

**APPENDIX E**

**ENVIRONMENTAL SITE ASSESSMENTS (PORTIONS)**

**Appendix E-1**  
**Hills Property, Phase I ESA**

**Phase I**

**Environmental Site Assessment**

**The Hills @ Southampton**

**East Quogue, New York**

**NP&V Job# 05105**

**May 9, 2005**

**CONFIDENTIAL AND PRIVILEGED**

## Phase I

### Environmental Site Assessment

### The Hills @ Southampton

#### 1.0 SUMMARY

The subject property has been inspected and reviewed independently by Nelson, Pope & Voorhis, LLC in order determine if potential environmental or public health concerns are present. This report is intended to identify Recognized Environmental Conditions (as defined in ASTM Standards on Environmental Site Assessments for Commercial Real Estate) on the subject property based on the four (4) basic components of a Full Phase I Environmental Site Assessment (ESA): records review, site reconnaissance, interviews and evaluation and reporting.

The subject property lies in the Hamlet of East Quogue, Town of Southampton, County of Suffolk, New York. The 430-acre subject property is comprised of numerous, primarily wooded parcels. The southern portion of the property is located on the north side of Old Country Road and extends northward to Sunrise Highway (Route 27) and east and west of Spinney Road, a partially developed road. Several out-parcels are located in the portion of the property located east of Spinney Road. The northern portion of the property is located on the north side of Sunrise Highway (Route 27) and is comprised of three (3) parcels of vacant, wooded land. For the purposes of discussions in this report, the property will be divided into three (3) sections; the northern portion, areas east of Spinney Road and areas west of Spinney Road. The following table illustrates the overall Suffolk County Tax Map numbers of the property:

District	Section	Block	Lot
900	203	1	25
	203	1	27
	203	1	30
	219	1	4-24
	250	3	1-6
	250	3	9
	250	3	11
	250	3	13-14
	250	3	17
	250	3	30
	288	1	121-125
District	Section	Block	Lot
	288	1	127
	288	1	130
	288	1	132-133
	288	1	136
	288	1	138
	288	1	140

	288	1	141.1
	288	1	48
	314	2	20.2
	314	2	20.3
	340	1	2
	340	1	5



The subject property is primarily wooded, vacant land with no authorized uses. The parcels located south of Sunrise highway (Route 27) have variable topography with steep slopes and higher elevations on the northern portions of the parcels. The parcels located to the north of Sunrise Highway (Route 27) have undulating topography. A LIPA right-of-way runs adjacent to these parcels. These northern parcels were relatively free of debris. No paths were observed. North of Sunrise Highway (Route 27), an area of forested swamp was observed east of Spinney Road and possible areas of ponding were observed west of Spinney Road.

The areas located to the east of Spinney Road have variable topography with cleared formerly mined areas. The southern portion of this area was generally flat, whereas the northern and central portion have undulating topography. Historical aerials photograph have indicated that the southern portion of this area was formerly farmed. Several cleared areas and paths were observed in this portion of the property. Debris was observed throughout the property, predominantly in the cleared areas and along paths. The debris included several vehicles and vehicle parts, vehicle batteries, numerous empty quarts of motor oil, partially full paint cans, metal, tires, wood, plastic and glass bottles and containers, several appliances, construction and demolition debris, shot gun shell casings and yard waste. A large area of yard waste, including tree branches and numerous stumps, was observed in the western portion of this area, behind the existing residences that are located east of Spinney Road. Two (2) areas containing mounds of soil were also observed at the rear of the residences. The mounds were covered with grass. Several empty, rusted drums were observed in the vicinity of the southeastern property boundary. A small, wooden shack was observed in the south-central portion of this area.

The parcel located on the west side of Spinney Road also had variable topography. The remaining area of the property consists of paved parking area and landscaped area. The southern portion of this area was generally flat, whereas the northern and central portion had undulating topography. Several cleared areas and paths were observed. Debris was observed throughout the property, predominantly in the cleared areas and along paths. The debris included several vehicles and vehicle parts, vehicle batteries, numerous quarts of motor oil, paint cans, metal, tires, wood, pool filters, plastic and glass bottles and containers, several appliances, construction debris, mattresses, furniture, one (1) empty 275 gallon storage tank, shell casings, televisions, computer monitors, other household electronics and sundry items. There were no visible signs of release associated with any of the debris, except one area where a petroleum odor was evident in the vicinity of one of the abandoned cars. Some of the debris was used for target practice as evidenced by the shell casings observed in their vicinity. Evidence of past use of fireworks was observed on top of one hill. Evidence of bonfires and vehicle fires were observed in several locations throughout the property.

No Sanborn Maps were available for the area of the subject property. Historic aerial photographs were reviewed to determine the prior uses of the subject property. Aerial photographs from 1938, 1961, 1969, 1976, 1980, 1999 and 2001 were reviewed in order to determine if any prior uses occupied the subject property. The subject property was wooded in the 1938 aerial photograph, however, a pond and a few trails were observed in the in the portion of property



located on the west side of Spinney Road. Small areas of the southern portion of the property located on the east side of Spinney Road were farmed. Significant areas of disturbance were noted in the areas of the property located on the west and east sides of Spinney Road in the 1961 to 1980 aerial photographs. The disturbed areas were undergoing succession in the 1999 and 2001 aerial photographs.

An extensive government records search found no potential sources of environmental degradation on the subject property. Several Federal, State and County documented regulated sites were noted in the vicinity of the subject property. Specifically, one (1) closed spill incident is located within one-half (0.5) mile of the subject property.

In conclusion, this assessment has revealed evidence of the following recognized environmental conditions in connection with the subject property, subject to the methodology and limitations of this report.

1. The area of petroleum odor should be examined in more detail and soil samples should be collected to determine the appropriate action.
2. The soil mounds east of homes along Spinney Road should be sampled to determine if contamination is present.
3. The debris observed on the property should be removed and properly discarded.
4. Soil samples should be collected in areas with high concentrations of shell casings and analyzed for lead.
5. Soil samples should be collected from areas of the property that were formerly used for agricultural purposes and analyzed for pesticides and metals.



