December 6, 2022

Mr. Richard Mustico
Project Manager, Remedial Section B
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7016

**Re: Grossly Contaminated Material Investigation Work Plan**
**473 President Street, President Street Portfolio, and 514 Union Street**
**Brooklyn, New York 11215**
**NYSDEC BCP Site ID No.'s C224220, C224309, and C224318**
**Langan Project No.: 170361303**

Dear Mr. Mustico,

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) prepared this Grossly Contaminated Material (GCM) Investigation Work Plan on behalf of 473 President LLC (the Volunteer), in response to the New York State Department of Environmental Conservation (NYSDEC) 19 October 2022 request to submit a GCM investigation work plan for 473 President Street (Brownfield Cleanup Program [BCP] Site No. C224220), President Street Portfolio (BCP Site No. C224309), and 514 Union Street (BCP Site No. C224318) (the "Sites").

The 473 President Street and President Street Portfolio sites are in the remediation phase and Remedial Action Work Plans (RAWP) for these sites were approved by NYSDEC in October 2020 and February 2021, respectively. The Remedial Investigation Work Plan (RIWP) for the 514 Union Street site was approved by the NYSDEC in August 2022. The remedial investigation (RI) was completed at the 514 Union Street site in September 2022. An Interim Remedial Measures Work Plan (IRMWP) for the 514 Union Street site to address soil vapor intrusion (SVI) mitigation was approved by the NYSDEC in July 2022. The SVI mitigation system was installed in September 2022 and startup testing was completed on 22 September 2022.

## SITE BACKGROUND

### Site Location

The Sites are located in the Gowanus neighborhood of Brooklyn, New York, and encompass Block 440, Lots 1 and 12. The Sites are located on the block bound by Union Street to the north,

3rd Avenue to east, President Street to the south and Nevins Street to the west. A site location map is provided as Figure 1.

The 473 President Street and President Street Portfolio sites are currently vacant with development planned for early 2023. The 514 Union Street site is occupied by Royal Palms Shuffleboard Club, comprised of shuffleboard courts, an office, bars, restrooms, storage areas, and a loading dock.

The Gowanus neighborhood is a densely populated urban area improved with infrastructure including paved roads, walkways and buildings. The infrastructure is generally underlain with fill used for construction and development since the mid 1800's. Langan's review of historical documents revealed that the Sites and surrounding area had been developed for residential, commercial and industrial uses since at least 1886.

**Historical Off-site GCM Sources**

The Gowanus Canal, located about 300 feet west of the Sites, is on the National Priorities List (NPL) as a Federal Superfund site, and contains known GCM. Grossly contaminated media is defined in title 6 of the Official Compilation of New York Codes, Rules and Regulations (6 NYCRR) Part 375-1.2(u) as soil, sediment, surface water or groundwater which contains sources or substantial quantities of mobile contamination in the form of non-aqueous phase liquid (NAPL) that is identifiable either visually, through strong odor, by elevated contaminant vapor levels or is otherwise readily detectable without laboratory analysis. The former Fulton Manufactured Gas Plant (MGP) site (Site No. 224051), located approximately 330 feet north of the Sites, is a source of GCM.

The GCM investigation work plan requested by NYSDEC includes advancement of three soil borings to a minimum depth of 100 feet below grade surface (bgs) near current monitoring wells MW12S and MW13D by the 514 Union Street site, near monitoring well location MW03 on the President Street Portfolio site, and near monitoring well location MW15 on the 473 President Street site. If GCM impacts are observed during boring advancement, soil and groundwater samples will be collected to vertically delineate the impacts.

As discussed in the following sections, previous soil borings and monitoring wells in the neighborhood have documented the delineation of GCM impacts associated with the former Fulton MGP site.

<u>Former Fulton MGP Site</u>

The NYSDEC's 18 August 2022 request for GCM delineation at the Sites references the Fulton MGP site borings FW-SB-27 and GCMW-30D2. These two borings are located approximately 570 feet and 400 feet from the Sites, respectively. As stated in the 30 September 2022 Coal Tar Delineation Request Response Letter prepared by Langan, the July 2012 Final RIR prepared by

GEI Consultants, Inc. (GEI) for the former Fulton MGP site delineated GCM impacts to the south in soil borings advanced to a maximum depth of 68 feet bgs. The closest delineation boring to the Sites, FW-SB-38, is located about 150 feet northwest.

