
GLOVERSVILLE (WASHINGTON ST.) NON-OWNED FORMER MGP SITE

GLOVERSVILLE, NEW YORK

**Site-Specific Work Plan
for
Site Characterization**

July 2003

Prepared for:

Niagara Mohawk

A National Grid Company



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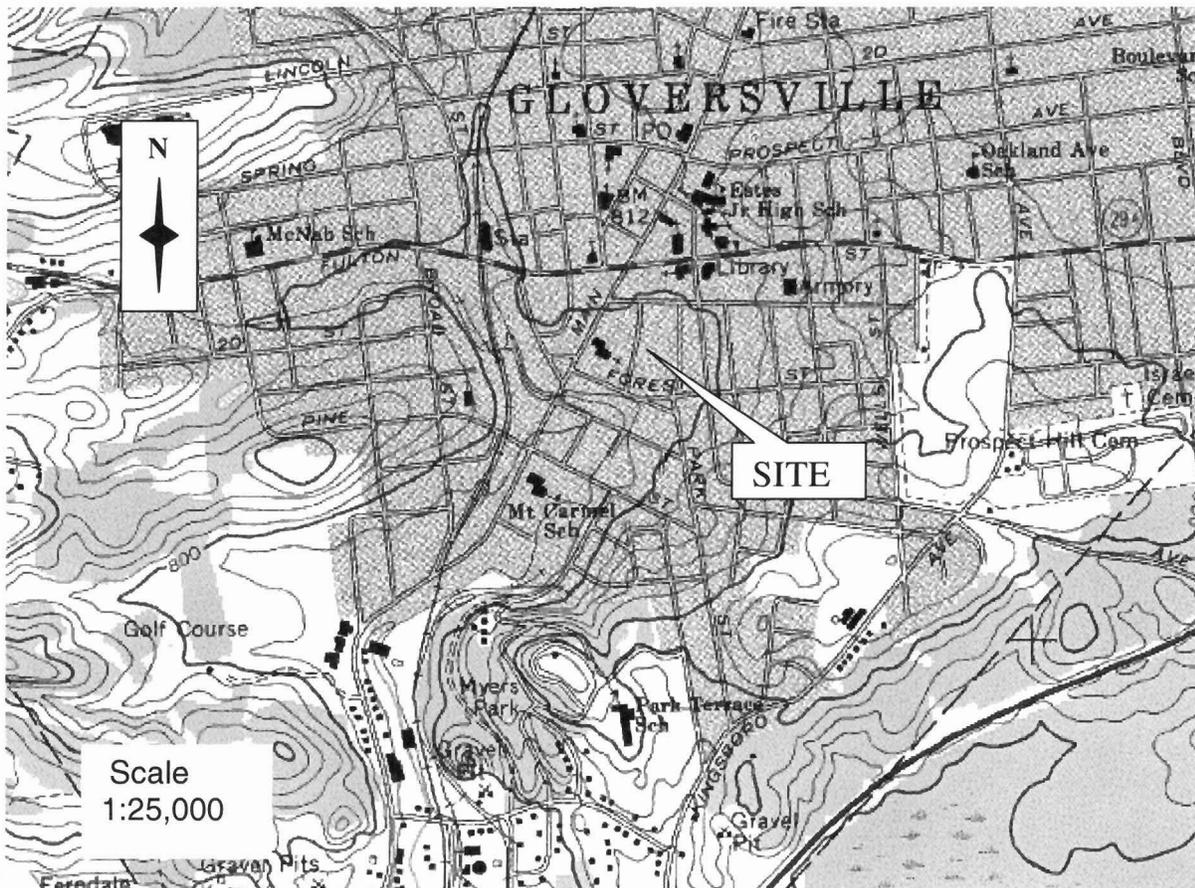
1.0 INTRODUCTION

This Work Plan presents the Site-specific scope of investigation activities and health and safety considerations for the Gloversville (Washington Street) Non-owned Former Manufactured Gas Plant (MGP) Site. The purpose and objectives of the investigation, rationale for the investigation approach, data quality objectives, field investigation procedures, quality assurance/quality control (QA/QC) requirements, and generic health and safety requirements are presented in the Generic Work Plan for Non-owned Former MGP Sites prepared previously by Foster Wheeler Environmental and approved by the New York State Department of Environmental Conservation (NYSDEC). This Site Characterization Work Plan is prepared pursuant to a Voluntary Consent Order (VCO) Index No. DO-0001-0011, between Niagara Mohawk, a National Grid Company (Niagara Mohawk) and the NYSDEC dated July 3, 2001.