### **3.0 SITE DESCRIPTION**

#### **3.1 LOCATION AND LEGAL DESCRIPTION**

The subject property lies in the Hamlet of East Quogue, Town of Southampton, County of Suffolk, New York. The 430-acre subject property is comprised of numerous, primarily wooded parcels. The southern portion of the property is located on the north side of Old Country Road and extends northward to Sunrise Highway (Route 27) and east and west of Spinney Road, a partially developed road. Several out-parcels are located in the portion of the property located east of Spinney Road. The northern portion of the property is located on the north side of Sunrise Highway (Route 27) and is comprised of three parcels of vacant, wooded land. For the purposes of this report the property will be divided into three sections; the northern portion, areas east of Spinney Road and areas west of Spinney Road. **Figure 1** provides a location map depicting the subject property and the surrounding area. The subject property is irregularly shaped. Tax Map numbers for the subject property are illustrated in Section 1.

#### **3.2 SITE AND VICINITY CHARACTERISTICS**

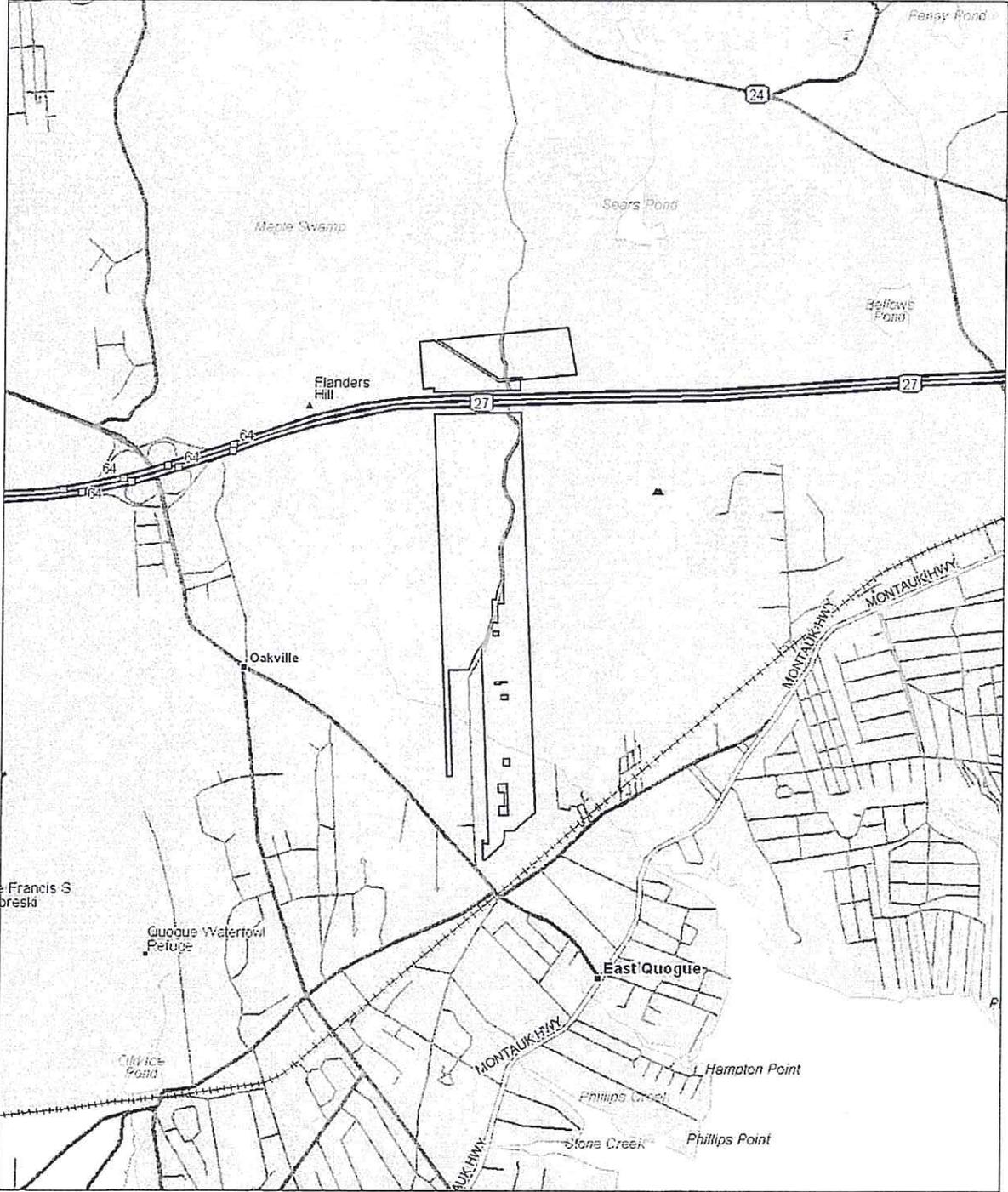
The subject property is primarily wooded, vacant land with no authorized uses. The parcels located south of Sunrise highway (Route 27) have variable topography with steep slopes and higher elevations on the northern portions of the parcels. The parcels located to the north of Sunrise Highway (Route 27) have undulating topography. A LIPA right-of-way runs adjacent to these parcels. These northern parcels were relatively free of debris. No paths were observed. North of Sunrise Highway (Route 27), an area of forested swamp was observed east of Spinney Road and possible areas of ponding were observed west of Spinney Road.

The areas located to the east of Spinney Road have variable topography with cleared formerly mined areas. The southern portion of this area was generally flat, whereas the northern and central portion have undulating topography. Historical aerials photograph have indicated that the southern portion of this area was formerly farmed. Several cleared areas and paths were observed in this portion of the property. Debris was observed throughout the property, predominantly in the cleared areas and along paths. The debris included several vehicles and vehicle parts, vehicle batteries, numerous empty quarts of motor oil, partially full paint cans, metal, tires, wood, plastic and glass bottles and containers, several appliances, construction and demolition debris, shot gun shell casings and yard waste. A large area of yard waste, including tree branches and numerous stumps, was observed in the western portion of this area, behind the existing residences that are located east of Spinney Road. Two (2) areas containing mounds of soil were also observed at the rear of the residences. The mounds were covered with grass. Several empty, rusted drums were observed in the vicinity of the southeastern property boundary. A small, wooden shack was observed in the south-central portion of this area.



