
MGP RESEARCH REPORT

HESTER STREET GAS WORKS

Prepared for:

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EXECUTIVE SUMMARY

Consolidated Edison Company of New York, Inc., (Con Edison) contracted Langan Engineering and Environmental Services, Inc. (Langan) to conduct research of former manufactured gas plants (MGPs) that were previously operated by either Con Edison or predecessor companies of Con Edison. Langan was assigned a group of sites on the east side of the Borough of Manhattan. The objective of the MGP research is to gather and summarize information to rank and prioritize each MGP site for future investigation under the pending Voluntary Cleanup Agreement (VCA) between Con Edison and the New York State Department of Environmental Conservation (NYSDEC). In order to meet this objective, the information presented in this report includes a description of the property, the site setting (zoning, demography, topography, geology and hydrogeology), past ownership, past site operations, and a summary of environmental/regulatory agency records.

This MGP Research Report (report) presents the results of research for the Hester Street Gas Works (Site). The Site formerly existed on a portion of a city block (Tax Block 207) in the Chinatown section of the borough of Manhattan, New York City, New York. The grounds of the Hester Street Gas Works were located on the north half of this block, on a parcel of land consisting of eight adjacent lots bounded by the south side of Hester Street and between the east side of Centre Street and the west side of Baxter Street.

Historical research and site reconnaissance identified the following items and issues to be considered for ranking and prioritization of the Site:

- No information was available on industrial activities conducted on the Site prior to MGP operations.
- The New York Gas Light Company began operations circa 1824 at the Hester Street Gas Works and ceased operations in 1848 due to a fire. The available historical information indicates that this Site was both a gas manufacturing and a gas storage facility.
- The New York Gas Light Company sold all parcels of the Site in 1849 to various private parties.
- The type, quantity and disposition of MGP residuals and byproducts generated by this former MGP is not documented. Therefore, it is unknown whether any quantity of such residuals accumulated in the subsurface beneath the Site or whether such residuals impacted off-Site properties.

- Based on the Sanborn map coverage, all of the buildings within the Site footprint contain basements. It is not known if MGP remnants or residuals were excavated from the Site when these structures were built.
- Based on site reconnaissance (observations from the city streets) and historical research, there are no known remaining structures associated with the former MGP on the Site. It is not known if there are buried subsurface remnants, such as ring walls or foundations of gas holders.
- The area of the Site consists of combined commercial/residential structures and a parking lot.
- Based on the Environmental Data Resources, Inc. (EDR) Report, within 1/4 mile of the Site, nine sites were listed on the Resource Conservation and Recovery Information System-Large Quantity Generator (RCRIS-LQG) database, nine sites were listed on the RCRIS Small Quantity Generator (RCRIS-SQG) database, and sixteen sites were listed on the registered Petroleum Bulk Storage Underground Storage Tank (PBS UST) database.
- The Environmental Data Resources, Inc. (EDR) Report does not list any spills, discharges or leaking underground storage tanks (LTANKS) within the footprint of the Site or on adjoining properties. There are 14 LTANKS database records in the EDR report for locations within 1/4 mile of the Site. Most of the incidents associated with these sites are spills of small quantities of petroleum product, overfilling of tanks, or failure of tank integrity tests.
- According to New York City and New York State records, there is a 1,500 gallon capacity UST at 128 Baxter Street, and a 2,000 gallon UST at 138 Baxter Street, both used for heating oil storage.
- There are no environmental sampling results associated with the Site based on the information researched for this report.
- There are three schools located within 1/4 mile of the Site. Public School 130, also known as the De Soto School, is located at the northeast corner of Baxter Street and Hester Street, directly across the intersection of these two streets from the Site. Transfiguration School is located at 29 Mott Street. Public School 23 is located within three blocks to the south of the Site on Bayard Street, between Mulberry and Mott Streets.
- Columbus Park is located within 1/4 mile southeast of the Site.

- If impacts are present on the Site, potential receptors would include workers conducting intrusive activities, workers and visitors to the commercial establishments, and residents. There are limited pathways for exposure to surface and subsurface soils on the Site because the area is paved or covered by buildings with basements that were constructed after the retirement of the MGP. Basement floors and walls and exterior paved surfaces would prevent potential direct contact to any MGP wastes, but it is possible that vapors could migrate through foundations into the buildings. Other pathways include sewers, utility vaults and other subsurface conduits.
- Downgradient buildings with basements (if groundwater is impacted and a plume exists) and adjoining buildings with basements may possibly experience the same impacts as on-Site buildings from vapors/seepage.
- There are no known groundwater wells on the Site. There is one data base record for a public supply well approximately 1/4 to 1/2 mile southwest of the Site. However, the existence of this well has not been confirmed. The East River and Hudson River are located over 1/2 mile from the Site, to the south and west, respectively.

