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# EXPLANATION OF SIGNIFICANT DIFFERENCE

## FORMER CITIZENS MANUFACTURED GAS PLANT (MGP) SITE

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Brooklyn, Kings County

Site No. C224012

August 2020

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Prepared by the New York State Department of Environmental Conservation  
Division of Environmental Remediation

### 1.0 INTRODUCTION

The purpose of this notice is to describe the progress of the cleanup at the Former Citizens Manufactured Gas Plant site and to inform you about a change in the site remedy. The site is located at the intersection of Smith and 5<sup>th</sup> Streets along the Gowanus Canal in Brooklyn, NY. A site location figure is attached as Figure 1.

The site was initially in the state's Voluntary Cleanup Program (VCP) and was part of what was known as the K-Citizens Manufactured Gas Plant – Carroll Gardens site (V00360). The site transferred into the state's Brownfield Cleanup Program (BCP) in 2009, as part of the Citizens MGP Site (C224012). In 2019, Parcel III of that site became a standalone site known as the 459 Smith Street site (C224012B).

The Citizens MGP site is being remediated to achieve a “track 4” restricted residential cleanup under the Brownfield Cleanup Program. The goal for a track 4 is to remove identified source material to the extent feasible, install a site cover (subject of this document), and to manage what remains under a long-term Site Management Plan. The changes put forth in this document meet the requirements of a track 4 cleanup.

On April 23, 2007, the New York State Department of Environmental Conservation (DEC) issued a Decision Document (DD) which selected a remedy for the Carroll Gardens VCP site (V00360). This DD remained the governing cleanup document when the site transitioned into the BCP. The DD required the removal of all remaining former manufactured gas plant (MGP) structures and soil contamination present in areas adjacent to these structures. In addition, the DD required removal of any coal tar impacted soil present within the top eight feet across the site. Pre-remedial design investigations were conducted after the DD was issued. These investigations determined that coal tar contamination was present only in the areas surrounding the former MGP structures. Thus, the extensive excavation contemplated is not necessary, only targeted soil removal. Therefore, the requirement for sitewide soil removal was excluded from the site's final remedial design. The purpose of this Explanation of Significant Difference (ESD) is to amend the DD to include a sitewide cover system, consistent with DEC requirements for restricted residential use. A separate ESD will be issued for BCP site no. C224012B (Parcel III), as it is now a separate site.

This ESD will become part of the Administrative Record for this site. The information here is a summary

of what can be found in greater detail in documents that have been placed in the following repositories:

**Community Board 6**  
250 Baltic Street, Brooklyn, NY  
(718) 643-3027

**NYSDEC**  
625 Broadway, Albany, NY  
Attn: John Miller, P.E.  
(518) 402-9589

Information can also be found at DEC Info Locator at: <https://www.dec.ny.gov/data/DecDocs/C224012/>

Although this is not a request for comments, interested persons are invited to contact the Department's Project Manager for this site to obtain more information or have questions answered.

## **2.0 SITE DESCRIPTION AND ORIGINAL REMEDY**

### **2.1 Site History, Contamination, and Selected Remedy**

The 5.8-acre Carroll Gardens/Public Place property is located on the bank of the Gowanus Canal in Brooklyn. It is bounded by Smith Street, 5th Street, the property at 459 Smith Street and the Gowanus Canal. Surrounding land uses range from industrial to residential. The nearest residential structure is located directly across 5th Street from the site. The site is comprised of two of the original four parcels (Parcels I and II) which are owned by the City of New York. A third parcel (Parcel III) was recently removed from this BCP site, and has entered the BCP as a standalone site, the 459 Smith Street Site (C224012B). A fourth parcel, that was part of the original MGP operations, is being managed separately. This privately owned fourth parcel currently houses a trucking company and is the subject of a consent order (legal agreement) between National Grid and the Department.

Soon after the construction of the Gowanus Canal in the 1860s, the site was utilized as a manufactured gas plant (MGP). These operations continued for approximately 100 years until the plant operations ended in the 1960s. As a result of these operations, the site is contaminated with MGP residuals, including coal tar and petroleum products. Coal tar contains various volatile organic compounds (VOCs), primarily benzene, toluene, ethylbenzenes, and xylenes (BTEX). A family of compounds referred to as polycyclic aromatic hydrocarbons (PAHs) are also associated with MGP coal tar. During site investigations, coal tar has been observed across the site at various depths ranging from approximately seven to one hundred fifty feet below grade. Shallower coal tar impacts were observed in soil at locations which generally correspond to locations of former MGP structures. Groundwater at the site has been impacted with BTEX and PAH compounds associated with the coal tar. Contamination has migrated off-site impacting both the soil and groundwater. Off-site contamination will be fully delineated under the consent order discussed above.