FIGURE 1

LOCATION MAP



Source: DeLorme Street Atlas  
Scale: Not to Scale



The parcel located on the west side of Spinney Road also had variable topography. The remaining area of the property consists of paved parking area and landscaped area. The southern portion of this area was generally flat, whereas the northern and central portion had undulating topography. Several cleared areas and paths were observed. Debris was observed throughout the property, predominantly in the cleared areas and along paths. The debris included several vehicles and vehicle parts, vehicle batteries, numerous quarts of motor oil, paint cans, metal, tires, wood, pool filters, plastic and glass bottles and containers, several appliances, construction debris, mattresses, furniture, one (1) empty 275 gallon storage tank, shell casings, televisions, computer monitors, other household electronics and sundry items. There were no visible signs of release associated with any of the debris, except one area where a petroleum odor was evident in the vicinity of one of the abandoned cars. Some of the debris was used for target practice as evidenced by the shell casings observed in their vicinity. Evidence of past use of fireworks was observed on top of one hill. Evidence of bonfires and vehicle fires were observed in several locations throughout the property. Additional information concerning interior building observations and construction is presented in Section 3.3.1. Additional information concerning operations on the subject property is presented in Section 3.3.3. Additional information concerning site reconnaissance is presented in Section 5.0.

The area immediately surrounding the subject property is comprised of vacant land, industrial, municipal and residential uses. These uses are described in more detail in Section 3.3.5.

### **3.3 DESCRIPTION OF SITE IMPROVEMENTS**

#### **3.3.1 Site Conditions**

There are no buildings on the subject property.

#### **3.3.2 Site User Information**

No one was available to answer question regarding the subject property. No other information was provided regarding the property during site reconnaissance.

#### **3.3.3 Current Uses of the Property**

The subject property is vacant land with no authorized uses.

#### **3.3.4 Past Uses of the Property**

No Sanborn Maps were available for the area of the subject property. Historic aerial photographs were reviewed to determine the prior uses of the subject property. Aerial photographs from 1938, 1961, 1969, 1976, 1980, 1999 and 2001 were reviewed in order to determine if any prior uses occupied the subject property. The subject property was wooded in the 1938 aerial photograph, however, a pond and a few trails were observed in the west-central portion of the property. Small areas of the southern portion of the



property located on the east side of Spinney Road were farmed. Significant areas of disturbance were noted in the areas of the property located on the west and east sides of Spinney Road in the 1961 to 1980 aerial photographs. The disturbed areas were undergoing succession in the 1999 and 2001 aerial photographs. Please refer to Section 4.3 for additional information regarding site history.

### 3.3.5 Adjacent Land Uses

Current land use at the subject property and surrounding area is described based on aerial photographs and visual observations. The subject property is surrounded by vacant land, municipal and residential uses. Surrounding land uses will be described based on the sections used in Section 1; the northern portion, areas east of Spinney Road and areas west of Spinney Road.

#### *Northern Section*

*South:* LIPA right-of-way, beyond which is Sunrise Highway (Route 27).

*West:* Vacant, wooded land.

*North:* Birch Creek Pond County Park.

*East:* Vacant, wooded land

#### *Areas east of Spinney Road*

*South:* Vacant, wooded land, dilapidated buildings associated with former farming operations.

*West:* Western portion of subject property, single-family residences, beyond which is Spinney Road, Oakwood Cemetery, Suffolk County Water Authority well field and pump station and vacant land.

*North:* Sunrise Highway (Route 27).

*East:* Vacant land

#### *Areas west of Spinney Road*

*South:* Vacant land, Suffolk County Water Authority well field and pump station, Oakwood Cemetery and single-family residences, beyond which is Lewis Road

*West:* Sand mine and vacant land.

*North:* Sunrise Highway (Route 27).

*East:* Eastern portion of subject Property.

Past uses in the vicinity of the subject property are described based on review of historic aerial photographs and topographic maps, and a field inspection. The aerial photographs revealed the area surrounding the subject property has evolved into the existing industrial, commercial, and residential uses.

### 3.3.6 Site Map

An aerial photograph illustrating the subject property is provided as **Figure 2**.

FIGURE 2

AERIAL PHOTOGRAPH



Source: GeoMaps  
Scale: 1" = 1,800'



## **4.0 ENVIRONMENTAL RECORDS REVIEW**

With the understanding of the facilities at the subject property, it is important to establish the environmental and regulatory conditions of the subject property and surrounding area, as related to public health and environmental issues. This section of the report includes a review of agency records, soils and groundwater resources. The site inspection and the environmental and regulatory conditions form the basis for conclusions regarding the risks and liabilities associated with the subject property.

### **4.1 STANDARD ENVIRONMENTAL RECORD SOURCES**

A search of Federal, State and Local databases was performed in order to provide a profile of the subject property and surrounding area with regard to published government agency records. The procedures employed adhere as closely as possible to ASTM standards.

Contact was made with the United States Environmental Protection Agency (USEPA), the New York State Department of Environmental Conservation (NYSDEC), the Suffolk County Department of Health Services (SCDHS), and local government regarding environmental and/or public health concerns associated with the subject property and surrounding uses.

#### **4.1.1 United States Environmental Protection Agency (USEPA)**

The United States Environmental Protection Agency (USEPA) was contacted in order to obtain information regarding the National Priorities List (NPL), and sites documented on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS). The NPL defines all known hazardous material waste sites, which are described by the Federal Government as needing immediate cleanup action. All hazardous material waste sites considered for addition to the NPL are listed in the CERCLIS list.