1.0 OBJECTIVE

This MGP Research Report for the former Hester Street Gas Works (the Site) has been prepared for Consolidated Edison Company of New York, Inc., (Con Edison) by Langan Engineering and Environmental Services, Inc. (Langan). The objective of this report is to present the findings of a search of available data and records for the Site with respect to historical operations by Con Edison's predecessor companies, other historic uses of the property, and current Site conditions. A visual reconnaissance of the areas of the Site that could be seen from adjacent city streets was also conducted.

Investigative methodologies included a review of information obtained from the following sources: Con Edison's internal files, a 200-year chain-of-title search, Brown's Directories, Public Service Commission Reports, an environmental data base search, Sanborn Fire Insurance Maps, historic aerial photographs, and USGS topographic maps. Other information sources include both city and state records and files. Files and records researched from the City of New York include the following agencies: the City Register (Tax Block and Lot information); the Department of Buildings; the Fire Department, the Department of Environmental Protection, and the Department of Health. New York State agencies whose files and records were reviewed include the Department of Environmental Conservation and the Department of Health.

The information obtained from these sources was then compiled and evaluated to prepare a description of the former MGP site ownership and operations, the current property use and zoning, the type and characteristics of adjacent properties, potential receptors, and the likelihood for MGP contamination having been removed as a result of site development. Database search information was reviewed to determine if there is potential soil or groundwater contamination as a result of on-site spills or discharges of hazardous substances, hazardous waste activities on the Site, or off-Site contamination that may be impacting the Site.

2.0 PROPERTY DESCRIPTION

The Hester Street Gas Works was located in what is now known as the Chinatown section of Manhattan (see Figure 1). Figure 2 is a current Site Plan, showing the footprint of existing structures. Based on Con Edison documents, the grounds of the Hester Street Gas Works were located on an approximate one-half acre parcel of land consisting of eight adjacent lots bounded by the south side of Hester Street and between the east side of Centre Street and the west side of Baxter Street (see Figure 2).

The property is currently identified by the following Blocks and Lots on the Tax Map for the Borough of Manhattan. See Figure 3 for the locations of these blocks and lots.

1. Block 207, Lot 6, 7, 8 - also known as 180 Centre Street
2. Block 207, Lot 10- also known as 204 Hester Street
3. Block 207, Lot 12- also known as 202A Hester Street
4. Block 207, Lot 13- also known as 200 Hester Street
5. Block 207, Lot 14- also known as 128 Baxter Street
6. Block 207, Lot 15- also known as 126 Baxter Street

3.0 CURRENT USE

Table 1 lists the current property owners as recorded with the City Register, as verified with the New York City Property Assessment role.

The former MGP Site is currently developed with a paved parking lot and combined commercial/residential buildings. Photographs of the various properties (taken from the adjacent public roadways; access onto the Site properties was not obtained) and a log of each photograph are included in Appendix A. Figure 2 (based on a 1996 Sanborn Map) indicates the location and address of each current structure.

The parking lot occupies more than half of the Site (see photo 3-1); the remainder of the Site is occupied by combined commercial/residential structures. The parking lot, located at the corner of Centre Street and Hester Street, occupies four on-Site tax lots (Block 207, Lots 6, 7, 8, and 10), plus one off-Site tax lot (Block 207, Lot 5) to the south of the Site. At 202A Hester Street (Block 207, Lot 12), there is a five-story brick building with a beauty shop, "Toto Beauty & Body" (see photo 3-2), on the first floor and apartments above the beauty shop. Further east, at 200 Hester Street (Block 207, Lot 13) is another five-story brick building with a hair salon, "Scissors Culture", on the first floor and apartments above the hair salon (see photos 3-3 and 3-4). The entrance to these apartments at the 200 Hester Street address is the doorway at 130 Baxter Street (see photo 3-5). At 128 Baxter Street is a five-story brick building with a pharmacy and a hair salon on the first floor and apartments above (see photo 3-6). At 126 Baxter Street is a five-story brick building with a club/bar on the first floor and apartments above (see photo 3-7).

Based on the Sanborn map coverage, all of the buildings within the Site footprint contain basements. It is not known if MGP remnants or residuals were excavated from the Site when

these structures were built. No visible remaining structures associated with the former MGP on the Site were observed during the perimeter Site inspection.

4.0 SITE SETTING

4.1 Zoning and Demographics

The Site is located in an area of Manhattan's Chinatown that is zoned by the New York City Department of City Planning for light manufacturing use. The City's zoning code for the properties that comprise the Site is M1-5B. This code, according to the New York City Department of City Planning, "designates a wide range of manufacturing and related uses that can conform to a high level of performance standards. Manufacturing establishments of this type, within completely enclosed buildings, provide a buffer between Residence (or Commercial) Districts and other industrial uses which involve more objectionable influences. New residential development is excluded from these districts, except for joint living-work quarters for artists in M1-5B districts, where authorized by the City Planning Commission, both to protect residences from an undesirable environment and to ensure the reservation of adequate areas for industrial development."

