



**Historic Manufactured Gas and Related
Gas Storage Facilities on Long Island**

Prepared by KeySpan Corporation

For

**The Long Island Power Authority
May 2007**



EXECUTIVE SUMMARY _____ PAGE 4

ABBREVIATIONS AND ACRONYMS _____ 19

GLOSSARY _____ 21

MAP OF HISTORIC MANUFACTURED GAS AND RELATED GAS STORAGE FACILITIES ON LONG ISLAND _____ 26

MAJOR FACILITIES _____ 28

MANUFACTURED GAS PLANTS _____ 29

Nassau County Sites _____ 32

Glen Cove MGP _____ 33

Hempstead - Clinton Road MGP _____ 36

Hempstead - Intersection Street MGP _____ 37

Suffolk County Sites _____ 39

Babylon MGP _____ 40

Bay Shore MGP _____ 42

Halesite MGP _____ 47

Patchogue MGP _____ 49

Sag Harbor MGP _____ 51

Queens County Sites _____ 53

Far Rockaway MGP _____ 54

Rockaway Park MGP _____ 56



| | |
|---|-----------|
| HOLDER STATIONS | 58 |
| Nassau County Sites | 60 |
| East Garden City (Stewart Avenue) Holder | 61 |
| Glenwood Landing Holder | 63 |
| Inwood Holder | 65 |
| Long Beach Holder | 66 |
| MINOR FACILITIES | 68 |
| HORTONSPHERES | 69 |
| Nassau County Sites | 71 |
| Bellmore Hortonsphere | 72 |
| Lynbrook Hortonsphere | 73 |
| Manhasset Hortonsphere | 74 |
| Oyster Bay Hortonsphere | 75 |
| Suffolk County Sites | 76 |
| East Hampton Hortonsphere | 77 |
| Pinelawn/ Farmingdale Hortonsphere | 78 |
| Port Jefferson Hortonsphere | 79 |
| Riverhead Hortonsphere | 80 |
| ILLUMINATING GAS WORKS | 81 |
| Nassau County Sites | 83 |
| Garden City Gas Works | 84 |
| Suffolk County Sites | 86 |
| East Hampton Gasoline Vaporization Facility | 87 |
| Saltaire Acetylene Gas Facility | 88 |
| Southold Acetylene Gas Facility | 89 |

EXECUTIVE SUMMARY

INTRODUCTION

This document presents KeySpan's management of the environmental concerns associated with the Long Island Lighting Company's historical, Long Island-based, gas manufacturing and distribution infrastructure. This infrastructure included former manufactured gas plants, manufactured gas holder stations, Hortonsphere gas storage facilities, and other illuminating gas producing facilities such as acetylene gas plants and gasoline vaporization facilities. On Long Island, KeySpan became responsible for the environmental legacy at these historic facilities at the time it was created in May 1998. KeySpan was formed as a result of the business combination of KeySpan Energy Corporation, the parent of The Brooklyn Union Gas Company, and certain businesses of the Long Island Lighting Company (LILCO). KeySpan has assumed all liabilities arising from all manufactured gas plant operations of LILCO and its predecessors. The historic facilities addressed in this document were operated by a number of smaller predecessor companies of LILCO that were consolidated by that company in the 1920's.

Shortly after KeySpan was formed in 1998, the Company committed to moving forward on its full portfolio of sites by negotiations with the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) to address priorities in an integrated and proactive way based on the potential environmental risks and impacts. In 1999, KeySpan signed four separate Orders on Consent that govern investigation activities at all of the coal-based Manufactured Gas Plants (MGPs) locations on Long Island. As described in more detail below, these types of historical operations are the NYSDEC's highest priorities for action. These Orders on Consent included remediation activities at Sag Harbor, Rockaway Park, Bay Shore, Hempstead (Intersection Street), Glen Cove and Halesite. Since that time, KeySpan has signed additional orders in 2001 and 2007 and is seeking to execute orders for the remaining Long Island sites with associated workplan commitments shortly.

NYSDEC estimates that the regulatory process takes from 10-15 years for MGP sites to move from investigation through remediation. Work began on the major sites by performing interim remedial measures to ensure that there were no active physical conduits such as pipes and sewers leaving the properties. Preliminary investigations were then performed on the smaller sites. The Company is now either remediating or entering remediation on the major sites, or in the feasibility study phase to determine the remedial process. KeySpan is also moving forward on its remaining smaller Long Island sites, reflecting its clear commitment to move as rapidly as possible within the regulatory framework.

The Company has participated in hundreds of meetings with the public, local community leaders and government officials and has made information about these work activities available to the public through public repositories, websites,

dissemination of fact sheets and dedicated telephone hot lines. These public outreach activities extend well beyond any applicable regulatory requirements.

HISTORICAL BACKGROUND

The manufactured gas industry began in the United States in the early 1800s and grew rapidly from the late 1800s to the 1920s. Manufactured gas was considered one of the most important industrial enterprises of the 19th century. For over 150 years, the manufactured gas industry provided gas for lighting, cooking, and heating homes and businesses throughout the United States. The MGPs were an important part of life in cities and towns where they were located, providing the basis for broad social, commercial, and technological advancements. The plants provided employment and fostered a sense of civic pride for their local communities.

Small facilities began to close in the early 1900s as the industry consolidated production at larger plants and connected smaller systems together with new pipeline networks. As World War II approached, interstate pipelines were built, making natural gas from the Midwest more widely available, and cheaper than manufactured gas. Most MGPs closed by the mid 1950s, but a few remained in operation in remote areas, or on standby status to meet peak demand.

The first gas plant on Long Island began operations in Sag Harbor at the end of 1859. This was quickly followed by a plant in Hempstead in January 1860. The number of plants grew rapidly in the two decades around the turn of the 20th century. The Long Island Lighting Company began to consolidate the industry in the 1920's, and began closing many small plants. By 1930, production was centered on three major plants, Bay Shore, Hempstead (Intersection Street) and Rockaway Park. Around this time the gas distribution system was improved and most of the Hortonspheres were constructed. Manufactured gas was replaced by natural gas in the 1940s and 1950s. By this time, only the Bay Shore plant remained in operation, which produced gas on a standby basis until 1972, at which time the manufactured gas production and distribution system ceased operations totally.

GAS MANUFACTURING PROCESSES

There were three main types of manufactured gas: coal gas, carbureted water gas and oil gas. In addition, there were a number of other illuminating gas processes that produced small volumes of gas for small towns or such large facilities as hotels or hospitals. Acetylene production and gasoline vaporization were two such processes used on Long Island.

Beginning in the early 1800s, coal gas was produced by the carbonization of coal. In this process, coal was heated in closed retorts. Inside these retorts, the coal was kept from burning by limiting its contact with outside air. Volatile constituents of the coal

would be driven off as a gas, which was collected, cooled, and purified prior to being piped into the surrounding areas for use. The solid portion of the coal would become a black, material called coke that was a valuable fuel for many industrial uses. A number of the MGPs on Long Island started off as coal gas plants.

As the gas manufacturing industry developed and expanded after the Civil War, a new process was introduced, which produced a gas mixture that burned hotter and brighter. This process, carbureted water gas (CWG), was first introduced in the 1870s. In the late 1890s and early 1900s a large number of MGPs were converted to this process. The carbureted water gas process involved a first step in which coke or coal was heated in a closed vessel or retort into which steam was injected. A chemical reaction took place which produced a flammable gas mixture. Petroleum products were then sprayed or "carbureted" into the hot gas mixture. The gas then passed through hot "checker" bricks where the petroleum constituents were cracked and the gas "fixed" to produce a high heating and lighting value. Most Long Island MGP sites had some CWG operations during their history.

The oil gas process was developed in the 1890s and was used primarily in the Western United States. It was similar to the carbureted water gas process except the steam cycle was omitted and oil was cracked by spraying it over hot "checker" bricks. Use of the oil gas process in the Long Island system was limited.

Small gas works using acetylene or gasoline volatilization processes were used on Long Island to produce gas for remote towns and small facilities.

Acetylene burns with a hot, bright light and was used for illumination purposes. The process was developed in the 1890's and produced gas for farms, homes, small and remote towns and hotels, institutions, and other large facilities. It is made by combining calcium carbide (CaC_2) with water, producing acetylene and slaked lime (calcium hydroxide). Slaked lime is a beneficial by-product used in agriculture and in mortar.

Gasoline vaporization plants were developed in the early 1860's. The process simply consisted of passing air over or through liquid gasoline and burning the resulting air/volatile hydrocarbon mixture. As with acetylene these were used to illuminate individual residences or small towns until the 1920's. Gasoline vaporization facilities were located in East Hampton and Garden City.

MANUFACTURED GAS PLANT BY-PRODUCTS

The production of manufactured gas created tars and oils which were considered valuable by-products during the entire period that manufactured gas plants operated. The tars and oils were sold for use in various industries including steel manufacturing, electrical product production, solvent and varnish production, roofing and paving, and

pharmaceuticals production. Tars from the manufactured gas process were the basis of the organic chemical industry before the wide use of petroleum.

Inadvertent spills and leaks of tars and oils occurred during operations. Demolition of the plants after they were closed may also have left tanks and pipes containing tars and oils in the ground. The removal of sulfur from the manufactured gas also generated a form of cyanide as a waste product. In the 19th century sulfur was removed from the gas stream by bubbling the gas through lime beds or a lime slurry. In later plants sulfur removal was done by passing the gas through wood chips treated with iron oxides. Trace amounts of cyanide present in the gas were removed along with the sulfur. Once the purifying capacity of the media was exhausted, it was discarded or used as a fill material. This waste contains complex cyanide compounds such as ferro-ferric cyanide. While these complex (ferro-ferric) cyanides are soluble and can be leached into ground water they have low toxicity and do not readily dissociate into the more toxic forms of cyanide.

Because of the gas manufacturing and purification processes employed, the environmental legacy of the manufactured gas plants is more consequential than at the other illuminating gas works or gas storage facilities. While these facilities produced some residual materials, the potential for impacts to the environment is much lower than at the former manufactured gas plants. As noted above the acetylene plant produced lime which could be used for agricultural purposes. The gasoline volatilization plants most likely produced some volume of devolatilized oil which could have been used for other combustion or lubricating purposes. Neither process required sulfur removal.

GAS STORAGE

Gas storage is part of any gas distribution system. Historically gas was stored either in low pressure tanks such as water sealed or tar sealed tanks or in high pressure vessels such as Hortonspheres. All of these types of storage are found in the former Long Island gas distribution system on Long Island. Environmental concerns associated with storage facilities are generally not as great as those associated with MGPs. Water sealed holders and tar sealed holders have the potential for hydrocarbon contamination associated with the seal material. The high pressure facilities have the potential for volatile hydrocarbon contamination from "blowdown" of condensate removed from the gas transmission lines prior to storage. All of these storage facilities are large above ground metal tanks. As such, there is also the potential for lead paint contamination of the surrounding area.

RISKS ASSOCIATED WITH MGP BY-PRODUCTS

Risk is a product of the concentration of chemicals and the potential exposure of the public or the environment to these chemicals. On the NYSDEC website (<http://www.dec.ny.gov/chemical/24906.html>), the department provides the following information about the following pathways for exposure to MGP-related chemicals:

“...In general, people can be exposed to MGP wastes through three major routes:

- breathing (also called inhalation),
- eating or drinking (also called ingestion), and
- getting something on the skin (also called dermal contact).

Exposure refers to people contacting a chemical. For more information on what exposure means, you can read the NYS DOH fact sheet on exposure at their website:

<http://www.health.state.ny.us/environmental/about/exposure.htm>

People can be exposed to MGP contamination through contact with tar, tar-contaminated soils, purifier waste, contaminated groundwater or surface water, contaminated dust and contaminated air. If there is no contact with wastes, there is no exposure....” If there is no exposure, there is no risk.

EVALUATION OF MANUFACTURED GAS PLANTS

A majority of the MGPs located throughout the United States have been identified and efforts are underway, to varying degrees, to conduct investigation and remediation activities to mitigate or eliminate their potential impacts to human health and the environment.

With respect to KeySpan sites, historic site ownership and operational history was determined based upon a review of available Sanborn Fire Insurance Maps (Sanborn Maps) and Bromley Atlas Maps. In addition, other historic sources (e.g., Brown’s Directory) and site specific reports (where available) were reviewed to determine site operational history. Since many of these facilities operated, and some were closed nearly a century ago, available historical records are, at times, incomplete. Property boundaries presented within the document are approximate based upon the maximum extent of the MGP operations from available information reviewed. Information regarding current property ownership, site conditions, and regulatory status are subject to change, and may not reflect recent property transactions. Details on KeySpan’s manufactured gas plants will be periodically updated as new information becomes available.

PRIORITIZATION OF KEYSpan SITES

Over the last fifteen years, KeySpan and its predecessor LILCO have been actively engaged in the investigation and remediation of MGPs on Long Island. KeySpan reviewed its records and publicly available historical literature to identify MGP facilities on Long Island. These facilities were evaluated in terms of factors such as nature of operations at each location, overall size and volume of product output and years of operation. KeySpan then worked with NYSDEC to establish a priority ranking and a schedule for activities on each site.

In its public documents available on the Department's website (<http://www.dec.ny.gov/chemical/24904.html>), the NYSDEC has described the prioritization process. "...Prioritization of remedial activities at former MGP sites is an ongoing process. As additional information on the nature and extent of contamination at each site becomes available, or if interim remedial measures (IRMs) are completed, the relative rankings of each site may change.

Prior to the Site Characterization, little information other than the physical setting of the site is typically available. At this stage, sites are prioritized according to the existing use of the site and nearby properties and the site's proximity to sensitive environmental receptors. Prioritization of site characterization start dates will be made based on the following considerations:

- Existing residential use or institutional (schools, etc.) use of the site;
- Existing residential or mixed residential use of properties adjacent to or in close proximity to the site;
- Reliance on private water supply wells by the public in close proximity to the site;
- Public water supply wells in close proximity to the site;
- Sensitive environmental resources such as Class A or B surface waters, sole source aquifers or endangered aquatic species habitats;
- Public recreational lands;
- Potential for reuse of the property;
- Active commercial/industrial property; or,
- Abandoned commercial/industrial.

The prioritization process also considers the nature of the threat posed by the facility in question. MGP sites have a number of sources of potentially mobile contaminants that can be present in relatively high volumes. A Hortonsphere, on the other hand, has limited sources of low volume contaminants of relatively low mobility. Thus, remedial activities on small sites with minimum likelihood of posing a threat to human health or the environment, such as the Hortonspheres, are frequently deferred until the later stages of the remediation program. However, in response to concerns raised by the Long Island community, KeySpan has initiated a preliminary characterization program for the Hortonsphere and illuminating gas sites. The purpose of these characterizations

is to determine risk to human health and the environment and to provide data for further prioritization.