2.0 SITE DESCRIPTION

The Gloversville (Washington Street) Non-owned Former MGP Site (the "Site") is a former MGP approximately ¾ acres in size located on Broadway Avenue, Gloversville, Fulton County, New York. Prior to the property being used for MGP operations and immediately following the cessation of MGP operations the property of the former MGP plant had been used for a variety of Industrial/commercial uses. Figure 1 illustrates the location of the property on the USGS 7.5

Figure 1: Site Location Map



Source: 1970 USGS Gloversville, NY Topographic Quadrangle

minute Groversville Quadrangle Map. The Site is Located in a mixed residential and commercial neighborhood. The Site is fed by city sewer and water services. Currently, residential properties and municipal roads border the Site.

2.1 Site History

Historical review of the former MGP for this Work Plan consisted of reviewing information provided by the New York State Archives, the Groversville Public Library, the Groversville Town Historian, the Groversville Town Clerk's Office, the Fulton County Clerk's Office, and the Fulton County Historical Society. Foster Wheeler Environmental also conducted an internet-based search through the Library of Congress' map archives for Site-related historical information. Sanborn Fire Insurance maps provided by a commercial vendor were also reviewed. Historical information presented in this Work Plan was obtained from third parties and is provided for informational purposes only. Niagara Mohawk, A National Grid Company (Niagara Mohawk) cannot warrant the accuracy of such third party information.

A Groversville Herald American and Leader-Republican article written in July 1937 outlines the history of gas production in Groversville. Gas production began in 1856 when the owner of the Old Windsor Hotel, located at the corner of Fulton and Main Streets, erected a small resin plant to supply the hotel and neighboring churches and a few private homes with gas for lighting. This was a small plant with about 4,000 cubic feet capacity and never grew to any larger size. In 1859, the Fox and Demarest Co. purchased this plant and soon built a coal gas plant, nearly quadrupling the storage capacity of the resin plant, at the Broadway (then referred to as Gas Street) location. This coal gas plant is the Site and the subject of this Site Characterization Work Plan.

No information pertaining to MGP production in Groversville is presented in the *Survey of Town Gas and By-Product Production and Locations in the U.S. (1880-1950)* (Radian, 1985).

During the 1860s, the resin plant was closed and the coal gas plant continued serving the Village of Groversville until 1888. During the late 1880s the MGP plant, mains and lines were rented to the Johnstown Gas Company who henceforth supplied coal gas to the entire territory from their Market Street Property in Johnstown, NY.

Information identified on Atlas maps from 1868 of Montgomery and Fulton Counties, shows the small gas house (resin plant) associated with the Old Windsor Hotel (identified on the map as the Mason House). The Fox & Demarest Company is also identified. Two buildings are shown on the Fox and Demarest Co. property, which may represent the original gas works location, but no indication of a gas works are identified.

An 1876 "birds eye" view drawing of Groversville depicts the location of the Windsor Hotel on the Corner of Fulton and Main Streets (resin plant not identified). The map also shows a truncated side street on the north side of Forest Street identified as Gas Street. The gas plant that would be constructed near the north end of this street is not shown, suggesting that the drawing was created before or at the onset of the plant's construction.