The surrounding properties (within a 0.25 mile radius of the Site) also include various manufacturing and commercial zoning codes that are summarized as follows. The zoning codes that are within this 0.25 mile radius of the Site include M1-5B, C6-1, C6-4, C6-1G and C6-2G. The C6 commercial zoning codes refer to General Central Commercial Districts, according to the New York City Department of City Planning, that are "designed to provide for the wide range of retail, office, amusement service, custom manufacturing, and related uses normally found in the central business district and regional commercial centers but to exclude non-retail uses which generate a large volume of trucking."

The building classes as listed on the New York City Tax Assessment website are summarized as follows:

<u>Tax Block and Lot Number</u>	<u>Building Class and Description</u>
Block 207, Lot 6	G6 – Licensed parking lot
Block 207, Lot 7	G6 – Licensed parking lot
Block 207, Lot 8	G6 – Licensed parking lot
Block 207, Lot 10	G6 – Licensed parking lot
Block 207, Lot 12	C7 – Walk-up apartment over six families with stores
Block 207, Lot 13	C7 – Walk-up apartment over six families with stores
Block 207, Lot 14	C4 – Old law tenement
Block 207, Lot 15	S4 – Primarily 4 family with 1 store or office

The surrounding property use consists of the following:

- To the north, commercial/residential properties along the north side of Hester Street, including the De Soto School (Public School No. 130) on the northeast corner of Hester and Baxter Streets;
- To the west, commercial/residential properties along the west side of Centre Street;
- To the south, adjoining commercial/residential properties; and,
- To the east, commercial/residential properties along the east side of Baxter Street.

The population of the Borough of Manhattan is 1,537,195 people (NYC Department of Planning, 2000 Census Summary). The Site is located within Census Tract 0041, which is located just east of Centre Street and north of Canal Street. The surrounding areas (within 0.25 mile radius of the Site) are located within Census Tracts identified as 0033, 0031, 0047, 0029, 0016, and 0045. These Census Tracts are diversified by race and ethnic groups as follows.

Census Tract	0041	0033	0031	0047	0029	0016	0045
Total Population	8,957	3,696	1,726	2,463	7,422	9,598	15,112
White	1,724	3,088	750	1,986	519	526	11,572
Black/African American	46	68	154	31	784	27	763
American Indian and Alaska Native	5	1	1	1	5	8	20
Asian	6,735	277	382	208	5,292	8,590	1,457
Native Hawaiian and Other Pacific Islander	2	2	0	0	2	1	6
Other Race (non-hispanic)	7	20	245	15	16	8	44
Two or more races	171	78	69	53	68	173	302
Hispanic Origin (any race)	267	162	125	169	736	265	948

4.2 Topography, Geology, and Groundwater

A U.S.G.S Quadrangle Map indicating the location of the Site is included in Figure 4.

The Site exhibits minor topographic relief of less than 10 feet, with an average ground surface elevation of 20 feet above Mean Sea Level (MSL).

Where not disturbed by anthropogenic activities, the Site is underlain by Pleistocene-age glacial sediments deposited as outwash (Perlmutter and Arnow, 1953). These sediments consist of well sorted interbedded gravel, sand, silt, and clay strata.

Bedrock, classified as Member C of the Manhattan Formation (Baskerville, 1990) is present approximately 45-130 ft below ground surface (ft bgs) at the Site (Office of the President, Borough of Manhattan Topographical Bureau, 1944). Member C of the Manhattan Formation is a metamorphic rock of Cambrian age and is composed of layered sillimanite-muscovite-biotite-kyanite schist and gneiss; tourmaline-garnet-plagioclase-biotite-quartz schist and gneiss; and, amphibolite (Baskerville, 1990). The Site is situated approximately 1000 feet south of the Cameron's Line thrust fault. Bedrock in the vicinity of the Site has been mapped as dipping moderately (35 degrees) approximately west-northwest.

Ground water is expected to be present at a depth of less than 20 feet beneath the Site. The NYSDEC groundwater classification is GA (fresh groundwaters). Ground water in both the unconsolidated deposits (both the fill and natural materials) and the bedrock is expected to flow approximately west to southwest toward, and discharge into, the Hudson River located over ¼ mile from the Site. Ground water flow in the overburden may, however, be influenced locally by the presence of underground manmade structures (pipes, foundations, etc.).