The NYSDEC's 19 October 2022 GCM investigation work plan request references the former Fulton MGP site borings FW-SB-37 and FW-SB-38. The borings are located about 215 feet and 150 feet northwest of the Sites, respectively. The GEI report concludes that although polycyclic aromatic hydrocarbons (PAHs) were detected in a soil sample collected at FW-SB-38 from the 65 to 68 feet bgs, the relative magnitude of these concentrations represent delineation of the southern extent of GCM. The RIR for the Former Fulton MGP site, the objective of which is to delineate the horizontal and vertical extent of contaminants in all media at or emanating from the site, was approved by the NYSDEC and was finalized in July 2012.

Deep Soil Boring and Monitoring Well at 473 President Street

As stated in the 30 September 2022 Coal Tar Delineation Request Response Letter, prepared by Langan, one boring (SB20D) was advanced to 55 feet bgs at the 473 President Street site during the April 2017 Supplemental Investigation. The soil boring was converted into a deep monitoring well (MW20D) with a screened interval of 20 to 30 feet bgs. No evidence of coal tar impacts were observed, and analytical results did not indicate coal tar impacts between 30 and 55 bgs at SB20D. The petroleum-related impacts observed between 10 and 30 feet bgs at SB20D/MW20D are attributed to the suspected underground storage tanks (USTs) in the northwestern portion of the 473 President Street site.

Geotechnical Boring Logs

Geotechnical borings documented in the October 2021 Final Investigation Report, prepared by Pillori Associates, P.A. (Pillori), were advanced to about 100 feet bgs. The closest geotechnical borings (B-16 and B-17) to location MW03 on the President Street Portfolio site are located about 18 feet southwest, and 45 feet southeast, respectively. Geotechnical boring B-16 was advanced to about 100 feet bgs, and boring B-17 was advanced to about 76 feet bgs. According to the geotechnical boring logs, the stratigraphy generally consists of fill underlain by brown sand with trace amounts of silt and gravel. Cobbles and boulders were encountered between 40 and 90 feet bgs. No evidence of a confining layer was identified in the geotechnical boring logs. No observations or evidence of GCM were noted in the boring logs, or samples collected by the geotechnical engineer.

## SAMPLING METHODOLOGY AND FIELD INVESTIGATION

To investigate the vertical and horizontal extents of GCM potentially encroaching from the Gowanus Canal and Fulton MGP site, Langan will install three soil borings across the Sites to a minimum depth of 100 feet below grade surface. If GCM is observed, vertical delineation will be

determined if GCM-related impacts are observed in less than 75% of the soil boring interval. If there is less than 50% recovery, delineation will not be determined based on that interval and an additional interval will be advanced to achieve vertical delineation. Grab soil samples from the interval immediately below the bottom of each distinct observed impact will be collected for Part 375/Target Compound List SVOCs. If no GCM impacts are identified, no soil samples will be collected.

Three borings (SB01_CT through SB03_CT) will be advanced: SB01_CT near monitoring wells MW12S and MW13D on the Union Street sidewalk; SB02_CT near monitoring well location MW03 in the western part of the President Portfolio site; and SB03_CT near monitoring well location MW15 in the central part of the 473 President Street site.

At any soil boring locations exhibiting evidence of GCM; multi-level monitoring wells will be installed. Multi-level monitoring wells will be screened at the groundwater interface, and below the deepest observation of GCM. Temporary monitoring wells will be constructed with 2-inch-diameter polyvinyl chloride (PVC) riser pipe attached to 10-foot-long, 0.01-inch slotted PVC screen set at the desired depth intervals. Each monitoring well will be purged before sampling. Following purging, each well will be sampled using a peristaltic pump with dedicated high density polyethylene (HDPE) tubing. Groundwater samples will be collected and analyzed for VOCs and SVOCs.

If any GCM is encountered in the soil borings, additional soil borings will be installed as needed to fully delineate the horizontal extent of GCM impacts. Additional soil boring locations will be proposed to NYSDEC for review prior to proceeding with installation. The additional soil borings will be advanced to the vertical extent of observed GCM impacts in the previous boring, or the vertical geologic unit beneath the observed GCM impacts in the previous boring.