Table 1 is a list of the historic MGPs and related facilities on Long Island.

| Table 1 Long Island Site List | | |
|--|---|---|
| Nassau County | Suffolk County | Queens County (Former LILCO Service Territory) |
| Manufactured Gas Plants | | |
| Glen Cove MGP | Babylon MGP | Far Rockaway MGP |
| Hempstead-Clinton Road MGP | Bay Shore MGP | Rockaway Park MGP |
| Hempstead Intersection Street MGP | Halesite MGP | |
| | Patchogue MGP | |
| | Sag Harbor MGP | |
| Holder Stations | | |
| East Garden City (Stewart Avenue) Holder | | |
| Glenwood Landing Holder | | |
| Inwood Holder | | |
| Long Beach Holder | | |
| Hortonspheres | | |
| Bellmore Hortonsphere Lynbrook Hortonsphere* Manhasset Hortonsphere Oyster Bay Hortonsphere | East Hampton Hortonsphere Pinelawn/Farmingdale Hortonsphere Port Jefferson Hortonsphere Riverhead Hortonsphere | |
| * Site may also have had a holder prior to construction of Hortonsphere | | |
| Illuminating Gas Works | | |
| Garden City Gas Works | East Hampton Gasoline Vaporization Facility Saltaire Acetylene Gas Facility Southold Acetylene Gas Facility | |

NEW YORK STATE REGULATORY PROCESS

Long Island's Manufactured Gas Plants, Gas Holder Sites, and other sites that produced or stored illuminating gas fall under several regulatory programs administered by the NYSDECs Division of Environmental Remediation (DER) in conjunction with the NYSDOH. The programs include sites in the State Superfund program that are under Order on

Consent/Agreement, sites under the State's Voluntary Cleanup Program (VCP) and sites under the more recently established Brownfield Cleanup Program.

MGP related sites under Orders on Consent/Agreement are regulated as Inactive Hazardous Waste Disposal Sites by NYSDEC and the regulatory process they follow is akin to the United States Environmental Protection Agency's (USEPA) Superfund program. The regulatory process typically includes: Preliminary Site Assessment (PSA) (also known as a Site Characterization), Remedial Investigation (RI), Feasibility Study (FS), Record of Decision (ROD), Remedial Design (RD) and Construction. Interim Remedial Measures (IRMs) may be conducted at any time in the process with NYSDEC approval, usually when an investigation or remedial action can be undertaken without impacting the overall program. Both NYSDEC and NYSDOH review and approve work plans for the RI, FS, and any IRMs. The NYSDEC issues the ROD for a site based upon the RI and FS and the ROD guides the development of the remedial design.

New York State has one of the most stringent "State Superfund" programs in the country. The NYSDEC administers this program out of its headquarters in Albany, to ensure the necessary engineering expertise, resources, and the ability to coordinate site activities overall so that remediations are performed in a consistent, uniform manner throughout the state. The oversight process performed by NYSDEC and NYSDOH begins with the issuance of an Order on Consent/Agreement. For multi-site consent orders/agreements, the order has often dictated the start date of the investigation process at each site. Once the order is finalized, KeySpan is required to develop and submit investigative work plans for each site to the NYSDEC and NYSDOH for their review and approval. Following review, the agencies separately either issue approval or comment on the work plan. If comments are issued, an iterative process is undertaken to address the agencies' comments until acceptance is gained. Upon receipt of a NYSDEC approved work plan KeySpan can then begin field investigations which are overseen by a NYSDEC field inspector. The NYSDEC and NYSDOH review, comment, and approval cycle takes place at all critical stages of the process including investigation, IRM planning and execution, developing remediation approaches, remediation design, and construction implementation. This review, comment, and approval process can often take months.

Public participation and comment opportunities are afforded at each of these key steps in the process followed for Order on Consent sites, generally with the NYSDEC issuing a Fact Sheet and conducting a Public Meeting to discuss the status of the site, and providing time periods in which the public can provide input at the meeting or in correspondence or phone calls to the NYSDEC Project Manager. In addition to meeting the requirements of the NYSDEC outreach program, KeySpan conducts a broad range of public information and public input activities at each site, including maintaining Telephone Hotlines that provide news as well as take input, establishing and maintaining site-specific websites, holding meetings with community organizations, providing frequent briefings to public officials, publishing newsletters, meeting with individual property owners in areas affected by the former sites, and maintaining a

Community Relations presence in the impacted area during significant project activities.

The Voluntary Cleanup Program (VCP) was established by New York as a mechanism to promote redevelopment of properties that are environmentally impaired; the program was a precursor to the Brownfield Cleanup Program (BCP). Under the program, the volunteer (the entity accepting responsibility for the investigation and remediation of the site) enters into a voluntary cleanup agreement with the NYSDEC. The volunteer performs investigation and remediation activities under NYSDEC-approved work plans and agrees to remediate the property to a level that is protective of public health and the environment. The NYSDEC and the NYSDOH oversee conduct of the work. Public participation and comment opportunities such as those described above are included in the program at various stages, as are the additional communications activities KeySpan implements. Upon completion, the volunteer receives a release of liabilities subject to certain regulatory re-openers. The process includes investigation work plans and reports, potential IRMs, remedial action plans, remedial implementation and operations maintenance and monitoring plans.

At the end of the process, most existing orders call for an Assignable Release and Covenant Not To Sue, sometimes called a No Further Action letter, which gets issued by the NYSDEC after the NYSDEC is satisfied that the Work Plan covering the remediation of the site has been implemented. The law does provide for re-opening the investigation and remediation of a site when there are indications that the activities associated with the remedial Work Plan are not sufficiently protective of human health and the environment.

PROGRAM TIMING

In each Order on Consent, the NYSDEC establishes a schedule for investigation and remediation. However, site conditions encountered during the investigation phase often will expand the scope of the investigation and require additional or supplemental investigations. These expansions of scope of investigation can cause slippage of the timeframe for remediation milestones while the site conditions are better defined. Precise definitions of the nature, extent and location of the wastes and the delineation of any plume paths are essential to designing and implementing a successful remediation plan.

There are many other factors which can affect the timing of work activities and many of these are only partially within the control of the regulated party that is responsible for remediation of the site. KeySpan strives to work cooperatively with local communities to accommodate a variety of concerns raised during program activities such as noise or vibration levels or interruptions to traffic patterns, especially at seasonal peak times. In addition, on Long Island and in New York City, many of these properties are currently owned by third parties and obtaining access to do the work takes a considerable amount of time and effort. At times, the pace of remedial work has been slowed by

requests from local authorities for additional information. On other occasions, work has been delayed because of lawsuits brought by various stakeholders. The entire process is very dynamic and must adapt to changing conditions and demands that are unique to each site. As such, a detailed projection of long range site activities for large remediation programs is bound to quickly become inaccurate and irrelevant.

ON-GOING AND NEAR TERM SITE ACTIVITIES

The following provides a snapshot of the current activities at each of the Long Island sites and provides an outlook as to the proposed activities over the next several months. The sites have been organized by former operation (MGP, Holder Station, Hortonsphere, or illuminating gas works) that have been segregated into Suffolk, Nassau, or Queens Counties.

Manufactured Gas Plants

Nassau County Sites

GLEN COVE MGP

- Well and Basement Survey to be conducted in 3Q 2007
- Final RI Report expected in 2007
- NYSDEC expected to hold public meeting to present results of the RI in 2007

HEMPSTEAD – CLINTON ROAD MGP

- A Preliminary Site Assessment was completed under VCA in 2003
- Qualified NFA with monitoring in March 2003

HEMPSTEAD – INTERSECTION STREET MGP

- Public Meeting on Final RI June 5, 2007
- FS and RAP preparation in progress, expected 3Q-2007, estimated remediation start 3Q-2008
- Evaluation of potential IRMs in progress for possible construction start in the 3rd quarter 2007

Suffolk County Sites

BABYLON MGP

- RI Work Plan to be issued in December 2007

BAY SHORE MGP

The Bay Shore MGP site has been separated into four operable units (OUs). A Remedial Action is ongoing to address the OU-1 site. The remaining OU's have ongoing and near term interim remedial measures to address site impacts. A series of are Each OU is currently undergoing remediation through interim remedial

measures and remedial construction activities. A summary of activities for each OU is provided below:

OU-1:

- Phase I – Barrier Wall and Water Treatment – Remedial Design complete 1Q-2007, construction started February 2007, estimated completion 2Q-2007
- Phase II – Source Area Excavation – Design and procurement in progress, estimated construction start 3Q-2007
- Phase III – In-Situ Treatment – Pilot studies complete, preliminary design in progress, estimated construction start 4Q-2008

OU-2:

- System operation and monitoring in progress
- Design of two additional new oxygen injection IRMs in progress, planned construction 3Q-2007

OU-3:

- System operation in progress
- Catch basin vapor survey in progress
- Additional source area mitigation, procurement in progress, estimated construction start 3Q-2007

OU-4:

- IRM OU-4C Work Plan delayed because of private property access issues.
- In-situ chem.-ox (SISCO) treatment design in progress, construction start estimated 3Q-2007

HALESITE MGP

- RD construction estimated to start in 2007/2008

PATCHOGUE MGP

- Remedial Investigation Work Plan is scheduled to be issued in September 2007

SAG HARBOR MGP

- Pre-RD activities conducted 2Q 2007, estimated construction start 4Q-2007

Queens County Sites

FAR ROCKAWAY MGP

- RI Work Plan to be issued in June 2007

ROCKAWAY PARK MGP

- Final RD in 2007, estimated construction start 4Q-2007

Holder Stations

Nassau County Sites

EAST GARDEN CITY (STEWART AVENUE) HOLDER

- RI Work Plan to be issued in December 2008

GLENWOOD LANDING HOLDER

- VCA requirements for groundwater treatment on hold while NYSDEC reviews KeySpan's supplemental groundwater data report on identified upgradient sources of groundwater contamination

INWOOD HOLDER

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

LONG BEACH HOLDER

- SC Work Plan to be issued in June 2008

Hortonspheres

Nassau County Sites

BELLMORE HORTONSPHERE

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

LYNBROOK HORTONSPHERE

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

MANHASSET HORTONSPHERE

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

OYSTER BAY HORTONSPHERE

- KeySpan is working with the NYSDEC to include these sites under an order
- KeySpan expects to initiate site characterizations on these sites in 2007

Suffolk County Sites

EAST HAMPTON HORTONSPHERE

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

PINELAWN/ FARMINGDALE HORTONSPHERE

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

PORT JEFFERSON HORTONSPHERE

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

RIVERHEAD HORTONSPHERE

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

Illuminating Gas Works

Nassau County Sites

GARDEN CITY GAS WORKS

- NYSDEC concluded NFA in October 2001

Suffolk County Sites

EAST HAMPTON GASOLINE VAPORIZATION FACILITY

- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007

SALTAIRE ACETYLENE GAS FACILITY


- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007


SOUTHOLD ACETYLENE GAS FACILITY


- KeySpan is working with the NYSDEC to include this site under a separate order
- KeySpan expects to initiate a site characterization on this site in 2007


**KeySpan Energy Delivery Long Island
Projected Regulatory Activity Time Line 2007 - 2012**

| Site Name | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|-------------------|---------------|----------|------|------|------|
| Babylon MGP | RI | | | | | |
| Bay Shore MGP OU-1 | RD / RA | RD / RA / O&M | RA / O&M | | | |
| Bay Shore MGP OU-2 | IRM / O&M | O&M | | | | |
| Bay Shore MGP OU-3 | IRM / O&M | | | | | |
| Bay Shore MGP OU-4 | IRM | IRM | | | | |
| East Garden City Holder | | SC | | | | |
| Far Rockaway MGP | RI | RI | | | | |
| Garden City Gas Works | No Further Action | | | | | |
| Glen Cove MGP | RI | FS/ RAP | | | | |
| Glenwood Landing Holder | See Note 1 Below | | | | | |
| Halesite MGP | RD / RA | RA | | | | |
| Hempstead (Clinton Road) MGP | No Further Action | | | | | |
| Hempstead (Intersection Street) MGP | FS/ RAP/ IRM | RD / RA | RA | | | |
| Long Beach Holder | | SC | | | | |
| Patchogue MGP | RI | RI | | | | |
| Rockaway Park MGP | RD / RA | RA | RA | | | |
| Sag Harbor MGP | RD / RA | RA | | | | |
| Sites Not Yet Under Order (2) | | | | | | |
| Inwood Holder | SC | | | | | |
| Bellmore Hortonsphere | SC | | | | | |
| East Hampton Hortonsphere | SC | | | | | |
| Lynbrook Hortonsphere | SC | | | | | |
| Manhasset Hortonsphere | SC | | | | | |
| Oyster Bay Hortonsphere | SC | | | | | |
| Pinelawn/Farmingdale Hortonsphere | SC | | | | | |
| Port Jefferson Hortonsphere | SC | | | | | |
| Riverhead Hortonsphere | SC | | | | | |
| East Hampton Gasoline Vaporization Facility | SC | | | | | |
| Saltaire Acetylene Gas Facility | SC | | | | | |
| Southhold Acetylene Gas Facility | SC | | | | | |

 Site Characterization (SC)

 Remedial Investigation (RI)/ Feasibility Study (FS)/ Record of Decision (ROD)/ Remedial Action Plan (RAP)

 Remedial Design (RD)/ Remedial Action (RA)

 Operations & Maintenance (O&M)

 Interim Remedial Measure (IRM)

Notes:

1. All Voluntary Cleanup (VCA)-related soil remediation is complete. Groundwater remediation has been deferred while verification of off-site source is investigated.

2. An additional 10 gas storage facilities and/or other illuminating gas works are identified on Exhibit "A"-Table 3 of the Multiple Sites Order on Consent and Administrative Settlement Index # A2-0552-0606 (AOC) dated February 2007. Riverhead Hortonsphere and Port Jefferson Hortonsphere sites were not included in the AOC. KeySpan is working with the NYSDEC to include these sites under a separate order and complete site characterizations by the end of 2007.

