

October 3, 2006

Mr. R. Scott Deyette
Division of Environmental Remediation
NYSDEC
625 Broadway, 11th Floor
Albany NY 12233-7017



Subject: Fulton (North Ontario St.) Former MGP Site

Dear Scott:

Please find enclosed the work plan for the Supplemental Site Characterization (SC) activities at the Fulton (North Ontario Street) Former Manufactured Gas Plant (MGP) site. The enclosed work plan is a revised version of the May 17, 2006 work plan. The revisions were based on comments provided by the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) in a letter dated July 13, 2006. National Grid responded to the comments in a letter dated August 7, 2006, providing approaches and recommendations for revising the work plan to address each of the comments. In a letter, dated August 29, 2006, the NYSDEC approved the work plan based on the proposed revisions. The work plan provided herein incorporates those revisions.

National Grid is currently negotiating an access agreement with the current owners of the Black-Clawson property along Hubbard Street where additional soil borings are proposed. We will notify you upon receipt of access to schedule a start date for field activities.

Please contact me if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "S.P. Stucker".

Steven P. Stucker, C.P.G.
Senior Environmental Engineer

Cc:

William Holzhauer-National Grid
Terry Young-National Grid
Julia Guastella-New York State Dept. of Health
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October 2, 2006

28-130447.001

Steven Stucker, C.P.G.
National Grid
300 Erie Boulevard West
Syracuse, New York 13202-4250

Subject: Work Plan for Supplemental Site Characterization
Fulton (North Ontario St.) Former MGP Site, Fulton, NY

Dear Mr. Stucker:

This letter presents a work plan for supplemental Site Characterization (SC) activities at the Fulton (North Ontario Street) Former Manufactured Gas Plant (MGP) site (hereinafter referred to as the "site") pursuant to a letter from the New York State Department of Environmental Conservation (NYSDEC) dated March 20, 2006.

This work plan is a revised version of the May 17, 2006 work plan. The revisions were based on comments provided by the NYSDEC and the New York State Department of Health (NYSDOH) in a letter dated July 13, 2006. National Grid responded to the comments in a letter dated August 7, 2006, providing approaches and recommendations for revising the work plan to address each of the comments. In a letter dated August 29, 2006, the NYSDEC approved the work plan based on the proposed revisions. The work plan provided herein incorporates these revisions.

As discussed during the October 26, 2005 meeting between NYSDEC and National Grid regarding the "Site Characterization Data Summary Report, Fulton (North Ontario St.) Former MGP Site" (Brown and Caldwell, August 2005), and in the NYSDEC's March 20, 2006 letter, NYSDEC and National Grid agree that additional SC activities are required at the site. The objective of the additional SC activities is to further evaluate the nature and extent of MGP-related constituents at the site to assess if:

1. A Remedial Investigation (RI) is required for the site;
2. No further investigation or remedial activities are required at the site; or

3. The nature and extent of MGP-related impacts are sufficiently characterized to allow decisions regarding remediation to be made.

Specific methods and procedures associated with the supplemental SC will be conducted in accordance with the following plans:

- Generic Field Sampling Plan for Site Investigations at Non-Owned Former MGP Sites (Foster Wheeler, November 2002) (referred to as “FSP”).
- Generic Quality Assurance Project Plan for Site Investigations at Non-Owned Former MGP Sites (Foster Wheeler, November 2002) (referred to as “QAPP”).
- Generic Health & Safety Plan for Site Investigations at Former MGP Sites (Niagara Mohawk, A National Grid Company, November 2002) as modified by Attachment with Site-Specific Health & Safety Information (Brown and Caldwell, October 2004) (referred to as “Health and Safety Plan”).

The scope of work and schedule for completing the work are presented in the following sections.

SCOPE OF WORK

The scope of work for the supplemental SC is divided into three components: preliminary activities; Stage 1 activities; and Stage 2 activities. As described below, based on the findings of Stage 1 activities, adjustments to the scope of the Stage 2 activities may be proposed.

Preliminary Activities

Selection of Background Soil Sample Locations

As requested by the NYSDEC in their July 13, 2006 letter, and described in further detail below in the “Stage 2 Activities” Section, a surficial soil sampling program will be conducted during the supplemental SC. Part of the evaluation of surficial soil requires that samples be collected from approximately five off-site locations to assess background concentrations. Accordingly, during the preliminary activities, a field reconnaissance will be conducted to select background sampling locations. The selected locations will be plotted on a map and provided to the NYSDEC and NYSDOH for review and approval.