The GCM Investigation Work Plan will be implemented in accordance with the Health and Safety Plan (HASP), Quality Assurance Project Plan (QAPP), and Community Air Monitoring Program (CAMP) included in the 514 Union Street July 2022 Remedial Investigation Work Plan (RIWP) as Appendices B, C and D, respectively.

Proposed GCM investigation boring locations are shown on Figure 2.

**REPORTING**

Documentation of the GCM investigation will be provided in a GCM Investigation Report. The report will describe investigation activities and present the field results. If any soil or groundwater samples are collected, analytical results will be presented in summary tables and soil and/or groundwater sample locations will be shown on a site plan.

At a minimum, the GCM investigation report will include:

- Field observations

- An evaluation of the results and findings
- Conclusions and recommendations

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by the end of each day following the reporting period and will include:

- An update of progress made during the reporting day
- Description and locations of work completed during the reporting day
- A summary of any and all complaints with relevant details (names, phone numbers)
- A summary of CAMP findings, including exceedances
- An explanation of notable site conditions, including the location of elevated photoionization detector (PID) readings, if observed

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the GCM investigation or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the GCM investigation will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities and a map that identifies work areas. These reports will include a summary of CAMP results, odor and dust problems and corrective actions, PID readings, and all complaints received from the public.

The NYSDEC-assigned project number will appear on all reports.

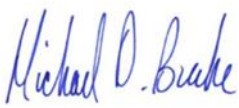
**SCHEDULE**

Access to the Sites will be coordinated with the Volunteer, and the mobilization to implement the Gross Contaminated Material Investigation Work Plan is expected to begin in December 2022.

Enclosure(s): Figure 1 – Site Location Map
Figure 2 – Proposed Boring/Monitoring Well Location Plan