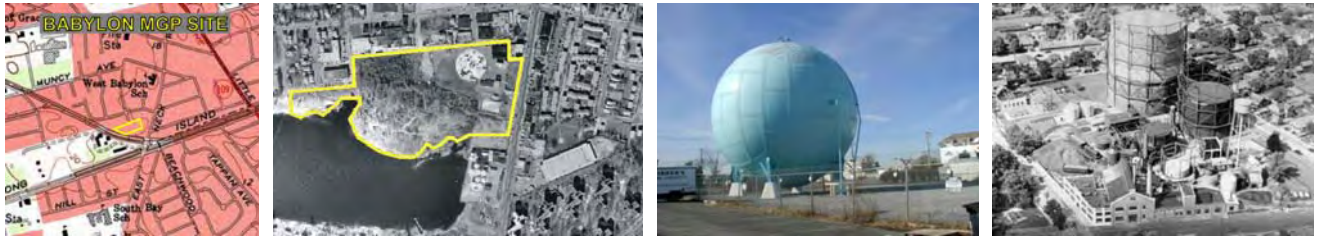
ABBREVIATIONS AND ACRONYMS

ABBREVIATIONS AND ACRONYMS



| | |
|-----------------|--|
| AKA | Also Known As |
| AOC | Administrative Order on Consent |
| BCP | Brownfields Cleanup Program |
| BTEX | Benzene, Toluene, Ethylbenzene, Xylene |
| BU | Brooklyn Union |
| CMSP | Communications Management Strategic Plan |
| CPP | Citizen Participation Plan |
| CWG | Carbureted Water Gas |
| DER | Division of Environmental Remediation |
| EPA | Environmental Protection Agency |
| FS | Feasibility Study |
| IRM | Interim Remedial Measure |
| ISCO | In-Situ Chemical Oxidation |
| LILCO | Long Island Lighting Company |
| LIPA | Long Island Power Authority |
| LLC | Limited Liability Company |
| MGP | Manufactured Gas Plant |
| MMCF | Million Cubic Feet |
| NAPL | Non-Aqueous Phase Liquid |
| NFA | No Further Action |
| NFRAP | No Further Remedial Action Planned |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| OM&M | Operation, Maintenance, and Monitoring |
| O&M | Operation and Maintenance |
| OU | Operable Unit |
| PA | Preliminary Assessment |
| PAH | Polycyclic Aromatic Hydrocarbons |
| PRAP | Proposed Remedial Action Plan |
| PSA | Preliminary Site Assessment |
| RA | Remedial Action |
| RAP | Remedial Action Plan |
| RD | Remedial Design |
| RI | Remedial Investigation |
| ROD | Record of Decision |
| SC | Site Characterization |
| SCDHS | Suffolk County Department of Health Services |
| VCA | Voluntary Cleanup Agreement |
| VCP | Voluntary Cleanup Program |

GLOSSARY



“Contamination” or “contaminant” means any discharged hazardous substance as defined pursuant to ECL § 37-0103, hazardous waste as defined pursuant to 6 NYCRR Part 371, or petroleum as defined pursuant to ECL § 17-1003.

“DER” means the Division of Environmental Remediation, a division with the New York State Department of Environmental Conservation

“DER-10” means the publication issued by DER entitled “Technical Guidance for Site Investigation and Remediation” which is intended to facilitate consistent, accurate, efficient and timely completion of remedial projects where DEC oversight, approval or acceptance is sought or mandated by law.

“Discharge” means any intentional or unintentional action or omission resulting in the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of a contaminant into the waters or groundwater of the State or onto the lands or onto lands from which it might flow or drain into said waters, or into the waters outside the jurisdiction of the State when damage may result to the lands, waters, or natural resources within the jurisdiction of the State, except discharges pursuant to and in compliance with the conditions of a valid State or Federal permit, or a discharge exempted from a permit in accordance with section 7.10 of DER-10.

“Engineering controls” means any physical barrier or passive mechanism to contain or stabilize contamination, ensure the effectiveness of a remedial action or eliminate potential exposure pathways from any contaminated medium. Engineering controls may include, without limitation, caps, covers, vapor barriers, fences, slurry walls, access controls, and demarcation barriers (e.g., geonets or other fabric). Engineering controls are used in conjunction with institutional controls, to ensure that the engineering controls remain effective.

“Environment” means any water including surface or subsurface, water vapor, any land including land surface or subsurface, air, fish, wildlife, biota including humans, and all other natural resources.

“Gas holder” is used to store manufactured or natural gas at various points in the distribution system.

“Groundwater” means water below the land surface in a saturated zone of soil or rock. This includes perched water separated from the main body of groundwater by an unsaturated zone.

“Hazardous waste” means a waste, which appears on the list or satisfies the characteristics in 6 NYCRR Part 371.

“Historic fill material” means non-indigenous material, deposited or disposed of to raise the topographic elevation of the site, which was contaminated prior to emplacement, and is in no way connected with the subsequent operations at the location of emplacement and which includes, without limitation, construction debris, dredge spoils, incinerator residue, demolition debris, fly ash, and non-hazardous solid waste. Historic fill material does not include any material that is chemical production waste or waste from processing of metal or mineral ores, residues, slag, or tailings. In addition, historic fill material does not include a municipal solid waste disposal site.

“Hortonsphere” is a spherical vessel that was used to store gas under high pressure.

“Interim Remedial Measure (IRM)” means a discrete set of activities to address both emergency and non-emergency site conditions, which can be undertaken without extensive investigation and evaluation, to prevent, mitigate, or remedy human exposure and/or environmental damage or the consequences of human exposure and/or environmental damage attributable to a site.

“Manufactured Gas Plant (MGP)” means a plant that used used to produce coal gas, carbureted water gas, or oil gas.

“No Further Action (NFA)” is a designation a site is given by the NYSDEC when investigation and/ or remediation results in contaminants below the regulatory standards, guidance and criteria and/or no adverse impacts to fish, wildlife and human health exist.

“Non-Aqueous Phase Liquid (NAPL)” means an immiscible liquid which remains as a separate phase or layer in the environment.

“NYSDEC” means the New York State Department of Environmental Conservation.

"NYSDOH" means the New York State Department of Health.

"Petroleum" or "Oil" is defined by Article 12 Section 172 of the NYS Navigation Law as oil or petroleum of any kind and in any form including but not limited to, oil, petroleum, fuel oil, oil sludge, oil refuse, oil mixed with other wastes and crude oils, gasoline and kerosene. For purposes of this guidance, oil include mineral oils or any other oil for which an investigation and/or remediation is determined necessary by the DER, to address a spill discharge or any disposal impacting public health or the environment.

"Project Manager (PM)" means the NYSDEC staff member with primary responsibility for ensuring that an investigation or remediation was completed in accordance with DER regulatory standards.

"Receptor" means any humans or biota which are, or may be expected to be, or have been, exposed to or affected by a contaminant from a site.

"Remedial action (RA)" means those actions taken at or near a site as may be required by the DER, including, without limitation, removal, treatment, containment, transportation, securing, or other engineering or institutional controls, whether of a permanent nature or otherwise, designed to ensure that any discharged contaminant is remediated in compliance with the applicable Standards, Criteria, and Guidance (SCGs) pursuant to Section 5 of DER-10.

"Remedial investigation (RI)" means actions to investigate contamination and determine the nature and extent of the contamination presented by a discharge or disposal at a site. The requirements of a remedial investigation are set forth at section 3 of DER-10.

"Remediation" or "remediate" means all necessary actions to clean up any known, suspected, or threatened discharge or disposal of contaminants, including, as necessary, the remedial selection, remedial design, remedial action and operation, maintenance and monitoring of the remedy.

"Residual product" means an immiscible liquid (NAPL) existing in the subsurface at concentrations below the residual saturation point, which is held in place by capillary forces and will, therefore, not drain from the formation.

"Risk assessment" is the characterization of the potential adverse health effects of human exposure to environmental hazards. It includes several steps: describing the potential adverse health effects based on an

evaluation of epidemiological, clinical toxicological and environmental research; extrapolating from those results to predict the type and estimate the extent of health effects in humans under given conditions of exposure; making judgment as to the number and characteristics of the persons exposed at various intensities and durations and ultimately judging whether there is a risk to public health and what the over all magnitude of the risk is.

“Sediment” means soils or organic material in water, as found in lakes, rivers, streams and other water bodies and in, or in close proximity to, wetland areas. Material found in enclosed sumps, sewers or piping systems not accessible to fish and wildlife and not forming any benthic or aquatic habitat are not considered sediments for the purpose of comparison to the NYSDEC Technical Guidance for Screening Contaminated Sediment.

“Site” means a confirmed or suspected inactive hazardous waste disposal site, a chemical or petroleum spill site, a hazardous substance disposal site, a site being addressed under the NYS Brownfields program, or a property being investigated under the NYS voluntary cleanup program. The site may be a specific area of a parcel or may extend beyond a parcel's boundaries.

“Site characterization” means the first phase in the process of identifying areas of concern at a site, which is conducted pursuant to section 3 of DER-10.

“Waters” means all lakes, bays, sounds, ponds, impounding reservoirs, groundwater, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic Ocean within the territorial limits of the State of New York, and all other bodies of water, natural or artificial, inland or coastal, fresh or salt, public or private, which are wholly or partially within or bordering the State or within its jurisdiction.

“Wetland” means any freshwater or tidal wetland including Federal jurisdictional wetlands, NYS regulated wetlands, and unregulated wetlands.

MAP OF HISTORIC MANUFACTURED GAS AND RELATED GAS STORAGE FACILITIES ON LONG ISLAND



LEGEND

- # KeySpan Corporation Environmental Asset Management
- ## LEGEND
- MANUFACTURED GAS PLANT SITE
 - HOLDER SITE
 - HORTONSHERE SITE
 - ILLUMINATING GAS WORKS SITE
- # Gas Storage Facilities on Long Island
-
- SOURCE: MAP CREATED WITH TOPOI™ 2000 WILL DEL OWER PRODUCTIONS (www.topo.com)

27

MAJOR FACILITIES

MANUFACTURED GAS PLANTS

Nassau County Sites

Glen Cove MGP
Hempstead - Clinton Road MGP
Hempstead - Intersection Street MGP

Suffolk County Sites

Babylon MGP
Bay Shore MGP
Halesite MGP
Patchogue MGP
Sag Harbor MGP

Queens County Sites

Far Rockaway MGP
Rockaway Park MGP

Manufactured Gas Plants

Most of the gas manufactured and used on Long Island came from the Carbureted Water Gas process. This was a cyclical process where air is passed over a bed of coal or coke in a "generator" to make it glowing hot. This is referred to as the "blow" run. When the glowing coals reach the desired temperature (generally, a few minutes), the air stream is shut down then steam is injected. The steam reacts with the glowing coals in the "make" run, to form a gas consisting primarily of carbon monoxide and hydrogen. As this reaction cools the glowing bed of coals the steam is shut off, completing the cycle, and air is again passed through the bed.

The gas produced in the "make" run passed from the generator into the carburetor where oil was sprayed or carbureted into the gas stream. This mixture passed over heated fire bricks in the carburetor which helped further vaporize the oil. The gas now consisted of the original carbon monoxide and hydrogen mixed with vaporized oil. This gas has a much higher BTU content and luminosity than the original gas coming from the generator. This gas stream then passed into the superheater where the mixture was "fixed" by passing over more hot fire brick.

The product gas now exited the gas making apparatus by passing through a wash box which served as a water seal. As the gas passed through the water it began to cool and tar precipitated from the gas. The tar water mix flowed to a tar water separator and the gas was further cleaned by passing through a tar scrubber or passing directly to a relief holder where it was stored temporarily before further treatment. As the gas cooled further precipitation of the volatilized oils occurred. This would collect in the relief holder base.

After temporary storage in the relief holder the gas was subjected to further tar removal then sulfur removal at the purifiers. The liquid waste stream would be routed to the tar water separators where tar would be removed for further processing and the water would be recycled into the system.

Tar was a major byproduct of the carbureted water gas process. A carbureted water gas plant using heavy oils to carburet the gas produced from two to four gallons of tar for each thousand cubic

feet of gas. At a relatively small plant such as Sag Harbor, the 1920 annual production of roughly twenty million cubic feet of gas would have also produced forty to eighty thousand gallons of tar. While most of this tar was reused as boiler fuel or sold, in advertent spills and leaks did occur.

Tar is a heavier than water complex chemical mixture. Chemicals of concern in tar include volatile chemicals, such as benzene, xylene, and toluene. It also contains polycyclic aromatic hydrocarbons (PAH) such as naphthalene, and benzo a pyrene. A number of the PAHs are carcinogenic compounds.

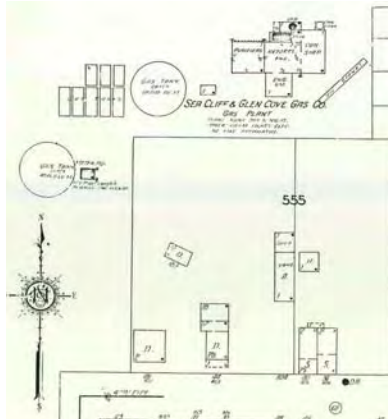
NASSAU COUNTY SITES



SITE HISTORY

The MGP began operation in 1904. In 1929 the plant was closed and the manufacturing facilities demolished shortly thereafter. Gas production reached a peak of 54 MMCF in 1928, making it a small-sized plant. An active electrical substation is currently located on the site. LIPA acquired the substation on this site when it acquired the LILCO transmission system, however, KeySpan retains the MGP clean-up obligations.

A PSA report was prepared on behalf of the EPA in June 1989. A Phase I report was completed in April 1997 and a Limited Screening Investigation was conducted in July 1998. In February 1999 an Abandoned Utility Investigation and Closure Work Plan was prepared. Implementation of the Work Plan took place in May 1999. Administrative Order on Consent (AOC) (D1-0001-98-11) was issued under the Voluntary Cleanup Program in September 1999. A Due Diligence Investigation Report was submitted in February 2000. A RI Work Plan was approved in January 2000 and a Revised RI Work Plan approved in November 2003. RI field investigations were completed in October 2005. The Draft Final RI was submitted in June 2006. The Draft Supplemental RI Work Plan was submitted to the NYSDEC in March 2007.



1931 Sanborn Map of Glen Cove MGP

| | |
|----------------------|-----------------------------|
| Address: | Grove Street, Glen Cove, NY |
| Region: | North Shore, Nassau County |
| Operating Timeframe: | 1904-1929 |
| Current Ownership: | LIPA |
| Acreage: | Approximately 1.9 acres |
| Category: | Small MGP |

KEY ISSUES

- MGP impacts limited to compact area beneath the former MGP and immediately adjacent to the north.
- No surface water impacts to Glen Cove Creek
- Additional sampling of Glen Cove Creek Sediments underway
- Residential properties adjacent to site

REGULATORY TIMELINE

- NYSDEC Site Number 1-30-089P
- PSA June 1989
- AOC (D1-0001-98-11) was issued under the Voluntary Cleanup Program in September 1999
- RI Work Plan approved January 2000
- Revised RI Work Plan approved November 2003
- RI Field Investigation – Phase I complete July 2004
- Preliminary Data Submittal and Proposed Additional Scope submitted October 2004
- RI Field Investigation – Phase II began April 2005 and was completed in October 2005
- Draft Final RI Report submitted to NYSDEC in June 2006
- Draft Supplemental RI Work Plan submitted to NYSDEC in March 2007
- Final RI Report expected in 2007
- NYSDEC expected to hold public meeting to present results of the RI in 2007

ON-GOING

- Final RI Report expected in 2007
- NYSDEC expected to hold public meeting to present results of the RI in 2007
- Well and basement survey to be conducted in 3Q 2007

COMMUNICATION MILESTONES

PROJECT START

- April 1999 LIPA Briefing on the AOC for Glen Cove
- April 1999 Information Kit to local officials and local media
- April 1999 Employee Briefings (active site)
- April 2004 Re-brief local officials regarding RI Start

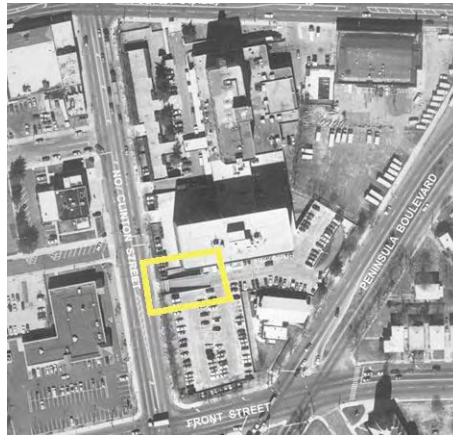
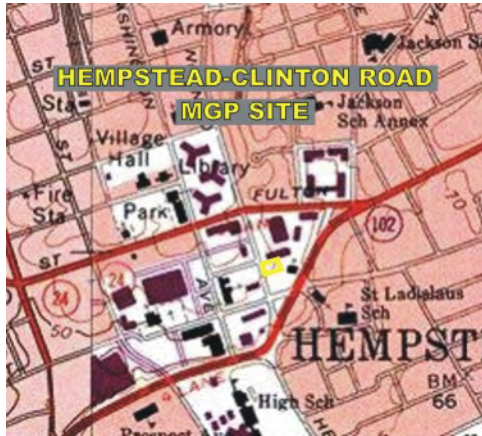
COMMUNICATIONS

- April 2004 Remedial Investigation Start (with handout)
- March 2005 Supplemental Remedial Investigation Start (with handout)
- March 2005 Letters and handouts re Access Agreements for private property investigations
- March 2005 Meeting with local officials re access issues
- March 2007 Well and Basement Survey Letter provided to the NYSDEC and NYSDOH

Telephone Hotline has been continuously maintained since April 2004.

