Brian Bermingham
Project Engineer
Site Investigation & Remediation

nationalgrid

May 8, 2015

Elizabeth B. Lukowski
Engineering Geologist
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway
Albany, NY 12233-7014

**Re: Site Characterization Supplemental Scope of Work**
**Proposed Additional Borings**
**Former Peoples Works Manufactured Gas Plant Site**
**Brooklyn, New York**
**NYSDEC Site No. 224053, Index No. A2-0552-0606**

Dear Ms. Lukowski,

Tetra Tech, Inc. (Tetra Tech), on behalf of National Grid, is currently conducting field work at the Former Peoples Works Manufactured Gas Plant (MGP) Site (the "Site") as part of the Supplemental Site Characterization (SSC). The SSC is being conducted to satisfy the New York State Department of Environmental Conservation's (NYSDEC) request to address data gaps in the SC prior to redevelopment of the Site by the property owner. The current scope of work for the SSC was approved by NYSDEC on September 24, 2014.

This supplemental scope of work focuses on additional characterization of impacts observed at the two properties (Block 2134, Lots 1 and 150) on which the Site is located. A Brownfield Cleanup Program application has been accepted for the portions of the two properties that are south of the footprint of the former MGP Site. National Grid understands that the entirety of the two properties will be redeveloped in the near future (hereinafter the Redevelopment Properties).

The NYSDEC has suggested that National Grid also include, in this supplemental scope of work, contingent samples beyond the northern boundaries of the properties which encompass the footprint of the former MGP Site. Given the potential for imminent redevelopment, National Grid would prefer to separate the work proposed herein from any needed work outside of the northern lot boundaries of the Redevelopment Properties. This would allow National Grid to submit, as quickly as possible, a final characterization report in order to support any redevelopment activities. Should additional investigation be required on the adjacent parcel to the north, National Grid will address that work in a separate

287 Maspeth Avenue, Brooklyn, NY11211
C: 646.831.0912 F: 718.963.5611
www.nationalgrid.com

work plan for a subsequent off-site investigation, without delaying the completion of the investigation on the Redevelopment Properties.

The following text and attachments, describing additional investigation work on the two Site Properties, have been prepared by Tetra Tech.

**Supplemental Scope of Work**

During the most recent field mobilization, five borings (PWSB-21 through PWSB-25) were completed in the vicinity of wells MW-11 and MW-12 to determine the extent and source of BTEX in groundwater at this area of the Site. At PWSB-22, strong naphthalene-like and solvent-like odors and PID readings elevated above background were noted. At PWSB-25, strong petroleum-like odors and elevated PID readings were noted. No impacts were noted in the borings south of this area (PWSB-21, PWSB-23, and PWSB-24). Boring PWMW-03 installed during this investigation and SB-14 installed during a previous field effort show no or limited impacts north of the breezeway area. The boring logs for these locations are attached.

These observations indicate that impacts have been delineated to the north and south of this area, but additional data are required to the east and west to further investigate the extent and source of BTEX in groundwater. Therefore, Tetra Tech proposes at least three additional borings in the vicinity of wells MW-11 and MW-12 (see attached Figure 1): PWSB-30 to the northwest and PWSB-28 to the northeast will be installed to find the source of the groundwater impacts. PWSB-29 will be installed adjacent to MW-12 to attempt to locate and identify source material. Additional borings may be installed if these borings do not meet this objective.

The borings will be advanced to approximately 20 feet bgs to correspond with the depths of MW-11 and MW-12. Up to two soil samples per boring will be selected for chemical analysis. The first soil sample will be collected at the depth interval indicating the greatest degree of observed impacts at each boring as described above. A sample will also be collected 10 feet below the deepest occurrence of observed impacts, or at the termination of the boring. If no impacts are observed within a particular boring, then a sample will be collected immediately above the groundwater table. Soil samples will be analyzed for BTEX, TPH, and an extended list of PAHs. In addition, groundwater grab samples will be collected (i.e., Hydropunch) from each of these borings, to be analyzed for BTEX and PAHs. Up to 20% of the collected soil samples may be archived for approximately one year. Groundwater samples will not be archived.

