



Department of
Environmental
Conservation

Proposed Decision Documents

East 14th and East 21st Street Works and
East 17th and East 19th Street Stations

November 1, 2017

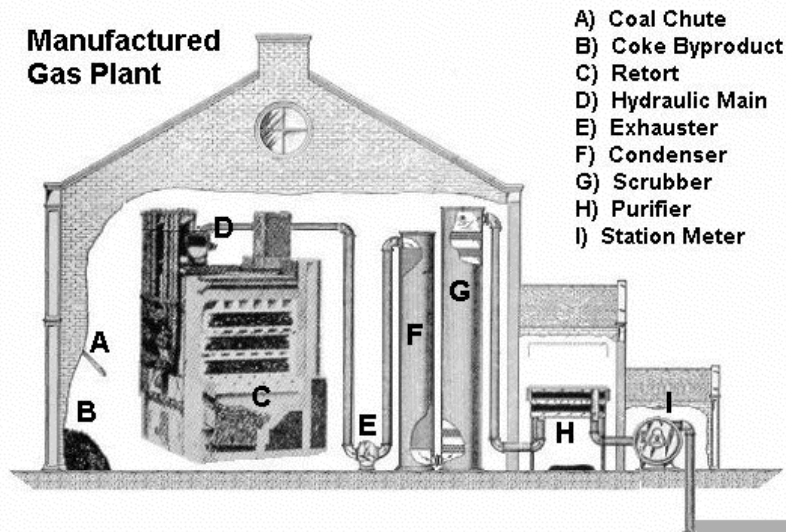
What is an MGP?

- Manufactured Gas Plant (MGP)
- Gas was produced by “baking” coal
- First started operations in the mid- 1800s; closed in the 1960’s
- Replaced by natural gas
- The MGPs at Peter Cooper and Stuyvesant Town sites operated from the 1840s to the 1940s.
- Con Edison is a corporate successor to the MGP operator

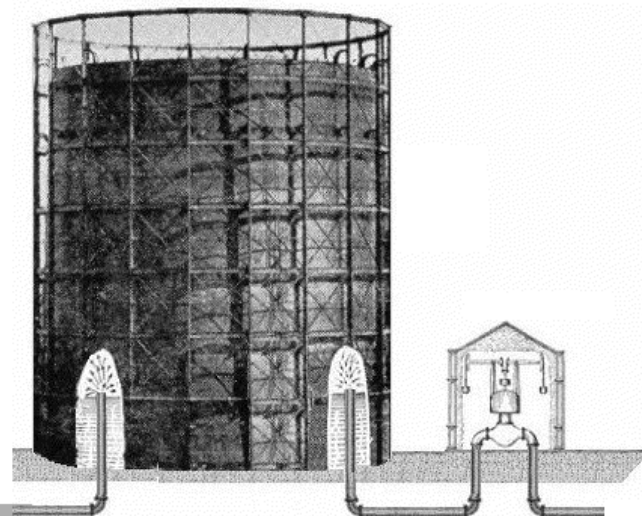


Distribution Holder

Manufactured
Gas Plant



- A) Coal Chute
- B) Coke Byproduct
- C) Retort
- D) Hydraulic Main
- E) Exhauster
- F) Condenser
- G) Scrubber
- H) Purifier
- I) Station Meter



Nature of Contamination

MGP Plants typically have two types of contaminants of concern onsite:

1. Coal Tar
2. Purifier Waste



- Coal tar is a direct by-product of manufactured gas.
- Properties vary from site to site
- At these sites it is primarily a viscous flow-able tar
- Coal tar is a mixture of several organic compounds. These compounds fall into two groups:
 1. BTEX compounds
 2. PAH compounds

BTEX

- These are four volatile hydrocarbons: Benzene, Toluene, Ethylbenzene, and Xylene.
- Found in most liquid petroleum by-products such as gasoline.
- Lighter than water, will create sheens on water surface.
- More easily dissolved in water than PAHs, but still more likely to create sheens and float than dissolve.
- Will tend to biodegrade.



Polycyclic Aromatic Hydrocarbons (PAHs)

- By-product of burning and heating processes
- Semi-volatile compounds
- Denser than water
- Not easily dissolved and transported by water
- Not readily broken down in the environment
- Found in: asphalt, grilled meats, rubber





Investigations

- Site characterization - 2004
- Remedial investigations - 2006 and 2007
 - 220 soil borings, 839 soil samples
 - 69 monitoring wells, 114 groundwater samples

Indoor air investigations

- Samples collected from 21 Peter Cooper Village buildings and 9 Stuyvesant Town buildings
- Results consistent with background levels
- 2017 sampling completed, results pending



Investigation Results

- Mobile coal tar has been found underground that is moving to the East River. This will be addressed separately.
- No MGP impacts detected in indoor air
- No MGP impacts present in surface soils to 5 feet below grade
- MGP impacts in subsurface soil deeper than 10 feet
- MGP impacts to groundwater
- Groundwater is not used for drinking, bathing or washing
- Potable water is provided by municipal water system



Department
of Health

What is NYS DOH's role?