Review of the NPL (search distance 1.0 mile) and the CERCLIS (search distance 0.5 mile) lists finds the following with respect to the subject property and surrounding area:

1. Subject property did not appear on the NPL or CERCLIS lists.
2. No sites appearing on the NPL were located within one (1.0) mile of the subject property.
3. There were no sites appearing on the CERCLIS list within one-half (0.5) mile of the subject property.

The CERCLIS list is a compilation of known or suspected uncontrolled or abandoned hazardous waste sites in the United States. These sites have either been investigated, or are currently under investigation by the EPA for the release, or threatened release of hazardous substances. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation and ultimately placed on the National Priorities List (NPL). It should be noted, however, that the presence of a site on this list does not confirm the presence of an environmental problem or a public health threat.



The USEPA was also contacted in order to obtain information concerning RCRA TSD facilities (treatment, storage, and disposal of hazardous wastes, as defined and regulated by the Resource Conservation and Recovery Act, RCRA), and RCRA Generators (of hazardous wastes as defined and regulated by RCRA). RCRA TSD facilities are sites that treat, store or dispose of wastes that can be toxic, flammable, corrosive, explosive or otherwise hazardous; and, RCRA Generators are sites that generate or transport wastes of the above noted characteristics. The search also included review of the Emergency Response Notifications System (ERNS) list, which is a list of reported releases or spills in quantities greater than reportable quantities, Federal Permit Compliance System Toxic Wastewater Discharges (PCSTWD) which permits toxic wastewater discharges and Federal Civil Enforcement Docket (CED) which lists judiciary cases filed on behalf of the EPA by the Department of Justice.

Review of the RCRA TSD Facilities List (search distance 1.0 mile), the PCSTWD and CED facilities (search distance 0.25 mile), the RCRA Generator List (search distance, subject property and adjoining properties), and the ERNS List (search distance, subject property only) finds the following with respect to the subject property and surrounding area:

1. Subject property did not appear on the RCRA TSD Facilities List, or the ERNS List.
2. Subject property was not listed as a RCRA Generator.
3. The subject property was not listed as a Civil Enforcement Docket Facility.
4. The subject property was not listed for Permit Compliance System Toxic Wastewater Discharges.
5. There were no sites listed as a RCRA TSD facility identified within one (1.0) mile of the subject property.
6. There were no RCRA Generators listed within close proximity to the subject property.
7. There were no CED facilities within one-quarter (0.25) mile of the subject property.
8. There were no PCSTWD facilities located within one-quarter (0.25) mile of the subject property.

The RCRA Generator program is intended to track the origin and destination of hazardous waste, and there is no indication that listing on this inventory constitutes an environmental threat. These facilities are located cross or down gradient, or have not generated any hazardous waste; therefore, no adverse impacts to the subject property are expected.

In addition, the Federal Facilities Index that includes resources conservation and Recovery Corrective Action Sites (CORRACTS) was reviewed. No additional sites that could impact the subject property were identified. The results of the search are included in **Appendix C**. Applicable State and Federal sites are listed in Sections 4.1.1 and 4.1.2.



#### 4.1.2 New York State Department of Environmental Conservation (NYSDEC)

The NYSDEC is charged with the responsibility of registering inactive hazardous waste disposal sites, and administering the investigation and cleanup of such sites. The NYSDEC inventory is contained in the publication, Inactive Hazardous Waste Disposal Sites in New York State. The inventory provides the location, extent of contamination and remediation status of each listed site in New York State. Accordingly, the registry of the NYSDEC was consulted for information on Inactive Hazardous Waste Disposal Sites (IHWDS). The NYSDEC provides information regarding Hazardous Substance Waste Disposal Sites (HSWDS) that are sites contaminated with toxic substances but are not eligible for state cleanup funding programs. Similarly, the NYSDEC is responsible for permitting Solid Waste Facilities (SWF) - these are facilities including landfills, incinerators, transfer stations and other solid waste management sites. The NYSDEC also registers Petroleum Bulk Storage (PBS) where the total storage capacity at the facility exceeds 1,100 gallons, Chemical Bulk Storage (CBS), Major Oil Storage Facilities (MOSF) and Toxic Release Inventory Sites (TRI). Finally, the NYSDEC regulates and monitors Air Discharges and NYS Toxic Spills which include Leaking Underground Storage Tanks (LUSTs).

Review of the IHWDS and HSWDS Lists List (search distance 1.0 mile), the SWF List (search distance 1.0 mile), PBS Lists (search distance, subject property and adjoining properties), CBS and MOSF lists, and LUST Lists (search distance 0.5 miles), and TRI and Air Discharge sites (search distance 0.25 miles), finds the following with respect to the subject property and surrounding area:

1. The subject property was not listed as an IHWDS or HSWDS site.
2. The subject property was not listed on the PBS, CBS or MOSF Lists.
3. The subject property was not listed on the NYS Toxic Spill site list.
4. The subject property was not listed as a TRI Site.
5. The subject property was not listed on the NYS Air Discharge list.
6. The subject property was not listed as having a LUST incident.
7. There were no IHWDS listings located within one (1.0) mile of the subject property.
8. There were no HSWDS facilities located within one (1.0) mile of the subject property.
9. There were no SWF listings identified within one-half (0.5) mile of the subject property.
10. There were no State Registered PBS facilities in close proximity to the subject property.
11. There were no State Registered CBS facilities identified within one-half (0.5) mile of the subject property.
12. There were no State Registered MOSF facilities within one-half (0.5) mile of the subject property.
13. There were no TRI sites within one-half (0.5) mile of the subject property.
14. There were no NYS Air Discharge sites within one-half (0.5) mile of the subject property.
15. There were no active or closed LUST incidents identified within one-half (0.5) mile of the subject property.



The NYSDEC also responds to incidents involving oil spills. The Department maintains a logbook and files on all reported and actual incidents at the NYSDEC offices at Stony Brook. This file was reviewed in conjunction with the subject property. No active and one (1) closed spill incident was identified within one-half (0.5) mile of the subject property between 1985 and 2004. Information regarding this closed spill incident is provided in **Appendix C**. The identified spill incident did not involve the subject property or was considered major incident. The area of the subject property is serviced by public water and is not expected to be adversely affected by this incident.