Property Access Activities

Prior to initiating field activities at the site, the owner of the property, Mid-Valley Oil, will be contacted to inform them of the planned activities. The access agreement previously obtained with Mid-Valley Oil is currently in effect.

As described further below, review of historical records indicates that a small parcel of land on the west side of Hubbard Street, referred to as "Parcel C", was part of the property owned by the owners of the former MGP. Although no MGP-related operations or facilities are known to have been associated with this parcel, National Grid plans to extend the SC to include this parcel. Accordingly, upon approval of this work plan by NYSDEC, National Grid began efforts to establish an access agreement with the property owner, Black Clawson Converting Machinery, Inc.

The City of Fulton was also contacted upon approval of the work plan to begin efforts to obtain permission to access their property for implementation of some of the field activities described below. Specifically, these activities include installation of monitoring wells downgradient of the site, and observations in adjacent sewers.

Following the approval by NYSDEC and NYSDOH of the background surficial soil sample locations, as described above, National Grid will contact the owners of those properties and attempt to establish an access agreement.

Stage 1 Activities

Stage 1 activities are non-intrusive and will be used to confirm some of the findings of the initial SC activities, such as groundwater flow direction and groundwater quality. The information from Stage 1 will be used to adjust proposed Stage 2 activities, as necessary. As described below, proposed adjustments will be provided to NYSDEC for review at the conclusion of Stage 1 activities.

Geophysical Survey

Test pits and soil borings conducted during the initial SC activities, in conjunction with historical maps, provided some indications of the locations and configurations of former MGP structures on the property. However, some uncertainty remains regarding the presence and position of these structures. Accordingly, a surface geophysical survey will be conducted at the site using electromagnetic (EM) induction and ground penetrating radar (GPR) survey techniques to attempt to better identify and/or define the approximate locations and limits of these structures. Both the property where the MGP structures are known to have been located, and the adjacent Parcel C, will be included in the survey. Findings of the geophysical survey will be used to select locations of the test pits that are planned for the Stage 2 activities. Reconnaissance of Parcel C will also be performed at this time to assess the surficial conditions and to record any relevant observations that may facilitate

selection of a location for exploratory soil borings to be drilled during Stage 2 activities.

Underground Utility Observations

Observations of dry-weather flow conditions in nearby sewer manholes will be recorded to assess the potential for interaction of shallow groundwater and the underground storm water conveyance line. Other pertinent information related to the sewer that is observed will also be recorded (e.g., structural integrity of utility line, visual or olfactory observations). Select features, such as sewer inverts and manhole rims, may be identified for subsequent measurement of elevation and location during the survey planned for Stage 2 activities to supplement the survey data that are currently available.

Water Level Measurements and NAPL Monitoring

Depth to water measurements will be recorded from each of the existing monitoring wells and piezometers to confirm the previous assessment of groundwater flow direction. In addition, non-aqueous phase liquid (NAPL) gauging will be performed at each existing location for the purposes of determining if NAPL is present and if so, its thickness. At the time of the initial SC, NAPL was not identified in the monitoring wells, yet the potential for delayed entry of NAPL may exist. In the event that NAPL is present, a sample of the NAPL will be collected and submitted for gas chromatograph (GC) fingerprint analysis to establish its chemical composition.

Groundwater Sampling & Analysis-Piezometer PZ-3

A groundwater sample collected from piezometer PZ-3 during the initial SC indicated the presence of toluene at a concentration of 8.8 µg/L, which is slightly above the New York State Class GA groundwater quality criterion of 5 µg/L. Based on groundwater flow directions and the presence of an adjacent gas station (see Figure 1), it is unlikely that the toluene detected in PZ-3 is related to the MGP. Noteworthy is that the three piezometers, PZ-1 through PZ-3, were installed by another party prior to the SC activities.

To confirm the presence and concentration of the toluene, a groundwater sample will be collected from PZ-3. The sample will be submitted for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX).

Slug Tests

In-situ hydraulic conductivity tests (i.e., slug tests) will be performed on each monitoring well that was installed during the initial SC to evaluate the horizontal hydraulic conductivity of the adjacent formation. Rising head slug tests will be

conducted and the data generated will be input into AQTESOLV[®] software for hydraulic conductivity calculations.