The EDR report (discussed in Section 7.1) notes the potential presence of one public supply well generally located approximately 1/4 to 1/2 mile southwest (not directly downgradient) of the Site in the federal database records, but not in the state database records for well information. The existence of this well has not been confirmed. Given the approximate location of this well with respect to the location of the Site, the distance from the Site and the direction of the groundwater flow, it is unlikely that potential contaminants are migrating from the Site to this well. Langan has contacted various City and State agencies regarding the exact address for and status of this upgradient well, but none of these agencies have been able to provide this information. The agencies contacted include the New York City Department of Environmental Protection (NYCDEP) - Water & Sewer, New York City (NYC) Office of Public Affairs, NYC Department of Environmental Engineering, NYC Department of Health (NYCDOH) and the New York State Department of Environmental Conservation (NYSDEC).

The East River and Hudson River are located over ½ mile from the Site, to the south and west, respectively. The NYSDEC surface water classification for both rivers is Class I saline surface waters.

5.0 PAST OWNERSHIP

A chain-of-title search request was submitted to Commonwealth Land Title Company at 655 Third Avenue, New York, New York. The search was conducted back to as far as records could be located and reviewed (to well before the estimated date of works construction). The deed chain information indicates that the New York Gas Light Company owned the Site property in

1849, and conveyed the lots comprising the Hester Street Site in this year to various private individuals. These lots subsequently changed hands a number of times, and were owned at various times by private individuals, realty companies, holding companies, and trusts.

Other than the information from the deed chain provided by Commonwealth, there is no other known pre-MGP ownership of the Site. Con Edison is a successor, by merger of several Manhattan gas companies in 1884, including the New York Gas Light Company, to form the Consolidated Gas Company of New York, that was renamed Consolidated Edison Company of New York in 1935.

A copy of the chain-of-title report is provided in Appendix B. Table 2 is a summary of the information provided in Appendix B.

6.0 PAST SITE OPERATIONS

The following is a summary of past Site operations based on a review of the source materials identified below and other historical references listed in Section 11. There is no known site plan for the former MGP operations.

6.1 Sanborn Maps Summary

Appendix C contains copies of the Sanborn Maps referenced below. The Hester Street Gas Works operations ceased in 1848, predating the earliest available Sanborn map (1894).

1894 Sanborn Map

The earliest available Sanborn Map (1894) does not show any MGP structures on the Site. The entire site is occupied by adjoining structures comprised of garages and what appear to be residential/commercial buildings. There are two unidentified buildings at 204 and 206 Hester Street and eight five-story buildings covering the remaining area of the Site. There is a mattress factory south of the Site on the southeast corner of the block. There is no tax block number on this map.

1905 Sanborn Map

There appears to be no changes from the 1894 map other than minor modifications to the previously existing structures. All of these structures are identified as combined dwellings and stores. Four of the five-story buildings are marked as “S.F.”, meaning store with a flat, or delivery service. The six other buildings, five stories each in height, are stores with dwellings on the upper floors. The mattress factory south of the Site shown on the 1894 map is identified as

a metallic bed and bedding factory on this map. The Tax Block designation on this map is 207. There is a Roman Catholic Church at 115 Baxter Street to the east of the Site. Public School No. 130 is located at 143 Baxter Street to the northeast of the Site.

1922 Sanborn Map

There are no changes on the Site, but Public School No. 130 now occupies the northeast corner of Hester and Baxter Streets on this map (131-137 Baxter Street); its location at 143 Baxter Street shown on the 1905 map is blank on the 1922 map. The metallic bed and bedding factory on the 1905 map has apparently been converted into another use although the labeling is illegible. The Roman Catholic Church at 115 Baxter Street is identified as "Most Precious Blood Roman Catholic Church".

1950 Sanborn Map

There are no changes on the Site, other than some of the structures being labeled as "Apts". Public School No. 130 is now shown to occupy both the 131-137 Baxter Street property, and the 143 Baxter Street property where an auditorium is now shown to exist. The previously existing off-Site structures (stores with flats) east of the Site on the corner of Baxter and Hester Streets have been replaced with a parking lot. The off-Site structure north of the Site at the northwest corner of Hester and Baxter Streets is labeled "machine shops" (previously identified as a boarding house on the earlier Sanborn maps). The metallic bed and bedding factory south of the Site on the southeast corner of the block, and shown on the 1905 map, is now labeled as "Furniture."

1968 Sanborn Map

The two structures at the southwest corner of the Site have been demolished and have been replaced by a parking lot. The parking lot extends from Centre Street to Baxter Street along the south side of the Site, and extends off-site to the south onto current Lot 5.

1976 Sanborn Map

Two on-Site buildings at the corner of Centre Street and Hester Street have been removed and the parking lot shown on the 1968 map has been extended to the northwest corner of the Site. Public School No. 130 now has a second name shown, the De Soto School.

1977 Sanborn Map

The properties at 204 and 206 Hester Street are no longer labeled "Apts" on this map.

Other Sanborn Maps

The remaining Sanborn Maps (1978-1996) indicate no significant changes on the Site since 1977.