At PWSB-27, advanced in the northwest portion of the site to investigate the location of potential piping extending to the bulkhead, naphthalene-like odors and an approximate 2-inch zone of NAPL coated soil was observed at approximately 14.5 feet bgs. The boring log for this location is attached. Tetra Tech proposes at least two additional borings in the vicinity of PWSB-27 to determine the extent of these impacts: PWSB-31 to the east, and PWSB-32 to the west. An additional

boring may be installed to the east if impacts are observed in PWSB-31. These borings will be advanced to approximately 40 feet bgs, to 10 feet below the deepest impacted material, or to refusal. Soil samples will be collected as described above, and will be analyzed for BTEX, TPH, an extended list of PAHs with analysis for potential forensics, and free cyanide. In addition, up to 20% of the collected soil samples may be archived for approximately one year.

The borings will be installed as described in the SSC Work Plan. Each soil boring will be continuously logged, and sediment and soils from each boring will be visually characterized to evaluate the presence of impacts. A PID will be used to screen all cores, and measurements will be recorded on the boring logs. Upon completion, soil borings will be grouted with a cement/bentonite mixture and the ground surface, concrete slab or asphalt, will be repaired appropriately.

During preparation for a tidal study during the most recent field mobilization, it was observed that well MW-12, installed in 2005 as part of a Phase II Investigation by AKRF, was damaged. The flush mount cover plate was missing, the well cap was not present and could not be located, and the flush mount appeared to be filled with dirt and debris (see attached photograph). Upon further inspection, it appeared that the well riser may have been broken and is missing. After hand excavating to two feet below ground surface (bgs), none of the remaining riser could be located.

Tetra Tech recommends that MW-12 be decommissioned since, as noted in the NYSDEC guidance document CP-43 - *Groundwater Monitoring Well Decommissioning Policy*, the integrity of the well is suspect or compromised. Tetra Tech proposes to abandon this well in accordance with CP-43. The monitoring well construction log for MW-12, attached, indicates the well was installed as a flush mounted, two-inch PVC well to a depth of 18 feet below ground surface.

Since the PVC riser is not accessible and may have been broken off, the casing cannot be pulled or the well grouted. Therefore, Tetra Tech proposes to over drill the well to a depth of 18 feet bgs, and grout the borehole with the appropriate bentonite/cement/water mixture to approximately 1 foot bgs. Concrete will then be placed and finished to make this location flush with the surrounding warehouse floor.

The well decommissioning will be conducted by a licensed driller, under the oversight of a geologist. A well abandonment log will be completed, and the process photographed. Tetra Tech will prepare a well decommissioning report for submittal to the NYSDEC and the property owner.

PWSB-29, proposed to be installed adjacent to MW-12, will be converted to a monitoring well (PWMW-04) to replace the abandoned MW-12. The well will be constructed to match the construction of MW-12. The well will be installed as a 2-inch polyvinyl chloride (PVC) well with a 10-foot 0.020-inch slotted screened interval, and will be screened from 6 to 16 feet bgs. The well will be finished with a flush mounted curb box.

