

February 11, 2021
Via E-Mail

Mr. John Miller
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway
Albany NY, 12233

Re: Pre-Design Investigation (PDI) Work Plan Addendum – 545 Sackett Street (Parcel III)
Fulton Municipal Works Former MGP Site
Brooklyn, New York

Dear Mr. Miller:

Attached is an addendum to the NYSDEC approved *Pre-Design Investigation (PDI) Work Plan – 545 Sackett Street (Parcel III)* dated June 29, 2018. The attached Work Plan Addendum was prepared consistent with the July 2015 *Record of Decision (ROD), K-Fulton Works Site No. 224051* issued by DEC and presents the scope of planned additional gas holder related investigation work on Parcel III.

If you have any questions, please feel free to call me at (516) 545-2578.

Sincerely,



Patrick J. Van Rossem
Project Manager
Site Investigation & Remediation
Environmental Management

Attachment: *PDI Work Plan Addendum – 545 Sackett Street (Parcel III)*

cc: S. Berninger, NYSDOH
A. Prophete, NGRID
C. Rooney, Esq., NGRID
L. Bausinger, DBR
J. Clark, GZA
C. Papamichael, Domain Companies



**Pre-Design Investigation (PDI) Work Plan Addendum
545 Sackett Street (Parcel III)
Fulton Municipal Works Former Manufactured Gas Plant
Brooklyn, New York**

This document serves to describe planned additional pre-design investigation activities at 545 Sackett Street property in Brooklyn, New York. This property is referred to as Parcel III of the Fulton Municipal Works Former Manufactured Gas Plant (MGP) Site.

1.0 INTRODUCTION

On behalf of The Brooklyn Union Gas Co. d/b/a National Grid NY (National Grid), GZA GeoEnvironmental of New York (GZANY) has prepared this *Pre-Design Investigation (PDI) Work Plan Addendum – Parcel III* for the property located at 545 Sackett Street in Brooklyn, New York (also referred to as Block 426 Lot 1, +/- 0.92 acre per New York City Department of Finance Digital Taxes Map Online). This document serves as an addendum to the *Pre-Design Investigation (PDI) Work Plan – Parcel III* which was submitted to New York State Department of Environmental Conservation (DEC) on June 29, 2018 and subsequently approved by DEC on July 13, 2018 and was prepared consistent with the July 2015 *Record of Decision (ROD), K-Fulton Works Operable Unit Number 01: Plant Site and Near Off-Site Brooklyn, Kings County, Site No. 224051* issued by DEC. The investigation activities described in the above referenced PDI Work Plan were performed by National Grid between August and September 2018 and were described in the *Pre-Design Investigation (PDI) Data Report – 545 Sackett Street (Parcel III)*, submitted to DEC on February 25, 2019.

This PDI Work Plan Addendum describes planned investigations specific to the two former gas holders: one reportedly located in the northeastern portion of the current Parcel III building; and a second gas holder that is reportedly almost entirely located on the adjacent property to the east (referred to as Parcel IV of the Fulton Former MGP Site). On certain historical drawings, the western limits of the latter has been shown to partially extend onto the Parcel III property.

1.1 ADDITIONAL PRE-DESIGN INVESTIGATION OBJECTIVES

As indicated above and shown on the attached Figure 1, there is a former gas holder reportedly located entirely within the northeastern portion of Parcel III that is approximately 80 feet in diameter and extends to depth a depth of approximately 19 feet below the building slab. There is also a second gas holder, which according to historical records, is almost entirely located on the adjacent 560 Degraw Street property (referred to as Parcel IV of the Fulton Former MGP Site) to the east / northeast of Parcel III. This holder is approximately 85 feet in diameter and is reportedly also approximately 19 feet deep. While certain of the previous explorations provide information related to the approximate depths of the holders, this additional work is focused on verifying the location of the holders relative to current Site features and gathering additional information relative to the holder sidewalls geometry and type. In addition, if feasible this scope of work includes performance of up to two additional borings within the western limits of the Parcel IV holder designed to collect further information relative to the depth of the holder and the quality of materials in this area. All of the proposed work is anticipated to be completed on the Parcel III property.