The New York State DEC conducts review of permits for wastewater discharges under the State Pollutant Discharge Elimination System (SPDES) program. The enabling legislation for this program is under Article 17 of the New York State Environmental Conservation Law and Federal authority is granted under Sections 307, 318, 402 and 405 of the Clean Water Act. Records for discharges are maintained at the offices of the NYSDEC. Permits are classified by type based upon the following categories: 01 - industrial and commercial process water; 02 - commercial sanitary discharges; 03 - major EPA regulated industrial discharges; 04 - non significant, non toxic industrial discharges; 05 - major municipal discharge points; and, 09 - private or commercial sewage treatment plants. With regard to potential environmental and public health concerns, only Class 01, 03, 05 and 09 type permits are of importance. Commercial sanitary discharges involve sewage only, and density limitations or sewage treatment requirements ensure that Class 04 discharges involve primarily non-contact cooling water and do not constitute a pollution threat.

The records for the vicinity surrounding the project site were consulted (search distance, subject property and adjoining properties) to determine if any important discharges are present. The following is noted:

1. The subject property is not listed as holding a significant SPDES permit.

#### **4.1.3 Suffolk County Department of Health Department (SCDHS)**

The SCDHS performs many important functions in environmental resource protection. These include inspection of facilities that use or store significant quantities of toxic or hazardous material or generate waste. SCDHS files specific to the subject property were not received prior to the completion of this report. The computer database was reviewed and found to contain no information regarding the subject property. Since the property is vacant land which has never been developed, no records are expected to be maintained by the SCDHS. If any pertinent information is obtained it will be forwarded in an addendum to this report.

Also of interest with regard to Health Department functions is a study completed in conjunction with Cornell University, referred to as the CLEARs study (Cornell Laboratory for Environmental Applications of Remote Sensing). This research involves

stereoscopic analysis and interpretation of historic aerial photographs for the purpose of identifying past and present hazardous waste disposal sites, solid waste disposal sites, disturbed areas, chemical storage, and other potential sources of contamination. The study has been ongoing since approximately 1986. The CLEARS study was consulted with regard to the area surrounding the subject property.

Six (6) CLEARS study sites were identified within the general area of the subject property.

1. Site Reference: Quogue # M 11  
Site Location: SITE PROPERTY.  
Site Description: Mined Area  
1962 - Shallow, sprawling sand mine-disturbed land situation may be in association with Site # M 1. Many small pits were detectable along edge of the excavation.  
1977 - No change.  
1984 - No change.
2. Site Reference: Quogue # M 1  
Site Location: located 2,000 feet to the west.  
Site Description: Mined Area  
1962 - Site comprised of a large intensively mined sandpit; two (2) structures, handling equipment, mounded spoil and ponded water area present.  
1977 - Intensive sand mining continuing; excavation has deepened with more than half showing ponded water.  
1984 - No change.
3. Site Reference: Quogue # P 2  
Site Location: located 2,200 feet to the west.  
Site Description: Pit  
1962 - A small rectangular pit is located in the southwest corner of the property; wastes are detectable down the sides of pit.  
1977 - All vegetation has now been removed from the property; the original pit has been filled in and covered over. Two small, open pits are detectable near the same corner.  
1984 - All signs of original pit have disappeared from detection; what may be a shallow trench is faintly detectable.
4. Site Reference: Quogue # D 7  
Site Location: located 1,500 feet to the west southwest.  
Site Description: Mined Area/Dump  
1962 - Active sand mining; easy road access.  
1977 - Former sandpit used for dump; approximately half of pit is filled in.  
1984 - Sandpit almost filled in; mounds detected on top of fill along edge of the remaining open portion of excavation.
5. Site Reference: Quogue # D 8



Site Location: located 1,000 feet to the west southwest.  
Site Description: Dump  
1962 - Sandpit is shallow.  
1977 - Sand mining continuing in about one-third of pit area; remaining area continues in a shallow state and is out of use for excavation.  
1984 - The portion of the sandpit closest to the road is in use for dumping; sand mining is continuing but the major portion of the site continues out of use; site is well trafficked.

6. Site Reference: Quogue # M 9  
Site Location: located 2,500 feet to the east.  
Site Description: Mined Area  
1962 - Small secluded sandpit surrounded by woodland.  
1977 - Sandpit is abandoned and is revegetating.  
1984 - No change.

The CLEARs Study assists with an historical perspective of the site and surrounding area. Little interpretation can be made with regard to the findings of the CLEARs study. There is no confirmation of activities which may have caused environmental degradation with regard to any of the sites. The SCDHS contracted the CLEARs study and will continue to interpret the results and take remedial action as necessary. The subject property is not listed as a CLEARs study site.

#### 4.1.4 Local Agencies

Freedom of Information requests were submitted to the Town of Southampton. The Building Department had no records pertaining to the subject property. The Planning and Zoning Department indicated the subject property is zoned Country Residence (CR) 200, 120 and 80. The Town Tax Assessors indicated the property is owned by Nam Associates, Inc and Nella Liquidating Trust.

## 4.2 PHYSICAL SETTING

### 4.2.1 Soils and Topography

The surficial geology of a site can often provide insight into the past activities on a given parcel of land. The Soil Survey of Suffolk County, conducted by the U.S. Department of Agriculture in 1975 is a useful source of soils information, which identifies soil types resulting from natural deposition and modification, as well as man-induced alterations associated with land use.