6.2 Con Edison Files

Information related to the former Site operations was obtained from an undated document titled "The Gas Industry in the Route 9A Reconstruction Corridor of Manhattan," which was provided by Con Edison. A pertinent excerpt from this document is included in Appendix K, and discussed in Section 6.6.

6.3 Historical Aerial Photographs Summary

Historical aerial photographs depicting the Site were obtained from EDR, Inc. and Aerographics, Inc. and reviewed by Langan. The photographs were taken in 1943, 1953, 1966, 1982, and 1998, and are included in Appendix D. A description of these photographs is provided as follows.

21 December 1943

The Site appears to be occupied by several adjacent buildings. The features of the surrounding area appear to be consistent with the 1950 Sanborn map (Appendix C). The photo is good quality, but the approximately 750-foot scale does not permit a more detailed analysis. The piers along the East River and the approaches to the Manhattan and Brooklyn bridges are visible at the bottom of the photograph. There does not appear to be any construction or development activities either on the Site or in the areas within 1/4 mile of the Site.

5 December 1953

The features of the Site and the surrounding area do not seem to have changed from the 1943 photograph. The photo is good quality, but the approximately 750-foot scale does not permit a more detailed analysis.

23 February 1966

The features of the Site and the surrounding area do not seem to have changed from the 1953 photograph. The photo is good quality, but the approximately 750-foot scale does not permit a more detailed analysis.

8 March 1982

This photo has a better scale (approximately 500 feet per inch) and better resolution than the previous photos. Cars can be seen in a parking lot located in the northwest corner of the Site in the same areas shown on the 1980 and 1983 Sanborn maps. There is a large vacant lot on this photo on the south side of Walker Street (one block south of Canal Street, between Centre and Baxter Streets) that did not exist on previous maps. Other than the vacant lot, the features of the Site and the surrounding area do not seem to have changed from the 1966 photograph.

11 March 1998

This photo has a good scale (approximately 500 feet per inch) and the best resolution compared to the previous photos. The east facades of the buildings on the Site and the surrounding properties are visible in this photo. The vacant lot shown on the 1982 aerial photo is now developed with several high-rise buildings. Other than these off-Site buildings, the features of the Site and the surrounding area do not seem to have changed from the 1982 photograph.

6.4 Brown's Directories

Brown's Directory of North American and International Gas Companies provides general information about gas companies in business each year. The information included is not site-specific, but rather about the company as a whole, i.e. sales and service information, stock information, and listings of corporate officers, etc. Brief descriptions of some of Con Edison's facilities (Astoria, Ravenswood, and Hunts Point) are provided in some issues, but there was no relevant information on the Site.

Issues of Brown's Directory of North American and International Gas Companies were viewed at the Science and Business Library of the New York City Public Library. The issues available at the library included the years 1900, 1903, 1906, 1911, 1914, 1946-1951, 1953, 1954, 1956, 1957, 1977, 1979, 1980, and 1983-2001.

6.5 Potential Wastes Generated and Associated Operations

The available historical information on the Hester Street Gas Works indicates that this Site was both a gas manufacturing and a gas storage facility. Based on the available historical information, there could be a potential for wastes containing hazardous substances to have been generated at the Site, but there is no information on how they were managed or disposed. Typical MGP wastes would have included tars, purifier wastes (wood or other solids), clinkers (ash-like material), condensates (liquids), and oils.

6.6 Summary of Past Operations

The following information was obtained from an undated document titled "The Gas Industry in the Route 9A Reconstruction Corridor of Manhattan," which was provided by Con Edison. A pertinent excerpt from this document is included in Appendix K. The Hester Street Gas Works was the original plant constructed by the New York Gas Light Company in 1824. The plant was located at the southeast corner of the intersection of Hester and Centre Streets. Gas transmission lines were installed to 300 customers from Wall Street to Grand Street by 1825. By 1826 there was an 18,000 cubic feet (cf) gas holder (gasometer), four benches of six retorts each, and several oil storage tanks located at the plant. The tanks were used for storage of whale oil. Gas was produced by destructive distillation of the whale oil. In 1829, the fuel was changed from whale oil to rosin (produced from distillation of crude resin from pine trees). Over the next several years, the use of coal was transitioned. However, the New York Gas Light Company continued to use rosin as late as 1848. In 1848, the New York Gas Light Company Hester Street Plant was completely destroyed by fire.

Supplemental information was obtained from a reference by Frederick L. Collins, Consolidated Gas Company of New York: A History (1934). According to Collins, in 1827 a second gasometer was constructed (Collins, p.50). Collins confirms information from the deed chain (Section 5.0) that the property was sold by the New York Gas Light Company in 1849 (Collins, p.82).

6.7 Other Historical Maps Summary

Historic maps of New York City were reviewed for the area of the Hester Street Gas Works, and are provided in Appendix L.