Document Repositories have been continuously maintained since 2000.

Hempstead - Clinton Road MGP



SITE HISTORY

The MGP operations began as early as 1873. Hempstead Gas Light Company, owned by Pennsylvania Gas Improvement Company, operated the MGP from 1887 until 1904. The maximum gas production was 7 MMCF in 1904 making the plant a small-sized MGP. Plant operations were abandoned in 1905. The site was occupied by LILCO and a gasoline filling station in the 1950s and 1960s. By 1970, a hotel and hotel parking garage were constructed on the site. The parking garage is located over the gas plant property.

An AOC was issued for this site in September 1999. A PSA Work Plan was approved in April 2002 and a Final PSA Report submitted in March 2003. Contaminants were detected at low concentrations in only two of 16 soil samples. **In March 2003, the NYSDEC issued a qualified no further action (NFA) with a monitoring plan to be implemented.** Institutional controls/ engineering controls will likely be needed at the site.



Photograph taken in 2002 at the Hempstead – Clinton Road MGP

| | |
|----------------------|-------------------------------|
| Address: | Clinton Street, Hempstead, NY |
| Region: | Nassau County |
| Operating Timeframe: | Circa 1873-1904 |
| Current Ownership: | Private |
| Acres: | Approximately 2.5 acres |
| Category: | Small MGP |

KEY ISSUES

- 3rd Party owned
- Monitoring plan to be implemented
- Institutional controls/ engineering controls will likely be implemented

REGULATORY TIMELINE

- NYSDEC Site Number 1-30-106
- AOC (D1-0001-99-05) issued September 1999
- PSA Work Plan issued April 2002
- PSA Report submitted March 2003
- **Qualified NFA with monitoring in March 2003**

ON-GOING

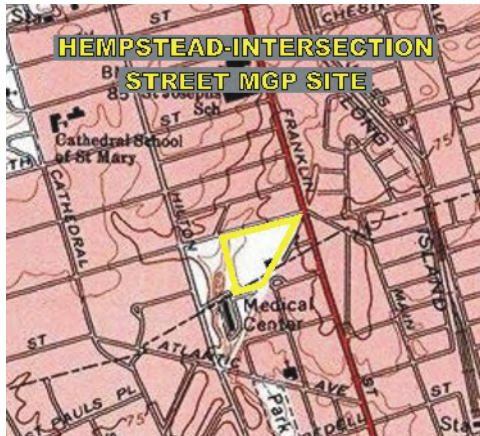
- **Qualified NFA with monitoring in March 2003**

COMMUNICATION MILESTONES

COMMUNICATIONS ACTIVITIES

- October 2001 Briefing of community officials, property owner, proximate neighbors, using handout material.
- March 2003 Briefing of community officials, property owner on PSA findings and No Further Action letter.

Hempstead - Intersection Street MGP



SITE HISTORY

MGP operations are believed to have begun in the early 1900s. The MGP operated until the mid 1950s, when the plant was demolished. Production peaked in 1948, when over 2,000 MMCF of gas was produced, making it a large MGP.

On behalf of LILCO, a Preliminary Investigation was conducted in 1990, followed by a Field Investigation in 1991 and a Phase II in 1992; a Baseline Risk Assessment in July 1992; a Remedial Alternative & Feasibility Analysis in November 1993; and a Contaminant Fate Investigation Report dated May 1995. Cut and Plug Interim Remedial Measures were undertaken in 1999. An AOC was issued in September 1999. RI work plan approved by the NYSDEC in December 1999. A supplemental RI work plan was approved in July 2001. Submitted RI report in February 2003. Supplemental RI work plan issued in August 2003. Final RI Report was submitted in March 2006 and approved in January 2007.



Historic photograph of the Hempstead Intersection Street MGP



Address: Intersection Street
Garden City and Hempstead, NY

Region: Nassau County

Operating Timeframe: Circa 1904-1950s

Current Ownership: KeySpan and Private Owner

Acres: Approximately 7.5 acres

Category: Large MGP

KEY ISSUES

- Public well field adjacent to site
- On site and off-site soil/sediment contamination
- On-site and off-site groundwater contamination
- Offsite 3rd Party contamination contributes to downgradient impacts

REGULATORY TIMELINE

- AOC (D1-0001-98-11) issued September 1999
- RI work plan approved December 1999
- Completed initial RI field program in 2000
- Supplemental RI approved July 2001
- Submitted Draft RI report to NYSDEC in 2002
- RI report submitted February 2003
- Supplemental RI Work Plan submitted August 2003
- Draft Final RI report to NYSDEC in 2004
- Final RI report to NYSDEC in 2005
- Completed additional RI sampling work per NYSDEC comments in 2005
- Submit public water supply well assessment reports for NYSDEC review fourth quarter 2005
- Final RI report submitted to NYSDEC in March 2006, approved in January 2007
- FS and RAP preparation in progress, expected 3Q-2007, estimated remediation start 3Q-2008
- Evaluation of potential IRMs in progress for possible construction start in the 3rd quarter 2007

ON-GOING

- FS and RAP preparation in progress, expected 3Q-2007, estimated remediation start 3Q-2008
- Evaluation of potential IRMs in progress for possible construction start in the 3rd quarter 2007

COMMUNICATION MILESTONES

PROJECT START

- March 1999 Information Kit to local media and local officials
- June 2000 Letter to local commercial property owners announcing Remedial Investigation start
- July 2000 Letter to proximate residential neighbors announcing Remedial Investigation start

OTHER COMMUNITY COMMUNICATIONS

- Well Survey to approximately 600 properties with follow-up phone calls to non-responders
- **Public meeting on Final RI June 5, 2007**

MEETINGS WITH LOCAL OFFICIALS

- 1999 to 2004- Multiple discussions with Hempstead Village Mayor
- Fall 2005 Hempstead Village Mayor and Garden City Village official regarding Site Status and Supplemental RI
- March 2007 Hempstead Mayor and Garden City Village officials regarding Final Remedial Investigation Report key findings
- March 2007 Local water authorities regarding Final RI Key Findings

COMMUNICATIONS HANDOUTS

- July 2000 Remedial Investigation Start
- July 2000 Commercial Property Briefings
- August 2003 Supplemental Remedial investigation Start
- April 2006 Supplemental RI re water issues
- March 2007 Final Remedial Investigation Report

Document Repositories continuously maintained since April 2000.

Telephone Hotline continuously maintained since April 2000.

SUFFOLK COUNTY SITES



SITE HISTORY

The MGP was constructed and began operating in 1911. Gas production was 10 MMCF in 1912, making it a small plant. The plant was used as an auxiliary plant and operated only in emergencies from circa 1913 to the 1930s. It was used as a distribution facility until 1961. The site has been occupied by various commercial businesses (e.g., storm window manufacturer, fluorescent light manufacturer, and fuel oil company). An assisted living care facility and residential properties are located adjacent to the MGP site.

KeySpan executed an Order of Consent for the site in September 1999. A PSA was completed in February 2003, and soil and groundwater impacts were detected. The site was included in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007.

| | |
|----------------------|------------------------------|
| Address: | Evergreen Street Babylon, NY |
| Region: | South Shore, Suffolk County |
| Operating Timeframe: | Circa 1911-1961 |
| Current Ownership: | Private |
| Acreage: | Approximately 0.8 acre |
| Category: | Small MGP |

KEY ISSUES

- Soil and groundwater impacts (possible MGP)
- Residential properties adjacent to site
- Senior Citizen Apartments located adjacent to the site

REGULATORY TIMELINE

- NYSDEC Site Number 1-52-181
- AOC D1-0001-99-05 issued September 1999
- PSA February 2003
- Included in AOC A2-0552-0606 issued February 2007
- RI Work Plan to be issued in December 2007

ON-GOING

- RI Work Plan to be issued in December 2007



Photograph taken of the Babylon MGP site from Evergreen Street facing west in June 2004

COMMUNICATION MILESTONES

LOCAL OFFICIALS

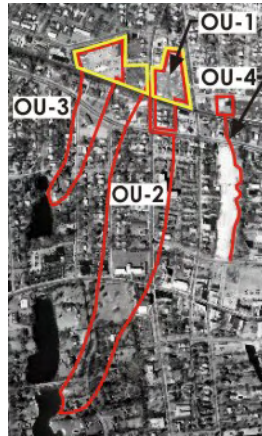
- March 8, 2007 Verbal briefing of Babylon Town Supervisor. Other meetings to be scheduled.
- March 14, 2007 Verbal briefing of County Legislator.

PROPERTY OWNER

- Property manager for fuel oil company has been briefed and is contacting owner to determine whether a meeting is required.
- Contact with owner of garden apartments raises uncertainty as to whether any part of their property is part of former MGP site-property is being evaluated further. However, they have been briefed on status.

PROXIMATE NEIGHBORS

- Three proximate neighbors have been provided in-person briefings and site-specific handout material.



SITE HISTORY

The MGP began operations approximately in the late 1880s and operated until circa 1973. Most of the facilities were demolished soon after 1973. A vacant LIPA property (former electric substation) is located adjacent to the site.

A groundwater and oil recovery system was installed and operated from 1949 to 1953. An environmental investigation was conducted in 1979 at the request of the Suffolk County Department of Health and the NYSDEC to investigate groundwater in the area. Additional environmental investigations occurred in the 1980s and 1990s. In September 1999, an AOC was issued for the entire site. A RI Report was approved by the NYSDEC in January 2003.

OU-1: Bench testing to evaluate the applicability of in-situ chemical oxidation (ISCO) of BTEX/PAHs and residual non-aqueous phase liquid (NAPL) as part of the RAP process took place in 2003, and an ISCO Bench Test Report was submitted in November 2003. An IRM for Bay Shore West was completed in February 2004. In August 2004, a RAP was approved. In December 2004, the construction report for Bay Shore West was issued. A Remedial Design Work Plan was submitted in February 2005. The Remedial Design was accepted in Fall 2006. The Phase I Remedial Design is complete and



Address:

5th Avenue, Bay Shore, and
1 Orinoco Drive, Brightwaters, NY
South Shore, Suffolk County

Region:

Operating Timeframe:

Circa 1889-1973

Current Ownership:

KeySpan and Multiple Private
Owners

Acreage:

Unknown

Category:

Large MGP

KEY ISSUES

- Four Operable Units (OUs)
- OU-1 contaminated soil and groundwater
- OU-2 contaminated offsite groundwater plume
- OU-3 contaminated soil, groundwater and offsite groundwater plume
- OU-4 contaminated soil and groundwater from former MGP related cesspool migrating into nearby creek
- OU-1, 2, 3 and 4 located or partially located on private properties

REGULATORY TIMELINE (OU-1)

- Work Plan approved July 1999
- AOC (D1-0001-98-11) issued September 1999
- Supplemental Work Plan approved November 2001
- RI Report issued April 2002
- RI approved January 2003
- ISCO Bench Test Report submitted November 2003
- IRM Work Plan submitted February 2004
- RAP approved August 2004
- IRM Construction Report submitted December 2004
- RD Work Plan submitted February 2005
- **Phase I – Barrier Wall and Water Treatment – Remedial Design complete 1Q-2007, construction started February 2007, estimated completion 2Q-2007**
- **Phase II – Source Area Excavation – Design and**

*Historic photograph of the Bay Shore MGP site construction began in February 2007. **Phase II remedial contractor procurement is in progress. Construction is estimated to start in the 3rd quarter of 2007. Phase III pilot studies are complete and the preliminary design is in progress. Quarterly groundwater monitoring is on-going.***

OU-2: IRM OU-2A (Groundwater Contaminant Plume Mitigation) Work Plan was approved in December 2004. IRM OU-2A construction completed in November 2005. Soil vapor and indoor air testing to evaluate potential vapor intrusion pathway is on-going in conjunction with NYSDOH, SCDHS, and NYSDEC. Design of two additional new oxygen injection IRMs in progress with planned construction Third Quarter 2007 Quarterly groundwater monitoring is on-going. System operation and monitoring on-going.

OU-3: IRM OU-3A (Brightwaters Yard and Downgradient Groundwater Investigation and Treatment) began in August 1999 and is currently on-going. IRM OU-3B (Brightwaters Yard Underground Storage Tank Removal and Area Investigation) commenced in September 1999 and was completed in March 2001. IRM OU-3C (Brightwaters Yard Underground Storage Tank Area Remediation) was conducted from February through June 2002. A Summary Report of OU-3C was submitted in December 2002. A Supplementary Activities Work Plan for IRM OU-3A was approved in February 2004. Remedial Construction on OU-3 took place from May to December 2004 and included source excavation, chemical oxidation treatment and oxygen injection. O&M began in January 2005. IRM OU-3A completion report submitted in August 2005. Soil vapor and indoor air testing to evaluate potential vapor intrusion pathway is on-going in conjunction with NYSDOH, SCDHS and NYSDEC. Quarterly groundwater monitoring is on-going.

OU-4: IRM OU-4A (Watchogue Creek, Cesspool, Pond and Creek Investigation) occurred from December 1999 to March 2001. IRM OU-4B (Watchogue Creek Sediment Removal and Creek Restoration) was completed in May 2002. An IRM OU-4D Work Plan (Cesspool Area Remediation) was approved in January 2005. A Work Plan for IRM OU-4C (Pond Remediation) was submitted in May 2005. Pond Area excavation IRM and SISCO treatment planned, lengthy access negotiations in progress for OU-4 and OU-4C, consequently, constructions start is uncertain. Quarterly groundwater monitoring is on-going.