The screens of the existing monitoring wells were positioned to straddle the water table. The saturated material adjacent to the screened intervals is primarily the upper portion of the glacial till unit. Thus, these slug tests will primarily be evaluating the hydraulic conductivity of the upper portion of the till.

Evaluation of Data from Stage 1 Field Activities

Following completion of the above-described field program for Stage 1 activities, the collected data will be evaluated and used to adjust locations selected for monitoring well installation, soil borings, surficial soil samples, and test pits proposed below for Stage 2 activities, as necessary. These proposed locations, described further below, are depicted in Figure 1. Preliminary test pit locations are not illustrated on Figure 1, as the results of the geophysical survey will be used to select the locations.

Upon completion of the data evaluation, a revised figure will be provided to NYSDEC detailing the proposed test pit locations and, if necessary, adjustments to the proposed soil boring and monitoring well locations.

Stage 2 Activities

Surficial Soil Sampling and Analysis

Surficial soil will be collected from eight (8) on-site sample locations (SS-1 through SS-8) as depicted on the attached Figure 1. Because there is a potential for local off-site sources to contribute constituents to the surface soil at the site (e.g., run-off and aerial deposition from the adjacent gas station and roadways), surficial soil samples from approximately five off-site locations will also be collected and analyzed to assess background concentrations. As described above under the "Preliminary Activities" Section, these background locations will be selected during a field reconnaissance and will be reviewed and approved by NYSDEC and NYSDOH prior to sampling.

The surficial soil samples will be collected from the 0- to 2-inch depth interval, below vegetative cover, in accordance with procedures described in the FSP. The samples will be analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs); Target Analyte List (TAL) metals and cyanide; and total organic carbon

In evaluating the surficial soil quality data, it is important to note that the former MGP operations ceased in 1890, and that since then, there have been multiple non-MGP uses of the site including a coal storage yard, a firearms manufacturing

company, a restaurant, mobile home sales yard, among others. Thus, post-MGP operations likely contributed constituents to the surficial soil.

Test Pits

Approximately three to four test pits will be excavated. As mentioned above, the specific locations will be selected based on the findings of the geophysical survey. It is anticipated that the surface geophysical survey may improve the understanding of the location and configuration of the former MGP structures. The test pits will serve to further investigate the presence, position, contents, and conditions of these structures.

Soil Borings

Nine (9) soil borings will be advanced at the approximate locations illustrated on Figure 1. These locations have been selected to further evaluate the horizontal and vertical extent of localized NAPL occurrences and areas where concentrations of polycyclic aromatic hydrocarbons (PAHs) above 500 mg/kg were identified during the initial SC. In addition, an assessment of Parcel C will be accomplished by advancement of two soil borings at the approximate locations illustrated in Figure 1. Note that the proposed soil boring locations may be adjusted following the data evaluation component of Stage 1.

A summary of the technical rationale for the positioning and depths of the proposed soil borings is presented on Table 1. The soil borings will be continuously sampled to the target depth indicated on Table 1, or to refusal, if shallower than the target depth. The boring will be sealed with a cement-bentonite grout upon completion. Approximately 1 to 2 soil samples from each boring will be submitted for analysis of BTEX, PAHs, and total cyanide. The interval(s) will be selected based on the results of previous borings (e.g., depth of elevated PAHs in adjacent boring) and/or results of field screening.

Deep Soil Borings

Prior to the installation of monitoring wells described below, deep soil borings will be drilled to refusal on bedrock. Three deep borings are planned, the locations of which coincide with the proposed monitoring well locations, as shown on Figure 1. Split-spoon samples will be collected and described for each 2-foot interval. The samples will also be field screened for potential impacts from MGP residuals or other sources.

The deep soil borings are intended to provide information related to the thickness and hydrogeologic properties of the overburden. During the initial SC, the upper portion of the overburden, comprised of fill material and glacial till, was visually and analytically characterized, but the deeper portion was not evaluated. Subsurface investigations at nearby sites (e.g., Fulton [South First St.] Former MGP) indicate

that the density of the glacial till is sometimes significantly greater in the lower portion of the unit. The denser till typically has a lower hydraulic conductivity and serves as an aquitard by restricting the movement of groundwater relative to that in more permeable zones. This information is important for understanding the hydrogeologic characteristics of the site.