The earliest available map for the area of the Hester Street Gas Works was obtained from the David Rumsey collection and is dated 1838. This map shows the city streets surrounding the location of the Hester Street Works. This map identifies what is currently known as Baxter Street as "Orange Street". Although the Con Edison documentation indicates the plant was in operation by this date, there are no MGP structures indicated on this map in the area of the former Site.

A map dated 1857, obtained from the Perris collection, shows the layout of various structures on the city block where the Site was previously located. The footprints of these structures are similar to those of the structures shown on the 1894 Sanborn Map (Appendix C). The 1857 map shows building locations, stacks, skylights and street addresses, but does not indicate the usage of the structures.

7.0 ENVIRONMENTAL/REGULATORY AGENCIES RECORDS

7.1 EDR Radius Map

Langan reviewed the EDR Radius Map document (EDR report) dated 14 March 2002 (provided by Con Edison) that is provided in Appendix E. It should be noted that the EDR report was commissioned for both the former Hester Street Works and the Canal Street Works, as these sites are located adjacent to one another on the east and west sides of Centre Street between Canal and Hester Streets. The target property was identified as “Canal Street,” centered on the adjacent block to the west of the Site (location of the former Canal Street Gas Works).

In the EDR report, there are three unmapped (orphan) sites, two identified as Consolidated Gas Co. and one as Standard Gas Co., listed in the Former Manufactured Gas (Coal Gas) Sites database. Additional information was requested from EDR regarding these three sites and was received on June 5, 2002 (included at the back of Appendix E). These three sites correspond to the East 15th Street Holder Station (part of the East 14th Street former MGP Site), the East 19th Street Gas Holder Station, and the West 10th Avenue former MGP Site. All three of these sites are located over one mile from the Hester Street site.

The target property is listed on four databases. The NYC Transit Authority – Canal Street Station, located at Canal and Centre Streets, is listed on the Facility Index System/Facility Identification Initiative Program (FINDS) and Resource Conservation and Recovery Information System Large Quantity Generator (RCRIS-LQG) databases with no violations found. A “Canal Street on the Hudson River” listing was reported in the ERNS database, with no additional information provided. A release of 4 gallons of unknown petroleum was reported on January 24, 2000, in a manhole at Canal Street and Broadway (NY Spills database). The first two listings do not pertain to the Site, but to the former Canal Street Gas Works property to the west, and the latter two listings do not appear to have been accurately located for the target property.

The EDR report lists one public water supply well in the federal database, but not in the New York State database, located approximately 1/4 to 1/2 mile southwest of the Site, between Chambers Street and Duane Street, in the vicinity of Broadway. The owner’s name and address is listed in the EDR report as Felt Gordon W., Camp Northwood Inc., 10 West 66th Street, New York, NY 10023, and the name of the Public Water Supplier (PWS) is listed as Camp Northwood, Rd#1, Northwood Road, Remsen, NY 13438. The exact location of this well is not specified in the EDR report.

Within 1/4 mile of the Canal Street Site, nine sites were listed on the RCRIS-LQG database, nine sites were listed on the RCRIS Small Quantity Generator (RCRIS-SQG) database, and

sixteen sites were listed on the registered Petroleum Bulk Storage Underground Storage Tank (PBS UST) database.

The EDR report lists a total of 67 sites in the Leaking Underground Storage Tanks (LTANKS) database. None of these sites are located within the footprint of the former MGP Site. Most (53) of these sites were located greater than 1/4 mile from the former MGP Site, and are associated with overfilling of tanks, failure of tank integrity tests, and staining beneath former tanks that were removed. Due to the absence of any spill numbers associated with the properties where the former Hester Street Gas Works was located, the on-line NYSDEC database was not utilized.

7.2 Public Service Commission Reports

Public Service Commission (PSC) Reports were published every year, from 1907 to the present, presenting the “opinions, orders, rules, and regulations” concerning public service companies. There is no information available for years prior to 1907. Since the years applicable to the MGP operation, 1824-1848, are prior to 1907, there was no reference to the Hester Street Gas Works in any of the PSC Reports.

7.3 New York City Records

7.3.1 New York City Fire Department

Freedom of Information Act (FOIA) requests were submitted to the NYC Fire Department (NYFD) on 26 March 2002, and again on 30 April 2002 for revised addresses, regarding the presence of USTs on the properties where the former Hester Street Works was located. Copies of the FOIA requests and the responses from the NYFD are included in Appendix F. The responses received from the NYFD indicate that there is one 1,500-gallon tank for #2 fuel oil storage at 126-128-130 Baxter Street on the eastern portion of the Site. (The NYFD records do not indicate the specific building where the tank is located; however, New York State records [Section 7.4.1 below] indicate the tank is located at 128 Baxter Street).