2.0 PLANNED SCOPE OF WORK

The following sections outline the planned scope of work associated with this PDI Addendum.



2.1 EXPLORATION PROGRAM

This scope of work involves performance of test pits and borings to further explore the former holder areas. Specifically, this scope has been developed to determine the location and geometry of the holder rings and, if feasible, performance of additional borings within the western limits of the Parcel IV holder designed to collect further information relative to the depth of the holder and the quality of materials in this area. Anticipated test pit and boring locations are depicted on the attached Figure 1. These locations were selected based on a review of existing data and available historical drawings. The actual locations of these test pits and borings will be determined in the field depending on utility clearance activities, access, overhead restrictions, and observations made.

As indicated on Figure 1, four (4) test pits are planned (FW-TP-501 through FW-TP-504). Prior to performing the test pits, sections of the warehouse floor will be sawcut and removed. We currently anticipate these test pits will range from approximately 6 ft wide by 10 to 15 feet long. The depth and geometry of each test pit will vary depending on the observations made and the depth of the holder ring. We currently anticipate depths ranging from approximately 2 to 6 feet below the building slab. Based on previous explorations, the reinforced concrete slab in the warehouse is anticipated to be approximately 6 to 8 inches thick.

The test pits will be performed using equipment that can operate within the ceiling clearances of the warehouse. At each test pit, sections of polyethylene sheeting will be laid out and the excavated materials will be placed on this sheeting in general order and depths from which they were excavated. To the extent practical, the first two to three feet of each test pit will be advanced with soft digging utilizing an air knife or vacuum excavation. The test pits will then be advanced to expose the sidewalls of the former gas holders. Each of the test pits will be photo-documented and the locations of the holder sidewalls will be measured relative to Site features and subsequently marked on the surface of the slab.

The excavated material will be backfilled within each test pit in the general order and depth that it was excavated. The material will be bucket tamped during backfilling. Restoration of the test pit areas will consist of either installing 10 mil polyethylene sheeting which will be covered with a layer of clean import gravel or placement of unreinforced concrete. In either case, the restoration will be completed such as to approximately match the surrounding floor surface.

In the event the western limits of the Parcel IV holder are far enough onto the Parcel III property, one (1) to two (2) test borings within this former holder will be performed from Parcel III warehouse building. These test boring locations are shown on the attached Figure 1 and designated as FW-SB-501A and FW-SB-501B. Borings will be performed using a direct-push (Geoprobe) drill rig to accommodate the ceiling heights within the existing warehouse building and to allow for continuous core sampling during the advancement of the borings for soil classification and field screening. Prior to performing the soil sampling, the slab section at the borehole location will be saw cut and then removed using a jackhammer or similar piece of equipment. After concrete coring, the borehole will be advanced with soft digging to approximately 6' to 8' utilizing an air knife or vacuum excavation, or with a hand auger if necessary. Finally, the borehole will be advanced using direct-push technology until the base of the holder is encountered (anticipated to be approximately 19 feet below grade) and continuous soil samples will be collected. The recovered soil from each boring will be logged and classified by GZA personnel in accordance with DEC approved protocols and Log Key for the Fulton Site. This includes classifying soil geologic conditions using the Unified Soil Classification System. In addition, consistent with the DEC approved Fulton Field Sampling Plan (FSP), the recovered soil from each interval will be field screened for presence of volatile organic compounds (VOCs) with a photo-ionization detector (PID) and evaluated for the presence of environmental indicators (staining, odor, and varying degrees of NAPL). GZA will also perform photo-documentation of each soil sampling interval and describe any residual materials observed consistent with the standard classification system used during previous explorations at the Fulton Site.