NAPL is not anticipated to be encountered at these locations. However, if NAPL is encountered, and there is a potential for substantial downward migration of NAPL from further advancement of the boring, the boring will be terminated. An alternate, nearby location for completing the deep boring would then be selected in an area that is expected to have a lower potential for encountering NAPL.

Monitoring Well Installation

Monitoring wells will be installed at the three locations where the deep soil borings are to be drilled, as illustrated on Figure 1. Consistent with the existing wells, at each location, a well will be installed with a screened interval that straddles the water table. The selected locations are intended to improve the current understanding of groundwater flow direction and to further assess the horizontal extent of MGP-related constituents in groundwater.

The proposed monitoring wells have been placed hydraulically downgradient or sidegradient of potential source areas and/or areas where initial groundwater samples indicated concentrations above New York State Class GA groundwater quality criteria (e.g., MW-102). Rationale for the selected locations is summarized in Table 1.

A deeper monitoring well may also be installed at each of the three proposed locations with the intake interval positioned at appropriate depths within the glacial till depending on:

1. The evaluation of the deeper portion of the glacial till via the deeper soil borings, particularly with regard to density (as it relates to hydraulic conductivity) and thickness; and
2. The field observations from the soil borings and test pits described above.

At a location, a deeper well would be installed if:

- The deeper portion of the till appears to have a hydraulic conductivity similar to or greater than that of the shallower overburden (based on soil descriptions, including density), i.e., if it does not appear to be an aquitard; and

- There are indications that potential on-site MGP-related impacts may contribute constituents to groundwater at depths below the screens in the shallower wells.

After a minimum period of 24 hours has passed following well installation to allow for the cement/bentonite grout to set, each well will be developed. Well development will be conducted in accordance with procedures in the FSP.

Slug Tests

In-situ hydraulic conductivity tests (i.e., slug tests) will be performed on each monitoring well installed during Stage 2 activities to evaluate the horizontal hydraulic conductivity of the adjacent formation. Testing methodology and evaluation performed on the collected data will be consistent with the Stage 1 slug testing task.

Groundwater Monitoring

A round of groundwater sampling will be conducted on the new and existing wells and piezometers. Sampling will be initiated after at least one week has passed since well development and after water levels in the wells have stabilized. Prior to sampling, depth to water measurements and NAPL gauging will be conducted. Groundwater samples will be collected according to the United States Environmental Protection Agency (USEPA) low-flow sampling protocol. Note that due to their shallow depth and narrow diameter of piezometers PZ-1 through PZ-3, modifications to this sampling protocol will likely be required (e.g., sampling with a bailer). These modifications, if required, will be documented. The groundwater samples will be submitted for analysis of BTEX compounds, PAHs, and total cyanide.

Survey

Each of the new soil borings, test pits, and monitoring wells will be surveyed. The survey will include location coordinates, ground surface elevation, and in the case of the wells, top of casing elevation data. Pending the findings of the underground utility observations in Stage 1, sewer inverts may also be surveyed to evaluate whether interaction of storm water and groundwater is occurring at the site. Coordinates will be referenced to the State Plane coordinate system for New York using the North American Datum of 1983 (NAD 1983) in units of feet. Elevations will be referenced to the National Geodetic Vertical Datum (NGVD) of 1929 in units of feet. The survey will be performed by a New York-licensed surveyor.

Data Evaluation and Reporting

Laboratory results for the groundwater and soil samples will be forwarded to a data validation service for preparation of a Data Usability Summary Report (DUSR). The DUSR will present a summary of data usability, including a discussion of qualified

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and rejected data and provide recommendations for resampling/reanalysis, as applicable.

Following completion of the DUSR, a Supplemental SC Data Summary Report will be prepared and submitted to NYSDEC for review. Data generated during the field activities will be presented in a format similar to that of the previously submitted SC Data Summary Report (Brown and Caldwell Associates, August 2005).

Based on the findings of the SC, one of the following recommendations will be made:

- A RI is required for the site;
- No further investigation or remedial activities are required at the site; or
- The nature and extent of MGP-related impacts are sufficiently characterized to allow decisions regarding remediation to be made (for example, an Interim Remedial Measure [IRM]).