The subject property is comprised of soil types: CpA & CpC - Carver Plymouth Sands, 3-15% & 15-35% slopes, respectively, CuB - Cut and Fill Land, Gp - Gravel Pit, HaA & HaB - Haven Loam, 0-2 and 2-6% slopes, respectively, RdA & RdB - Riverhead Sandy

Loam, 0-3 & 3-8% slopes, respectively and Su- Sunbury Sandy Loam. The characteristics of these soil types are- identified as follows (Warner et al., 1975):

*Carver and Plymouth sands, 0-3% slopes (CpA) - The Carver series consists of deep, excessively drained coarse-textured soils. This soil type is found mainly on outwash plains; however, they are also found on some flatter hilltops and intervening draws on moraines. The hazard for erosion is slight.*

*Carver and Plymouth sands, 3-15% slopes (CpC) - The Carver series consists of deep, excessively drained coarse-textured soils. This soil type is found mainly on rolling moraines; however, they are also found on the side slopes of many drainage channels on the outwash plains. The hazard for erosion is slight to moderate.*

*Carver and Plymouth sands, 15-35% slopes (CpE) - The Carver series consists of deep, excessively drained coarse-textured soils. This soil type is found almost exclusively on moraines except for a few steep areas on side slopes along some of the more deeply cut drainage channels on outwash plains. The hazard for erosion is moderate to severe.*

*Cut and fill land, gently sloping (CuB) - This series is comprised of areas that have been cut and filled for non-farm uses. The areas generally are large, but some areas are about five (5) acres in size. This soil type is comprised of moderately sloping areas that have been graded for building sites. Slopes range from 1 to 8 percent.*

*Gravel Pits (Gp) - Open excavations that have been made for the purpose of mining sand and gravel. These pits range in depth from eight (8) or ten (10) feet to more than 100 feet. The sides of the pit are generally left nearly vertical and the bottoms are level.*

*Haven loam 0-2% slopes (HaA) - This map unit consist of deep, well drained, medium textured soils that formed in a loamy or silty mantle over stratified coarse sand and gravel. Most of these areas are on outwash plains; some are on moraines and generally are on top of low-lying hills. The hazard of erosion is slight and internal drainage is good. Natural fertility is low.*

*Haven loam 2-6% slopes (HaB) - The Haven series consists of deep, well drained, medium textured soils that formed in a loamy or silty mantle over stratified coarse sand and gravel. This soil is found on outwash plains and moraines, commonly along shallow drainage channels. The hazard of erosion is moderate to slight.*

*Plymouth loamy sand, 0-3% slopes (PlA) - Consists of deep, excessively drained, coarse-textured soils that form a mantle of loamy sand or sand over thick layers of stratified coarse sand and gravel. These soils are mainly on outwash plains south of the Ronkonkoma moraine. The areas are generally level, but undulate in some areas. The hazard of erosion is slight.*

*Plymouth loamy sand, 8-15% slopes (PlC) - This map unit consists of moderately sloping soils on moraines and outwash plains. Where it occurs on moraines, slopes are rolling in many places, and the surface is broken by closed depressions. On outwash plains this soil type is on the short side slopes along intermittent drainageways. The hazard of erosion is moderate to severe because of the slopes and the sandy texture of the soil. Slope and droughtiness are the main limitations on this soil for most nonfarm uses.*

*Riverhead Sandy Loam, 0-3% slopes (RdA) - Consists of deep, excessively drained, coarse - textured soils that formed in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. This soil is generally found on outwash plains, and the areas are large and uniform. Hazardous of erosion is slight.*

*Riverhead sandy loam, 3-8% slopes (RdB) - The Riverhead series consist of deep, well-drained, moderately coarse-textured soils. These soils occur primarily on outwash plains. A few small irregular areas are on the moraines. Riverhead soils have moderate to high available moisture capacity. Internal drainage is good, with moderately rapid to very rapid permeability. Natural fertility is low.*

*Sunbury Sandy Loam (Su) - This is the only Sunbury soil mapped in the county and it is usually found between areas of more poorly drained soils and adjoining well-drained soils of the Riverhead series. Most areas of this soil are small.*

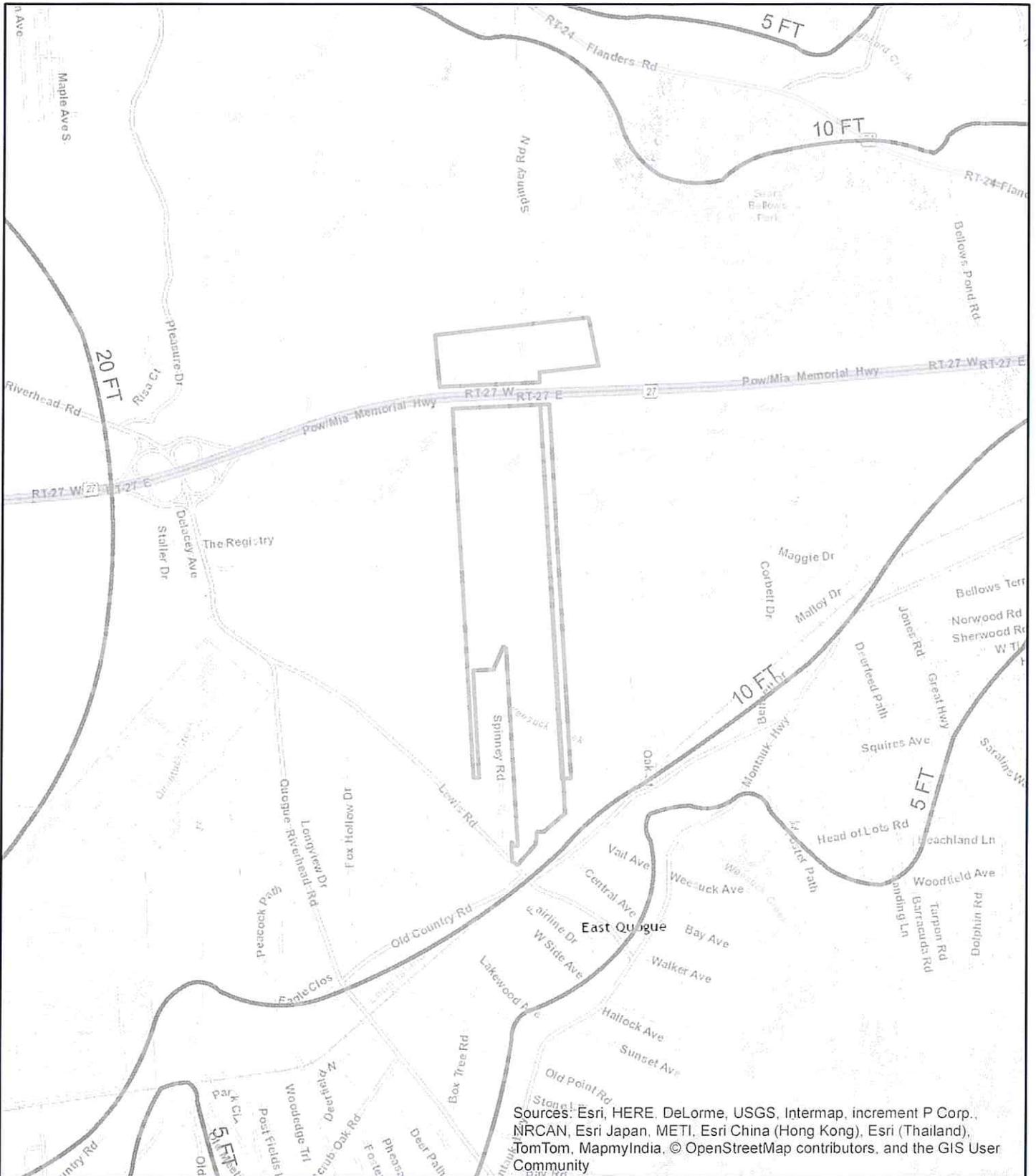
The nature of the surrounding area is that of industrial, municipal and residential uses. The subject property has rolling topography with large areas of steep slopes on the northern portion of the property. Neither soils nor topography appear to pose a constraint to the current use of the subject property. Bedrock in the vicinity of the subject property is approximately 900 feet below grade.