Bay Shore Regulatory Process: Following the completion of the initial phase of the RI, the Bay

procurement in progress, estimated construction start 3Q-2007

- **Phase III – In-Situ Treatment – Pilot studies complete, preliminary design in progress, estimated construction start 4Q-2008**

REGULATORY TIMELINE (OU-2)

- AOC (D1-0001-98-11) issued September 1999
- Supplemental Work Plan approved November 2001
- RI Report approved January 2003
- IRM Work Plan approved December 2004
- IRM construction completed in November 2005
- **System operation and monitoring in progress**
- **Design of two additional new oxygen injection IRMs in progress, planned construction 3Q-2007**

REGULATORY TIMELINE (OU-3)

- **IRM OU-3A started August 1999, on-going**
- IRM OU-3B started September 1999, completed March 2001
- AOC (D1-0001-98-11) issued September 1999
- IRM OU-3C Work Plan submitted October 2001
- Supplemental Work Plan approved November 2001
- IRM OU-3C conducted February to June 2002
- RI approved January 2003
- IRM OU-3C Report submitted December 2002
- IRM OU-3A Supplementary Activities approved February 2004
- Site Management Plan submitted April 2004
- IRM OU-3A Draft Completion Report submitted December 2004
- IRM OU-3A completion report submitted August 2005.
- **System operation in progress**
- **Catch basin vapor survey in progress**
- **Additional source area mitigation, procurement in progress, estimated construction start 3Q-2007**

REGULATORY TIMELINE (OU-4)

- AOC (D1-0001-98-11) issued September 1999
- IRM OU-4A started December 1999, completed March 2001
- Supplemental Work Plan approved November 2001
- IRM OU-4B started September 2000, completed May 2002
- RI approved January 2003
- IRM OU-4C Work Plan submitted May 2005
- IRM OU-4D Work Plan submitted January 2005
- IRM OU-4D IRM underway in November 2005
- Cesspool IRM December 2005

Shore site was segregated into four Operable Units as OUs 2, 3, and 4 have unique and separate issues. This permitted the remedial process to proceed at an accelerated pace while the complexities of the main site area (OU-1) were addressed under the RAP process. OU-2 and 3 are presently in the operating/monitoring phase. After two years of monitoring, the IRM will be evaluated for consideration as the permanent remedy under the RAP process.

- IRM OU-4C Work Plan delayed because of private property access issues.
- In-situ chem.-ox (SISCO) Technology Pilot Study conducted on OU-1 in 2006.
- **SISCO treatment design in progress, construction start estimated 3Q-2007**

ON-GOING

OU-1

- Phase I – Barrier Wall and Water Treatment – Remedial Construction
- Phase II – Source Area Excavation – Design and Procurement (in progress)
- Phase III – In-Situ Treatment –Preliminary design (in progress)
- Quarterly groundwater monitoring (in progress)

OU-2

- System operation and monitoring (in progress)
- Design of two additional new oxygen injection IRMs (in progress)
- Soil vapor and indoor air testing to evaluate potential vapor intrusion pathway (in progress)
- Quarterly groundwater monitoring (in progress)

OU-3

- System operation (in progress)
- Catch basin vapor survey (in progress)
- Additional source area mitigation, procurement (in progress)
- Estimated remedial construction start
- Soil vapor and indoor air testing to evaluate potential vapor intrusion pathway (in progress)
- Quarterly groundwater monitoring (in progress)

OU-4

- SISCO treatment design in progress and remedial construction (pending access)
- Quarterly groundwater monitoring (in progress)

COMMUNICATIONS AND OUTREACH PROGRAM

Because of the particular requirements of the Bay Shore/Brightwaters former MGP site project, since inception in 1999 there have been several hundred one-on-one meetings with property owners. These have included general briefings on the project, meetings to let property owners know of pending work, requests for access agreements, responses to requests for meetings, responses to specific concerns expressed by property owners about conditions on their properties, performance of air monitoring or groundwater supply well tests (and related presentations of results) and follow-ups related to activities conducted on those properties.

In addition to meetings with property owners, frequent in-person or telephone meetings have been held with local elected officials – particularly Town of Islip and Villages of Bay Shore and Brightwaters, to provide officials with updates on progress or specific issues, to discuss specific planned activities that may have impacts on Town or Village functions or properties and to obtain required permits or access to Town or Village owned properties. Again, these meetings are consistent with the goals and strategies of both the Communications Management Strategic Plan (CMSP) and Community Participation Plan (CPP), but are not formally planned elements of them.

PUBLIC MEETINGS

- September 1999 – Lawrence Farms and O-Co-Nee Associations
- December 1999 – Lawrence Farms Association Meeting
- January 2000 – NYSDEC/NYSDOH Public Meeting
- January 2003 – NYSDEC/NYSDOH Public Meeting
- September/October 2003 Bay Shore Summit/O-Co-Nee Association/Lawrence Farm Association Public Meetings
- May 2004 – NYSDEC/NYSDOH Public Meeting re Remediation Plans
- March 2006 – NYSDEC/NYSDOH Public Meeting re Remediation Progress
- June 2006 – Summit Council (Task Force) Meeting
- November 2006 – Summit Council (Task Force) Meeting
- February 2007 Summit Council (Task Force) Meeting

COMMUNITY UPDATES (FACT SHEETS, NEWSLETTERS, PROGRESS REPORTS)

- Fall 1999
- Winter 2000
- April 2000
- June 2000
- Winter 2001
- Winter 2001 (NYSDEC Fact Sheet)
- Spring 2001
- Winter 2002
- Winter 2003 (In form of NYSDEC Fact Sheet)
- Spring 2004 (Fact Sheet)
- June 2004 (Report on Public Meeting and IRMs)
- September 2004 ROD Fact Sheet
- October 2005 Handout re Reports of Rats
- March 2006 NYSDEC Fact Sheet re Remediation Progress
- Summer, Fall 2006 Quarterly OM&M Reports
- February 2007 NYSDEC Fact Sheet re OU-1 IRM and Site Progress
- April 2007 NYSDEC Fact Sheet re OU-1 Construction Start
- April 2007 Community Mailing re Construction Start and road closure



DOCUMENT REPOSITORIES

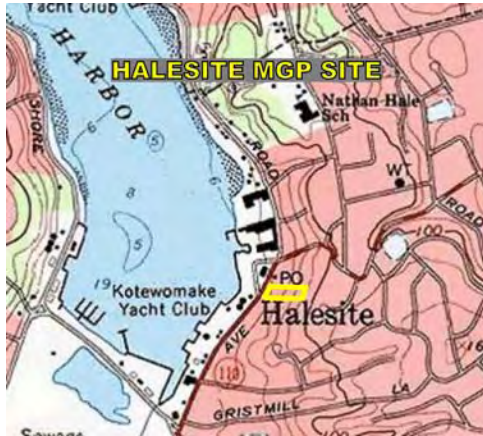
- The local Document Repository in the Bay Shore Public Library and the NYSDEC Library in Stony Brook have been fully maintained, containing copies of all completed reports on investigations and IRMs.

TELEPHONE HOTLINE

- The site's dedicated Telephone Hotline is monitored daily. All incoming calls are returned within one business day. Updates are recorded when significant work begins or a public meeting is scheduled.

WEBSITE

- Website for the site was launched in April 2007



SITE HISTORY

The MGP began operating circa 1892. The plant operated until 1918. The plant was demolished after 1919. LIPA acquired the substation on this site when it acquired the LILCO transmission system, however, KeySpan retains the MGP clean-up obligations.

A Phase I Investigation was conducted between 1995 and 1997 and a Report was completed in August 1997. A Consent Order was issued under the Voluntary Cleanup Program in September 1999 and a RI Work Plan Approved in December 1999. A RI Report was issued in December 2002. A Supplemental RI Report was completed in April 2004. A clean utility corridor was installed in the western portion of the site in August 2005. The Draft RAP was submitted to the NYSDEC in September 2005. A clean utility corridor letter was issued in November 2005. The Final RAP was approved by the NYSDEC in March 2006. **Groundwater monitoring is currently being conducted at the site. RD construction is estimated to start in 2007.**



Historic photograph of the Halesite MGP

| | |
|----------------------|---|
| Address: | New York Avenue, Youngs Hill Road Huntington, NY |
| Region: | North Shore, Suffolk County |
| Operating Timeframe: | Circa 1892-1918 |
| Current Ownership: | LIPA |
| Acreage: | Approximately 1 acre |
| Category: | MGP |

KEY ISSUES

- Residential properties adjacent to site
- Located 200 ft. from Huntington Harbor
- Electric substation located on portion of site
- Soil/sediment contamination (MGP)
- Impacts beneath adjacent property to the south

REGULATORY TIMELINE

- Site Number 1-52-173
- AOC (D1-0001-98-11) was issued under the Voluntary Cleanup Program in September 1999
- RI Work Plan approved December 1999
- RI Field Investigation completed July 2001
- RI Report submitted December 2002
- Supplemental RI Work Plan approved May 2003
- Supplemental RI submitted April 2004
- Clean utility corridor installed in August 2005
- Draft RAP issued in September 2005
- Clean utility corridor installation letter issued in November 2005
- Final RAP submitted in March 2006, approved by NYSDEC
- **RD construction estimated to start in 2007/2008**

ON-GOING

- **RD construction estimated to start in 2007/2008**

COMMUNICATION MILESTONES

PROJECT START

- April 1999 LIPA Briefing on the AOC for Halesite
- April 1999 Information Kit to local media and local officials
- April 1999 Employee Briefings (active site)

FACT SHEETS (NYSDEC)

- September 2004 Final Remedial Investigation Report
- February 2006 Remedial Action Plan

PUBLIC MEETINGS

- October 2004 Final Remedial Investigation Report (Availability Session)
- February 2006 Remedial Action Plan

COMMUNICATIONS HANDOUTS

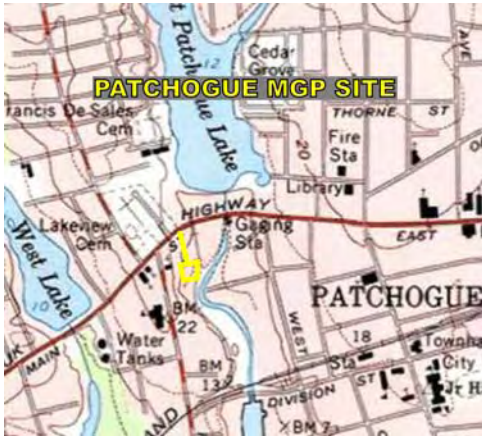
- February 2001 Remedial Investigation Start
- Indoor Air Sampling on private properties
- February 2003 Supplemental Remedial Investigation Start

OTHER COMMUNICATIONS

- All private property owners whose properties received indoor air testing and/or groundwater monitoring received letter reports and supporting data and were offered meetings with KeySpan personnel.
- Communications with the Town of Huntington officials regarding access to the town marina. Project updates were provided to officials in Town's Environmental Control Group.

Document Repositories continuously maintained since 2001

Telephone Hotline continuously maintained since 2001



SITE HISTORY

The Patchogue Gas Company constructed the MGP on the site in 1906, and produced gas through 1917. The maximum gas production was 18 MMCF in 1916 making the plant a small-sized MGP. From 1918 to 1925 the Patchogue MGP was only operated in emergencies, and had very limited gas production. After 1925, it was modified to a gas distribution facility operated by LILCO. LILCO sold the site in the 1970s and it was used as a refrigeration equipment and scrap storage yard until KeySpan purchased the site in May 2005 for purposes of remediation.

According to the U.S. Environmental Protection Agency, a Preliminary Assessment (PA) was prepared for the site dated September 24, 1986. EPA concluded that no further remedial action planned (EPA NFRAP) and archived the site within EPA's Superfund Program. A PSA Report dated March 2002 indicated that possible MGP contaminants were detected in soil, groundwater, surface water, and sediment samples. Site is included as part of the multiple site Order on Consent (AOC) and Administrative Settlement (Index # A2-0552-0606) issued in February 2007.



Photograph of the Patchogue MGP site taken in 2001

Address: West Main Street, Patchogue, NY
Region: South Shore, Suffolk County
Operating Timeframe: 1906-1925
Current Ownership: KeySpan
Acreage: Approximately 2 acres
Category: Small MGP

KEY ISSUES

- Soil, groundwater, surface water, and sediment impacts are MGP-related.

REGULATORY TIMELINE

- EPA Preliminary Assessment September 1986
- NFRAP and archived September 1986
- NYSDEC Site Number 1-52-182
- AOC (D1-001-99-05) issued September 1999
- Preliminary Site Assessment March 2002
- Included in AOC Index # A2-0552-0606
- Remedial Investigation Work Plan is scheduled to be issued in September 2007**

ON-GOING

- Remedial Investigation Work Plan is scheduled to be issued in September 2007**

Communications Milestones – Patchogue

PSA PERIOD

- 2000 Briefing of local officials on PSA under Order on Consent. Meetings and correspondence with property owner.
- March 2002 Meetings and correspondence with property owner re results of PSA.
- April 2002 Briefing of local officials re PSA.
- August 2005 Briefing of local officials regarding site status and next steps in investigation and remediation process.

SITE ACTIVITIES

- September 2006 Handout in English and Spanish for outreach to local officials and proximate neighbors related to demolition of structures on property.
- December 2006 Handout in English and Spanish for outreach to proximate neighbors related to the building of a retaining wall on a portion of the site.

REMEDIAL INVESTIGATION UNDER FEBRUARY 2007 ORDER ON CONSENT

- March 5, 2007 local officials briefed.

In addition to the focused meetings, KeySpan has kept local officials updated on site status during meetings on other subjects.



Photograph dated March 14, 2000

SITE HISTORY

MGP operations began in 1859 and continued until 1929. Annual production never exceeded 39 MMCF, making it a small MGP. In 1929, LILCO purchased the site and converted the site from gas manufacturing to gas distribution. Gas production structures were removed and storage capacity was increased. A Hortonsphere and three cylindrical natural gas storage tanks are currently located on a portion of the former MGP site. The tanks, Hortonsphere, and regulator and compressor station were removed in 2006.