Upon completion, the borings will be grouted to the ground surface using a conventional cement-bentonite mix.

While no specific analytical testing is anticipated, depending on conditions encountered, certain soil samples from these test pits and borings may be analyzed for the parameter list included in the June 2018 PDI Work Plan – Parcel III.

2.2 HEALTH AND SAFETY PLAN (HASP)

The Site-specific Health and Safety Plan prepared by GZA for the Parcel III PDI work will be reviewed and updated for this program. Refer to Appendix A of the July 2018 PDI Work Plan for a copy of the project HASP. The HASP will be available at the Property during the performance of the test pitting activities.

2.3 UTILITY CLEARANCE

As required by law, at least 72 hours prior to initiation of any intrusive field work, GZA's subcontractor will contact Dig Safely New York (1-800-272-4480) to locate underground utilities (i.e., gas, electric, telephone, cable, etc.) within the public right-of-ways adjacent to each property. Prior to performing these explorations, they will be cleared for the presence of utilities utilizing an air knife or vacuum excavation to approximately 2 to 3 feet below grade. GZA and its subcontractor will verify the utility operators provided on the Dig Safely ticket have marked the exploration locations clear of utilities prior to commencing work. In addition, the locations of the proposed explorations will be coordinated with the property owner relative to the layout of known subsurface utilities and other obstructions. The information gathered during utility clearance activities will be documented in the Addendum to the PDI Data Summary Report.

2.4 QUALITY ASSURANCE PROJECT PLAN (QAPP) AND FIELD SAMPLING PLAN (FSP)

All investigation and field sampling activities described herein will be performed consistent with applicable requirements of the QAPP, the FSP, and the FSP and QAPP addendums prepared for the Fulton Site. These documents are included in Appendices B and C of the July 2018 PDI Work Plan.

2.5 COMMUNITY AIR MONITORING PLAN (CAMP)

Air monitoring for VOCs, cyanide, and particulate dust will be performed during the field work consistent with the Fulton CAMP which is included in Appendix C of the July 2018 PDI Work Plan for Parcel III.

During the performance of intrusive investigations, GZA will also perform work zone air monitoring for VOCs with a portable PID, particulate dust with a Mini Ram™ PM-10 particle detector, and cyanide with a hydrogen cyanide meter and detector tube samplers as necessary. If concentrations of these parameters within the work zones or at the perimeter of the work are above the Response Levels within the HASP or the CAMP, the work will be temporarily suspended and controls (i.e., applying water for dust suppression, covering or drumming drill spoils, modification of work procedures) implemented to reduce airborne concentrations. If these controls are not effective at reducing concentrations below the Response Levels, work will be suspended and re-evaluated.

2.6 DECONTAMINATION PROCEDURES

Sampling equipment will be decontaminated between each use consistent with the procedures in the FSP. The excavator bucket and any other drilling and sampling tools will be decontaminated between each exploration location. Decontamination will be performed over a decontamination pad as described in the FSP.



2.7 INVESTIGATION DERIVED WASTES AND DECONTAMINATION

If any investigation derived waste (IDW) is generated, including excess soils and concrete, decontamination fluids, disposable sampling equipment, and used personal protective equipment (PPE), the IDW will be stored in steel 55-gallon, USDOT drums with secured lids. Upon generation, GZA will label each drum in accordance with National Grid's specific requirements indicating the source location and contents and the drums will be temporarily stored within a designated staging area within the warehouse building prior to disposal at a licensed facility permitted to accept the waste.

3.0 ADDENDUM TO PDI DATA SUMMARY REPORT

Upon completion, an Addendum to the PDI Data Summary Report will be prepared that presents observations made during this program. The report will include a figure depicting the locations of the explorations, test pit and boring logs, and relevant photos.