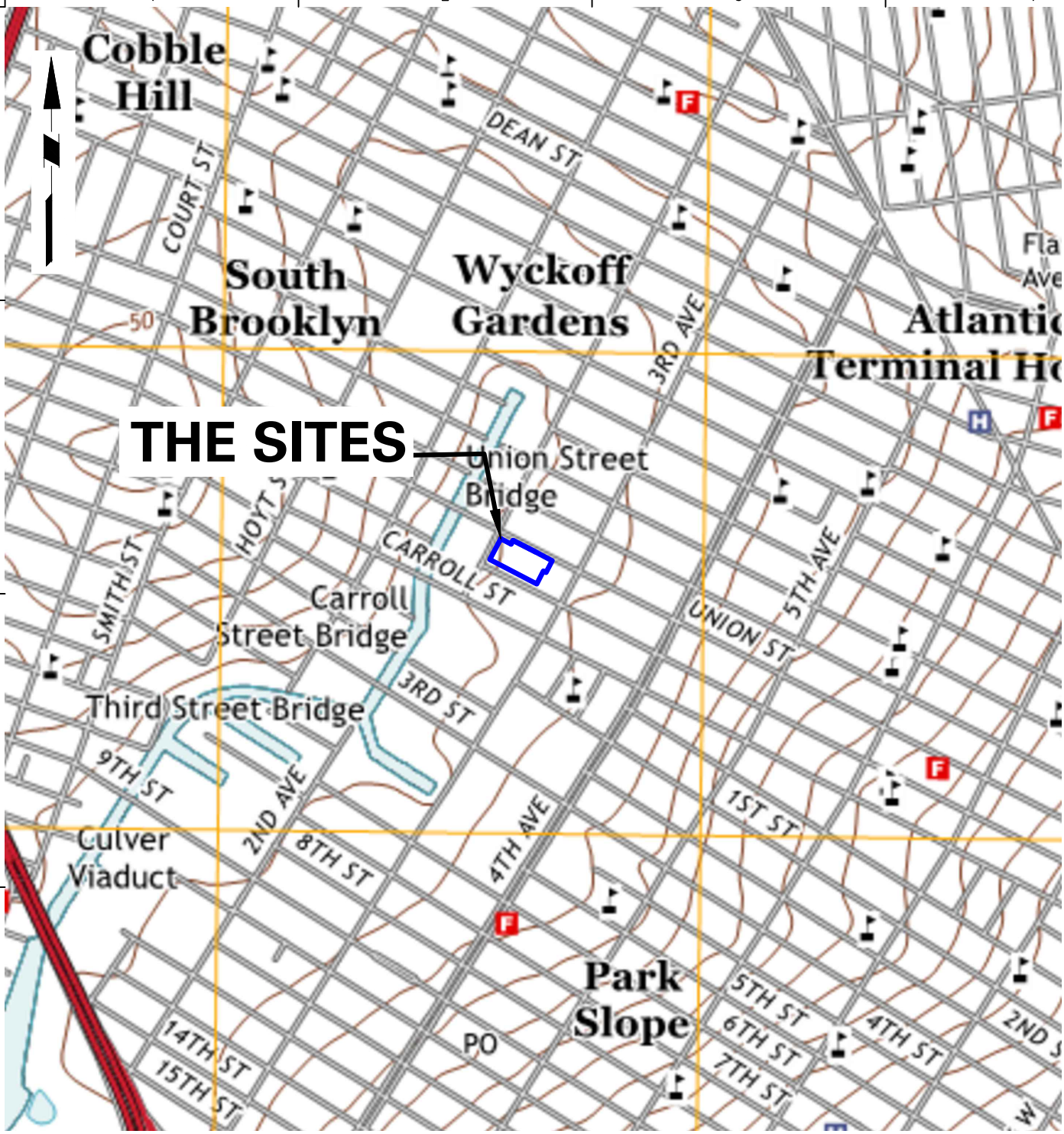
## CERTIFICATIONS

I, Michael D. Burke, certify that I am currently a Qualified Environmental Professional as defined in 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 and that this Remedial Investigation Work Plan (RIWP) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation.



Michael D. Burke, PG, CHMM

# FIGURES




NOTES:

1. BASEMAP ADAPTED FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5-MINUTE SERIES TOPOGRAPHICAL MAPS, JERSEY CITY, NJ AND BROOKLYN, NY QUADRANGLES, DATED 2016.

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SCALE: 1 INCH = 1000 FEET


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| Project | 473 PRESIDENT STREET/PRESIDENT STREET PORTFOLIO/514 UNION STREET<br>BLOCK No. 440, LOT No.'s 1 and 12<br>KINGS BROOKLYN NEW YORK |
| Figure Title | SITE LOCATION MAP |
| Project No. | 170361303 |
| Date | 11/17/2022 |
| Drawn By | AC |
| Checked By | VDP |
| Figure No. | 1 |
| Sheet | 1 of 5 |



Filename: \\langan.com\data\NYC\data3\170361301\Cadd Data - 170361301\SheetFiles\Environmental\Coal Tar\Figure 1 - Site Location Map_11172022.dwg Date: 11/17/2022 Time: 09:42 User: acaelwaerts Style Table: Langan.stb Layout: ANSIA-BP


## LEGEND

- **MW-20D** — BCP SITES PREVIOUS MONITORING WELL LOCATION
- **FW-MW-04** — FULTON MGP SOIL BORING/ GROUNDWATER MONITORING WELL LOCATION
- **SB01_CT** — PROPOSED BORING LOCATION
- BCP SITE BOUNDARY
- TAX LOT BOUNDARY

NOTES:
1. WORLD AERIAL IMAGERY BASEMAP IS PROVIDED THROUGH LANGAN'S ESRI AND ARCGIS SOFTWARE LICENSING AND ARCGIS ONLINE.
2. TAX PARCEL DATA PROVIDED BY THE NEW YORK CITY DEPARTMENT OF CITY PLANNING.
3. BCP SITES PREVIOUS MONITORING WELL LOCATIONS WERE SURVEYED.
4. FULTON MGP SOIL BORING/GROUNDWATER MONITORING WELL AND PROPOSED SOIL BORING LOCATIONS ARE APPROXIMATE.



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Project
473 PRESIDENT STREET/PRESIDENT STREET PORTFOLIO/514 UNION STREET
BROOKLYN
KINGS NEW YORK

Figure Title
# SOIL BORING/ MONITORING WELL LOCATION PLAN

Project No. 170361305
Date 11/17/2022
Scale 1"=100'
Drawn By MG/PDT
Figure No. 2
Sheet 2 of 2



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