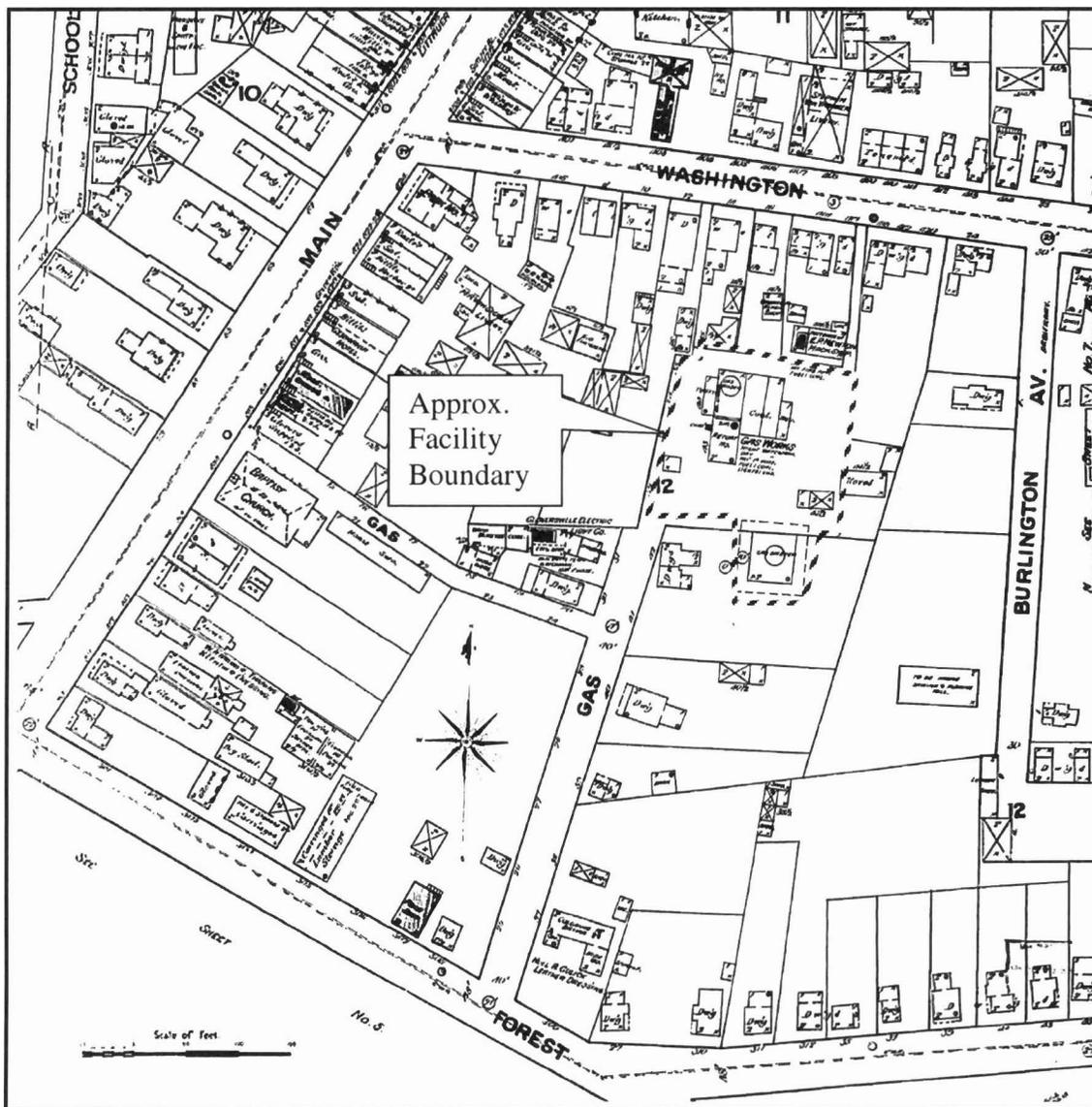
A review of nine Sanborn maps available for the vicinity of the former coal gas plant (1887, 1892, 1897, 1902, 1907, 1912, 1927, 1949 and 1969) provides for a description of the facility location from the plant's final years of operation through recent times.

1887: The facility is identified as “Gas Works” and is located in the central portion of Lot 12 at the north end of Gas Street (Figure 2). The facility consists of a main building containing a gas holder, a retort house, purifying room, and coal storage, and some unnamed buildings/sheds in the main buildings vicinity. A building east of the facility property is identified as “gloves”. South of the main building, on an adjacent parcel, is an enclosed gasometer with a scaled diameter of approximately 20 feet.

1892: The facility is labeled as “Used Occasionally Only”. In general, the footprint of the facility appears to be unchanged from the 1887 map. A refuse pile labeled “dangerous”, apparently associated with an adjacent lumber mill, is located east of the south gasometer. Burlington Ave. has been renamed Carpenter Ave.

1897: The purifying room of the main building appears to have been dismantled. The sheds/unnamed buildings in the vicinity of the main building have been removed. The