PROJECT SCHEDULE

Upon approval of this work plan the preliminary activities commenced, including property access efforts. After obtaining permission to access the necessary properties, Stage 1 field activities will be initiated, which are anticipated to be completed within one week. Based on the results from the Stage 1 activities, a revised figure will be submitted to NYSDEC depicting the proposed test pit locations and adjustments or additions, if any, to the currently proposed locations for soil borings, surficial soil samples, and monitoring wells (see Figure 1). Following NYSDEC review of the proposed locations, Stage 2 field activities will begin. It is anticipated that within approximately 6 to 8 weeks of completion of field activities the laboratory analyses and the DUSR will be complete. The Supplemental SC Data Summary Report will be submitted approximately two months after the DUSR is received from the data validator.

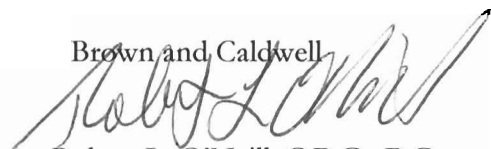
If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

Brown and Caldwell Associates


Jeffrey R. Caputi, P.E., CHMM, QEP
Vice President

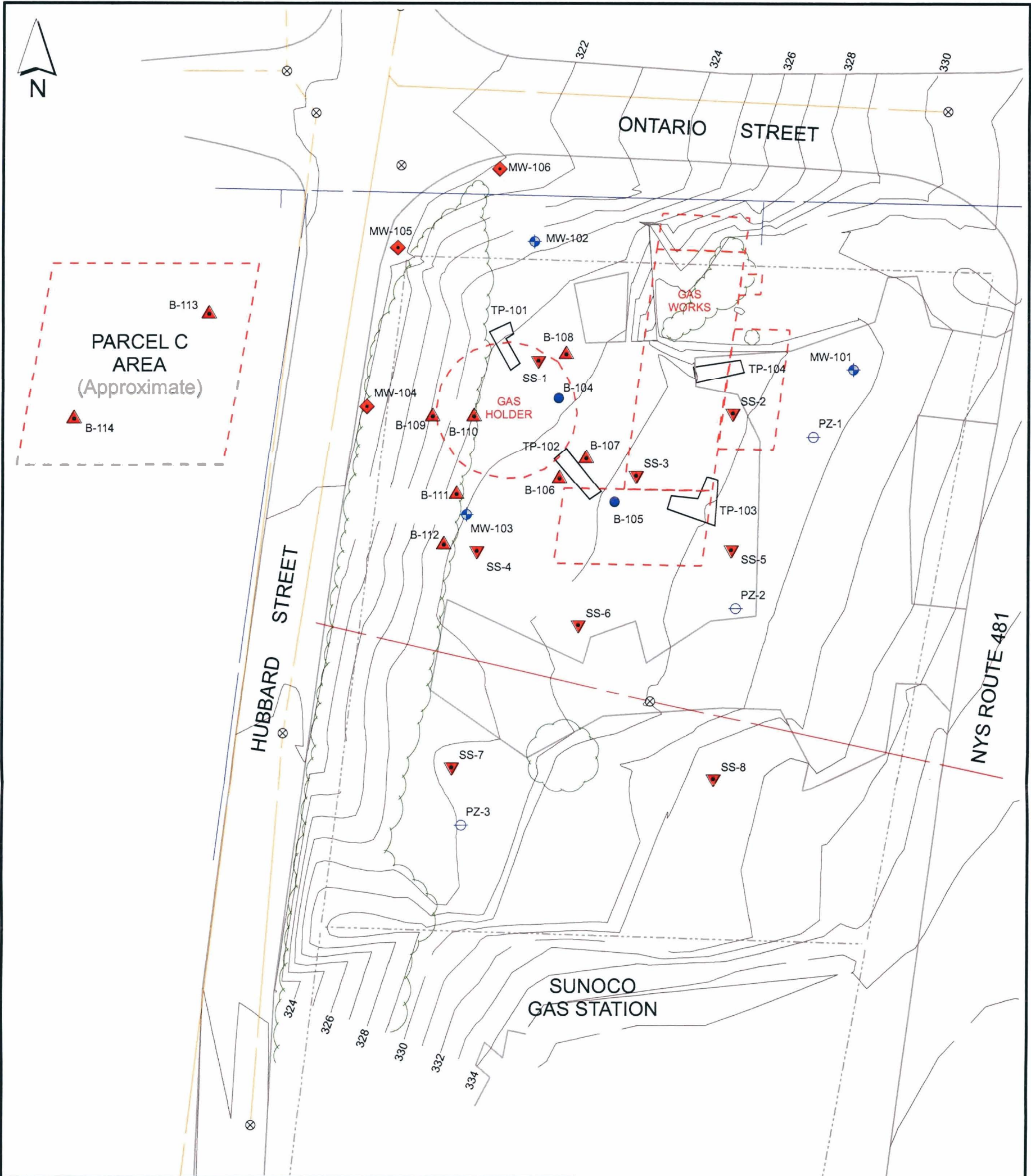
Brown and Caldwell


Robert L. O'Neill, C.P.G., P.G.
Supervising Geologist, Geoservices

Attachments

TABLE 1
RATIONALE FOR SOIL BORINGS AND MONITORING WELLS
SUPPLEMENTAL SITE CHARACTERIZATION
FULTON (NORTH ONTARIO ST.) FORMER MGP SITE
FULTON, NEW YORK

Location ID	Location Rationale	Soil Boring Target Depth
SOIL BORINGS		
B-106	Assess area near TP-102 where a tar-coated brick was observed at approximately 8 ft. below grade.	10 feet or below impacts identified by field screening (if any)
B-107	As above for B-106.	10 feet or below impacts identified by field screening (if any)
B-108	Assess if NAPL and elevated PAH concentrations identified in B-104 are confined to former gas holder area.	30 feet or below impacts identified by field screening (if any), unless refusal is shallower
B-109	As above for B-108.	30 feet or below impacts identified by field screening (if any), unless refusal is shallower
B-110	Assess configuration of former gas holder and extent of NAPL identified in B-104.	Base of former gas holder (estimated 28 feet)