4.0 SCHEDULE

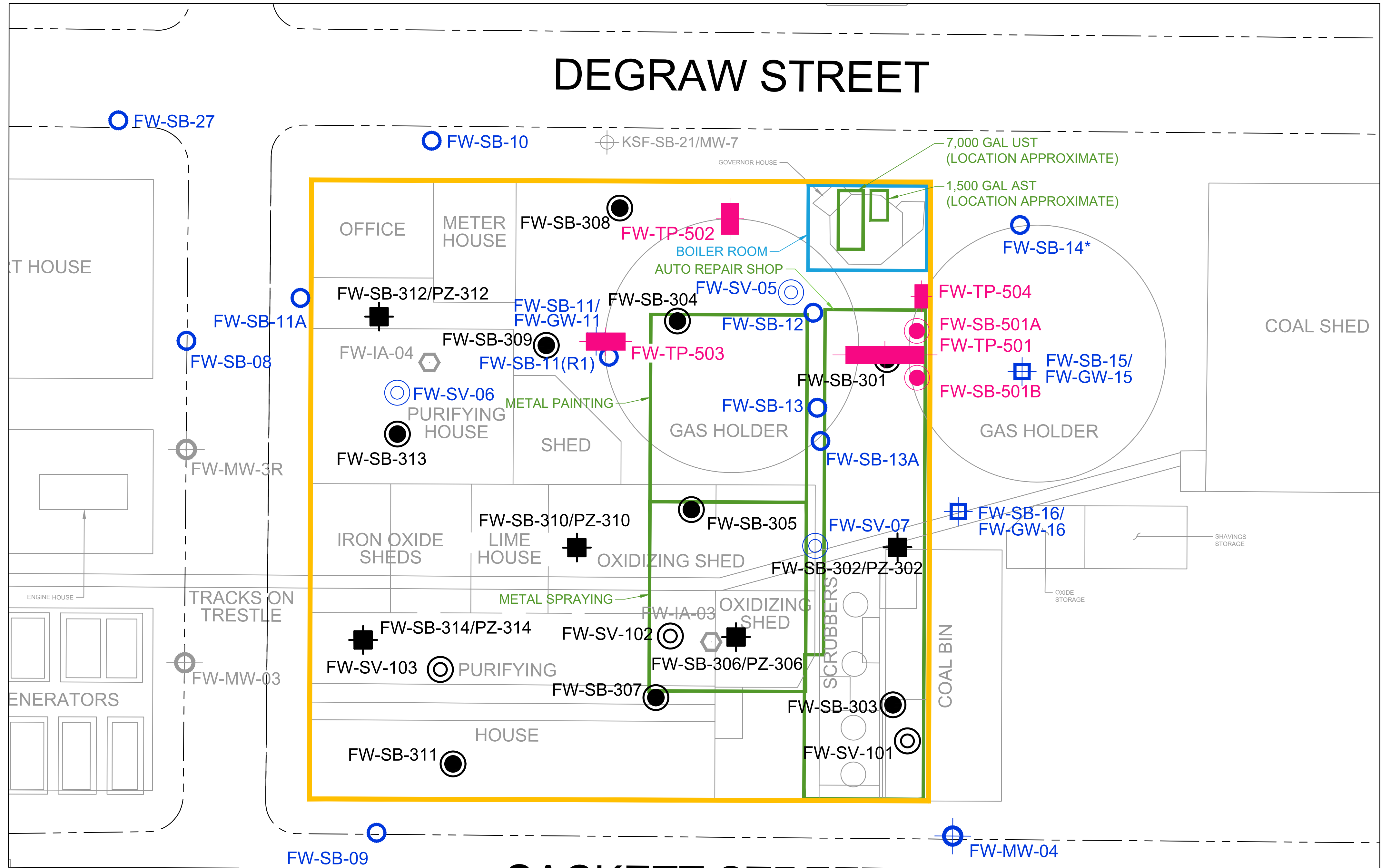
National Grid is coordinating with the property owner to schedule and complete the additional PDI work described herein. We currently anticipate this work will be performed in March 2021 pending finalizing the access agreement and receiving DEC approval of this Work Plan Addendum. The field work described herein will take approximately one (1) to two (2) weeks to perform. We expect the Addendum to the PDI Data Summary Report will be submitted to NYSDEC within approximately four (4) weeks after completion of the field work.