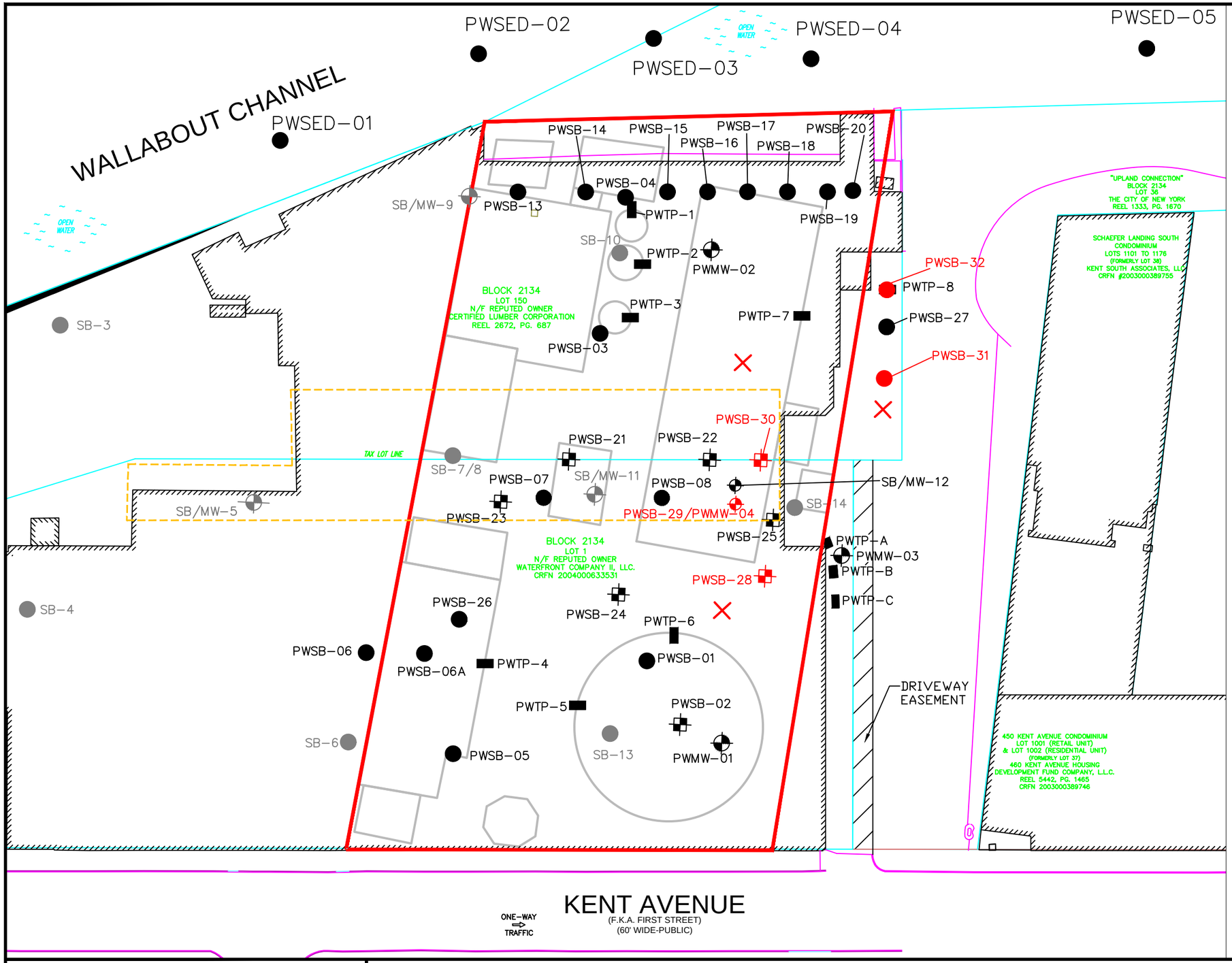
If you have any questions please do not hesitate to contact me at 646-831-0912, or via e-mail at bbermingham@trcsolutions.com.

Sincerely,

Brian Bermingham
Project Manager

Attachments

cc: J. Deming (NYSDOH)
A. DeMarco (NYSDOH)
R. Cantagallo (Tetra Tech)
D. Campbell (National Grid)




LEGEND

- APPROXIMATE FORMER MGP BOUNDARY
- CURRENT BUILDING
- PAVEMENT
- LOT BOUNDARY
- FORMER MGP–RELATED STRUCTURES
- COVERED AREA
- PWMW–01 MONITORING WELL LOCATION
- PWSB–02 SOIL BORING AND GROUNDWATER GRAB LOCATION
- SB/MW–09 APPROXIMATE MONITORING WELL LOCATION INSTALLED DURING PREVIOUS INVESTIGATION
- SB–3 APPROXIMATE SOIL BORING LOCATION FROM PREVIOUS INVESTIGATIONS
- PWSB–01 SOIL BORING LOCATION
- PWSED–01 SEDIMENT SAMPLE LOCATION
- PWTP–A TEST PIT LOCATION
- PWSB–28 PROPOSED SOIL BORING AND GROUNDWATER GRAB LOCATION
- PWMW–04 PROPOSED MONITORING WELL LOCATION
- PWSB–31 PROPOSED SOIL BORING LOCATION
- POTENTIAL STEP–OUT BORING LOCATION

SOURCES:
BOUNDARY AND SURVEY, NATIONAL GRID – FORMER PEOPLES WORKSITE, BROOKLYN, NEW YORK, PREPARED BY BORBAS SURVEYING & MAPPING, LLC, CONTROL POINT ASSOCIATES, INC, DRAWING NO. 110905_2011–10–24, NOVEMBER 1, 2011, ORIGINAL ISSUE.

SANBORN FIRE INSURANCE MAP, DATED 1887.

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FEET

TETRA TECH, INC.

TITLE:
Proposed Additional Soil Borings and Groundwater Grab Sample Locations
Former Peoples Works Manufactured Gas Plant Site
Brooklyn, Kings County, New York

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| DWN.: EO | DATE: 3/31/15 | PROJECT NO.: 194–4727 | |
| CHKD: RCC | REV.: 16 | FIGURE NO.: 1 | |
| DES.: RCC | APPD: RCC | | |

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