7.3.2 New York City Department Of Health

FOIA requests were submitted to the New York City Department of Health (NYCDOH), Bureau of Environmental Investigations on 28 March 2002 and clarified with more detailed address information on 30 April 2002. Copies of the FOIA requests are included in Appendix G.

To date, a response has not yet been received from NYCDOH. When the response has been received, that information will be submitted to Con Edison.

7.3.3 New York City Department Of Buildings

A file review was conducted at the offices of the New York City Department of Buildings for the properties where the former Hester Street Works was located. These files included various permits and records of minor construction (improvements to existing buildings). There were no detailed plans for the foundations of these structures or previous excavation work that may have been conducted on these properties.

7.4 New York State Records

7.4.1 New York State Department Of Environmental Conservation

FOIA requests were submitted to the New York State Department of Environmental Conservation (NYSDEC) on 28 March 2002 and clarified with more detailed address information on 30 April 2002. Copies of the FOIA requests are included in Appendix H.

The response received from the NYSDEC indicates that there is a 2,000 gallon UST located at 138 Baxter Street. The NYSDEC Petroleum Bulk Storage Program Facility Information Report states that the site status is active. There is also a 1,500 gallon UST located at 128 Baxter Street and the report indicates the site status is active.

Because the EDR report (Appendix E) indicated the absence of any spill numbers associated with the properties where the former Hester Street Works was located, the on-line NYSDEC database was not utilized as explained in Section 7.1 of this report.

7.4.2 New York State Department Of Health

FOIA requests were submitted to the New York State Department of Health (NYSDOH) on 3 June 2002. A copy of the FOIA request is included in Appendix I.

To date, a response has not yet been received from NYSDOH. When the response has been received, that information will be submitted to Con Edison.

8.0 POTENTIAL RECEPTORS

Receptors on, and in proximity to, the Site include the following: Residents of the apartment buildings on the Site, workers and visitors in the commercial buildings, and workers conducting intrusive activities. There are three schools located within 1/4 mile of the Site. Public School 130, also known as the De Soto School, is located at the northeast corner of Baxter Street and

Hester Street, directly across the intersection of these two streets from the Site. Transfiguration School is located at 29 Mott Street. Public School 23 is located within three blocks to the south of the Site on Bayard Street, between Mulberry and Mott Streets. Columbus Park is located within 1/4 mile southeast of the Site.

There are limited pathways for exposure to surface and subsurface soils on the Site because the area is paved or covered by buildings with basements that were constructed after the retirement of the MGP. Basement floors and exterior paved surfaces would prevent potential direct contact to any MGP residuals, but it is possible that vapors could migrate through foundations into these structures. Other pathways include sewers, utility vaults and other subsurface conduits. Downgradient buildings with basements (if groundwater is impacted and a plume exists) and adjoining buildings with basements may possibly experience the same impacts as on-Site buildings from vapors/seepage.

It is not known if there are MGP residuals remaining on Site after the construction of the on-Site buildings. Construction workers could be exposed to potential MGP residuals during intrusive activities on the Site.

There are no potential surface water receptors in proximity to the Site. Both the Hudson River and East River each are located over 1/2 mile from the site. Groundwater is not used as a drinking water source in the vicinity of the Site.

9.0 DISCUSSIONS AND CONCLUSIONS

All sources of historical information were researched in accordance with Con Edison's requirements for this project. The only limitation was lack of access to the properties for inspections.

Although a thorough search of available records was completed, the following information, which would provide a better understanding of Site conditions, could not be obtained:

- There is no known information on how MGP residuals or byproducts were managed or disposed of both during the years of operation and at the time that the Works was decommissioned.
- City Building Department records do not provide information on subsurface conditions or the foundations of the current structures on each property. It is not known if materials were excavated from the Site when these structures were built.

- It is not known if there exist buried remnants of the former MGP structures such as ring walls or foundations of gas holders, within or outside of the existing building footprints.

Based on the information reviewed the following facts were determined:

- Gas manufacturing and gas storage operations were conducted on the Site between circa 1824 and 1848.
- The thickness of overburden across the site ranges from approximately 45 to 130 feet below ground surface.
- There are two fuel oil storage tanks located on the Site, based on the information researched in this report.

10.0 SUMMARY OF HISTORICAL RESEARCH FINDINGS

Con Edison contracted Langan to conduct historical research of former MGPs and associated facilities that were either owned by Con Edison or predecessor companies of Con Edison. Langan was assigned a group of sites located in the Borough of Manhattan. This report presents results of the historical research conducted for the Hester Street Gas Works, a former MGP located in what is now known as the Chinatown section of Manhattan. A summary of factors that will be used in the prioritization of the sites is presented in the following table.