#### 4.2.2 Water Resources

Groundwater on Long Island is entirely derived from precipitation. Precipitation entering the soils in the form of recharge, passes through the unsaturated zone to a level below which all strata are saturated, referred to as the water table. The groundwater table is equal to sea level on the north and south shores of Long Island, and rises in elevation toward the center of the Island. The high point of the parabola is referred to as the groundwater divide. The changes in elevation of the water table create a hydraulic gradient which causes groundwater to flow, dependent upon potential.

The subject property is east of the groundwater divide, indicating that in the horizontal plane, flow is generally toward the south southeast. Groundwater will be ultimately discharged from the subsurface system into Shinnecock Bay. The major water bearing units beneath the subject property include: the Upper Glacial aquifer, the Magothy aquifer, and the Lloyd aquifer (**Smolensky et al, 1989**).

The elevation of groundwater beneath the subject property is approximately 10 feet above msl, depending on meteorological conditions associated with the water year. The topographic elevation of the subject property ranges from 34 to 235 feet. Therefore, the depth to groundwater ranges from 24 to 225 feet. The water table elevations and generalized direction of flow are illustrated in **Figure 3**.



**FIGURE 3  
WATER TABLE  
CONTOUR MAP**

Source: ESRI Web Mapping Service, USGS  
Scientific Investigations Map 3270, 2010 data  
Scale: 1 inch = 3,000 feet



**The Hills @  
Southampton  
East Quogue**

**Phase I ESA**



The Suffolk County Comprehensive Water Resources Management Plan (SCCWRMP) provides information on water quality from 0 to 400 feet below the water table, based upon observation as well as public and private water supply and well monitoring. The general area in proximity to the subject property is depicted as having good water quality with respect to nitrate-nitrogen (0-6 mg/l) at between 0 and 100 feet. With regard to organic compounds, SCDHS water quality data presented in the Suffolk County Comprehensive Water Resources Management Plan indicates that Volatile Organic Compound levels at 0-100 feet below the water table are good (<60% of standard) and found not to exceed drinking water standards the majority of the time; however, there are several areas in proximity to the site that exceed drinking water standards for organic parameters.

The Suffolk County Department of Health Services (SCDHS) conducted an eighteen (18) month long study of the impact pesticides have had on the groundwater. The study obtained water quality information from across the full geographic area of both counties in order to identify if any pesticides and metabolites had leached into the groundwater. The data from the wells in Nassau County and the five (5) western Towns of Suffolk show that only 1.5 and 2.0%, respectively, exceeded the pesticide related drinking water MCL and 15.4% of the wells in the five (5) eastern Suffolk Towns exceeded the MCL. Private wells in the five (5) eastern towns are at the highest risk of pesticides contamination. Maps provided in the appendix of the SCDHS reveal that the subject property is not located in the vicinity of any wells which are contaminated with pesticides.

The nearest water supply well is the SCWA Spinney Road well field and pump station. This well field is located on the west side of Spinney Road, approximately 3,100 feet north of Lewis Road. This well field is adjacent to west of the subject property.

## **4.3 SITE CLASSIFICATIONS**

### **4.3.1 Wetlands**

The subject property was inspected to identify the possible presence of any wetland vegetation and/or water surfaces that would sustain wetland vegetation. The site inspection revealed two (2) areas of wetlands and/or wetland species located on the portion of the subject property that is on the north side of Sunrise Highway (SR 27). Review of NYSDEC Freshwater Wetland Maps and the National Wetland Inventory did not identify any designated wetlands on the subject property.

### **4.3.2 Coastal Barrier Improvements/Flood Plains**



The subject property is not located in close proximity to the coast therefore, no coastal barrier improvements exist or are required. The subject property is located in Flood Zone X, an area of minimal flooding.

#### 4.3.3 Critical Habitat/Endangered Species

The subject property is located within the aquifer protection overlay district of the Town of Southampton, and both the compatible growth area and the core preservation areas of the Pine Barrens as designated by the Pine Barrens Act. The property has been subject to environmental inspection and review. No known endangered species have been identified in association with the subject property; however, this report is not substitute for a detailed ecological study.