ATTACHMENT

FIGURE 1 – EXPLORATION LOCATION PLAN – ADDENDUM TO PDI, PARCEL III

DEGRAW STREET

SACKETT STREET



LEGEND

- FULTON MUNICIPAL WORKS MGP
PARCEL III PDI SAMPLE LOCATIONS**
- SITE BOUNDARY
 - APPROXIMATE LOCATION OF PROPERTY BOUNDARIES
 - FW-SB-310 2018 PARCEL III PDI SOIL BORING LOCATIONS
 - FW-SB-310/PZ-310 2018 PARCEL III PDI SOIL BORING / PIEZOMETER LOCATIONS
 - FW-SV-101 2018 PARCEL III PDI SOIL VAPOR POINT
 - FW-MW-01 PREVIOUSLY INSTALLED MONITORING WELL SAMPLED DURING 2018 PARCEL III PDI
 - FW-SV-05 PREVIOUSLY INSTALLED SOIL VAPOR POINT SAMPLED DURING 2018 PARCEL III PDI
 - FW-TP-501 PROPOSED TEST PIT LOCATIONS
 - FW-SB-501A PROPOSED SOIL BORING LOCATIONS

FULTON MUNICIPAL WORKS MGP REMEDIAL INVESTIGATION (RI) SAMPLE LOCATIONS

- FW-MW-01 MONITORING WELL
- FW-SB-01 SOIL BORING
- FW-SB-20 SOIL BORING WITH TEMPORARY GROUNDWATER WELL SAMPLE
- FW-SV-10 SOIL VAPOR POINT
- FW-IA-01 INDOOR AIR SAMPLE
- FW-OA-02* OUTDOOR AIR SAMPLE

PREVIOUS SAMPLE LOCATIONS

- KSF-SB-24 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) SITE CHARACTERIZATION (SC) BORING
- KSF-SB-26/MW-3 NYSDEC SC MONITORING WELL
- POST-MGP OPERATIONS
- FORMER MGP FEATURES
- COMBINED SEWER OVERFLOW (CSO) OUTFALL

2018 PARCEL III PDI EXPLORATION COORDINATES		
BORING ID	NORTHING	EASTING
FW-SB-301	634672.5	672995.6
FW-SB-302/PZ-302	634648.2	672939.9
FW-SB-303	634624.0	672895.1
FW-SB-304	634617.6	673037.2
FW-SB-305	634594.2	672980.7
FW-SB-306/PZ-306	634588.6	672937.5
FW-SB-307	634556.6	672931.7
FW-SB-308	634617.4	673078.2
FW-SB-309	634576.3	673049.2
FW-SB-310/PZ-310	634555.7	672986.4
FW-SB-311	634488.5	672942.0
FW-SB-312/PZ-312	634532.2	673081.8
FW-SB-313	634520.4	673045.3
FW-SB-314/PZ-314	634480.6	672990.9
FW-SV-101	634569.7	672947.3
FW-SV-102	634622.9	672882.6
FW-SV-103	634498.6	672971.1