Several environmental investigations were undertaken between 1988 and 1997. In September 1999, an AOC was issued and a RI Work Plan approved in December 1999. A RI Report was submitted in April 2002. A Supplemental RI took place from March to June 2002 and the Supplemental RI Report submitted in December 2003. A Supplemental Field Program Report was submitted in February 2005. Groundwater monitoring is on-going at the site. A Draft FS was submitted to the NYSDEC in March 2005 and the Final FS was submitted September 2005. The PRAP was issued in January 2006. **Pre-remedial design activities are scheduled for April 2007.**



Photograph of the Sag Harbor Hortonsphere taken in 2002

Address:

Bridge Street and West Water Street
Sag Harbor, NY

Region:

Suffolk County

Operating Timeframe:

Circa 1859-1929

Current Ownership:

KeySpan

Acreage:

Approximately 0.8 acre

Category:

Small MGP

KEY ISSUES

- Soil contamination
- Groundwater contamination
- On site and off-site contamination
- In vicinity of Sag Harbor Cove
- Access to adjacent commercial and Village properties

REGULATORY TIMELINE

- Site listed as part of Sag Harbor Bridge Street site and subsequently delisted
- NYSDEC Site Number 1-52-159
- Preliminary Site Assessment submitted to DEC 1996
- Site listed as NYS Class II Site 1997
- AOC (D1-0002-98-11) issued September 1999
- RI Work Plan approved December 1999
- RI Report was submitted April 2002
- Supplemental RI Report submitted December 2003
- Supplemental Field Program Report issued February 2005
- Draft FS submitted in March 2005
- Final FS is submitted in September 2005
- PRAP was issued in January 2006
- ROD was issued in March 2006
- Indoor air sampling conducted in March 2007
- **Pre-RD activities scheduled for April 2007, estimated construction start 4Q-2007**

ON-GOING

- **Pre-RD activities conducted 2Q-2007, estimated construction start 4Q-2007**

COMMUNICATIONS MILESTONES

PROJECT START

- Information Kit distributed to officials, media
- Door-to-Door visits with proximate neighbors March, 2000
- Document Repositories opened March, 2000

FACT SHEETS (NYSDEC)

- April 2002 (Remedial Investigation)
- January 2006 (PRAP)
- April 2006 (ROD)

PUBLIC MEETINGS*

- September 2001 Composh (community organizations)
- April 2002 NYSDEC Public Meeting re remedial Investigation Report
- January 2006 Availability Session re RAP
- January 2006 Public Meeting re RAP

*All announced with newspaper advertisements in Sag Harbor newspapers

MEETINGS WITH LOCAL OFFICIALS

Briefings were done at project start in March 2000; to update status in January 2005, to present Remedial Alternatives in December 2005, and in the post-PRAP period to discuss dewatering issues)

COMMUNICATIONS HANDOUTS

- Composh Meeting 9.2001
- April 2002 Public Meeting re RI Report
- July 2002 Supplemental RI Start
- January-March 2004 Indoor Air Testing (door-to-door)
- June 2005 Decommissioning of Hortonsphere
- September 2005 – Architecture Review Board regarding Hortonsphere
- December 2005 Remedial Alternatives (FS)
- December 2005 Aquifer impact test
- January 2006 PRAP Meetings
- April 2007 Remedial Design Investigation

HOTLINE

The Hotline has been in continuous operation and maintained in an updated condition since March 2000.

DOCUMENT REPOSITORIES

The Document Repositories have been fully maintained since March 2000.

OTHER

All property owners whose properties were subject to indoor air testing received detailed letters and data with results and were offered meetings with KeySpan and NYSDOH officials.

QUEENS COUNTY SITES



SITE HISTORY

The MGP was constructed approximately in the mid 1890s and operated until circa 1909. LILCO acquired the Far Rockaway MGP in 1923. The property was subdivided and commercial/ industrial buildings were constructed on the site in the early 1970. The commercial/ industrial buildings currently occupy the site.

An AOC for the site was issued in September 1999. A PSA was conducted in 2002 and a final PSA report, dated March 2003, was submitted and accepted by NYSDEC, and indicated that the Far Rockaway MGP would require further investigation. The site was included in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007.



Photograph taken in 2004 of the Far Rockaway MGP site from Brunswick Avenue

Address: Brunswick Avenue, Queens, NY
Region: Far Rockaway, Queens
Operating Timeframe: Circa 1890s-1909
Current Ownership: Multiple Private Owners
Acreage: Approximately 1 acre
Category: Small MGP

KEY ISSUES

- Residential properties adjacent to site

REGULATORY TIMELINE

- NYSDEC Site Number 2-41-032
- AOC (D1-0001-99-05) issued September 1999
- Work Plan April 2002
- Final PSA March 2003
- Subject to a future RI or focused RI under a future consent order with NYSDEC
- Included in AOC A2-0552-0606 issued February 2007
- RI Work Plan to be issued in June 2007

ON-GOING

- RI Work Plan to be issued in June 2007

COMMUNICATION MILESTONES

LOCAL OFFICIALS

- March-April 2007 Briefings have been provided to offices of City Council members, Assemblywoman, State Senator and Congressional Representative.

OWNERS

- March- April 2007 All owners have been contacted and four of six have received briefings and handout material.

COMMUNITY ORGANIZATIONS

- March-April 2007 Briefings have been provided to Community Board 14 and Rockaway Chamber of Commerce.

PROXIMATE NEIGHBORS

- Door-to-door visits attempted with all 16 proximate residences. Handout material left with residents responding to visits.



SITE HISTORY

MGP operations began in the late 1870s. The MGP operated until 1958, when the plant was demolished. The MGP annually produced over 1,000 MMCF of gas from 1924 until the 1950s and peaked at over 4,600 MMCF in 1950, making it a large MGP.

A Site Inspection Report was completed in 1989 on behalf of the U.S. EPA. In 1997, a Phase I Report was prepared. An IRM was completed in the Rockaway Beach Substation—Area C in 2000. A Substation Investigation Report and Delisting Petition was prepared in August 2000. In October 2000, the NYSDEC approved of KeySpan's request to reclassify a portion of the MGP site. Remedial investigations were completed in 2002. An IRM was completed in the Bulkhead Area in 2002. A FS was approved in July 2004 and the NYSDEC issued a PRAP in August, 2004. An IRM was completed in the Bulkhead Area in late 2004. The PRAP and ROD were issued for the site in 2004. In February 2005, the RD Work Plan was submitted for review. The NYSDEC subsequently approved the RD work plan in January 2006. The Preliminary Design was submitted to the NYSDEC in May 2006. The NYSDEC subsequently approved the Preliminary Design in January 2007. **Final RD in 2007 with construction estimated to start in the 4th quarter of 2007.**



Historic photograph of the Rockaway Park MGP



| | |
|----------------------|---|
| Address: | 309-311 Beach Channel Drive Queens, NY |
| Region: | Rockaway Park, Queens |
| Operating Timeframe: | Circa 1870s-1958 |
| Current Ownership: | KeySpan |
| Acreage: | Approximately 9.8 acres |
| Category: | Large MGP |

KEY ISSUES

- Former LIPA electric substation located on site (demolished)
- Adjacent active LIPA electric substation located on a portion of the former MGP which is no longer part of the site regulated under the AOC
- Active natural gas regulator station relocated off-site in 2006
- Jamaica Bay located nearby
- New York City owned 0.6 acre strip of land (Bulkhead Area) is considered part of the site

REGULATORY TIMELINE

- NYSDEC Site Number 2-41-029
- AOC (D1-0002-98-11) issued September 1999
- RI Work Plan approved October 1999
- Bulkhead Area Work Plan approved March 2002
- Supplemental RI Work Plan approved June 2002
- RI Report issued October 2002
- Final RI Report issued May 2003
- IRM Construction began June 2004
- FS issued July 2004
- IRM Construction Report issued October 2004
- PRAP issued August 2004
- ROD issued October 2004
- RD Work Plan submitted February 2005
- RD Work Plan approved by the NYSDEC December 2005
- Preliminary Design submitted to NYSDEC in May 2006
- Preliminary Design approved by the NYSDEC in January 2007
- **Final RD in 2007, estimated construction start 4Q-2007**

ON-GOING

- **Final RD in 2007, estimated construction start 4Q-2007**

COMMUNICATION MILESTONES

PROJECT START

- December 1998 Employee Notifications
- March 1999 Information distributed to local officials and local media

FACT SHEETS (NYSDEC)

- September 2001 Remedial Investigation start
- January 2003 Final Remedial Investigation Report
- August 2004 PRAP
- October 2004 ROD

PUBLIC MEETINGS

- February 2001 State Assemblywoman community committee regarding possible offsite materials
- September 2001 Public Meeting with LIPA regarding Substation Decommissioning and de-listing
- July 2002 State Assemblywoman community committee regarding asbestos issues
- January 2003 (NYSDEC) Remedial Investigation Report and IRM's
- April 2004 State Assemblywoman community committee regarding site status
- September 2004 PRAP
- July 2006 State Assemblywoman community committee (Update)

COMMUNITY NEWSLETTER

- August 2004 regarding PRAP

COMMUNICATIONS INITIATIVES*

- September 2001 Site Activities Update
- December 2001 Underground cable and wires relocations
- May 2002 Substation Decommissioning
- July 2002 Jamaica Bay Bathymetry Study
- January 2003 Final RI
- November 2003 Supplemental RI Start
- February 2004 Feasibility Study
- April 2004 NYC Bulkhead IRM
- March 2005 Field Work Update
- September 2005 Tunnel Inspections
- January 2006 Barrier Pilot Test
- September 2006 Building Demolitions
- July 2006 Site Status

* State Assemblywoman Office was provided briefings on activities.

HOLDER STATIONS

Nassau County Sites

East Garden City (Stewart Avenue) Holder

Glenwood Landing Holder

Inwood Holder

Long Beach Holder

Holder Stations

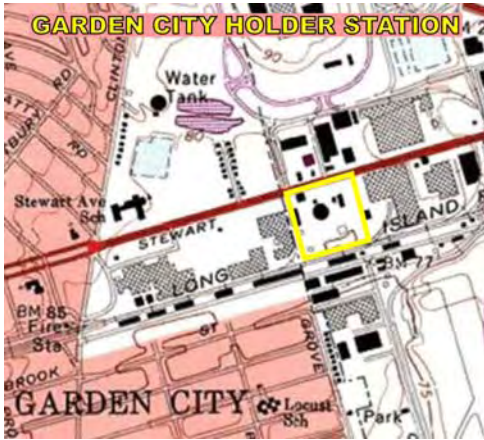
Gas holders are used to store manufactured or natural gas at various points in the distribution system. The holders constructed in the early part of the 20th century were low pressure holders with either a water or tar seal. The water seal holders were essentially inverted cups with telescoping sections in a bowl of water. When gas entered the holder, the cup would rise and extend the telescoping sections. The water would continue to form a seal at the bottom of the cup. Water sealed holders did not produce any contaminating compounds; however, after years of operation tar like condensate sludge containing hydrocarbons would collect in the base of the water seal. Depending when the holders were decommissioned and demolished, remnants of this sludge may still exist. While not being of significant volume this could create local conditions of environmental concern.

Tar sealed holders had a stationary shell and an internal piston that rose and fell when gas entered the cylinder. An oily tar was used to provide a seal around the edge of the piston. Tar, containing hydrocarbons of concern, could have been leaked or have been inadvertently spilled during operations or upon decommissioning and demolition.

Both tar sealed and water sealed holders were large metal structures. Typically, to prevent corrosion, these structures were coated with paint containing lead. Maintenance painting and scraping during operations could have deposited lead in the vicinity of the holders.

NASSAU COUNTY SITES

East Garden City (Stewart Avenue) Holder



SITE HISTORY

A tar sealed gas holder station operated on the site from at least the 1940s until about 1965. The East Garden City (Stewart Avenue) Holder operated by the LILCO was a remote gas distribution holder with no gas production facilities on site. The site is currently occupied by an active LIPA substation. KeySpan Stewart Avenue Gas Plant and Gate Station and New York Power Authority facilities on-site.

The site was included in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007.

Address:

600-620 Stewart Avenue
Hempstead, NY

Region:

Nassau County

Operating Timeframe:

Circa 1940s-1965

Current Ownership:

LIPA

Acreage:

Approximately 9.5 acres

Category:

Holder

KEY ISSUES

- Possible MGP impacts

REGULATORY TIMELINE

- NYSDEC Site Number 1-30-120
- Included in AOC A2-0552-0606 issued February 2007
- RI Work Plan to be issued in December 2008

ON-GOING

- RI Work Plan to be issued in December 2008



Historic photograph of the East Garden City (Stewart Avenue) Holder

COMMUNICATION MILESTONES

LOCAL OFFICIALS

- Briefings have been held with the Village of Garden City, Town of Hempstead, Village of Hempstead and other local and state elected officials.



SITE HISTORY

The site was developed as a natural gas cracking plant in 1949. The site was subsequently used as a natural gas regulating station, propane storage, and for vaporization. A laboratory facility was built on the site in the 1970s. By 2001, all the gas facilities had been demolished. In 2002 the site was redeveloped with a 79-megawatt natural gas turbine power generation facility. An active LIPA substation is located on site pursuant to an easement.

A VCA was applied for in March 2000 and signed in March 2001. Data collected prior to this date was accepted in the VCA. A RI was completed in September 2001. A RAP was approved and excavation work and capping was completed in January 2002. A bench scale treatability study was completed for in-situ groundwater treatment using chemical oxidation. **The final design of the groundwater treatment system was delayed due to the discovery of a large up-gradient groundwater plume (aka Glen Head Groundwater Plume). KeySpan collected additional groundwater data to support this scenario, and is working with the NYSDEC to close out the groundwater issue and the VCA.**



Historic photograph of the Glenwood Landing Holder

Address:

Shore Road, Glenwood Landing, NY

Region:

North Shore, Nassau County

Operating Timeframe:

1949-1975

Current Ownership:

KeySpan

Acreage:

Approximately 20 acres

Category:

Holder

KEY ISSUES

- Site subdivided into three discrete areas
- Soil and groundwater contamination
- Groundwater contamination now believed to be from upgradient 3rd party sources (Aka Glen Head Groundwater Plume)
- Sale of shore side parcels to the Town

REGULATORY TIMELINE

- VCA signed March 2001
- RI completed September 2001
- RAP approved
- RA Excavation Work and Capping completed January 2002
- Bench Scale Groundwater Treatability Study completed
- **VCA requirements for groundwater treatment on hold while NYSDEC reviews KeySpan's supplemental groundwater data report on identified upgradient sources of groundwater contamination**

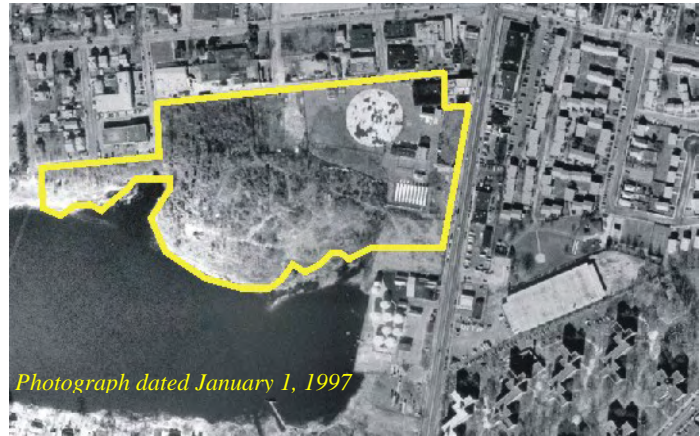
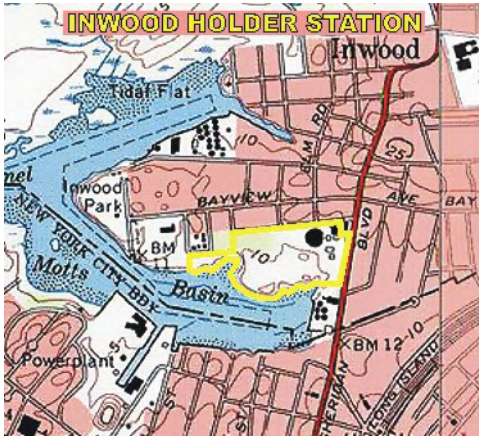
ON-GOING

- **VCA requirements for groundwater treatment on hold while NYSDEC reviews KeySpan's supplemental groundwater data report on identified upgradient sources of groundwater contamination**

COMMUNICATION MILESTONES

COMMUNICATIONS MILESTONES

- 1999 Briefing of local officials and community officials about environmental investigation under VCA.
- 1999 Briefing of local officials re abatement of asbestos unrelated to gas plant operations
- 2000 Meetings with community officials about reuse issues
- 2000-2001 Meetings with community organizations to discuss possible implications of investigation findings and re-use plans to cove area.
- January 2001 Briefing of local officials on plans to address aesthetic issues related to site conditions preparatory to demolition of buildings.
- May 2001 NYSDEC Fact Sheet re Remedial Investigation findings distributed to community
- September 2001 Briefing of local officials on Remedial Investigation findings
- September 2001 NYSDEC Fact Sheet re Remedial Action Plan distributed to community
- January 2003 Remedial Action Plan related to former gas plant operations completed and local officials briefed.
- June 2006 Briefing of local officials and updating Telephone Hotline related to Supplemental Investigation to verify up-gradient source of groundwater contamination.
- March 2007 Discuss groundwater monitoring well installation with the Town of North Hempstead Official Review Telephone Hotline Status.