B-111	Assess elevated PAH concentrations identified in soil at 8 to 10 ft. below grade in MW-103 and further evaluate physical composition of subsurface material at this depth (ash layer).	12 feet or below impacts identified by field screening (if any)
B-112	As above for B-111.	12 feet or below impacts identified by field screening (if any)
B-113	Assessment of portion of former MGP property located west of Hubbard St. (Parcel C).	4 feet below base of fill or below impacts identified by field screening (if any)
B-114	Assessment of portion of former MGP property located west of Hubbard St. (Parcel C).	4 feet below base of fill or below impacts identified by field screening (if any)
SURFICIAL SOIL SAMPLES		
SS-1 through SS-8	Assess concentrations of constituents in on-site surficial soil	0 to 2 inches below vegetative cover.
BGSS-1 through BGSS-5	Assess background concentrations of constituents in surficial soil	0 to 2 inches below vegetative cover.
MONITORING WELLS		
MW-104	Evaluate groundwater quality downgradient of former gas holder where NAPL was observed (boring B-104)	NA
MW-105	Assessment of groundwater quality downgradient of MW-102, where benzene concentration was above groundwater quality criterion during initial SC.	NA
MW-106	Assessment of groundwater quality side-gradient of MW-102, where benzene concentration was above groundwater quality criterion during initial SC.	NA



Legend

- Existing Soil Boring
- ◆ Existing Monitoring Well
- ⊕ Existing Piezometer
- Test Pit
- ⊗ Manhole
- Ground Surface Elevation Contour (ft, NGVD 29)
- - - Property Line
- Pavement Edge
- Vegetation
- Water Line
- Storm Sewer Line
- Sanitary Sewer Line
- ▼ Proposed Surficial Soil Sample
- ▲ Proposed Soil Boring
- ◆ Proposed Monitoring Well and Deep Soil Boring Location
- - - Former MGP Structure Location. Locations are approximate, based on 1890 Sanborn Fire Insurance Map.

Source: Base map developed based on drawing prepared by Snyder Engineering & Land Surveying, LLP (January 11, 2005). Refer to this drawing for site details.

30 15 0 30 Feet

FIGURE 1

**PROPOSED SAMPLE LOCATIONS
SUPPLEMENTAL SITE CHARACTERIZATION**

FULTON (NORTH ONTARIO ST.)
FORMER MGP SITE
FULTON, NEW YORK

DATE
08/06

PROJECT NUMBER
130447.001

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ASSOCIATES