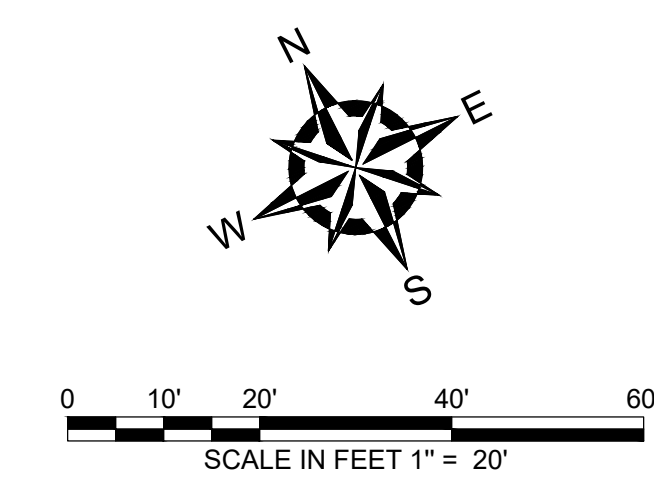
NAD83 NEW YORK EAST (FEET)

NOTES:

- THE LOCATIONS OF THE 2018 PARCEL III PDI BORINGS, PIEZOMETERS, AND SOIL VAPOR POINTS INDICATED HEREIN ARE BASED ON FIELD MEASUREMENTS AND SHOULD BE CONSIDERED APPROXIMATE.
- COORDINATES ARE BASED ON NORTH AMERICAN DATUM OF 1993 (NAD83).
- PROPOSED TEST PITS PERFORMED TO OBSERVE GAS HOLDER WALL GEOMETRY. LOCATIONS OF PROPOSED TEST PITS AND GAS HOLDERS ARE APPROXIMATE. LOCATIONS OF TEST PITS MAY VARY IN THE FIELD BASED ON ACTUAL GAS HOLDER GEOMETRY AND ON LOCATION ACCESS.

REFERENCE NOTES:

- THIS BASE PLAN WAS DEVELOPED FROM THE FOLLOWING AUTOCAD DRAWING FILES:
 - "FULTON-RI SAMPLE LOCATIONS.DWG", TITLED, "FIGURE 3 - HISTORICAL MGP STRUCTURES & RI STUDY AREA SAMPLE LOCATION MAP", DATED JULY 2012, PREPARED BY GEI CONSULTANTS.
 - "FULTON-IRMPDISR_EXTENT.DWG", TITLED, "FIGURE 3 - PRE DESIGN INVESTIGATION EXPLORATION LOCATION PLAN", DATED APRIL 2013, PREPARED BY GEI CONSULTANTS.
 - "FULTON-FORMER MGP FOOTPRINT.DWG", TITLED, "FIGURE 2 - FULTON FORMER MGP SITE FOOTPRINT SUMMARY", DATED APRIL 2013, PREPARED BY GEI CONSULTANTS.
 - "FINAL BLOCK-411,417,418,424,425,431,413.DWG" TITLED, "BOUNDARY AND TOPOGRAPHIC SURVEY", DATED SEPTEMBER 17, 2012, PREPARED BY KS ENGINEERS.



NO.	ISSUE/DESCRIPTION	BY	DATE
<p>THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.</p> <p style="text-align: center;">NATIONAL GRID PARCEL III FULTON MUNICIPAL WORKS FORMER MGP SITE 545 SACKETT STREET, BROOKLYN, NEW YORK</p> <p style="text-align: center;">EXPLORATION LOCATION PLAN - 545 SACKETT STREET PROPOSED ADDITIONAL EXPLORATIONS</p>			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:
PROJECT MGR:	MJP	REVIEWED BY:	JJC
DESIGNED BY:	GBS	DRAWN BY:	MR/DR
DATE:	NOVEMBER, 2019	PROJECT NO.:	03.0034060.10
		CHECKED BY:	GBS
		SCALE:	AS NOTED
		REVISION NO.:	
			FIGURE 1 SHEET NO.

2019 - GZA GeoEnvironmental, Inc. GZA-C:\Users\Doreen.Locall\Documents\GZA\03\0034060.10 T25-5 Fulton Parcel III\Figure 2 - Exploration Location Plan Nov 2019.dwg [Explor Plan] November 19, 2019 - 4:00pm Doreen Locall