Prioritization Criteria	Prioritization Factors
Does Con Ed own and control access and site usage?	No.
Relative size of the former MGP.	The former MGP site was approximately 0.5 acres and occupied the north half of current Block 207.
MGP History	The Hester Street Gas Works operated between circa 1824 and 1848.
Potential for development.	The area is currently composed of combination commercial/residential buildings and a parking lot.
Current potential for direct exposure to impacted soils.	The former MGP footprint is either paved or has buildings on it. Direct exposure to impacted soils is limited to site workers conducting excavations and other intrusive activities.

Prioritization Criteria	Prioritization Factors	
Potential for site actions to be triggered by other regulatory means.	Moderate potential for Site actions to be triggered by other regulatory means, specifically possible investigation and/or remediation of USTs should they be found in the future to have leaked. A 1,500 gallon and 2,000 gallon tank were identified at 128 Baxter Street and 138 Baxter Street, respectively	
Presence and proximity of sensitive receptors.	Groundwater Use Aquifers	No known groundwater use within 1/2 mile of the former MGP. The NYSDEC groundwater classification is GA.
	Surface Water Bodies	The East River and Hudson River are located over 1/2 mile from the Site to the south and west, respectively.
	Groundwater Seepage Areas	Unknown if any exist.
	Population	8,957 people in Census Tract 0041 (includes the Site), and 1,537,195 people in Manhattan Borough (Census, 2000).
	Playgrounds/Parks	Columbus Park is located within 1/4 mile southeast of the Site.
	Schools	There are three off-Site schools located within ¼ mile: Public School 130, also known as the DeSoto School; Transfiguration School; and Public School 23.
	Residences	There are residential apartments within the top four floors of a five-story building located at 202A Hester Street, within the top four floors of a five-story building located at 200 Hester Street, within the top four floors of a five-story building at 128 Baxter Street, and within the top four floors of a five-story building located at 126 Baxter Street.
Physical Site Factors	Gardens	None observed from windshield survey.
	Wetlands	The EDR report identifies wetlands adjacent to the shorelines of the East River and Hudson River, located over 1/2 mile south and west of the Site,

Prioritization Criteria	Prioritization Factors	
		respectively.
	Topography	Topographic relief of less than 10 feet across the Site.
	Soil Types and Permeability	The soils are likely fill and urban soils with relatively high permeabilities. The site is covered, limiting access and infiltration.
	Cover	The site is paved or covered with buildings.
	Depth to Groundwater	Less than 20 feet beneath the Site.
	Groundwater Use	No known use in vicinity.
	Surface Water Proximity and Use	The East River is over 1/2 mile south of the Site and the Hudson River is over 1/2 mile west of the Site.
Presence of buildings with basements onsite or nearby. Volatilization/seepage exposure pathway to residents or workers.	The Sanborn maps indicate there are basements present in all of the buildings on the Site. The potential for seepage/volatilization into basements exists if impacted soils are present. Downgradient buildings with basements (if groundwater is impacted and a plume exists) and adjoining buildings with basements may possibly experience the same impacts as on-Site buildings from vapors/seepage. The types of ventilation systems in use in these buildings are not known.	
Ongoing or obvious impacts to surface water.	None observed during site reconnaissance.	
Degree and extent of impacts associated with other (non-MGP) site uses.	Impacts were not observed.	

See Appendix J for the History Research Report Checklist for the Site.

11.0 REFERENCES

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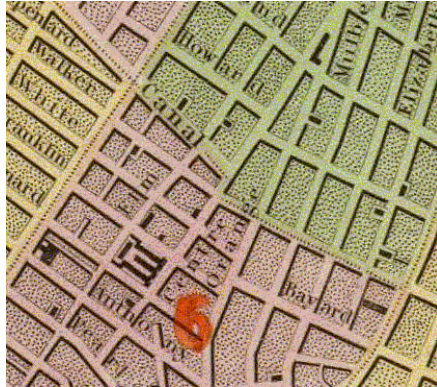
TABLE 1
CURRENT PROPERTY OWNERS
HESTER STREET GAS WORKS

Block 207, Lot 6, 7, 8	180 Centre Street Properties 100 Washington Street Newark, NJ 07102
Block 207, Lot 10	180 Centre Street Properties 100 Washington Street Newark, NJ 07102
Block 207, Lot 12	Gee Tai Chong Reality Shim M. Chu 48 Hester Street New York, NY 10002
Block 207, Lot 13	Gee Tai Chong Reality Shim M. Chu 48 Hester Street New York, NY 10002
Block 207, Lot 14	H & K Lee Kien Sun Lee 128 Baxter Street New York, NY 10013
Block 207, Lot 15	Lee Hung Mgin Lee Kien Sun 128 Baxter Street New York, NY 10013

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HESTER STREET WORKS HISTORICAL MAPS

1838 Rumsey Map, shows current Block 207



1852 Dripps Map, current Block 207



1857 Perris map, current Block 207



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