SITE HISTORY

Queensborough Gas and Electric Company began operating a gas holder station on the site from at least 1940. The holder station was operated by LILCO until the mid 1990s. The Inwood Holder was a remote gas distribution holder with no manufactured gas production facilities on site. However, a propane vaporization plant was previously located at the site. The property is currently owned by KeySpan and mostly vacant; however, a portion of the site is currently used as a lay down yard for gas distribution activities and as a regulator station.

A substantial portion of the southern portion of the parcel was reclaimed from Mott Basin through land filling with electric/gas generation waste during the 1940s to 1970s. A partial investigation was conducted to delineate hydrocarbon migration in the mid 1990s. Possible MGP related contaminants in soil and groundwater have been detected at the site. A shallow soil remediation was completed at the site to remove lead-impacted soils. Approximately 3,000 cubic yards of construction and demolition debris was remediated. Sediments in the Mott Basin adjacent to the site may be impacted. The site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. **KeySpan expects to complete SC activities in 2007.**



Historic photograph of the Inwood Holder

Address:

Nassau Avenue and Sheridan Boulevard, Inwood, NY

Region:

South Shore, Nassau County

Operating Timeframe:

Circa 1930s-1990s

Current Ownership:

KeySpan

Acreeage:

Approximately 27 acres

Category:

Holder

KEY ISSUES

- Mott Basin adjacent to south; possible sediment impacts
- Soil and groundwater impacts (possible MGP)

REGULATORY TIMELINE

- Conducted partial investigation of southern property in mid 1990s
- Identified in AOC A2-0552-0606 issued February 2007

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



SITE HISTORY

A gas holder was constructed on the site sometime between 1922 and 1950. The holder was operated as a remote gas distribution holder with no gas production facilities until the late 1960s. The site was subsequently developed for its current use as a gas regulator station. An active LIPA substation is located on portions of the site pursuant to an easement.

The site was included in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007.

Address: Riverside Boulevard, Water Street and Park Place, Long Beach, NY
Region: South Shore, Nassau County
Operating Timeframe: Circa 1922-1950
Current Ownership: KeySpan
Acreage: Approximately 3 acres
Category: Holder

KEY ISSUES

- Reynolds Channel adjacent to north

REGULATORY TIMELINE

- Included in AOC A2-0552-0606 issued February 2007
- SC Work Plan to be issued in June 2008

ON-GOING

- SC Work Plan to be issued in June 2008



Historic photograph of the Long Beach Holder

COMMUNICATION MILESTONES

LOCAL OFFICIALS

- March 2007 Briefings have been held with officials of the City of Long Beach and staffs of local, state and federal legislators.

MINOR FACILITIES

HORTONSPHERES

Nassau County Sites

Bellmore Hortonsphere
Lynbrook Hortonsphere
Manhasset Hortonsphere
Oyster Bay Hortonsphere

Suffolk County Sites

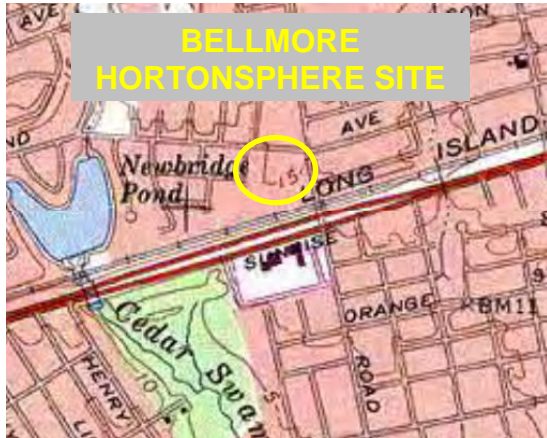
East Hampton Hortonsphere
Pine Lawn/ Farmingdale Hortonsphere
Port Jefferson Hortonsphere
Riverhead Hortonsphere

Hortonspheres

Hortonspheres were used to store gas under high pressure. These were generally employed in the distribution system after the late 1920s. As with the holders, they did not produce any contaminants. Environmental contamination could occur, however, if accumulations of condensate, containing hydrocarbons, were removed from the gas prior to storage. These generally would be low volume discharges.

Hortonspheres were metal structures and most likely were painted with lead containing paints. Routine maintenance operations could have caused the dispersal of lead paint chips in the vicinity of the tanks. As a result, there could be lead contamination within soils in the immediate vicinity of these tanks.

NASSAU COUNTY SITES



SITE HISTORY

A Hortonsphere operated on the site from prior to 1940 until at least 1964. The Bellmore Hortonsphere operated by the LILCO was used solely for gas storage. **No gas manufacturing occurred at the site.** An active substation is currently located at the site.

The Bellmore Hortonsphere site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. **KeySpan expects to complete SC activities in 2007.**

| | |
|-----------------------------|---|
| Address: | Newbridge Road and Grand Avenue, Bellmore, NY |
| Region: | Nassau County |
| Operating Timeframe: | Circa 1940-1964 |
| Current Ownership: | LIPA |
| Acreage: | Approximately 2 acres |
| Category: | Hortonsphere |

KEY ISSUES

- Residential properties adjacent to site

REGULATORY TIMELINE

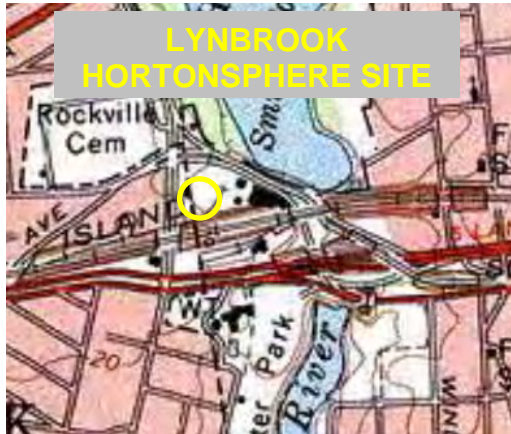
- Identified in AOC A2-0552-0606 issued February 2007

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



Photograph of the Bellmore Hortonsphere Site in 1998



SITE HISTORY

A holder and Hortonsphere operated on the site from prior to 1919 until sometime before 1951. The Lynbrook Hortonsphere site was operated by the Queens Borough Gas and Electric Light Company and was used solely for gas storage. **No gas manufacturing occurred at the site.** An active LIPA substation is located on site pursuant to an easement.

The Lynbrook Hortonsphere site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. **KeySpan expects to complete SC activities in 2007.**

Address:

Ocean Avenue and Merrick Road,
Lynbrook, NY

Region:

Nassau County

Operating Timeframe:

Circa 1919- prior to 1951

Current Ownership:

KeySpan

Acreage:

Approximately 0.5 acre

Category:

Hortonsphere

KEY ISSUES

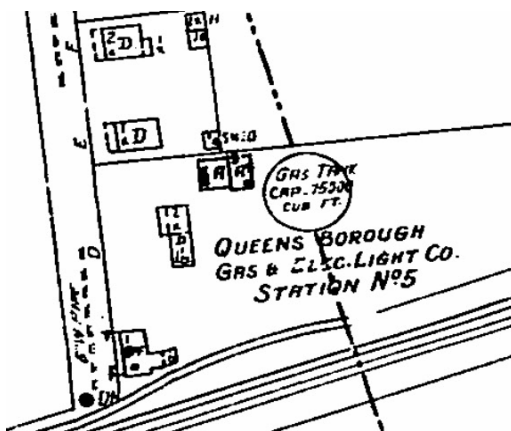
- Rockville Centre Village public water supply well is located <1/4 mile southeast of the site
- Smith Pond is located to the northeast of the site

REGULATORY TIMELINE

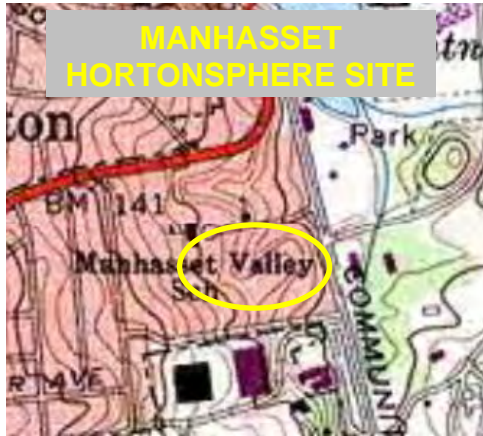
- Identified in AOC A2-0552-0606 issued February 2007

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



1924 Sanborn Map of the Lynbrook Hortonsphere site



SITE HISTORY

A Hortonsphere operated on the site from 1929 until 1960. The Hortonsphere was dismantled in 1960. The Manhasset Hortonsphere operated by the LILCO was used solely for gas storage. **No gas manufacturing occurred at the site.** The site is currently undeveloped except for parking in the northwestern corner.

The Manhasset Hortonsphere site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. **KeySpan expects to complete SC activities in 2007.**

Address: High Street, Manhasset, NY
Region: Nassau County
Operating Timeframe: Circa 1929-1960
Current Ownership: Private
Acreage: Approximately 3 acres
Category: Hortonsphere

KEY ISSUES

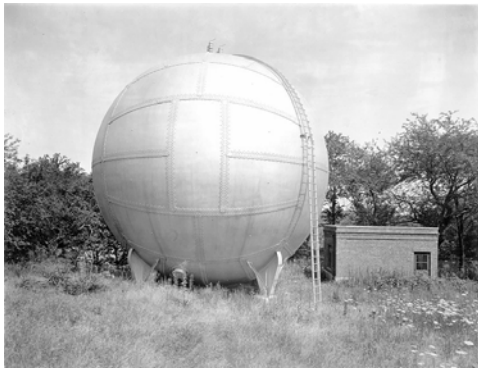
- Residential properties adjacent to site
- Manhasset – Great Neck Head Start Program adjacent to site
- Possible lead paint impacts within surface soils

REGULATORY TIMELINE

- Identified in AOC A2-0552-0606 issued February 2007

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



Historic photograph of the Manhasset Hortonsphere



SITE HISTORY

A Hortonsphere operated on the site from 1930 until 1979. The Hortonsphere was dismantled in 1979. The Oyster Bay Hortonsphere operated by the LILCO was used solely for gas storage. **No gas manufacturing occurred at the site.** An active substation and the former electrical generation building are currently located at the site.

The Oyster Bay Hortonsphere site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. **KeySpan expects to complete SC activities in 2007.**

Address:

21 Willow Place, Oyster Bay, NY

Region:

Nassau County

Operating Timeframe:

Circa pre1930-1979

Current Ownership:

LIPA

Acreage:

Approximately 2 acres

Category:

Hortonsphere

KEY ISSUES

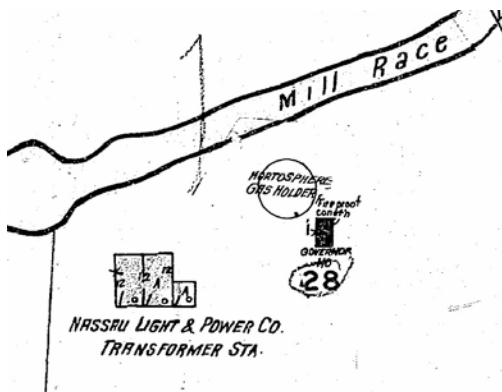
- Residential properties adjacent to site
- Adjacent to Mill Race, just north of Mill Pond, just south of Oyster Bay Harbor
- Oyster Bay Water District public water supply well located <1/8 mile to the west of the site, however the potential impacts to the well from the site are unlikely because of the nature and limited operational timeframe of the Hortonsphere
- Possible lead paint impacts within surface soils

REGULATORY TIMELINE

- Identified in AOC A2-0552-0606 issued February 2007

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



1941 Sanborn Map of the Oyster Bay Hortonsphere site

SUFFOLK COUNTY SITES



SITE HISTORY

The East Hampton Hortonsphere site operated from 1931 until present. The East Hampton Electric Light Company plant occupied site from circa 1909 until some time after 1920. By 1929, the site was used as a sub-station for the LILCO. A small gas holder is first depicted on the 1936 Sanborn Map. The holder operated until at least 1943 according to the Sanborn map information. By 1956, the gas holder was removed and a Hortonsphere was constructed in the northeast corner of the site. **No gas manufacturing occurred at the site.** The Hortonsphere is currently present at the site and the site is currently used as a substation.

The site was identified in the multiple site Order on Consent (ACO) and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. KeySpan expects to complete SC activities in 2007.

Address: Intersection of Race Lane and Railroad Avenue
East Hampton, NY

Region: East Shore, Suffolk County

Operating Timeframe: 1931-present

Current Ownership: LIPA

Acreage: Approximately 1.74 acres

Category: Hortonsphere

KEY ISSUES

- Possible lead paint impacts within surface soils

REGULATORY TIMELINE

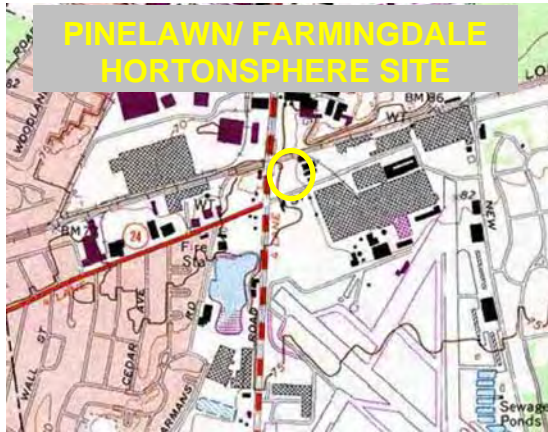
- Site Identified within ACO Index #. A2-0552-0606

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



Photograph of the East Hampton Hortonsphere taken in 1998



SITE HISTORY

The Pinelawn/Farmingdale Hortonsphere operated from 1927 until 1962. Pinelawn/Farmingdale Hortonsphere served solely as a gas distribution facility. **No gas manufacture occurred at the site.** The western portion of the site was developed as a substation. The Hortonsphere was dismantled in 1964. The site is currently a LIPA active tree trim yard.