#### 4.4 HISTORICAL USE INFORMATION

In terms of available records, historical use can be documented using a variety of standard records. The intent is to trace land use to a period prior to 1940. For the purpose of this Environmental Site Assessment, as many sources as are reasonably available have been consulted. The following are considered standard historical sources:

Aerial Photographs	Building Department Records
Fire Insurance Maps (Sanborn Maps)	Zoning/Land Use Records
Local Street Directories (Cole Directories)	Property Tax Files
USGS 7.5 Minute Topographic Maps	Recorded Land Title Records

No Sanborn Maps were available for the area of the subject property. Historic aerial photographs were reviewed to determine the prior uses of the subject property. Aerial photographs from 1938, 1961, 1969, 1976, 1980, 1999 and 2001 were reviewed in order to determine if any prior uses occupied the subject property. The subject property was wooded in the 1938 aerial photograph, however, a pond and a few trails were observed in the west-central portion of the property. Small areas of the southern portion of the property located on the east side of Spinney Road were farmed. Significant areas of disturbance were noted in the areas of the property located on the west and east sides of Spinney Road in the 1961 to 1980 aerial photographs. The disturbed areas were undergoing succession in the 1999 and 2001 aerial photographs. The USGS Mattituck and Quogue Quadrangle Maps dated 1904, 1947 and 1956 depicts the subject property as vacant, wooded with some cleared areas.

Evidence researched in this section further supports the site history documented in other sections of this report. The subject property was vacant land prior to the construction of the existing building.

## **5.0 SITE RECONNAISSANCE AND INTERVIEWS**

An in depth inspection of the subject property was conducted in order to determine the presence, use, storage, generation and/or disposal of hazardous substances, wastewater, underground and above ground tanks, drum storage, PCB's, solid waste disposal and/or wells. This section is based on visual or physical observation of the subject property, and/or information obtained from the interviews or records review. Persons interviewed for this report are identified in Section 2.4, and the full records review is contained in Section 4.0.

### **5.1 HAZARDOUS SUBSTANCES**

The property was inspected to determine the presence or handling of hazardous materials. The following findings are relevant:

- A petroleum odor was detected in association with one of the abandoned vehicles located on the western portion of the subject property. No other odors were detected or identified from the site reconnaissance which would indicate uncontrolled release of hazardous substances.
- There were no pools of liquid on the ground that could contain hazardous substances or petroleum products visually or physically observed or identified from the site reconnaissance, interviews or records review.
- There were no areas of stains or corrosion observed visually or physically observed or identified from the site reconnaissance, interviews or records review, except as previously noted.
- One forested, swamp area was observed in the portion of the property located north of Sunrise highway (Route 27). There were no pits, ponds or lagoons of concern visually or physically observed or identified from the site reconnaissance, interviews or records review observed on the subject property except as previously noted.
- There were no areas of stressed vegetation visually or physically observed or identified from the site reconnaissance, interviews or records review.

### **5.2 WASTEWATER DISPOSAL**

The facility was inspected to identify wastewater disposal systems and the following findings are relevant:

- No on-site sanitary systems are associated with the subject property.

### **5.3 ABOVEGROUND AND UNDERGROUND TANKS**

The subject property was inspected to determine the presence of aboveground and underground storage tanks. The following findings are relevant:

- One (1) 275 gallon, empty, storage tank was observed on the portion of the property located on the west side of Spinney Road.
- No other above or below ground storage tanks were observed on the subject property.

#### 5.4 DRUM STORAGE

The subject property was inspected for drum storage of hazardous substances or petroleum products, and the following findings are relevant:

- Several rusted, empty drums were observed on the southern area of the portion of property located on the east side of Spinney Road.

#### 5.5 POLYCHLORINATED BIPHENYLS (PCBs)

The subject property was inspected to determine potential for presence or release of PCBs. The following findings are relevant:

- There were no ground or pole mounted transformers observed on or in the vicinity of the subject property.

#### 5.6 SOLID WASTE DISPOSAL

The subject property was inspected for the presence of solid waste and the following findings are relevant:

- Debris including several vehicles and vehicle parts, vehicle batteries, numerous quarts of motor oil, paint cans, metal, tires, wood, pool filters, plastic and glass bottles and containers, several appliances, construction debris, mattresses, furniture, one (1) empty 275 gallon storage tank, shell casings, televisions, computer monitors, other household electronics and sundry items was observed on the subject property.

#### 5.7 WELLS

The subject property was inspected for the presence of wells and the following findings are relevant:

- No private water supply or monitoring wells were observed on the subject property.
- The area of the subject property is served by public water supplied by the Suffolk County Water Authority.



## **6.0 FINDINGS AND CONCLUSIONS**

This environmental inspection report, has been conducted in order to provide the prospective purchaser and lending institutions with accurate and complete information regarding the subject site, surrounding area, historic uses, agency records and regulations, and additional environmental considerations. Based upon this report, the limitations of this report and the methodology employed, the following statement is provided:

NP&V has performed a Phase I Environmental Site Assessment for The Hills @ Southampton located on the north side of Old Country Road and extends northward to Sunrise Highway (Route 27) and east and west of Spinney Road. This ESA has been prepared in conformance with the scope and limitations of ASTM Practice E 1527. Any exceptions to or deletions from this practice are described in Section 2.0 (Special Terms and Conditions, and Limitations and Exceptions), as well as **Appendix A** of this report.

In conclusion, this assessment has revealed evidence of the following recognized environmental conditions in connection with the subject property, subject to the methodology and limitations of this report.

1. The area of petroleum odor should be examined in more detail and soil samples should be collected to determine the appropriate action.
2. The soil mounds east of homes along Spinney Road should be sampled to determine if contamination is present.
3. The debris observed on the property should be removed and properly discarded.
4. Soil samples should be collected in areas with high concentrations of shell casings and analyzed for lead.
5. Soil samples should be collected from areas of the property that were formerly used for agricultural purposes and analyzed for pesticides and metals.