The elements of the selected remedy from the 2007 DD include:

1. Removal of MGP related structures, their contents and nearby associated contaminated soil.
2. Removal of impacted soil to a depth of eight feet across the site.
3. Installation of a subsurface barrier wall along the Gowanus Canal to prevent the further off-site migration of coal tar.
4. Installation of coal tar recovery wells along the subsurface barrier wall to collect mobile tar for disposal.
5. Development of a Site Management Plan (SMP) to manage the institutional and engineering controls placed on the site and future monitoring activities.
6. Placement of an environmental easement that requires compliance with the SMP and limits the

future use of the site to restricted residential.

### **3.0 CURRENT STATUS**

The site is subject to a Brownfield Cleanup Agreement, Index Number A2-0610-0808, executed in 2009. The Brooklyn Union Gas Company (aka KeySpan Corporation/National Grid USA) (“National Grid”) entered into the BCP as a Participant. Remediation is ongoing and includes excavation of former MGP structures and associated coal tar impacted soil, as well as installation of a barrier wall along the Gowanus Canal. (The barrier wall will continue along the Gowanus to the south on the 459 Smith Street site C224012B.)

### **4.0 DESCRIPTION OF SIGNIFICANT DIFFERENCE**

#### **4.1 New Information**

The 2007 DD requires removal of contaminated soil present within the top eight feet across the site. As part of the design, additional study was undertaken that demonstrated the coal tar source areas were limited to areas in the immediate vicinity of the former MGP structures. As such, the sitewide excavation of soil to a depth of 8 feet was deemed unnecessary and, it was concluded that residual contamination could be effectively addressed by placement of a sitewide cover. This would render the site suitable for restricted residential use, consistent with the 6NYCRR Part 375 requirements for BCP track 4 remedies.

#### **4.2 Comparison of Changes with Original Remedy**

The majority of the remedial components from the site’s 2007 DD have been incorporated into the site’s remedial design. Based on the new information discussed above, a change is proposed to the remedy to eliminate the requirement for soil excavation across the site. Since areas of shallow soil contamination remain across the site at concentrations above restricted residential use cleanup objectives, a site cover will be required to ensure that the remedy is protective of human health and the environment. Contamination that may be encountered in these areas during future ground intrusive activities would be addressed as part of the long-term Site Management Plan (SMP).

Figure 2 shows the areas of remediation at the site. The excavation remedial element (no. 2 above) will be replaced with the following, new requirement:

2. *A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.*

## 5.0 SCHEDULE AND MORE INFORMATION

Pursuant to the DD, removal of MGP impacted structures and soil is ongoing. Remedial activities are expected to continue through early 2021. Upon completion of the remedial program, a Final Engineering Report will be developed, documenting the work performed and that the remedial objectives have been met. A Site Management Plan (SMP) will also be developed to address the long-term obligations including monitoring, maintenance and periodic certification that all engineering controls and institutional controls remain in place and effective. Upon successfully meeting the remedial requirements of the BCP, a Certificate of Completion (COC) will be issued for the site.

If you have questions or need additional information you may contact any of the following:

### Technical Questions

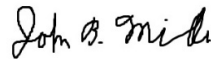
John Miller, P.E.  
NYSDEC  
625 Broadway, Albany  
(518) 402 – 9589  
[John.miller@dec.ny.gov](mailto:John.miller@dec.ny.gov)

### Health Related Questions

Steven Berninger  
NYSDOH  
Corning Tower, Rm 1787, Albany  
(518) 402 - 0443  
[Steven.Berninger@health.ny.gov](mailto:Steven.Berninger@health.ny.gov)

08/05/20

Date



John Miller, Project Manager  
Remedial Bureau C, Division of Environmental Remediation

08/5/2020

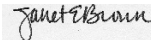
Date



Daniel J. Eaton, P.G. Section Chief  
Remedial Bureau C, Division of Environmental Remediation

08/05/2020

Date



Janet E. Brown, P.E., Director  
Remedial Bureau C, Division of Environmental Remediation

## DECLARATION

The selected remedy is protective of public health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.



**Figure 1**  
**Site Location**  
**Brooklyn, NY**





# Excavation Areas and Bulkhead Barrier Wall Plan