The site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. **KeySpan expects to complete SC activities in 2007.**

Address:

Between 1607 and 1611 Broad Hollow Road (Route 110)
Farmingdale, NY

Region:

Interior, Suffolk County

Operating Timeframe:

Circa 1927-1962

Current Ownership:

LIPA

Acreage:

Approximately 0.6 acre

Category:

Hortonsphere

KEY ISSUES

- Possible lead paint impacts within surface soils

REGULATORY TIMELINE

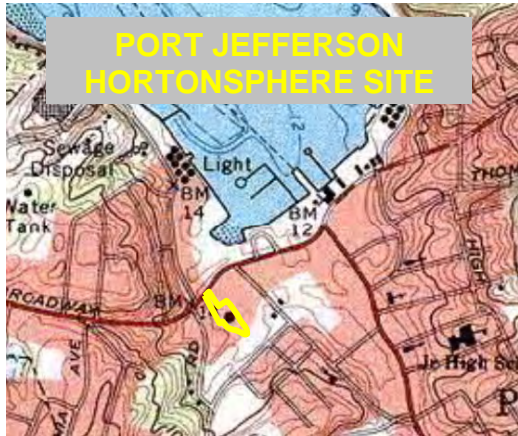
- Site Identified within AOC Index #. A2-0552-0606

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



Photograph of the Pinelawn/ Farmingdale Hortonsphere site taken in 1998



SITE HISTORY

*The Port Jefferson Hortonsphere operated from 1931 to 1976. The Hortonsphere was dismantled in 1976. The Port Jefferson Hortonsphere served solely as a gas distribution facility. **No gas manufacture occurred at the site.** The Hortonsphere has been dismantled and the site is now vacant.*

KeySpan expects to complete SC activities in 2007.

Address:

West Broadway Street
(Route 25A)

Region:

Port Jefferson, NY

Operating Timeframe:

North Shore, Suffolk County

Current Ownership:

1931-1976

Acreage:

Private

Category:

Approximately 1.08 acres

Hortonsphere

KEY ISSUES

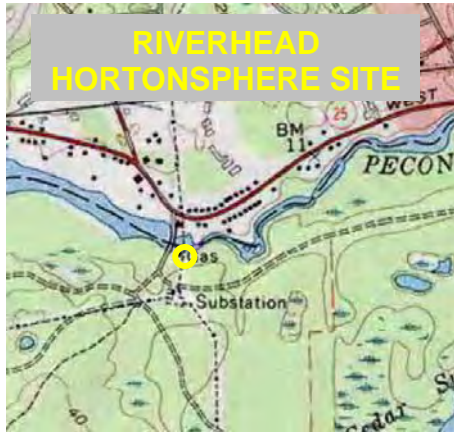
- Possible lead paint impacts within surface soils
- Port Jefferson Harbor is located approximately 450 feet to the northeast of the site
- Wetlands located adjacent to the south

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



Photograph of the Port Jefferson Hortonsphere site taken in 1998



SITE HISTORY

*The Riverhead Hortonsphere operated from 1939 to 1998. The Riverhead Hortonsphere served solely as a gas distribution facility. **No gas manufacture occurred at the site.** The Hortonsphere was dismantled in 1998 and the site is currently part of an active electrical substation.*

KeySpan expects to complete SC activities in 2007.

Address:

East Side of un-named service Road/south of West Main Street, Riverhead, NY

Region:

East Shore, Suffolk County

Operating Timeframe:

1939-1998

Current Ownership:

LIPA

Acreage:

Approximately 0.7 acre

Category:

Hortonsphere

KEY ISSUES

- Town of Riverhead public water supply well located < ½ mile to northeast of site
- Site is located within wetland
- Peconic River is located adjacent to the site
- Possible lead paint impacts within surface soils

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



Photograph of the Riverhead Hortonsphere site taken in 1998

ILLUMINATING GAS WORKS

Nassau County Sites

Garden City Gas Works

Suffolk County Sites

East Hampton Gasoline Vaporization Facility

Saltaire Acetylene Gas Facility

Southold Acetylene Gas Facility

Illuminating Gas Works

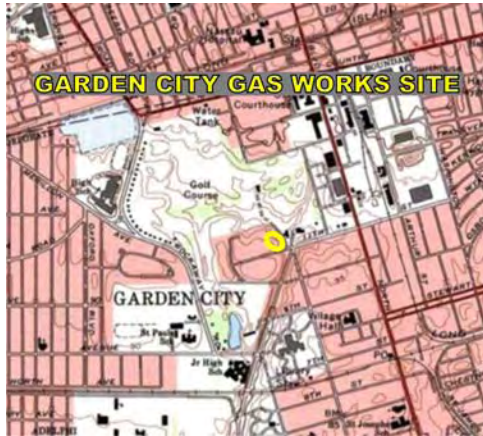
Several towns on Long Island were supplied with illuminating gas from plants that did not use the coal gas or carbureted water gas process. The two processes identified were acetylene and gasoline vaporization. These plants generally operated from the turn of the century until the 1920s and were shut down when LILCO acquired the distribution system and replaced the process with gas manufactured at the larger central facilities. The plants were small and produced low volumes of gas, less than five hundred cubic feet per year. Low gas production implies that there was not significant waste production.

Acetylene is made by mixing calcium carbide (CaC_2) and water. This produces acetylene and, in the presence of excess water, slaked lime $\text{Ca}(\text{OH})_2$. Acetylene burns with a hot bright flame and was used as an illuminating gas for either small facilities such as individual homes or farms or larger facilities distant from MGPs or natural gas.

The physical plant often consisted of a mechanism that fed calcium carbide into a tank of water and collected the acetylene gas. It would shut off the carbide flow when a predetermined volume of gas was collected and restart the carbide flow when the gas dropped to a pre determined level. Periodically slaked lime would have to be removed from the vessel. This material could be used for agricultural (lime) or other purposes (lime wash).

Gasoline vaporization plants were similar low volume production systems. Air was either passed over or bubbled through gasoline and the gas produced consisted of air and gasoline vapors. Any residuals could have been burned as fuel, however, there were chances of hydrocarbon releases if leaks or spills occurred.

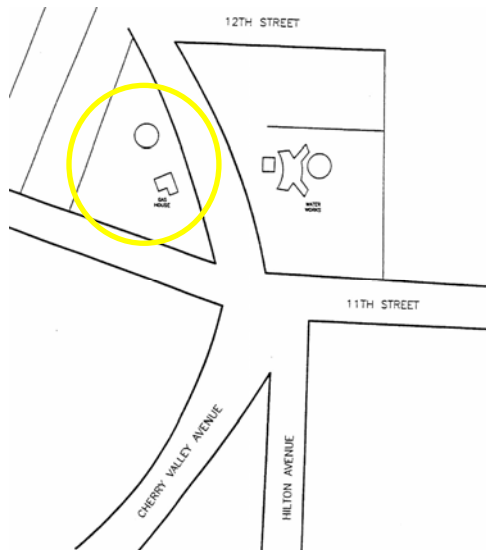
NASSAU COUNTY SITES



SITE HISTORY

The Garden City Gas Works began operations as a small private gas works in 1874. Operations are believed to have ceased in 1906. The site was vacant until the late 1950s when private residences were built on and in the vicinity of the site.

An AOC for the site was issued in September 1999. A PSA Work Plan approved in August 2000. A Draft PSA report was issued in March 2001. Compounds detected in soil and groundwater were not associated with the former gas work operation but were attributable to post-gas works operation site development and use. **NYSDEC issued a NFA in October 2001.** The Final PSA Report was submitted in February 2002.



Map of the Garden City Gas Works site

| | |
|----------------------|------------------------------------|
| Address: | Cherry Valley Road Garden City, NY |
| Region: | Nassau County |
| Operating Timeframe: | 1874-1906 |
| Current Ownership: | Multiple Private Owners |
| Acreage: | Approximately 1 acre |
| Category: | Illuminating Gas Works |

KEY ISSUES

- No Further Action issued by NYSDEC in October 2001

REGULATORY TIMELINE

- NYSDEC Site Number 1-30-105
- AOC (D1-0001-99-05) issued September 1999
- PSA Work Plan approved August 2000
- Draft PSA issued in March 2001
- NYSDEC concluded NFA in October 2001**
- PSA Report issued in February 2002

ON-GOING

- NYSDEC concluded NFA in October 2001**

COMMUNICATIONS AND OUTREACH PROGRAM

COMMUNICATIONS ACTIVITIES

- March 2000 – Meetings with individual homeowners to brief on process and obtain access. Handout material provided.
- June 2000 -- Briefing of Village of Garden City Mayor.
- Winter 2001 – Briefing of homeowners on favorable results (no finding of MGP-associated contaminants)
 - One homeowner was put in contact with NYSDOH over non-MGP associated issue.

SUFFOLK COUNTY SITES

East Hampton Gasoline Vaporization Facility



SITE HISTORY

A Gasoline Vaporization Facility operated on the site from prior to 1904 until at least 1929. No coal gas manufacturing occurred at the site. The site is currently privately owned.

The East Hampton Gasoline Vaporization Facility site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. KeySpan expects to complete SC activities in 2007.

Address: Buell Lane between Main Street and Church Street, East Hampton, NY
Region: Suffolk County
Operating Timeframe: Circa 1904-1929
Current Ownership: Private
Acreage: Approximately 0.3 acre
Category: Illuminating Gas Works

KEY ISSUES

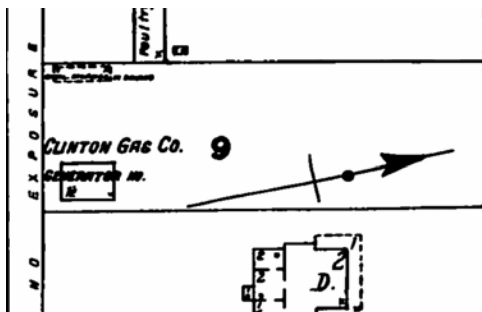
- Residential properties, school, church and rectory adjacent to site

REGULATORY TIMELINE

- Identified in AOC A2-0552-0606 issued February 2007

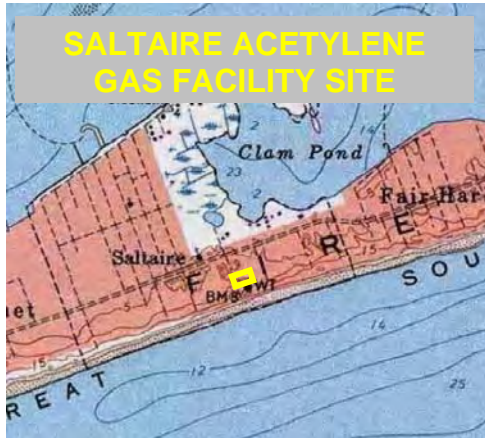
ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



1920 Sanborn Map of the East Hampton Gasoline Vaporization Facility

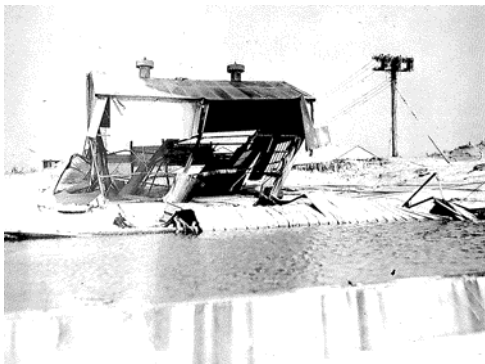
Saltire Acetylene Gas Facility



SITE HISTORY

The Saltire Acetylene Gas Facility operated from at least 1915 and was destroyed in the 1938 hurricane. The Saltire Acetylene Gas Facility was co-located with the pumping station and water works. The LILCO did not operate the plant according to Sanborn Fire Insurance map information. The Saltire Acetylene Gas Facility is currently used as a storage yard and located within a residential neighborhood. It is bordered by the Village of Saltire incinerator to the north. The site is currently an active LIPA substation.

The site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. The Environmental Protection Agency lists an air permit number for a village of Saltire incinerator to the north of the site. **KeySpan expects to complete SC activities in 2007.**



Photograph of the Saltire Acetylene Facility site taken circa 1938

Address:

340 feet to the southeast of the intersection of Lighthouse Promenade and Beacon Walk, Saltire, NY

Region:

South Shore, Suffolk County

Operating Timeframe:

Circa 1915-1931

Current Ownership:

LIPA

Acreage:

Approximately 0.11 acre

Category:

Illuminating Gas Works

KEY ISSUES

- Site is located in a residential neighborhood.
- Saltire Water District public water supply well located adjacent to site.
- The site is located approximately 550 feet to the north of the Atlantic Ocean.

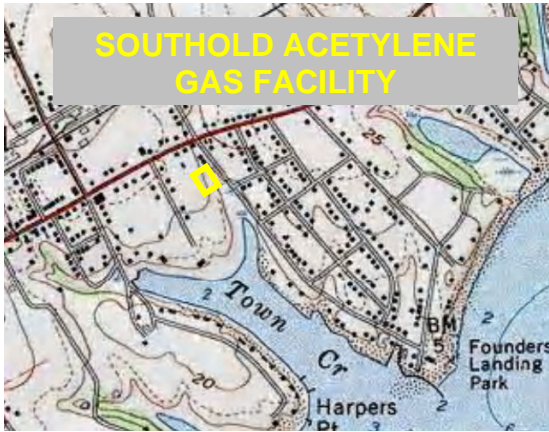
REGULATORY TIMELINE

- Identified in AOC A2-0552-0606 issued February 2007

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007

Southold Acetylene Gas Facility



Photograph obtained from Google Earth 2007

SITE HISTORY

The Southold Acetylene Gas Facility operated from 1905 to sometime before 1925 and was decommissioned at some point between 1929 and 1947. The LILCO did not operate the plant according to Sanborn Fire Insurance map information. The Southold Acetylene Gas Facility property has been redeveloped with a residence. The site is located within a residential neighborhood.

The site was identified in the multiple site Order on Consent and Administrative Settlement (Index # A2-0552-0606) issued in February 2007. KeySpan expects to complete SC activities in 2007.

Address:

West side of Hobart Road midway between Main Street and Korn Road, Southold, NY

Region:

East Shore, Suffolk County

Operating Timeframe:

1905- circa 1925

Current Ownership:

Private

Acreage:

Approximately 0.08 acre

Category:

Illuminating Gas Works

KEY ISSUES

- Site is located in a residential neighborhood.
- Site is currently a residential property.
- Fishers Island WW Corp public water supply well within a <1/4 mile south of site.
- Wetlands located on the site.
- Town Creek is located to the south of the site.

REGULATORY TIMELINE

- Identified in AOC A2-0552-0606 issued February 2007

ON-GOING

- KeySpan is working with the NYSDEC to include this site under a separate order
- SC activities expected to be completed in 2007



Southold—Acetylene Gas Plant

Historic photograph of the Southold Acetylene Gas Facility circa 1920's