- Assess how people may be exposed to contamination.

How can you be exposed?

- Direct contact – Touching contamination
- Ingestion – Eating or drinking
- Inhalation – Soil vapor intrusion (also known as SVI) is the way contaminants may migrate into indoor air.

Potential Exposure Pathways

- Direct contact – Contaminated soil is located below the surface.
- Ingestion – Public water is supplied to the surrounding area.
- Inhalation – Chemicals found in indoor air similar to those commonly found.

Potential Exposure Pathways

- Currently the public is not being exposed to contamination from this site.
- Immediate actions are not needed.

After this?

- Continued management and monitoring of the site.
- If conditions change, site will be reassessed.
- If the property is ever redeveloped, we will work with the NYS DEC to select a remedy that is protective of the public

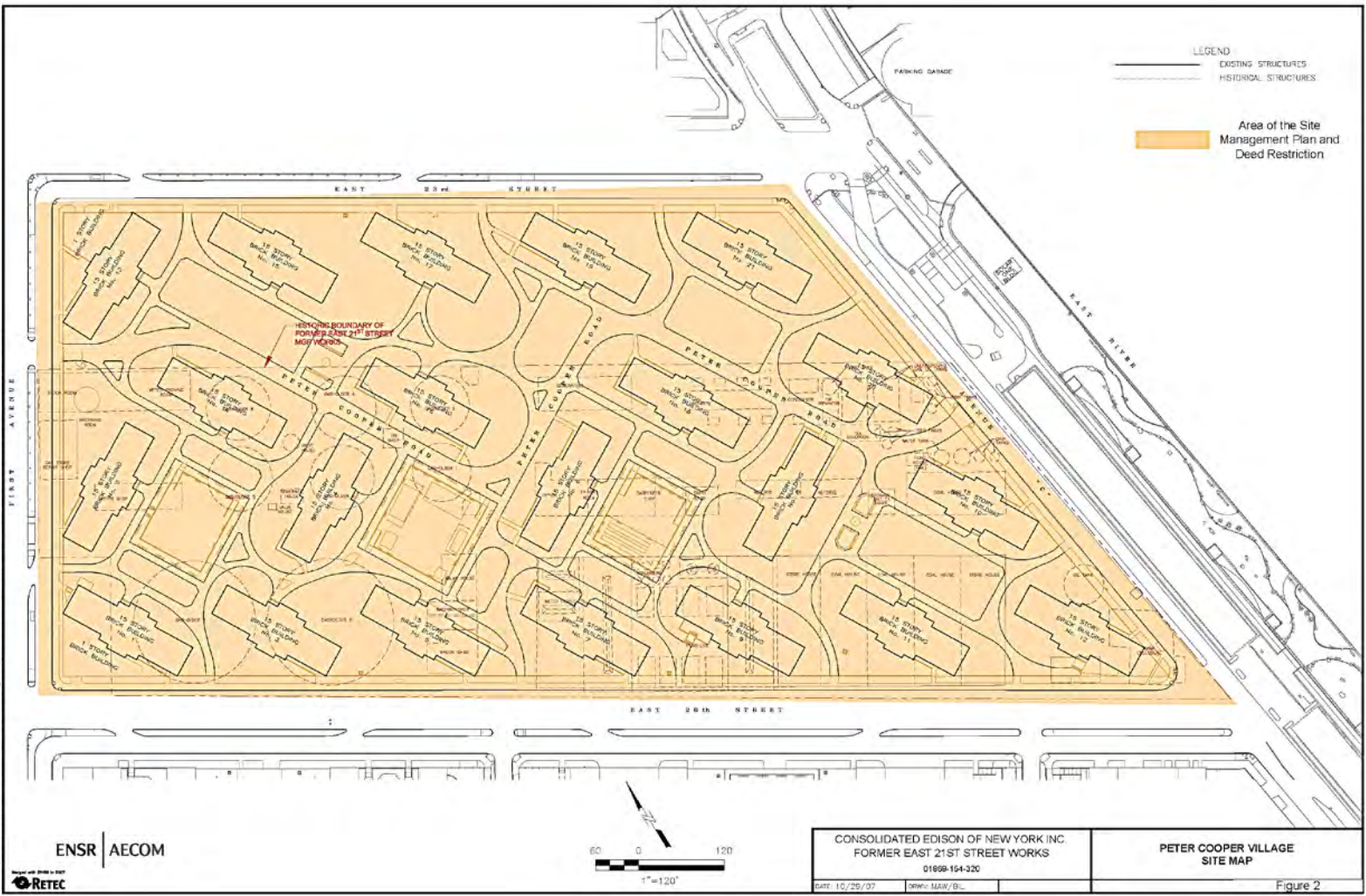
Proposed Remedy

- Coal Tar Extraction Wells
 - approximately 10 for Peter Cooper Village
 - approximately 6 for Stuyvesant Town
 - inconspicuous placement

- Maintain Site cover (e.g., pavement and buildings)

- Monitoring Plan -assess effectiveness of the remedy
- Operation & Maintenance Plan -ensure continued operation of the remedy
- Administrative Controls
 - Site Management Plan (SMP) to guide future excavation
 - Deed restriction to alert future owners

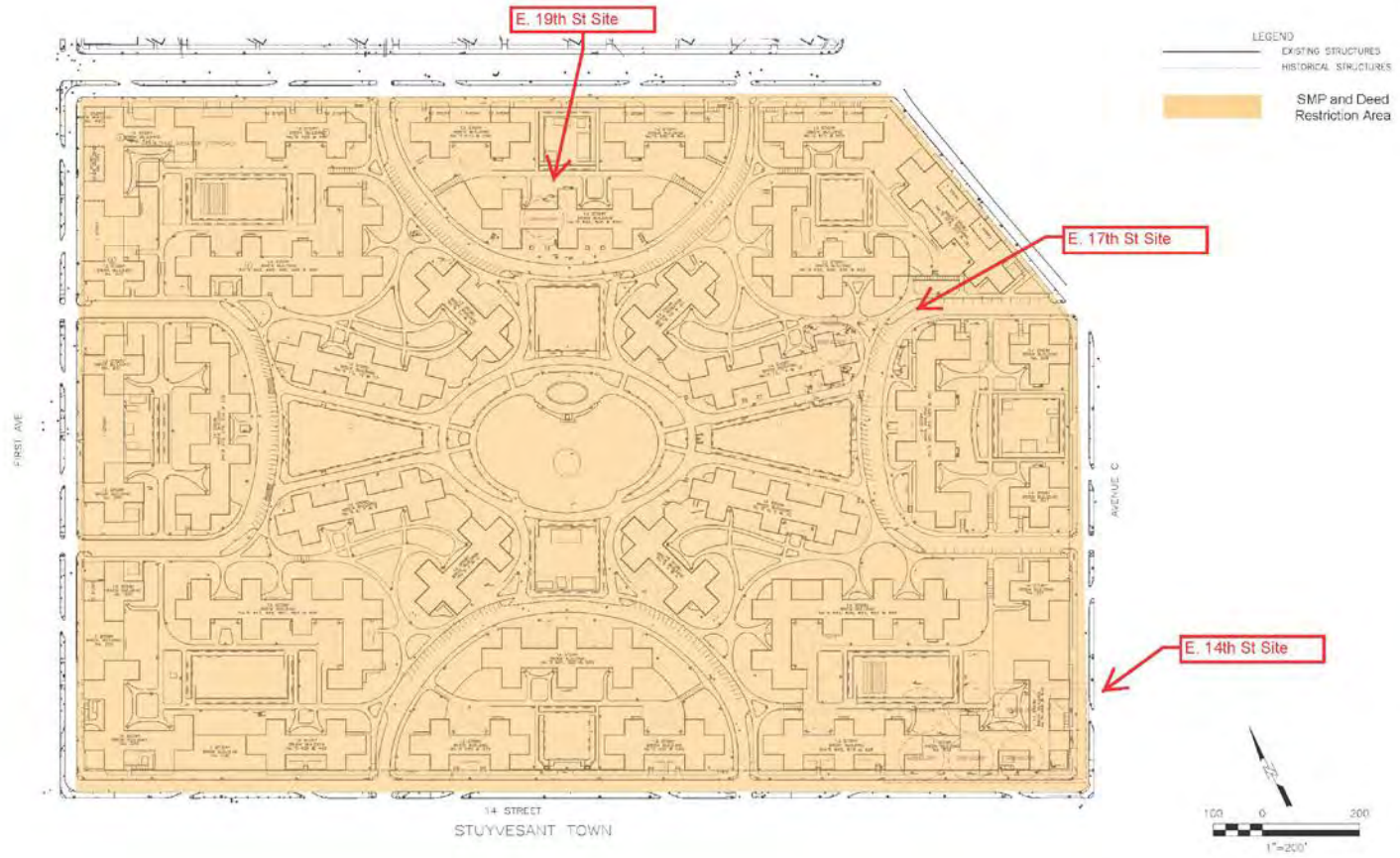
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01899-104-220		STUYVESANT TOWN SITE MAP	
DATE: 10/30/07	DRAWN: MAW/BL	FIGURE 2	

What happens now?

- Comments accepted through December 1
- Final decision issued
- Design and installation of the wells.
- Update Site Management Plan
- Place deed restriction
- Additional work will be done off of these sites, e.g Coastal Resiliency Project that will be monitored and coordinated with the Department and Con Edison



Thank You

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