Figure 2 – 1887 Sanborn Map



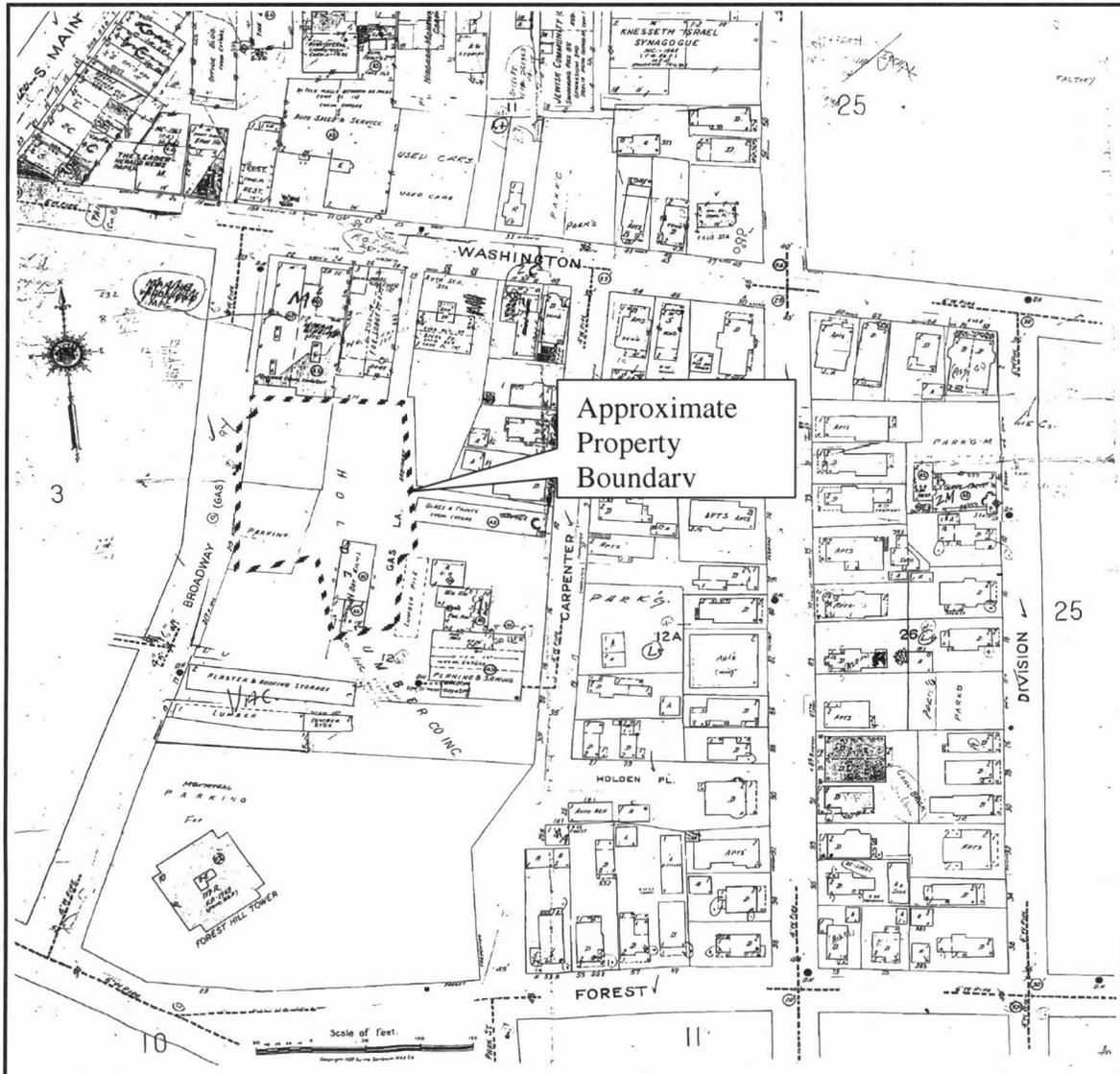
enclosed gasometer south of the main building now has a scaled diameter of approximately 30 feet. The refuse pile east of this gasometer is no longer identified.

1902: The facility appears to be part of the encroaching W. Holden & Son–Lumber Yard and Lumber Dressing Mill. The facility is no longer identified as a Gas Works and the main building appears to be used as a pipe shop and for storage of plumbing. No evidence of the gas holder, or references to coal storage, purifier room or retort house are present. Although the enclosure south of the main building is still present, it is labeled vacant and the gasometer is no longer shown.

1907: The main building is identified as sheds and storage. The south gasometer enclosure is labeled “old and vacant”. The Lumber Yard & Lumber Dressing Mill now encompasses much of the properties south of the Site.

1912: The main facility building is essentially unchanged from the 1907 map. The former

Figure 3 – 1969 Sanborn Map



gasometer enclosure has been removed. An unnamed building (possibly a stable) has been erected in the approximate location of this former gasometer enclosure.

1927: The location of the former main building had become a vacant lot. Gas Street has been widened and extends between Washington and Forest Streets. Several lumber sheds have been erected east of the former main building location, and the building that occupies the approximate former south gasometer location is identified as “dry kilns”.

1949: Gas Street has been renamed Broadway and the facility’s main building location remains vacant. The lumber sheds east of the main lot have been removed, and the lot just south of the former main building location has become a parking lot.

1969: The configuration remains the same (Figure 3).

Aerial photographs of the vicinity taken in April 1997 show the majority of the former facility location to be vacant. The “dry kilns” building is no longer present and a large rectangular building has been constructed just south of the area formerly identified as a parking lot.

2.2 Current Conditions

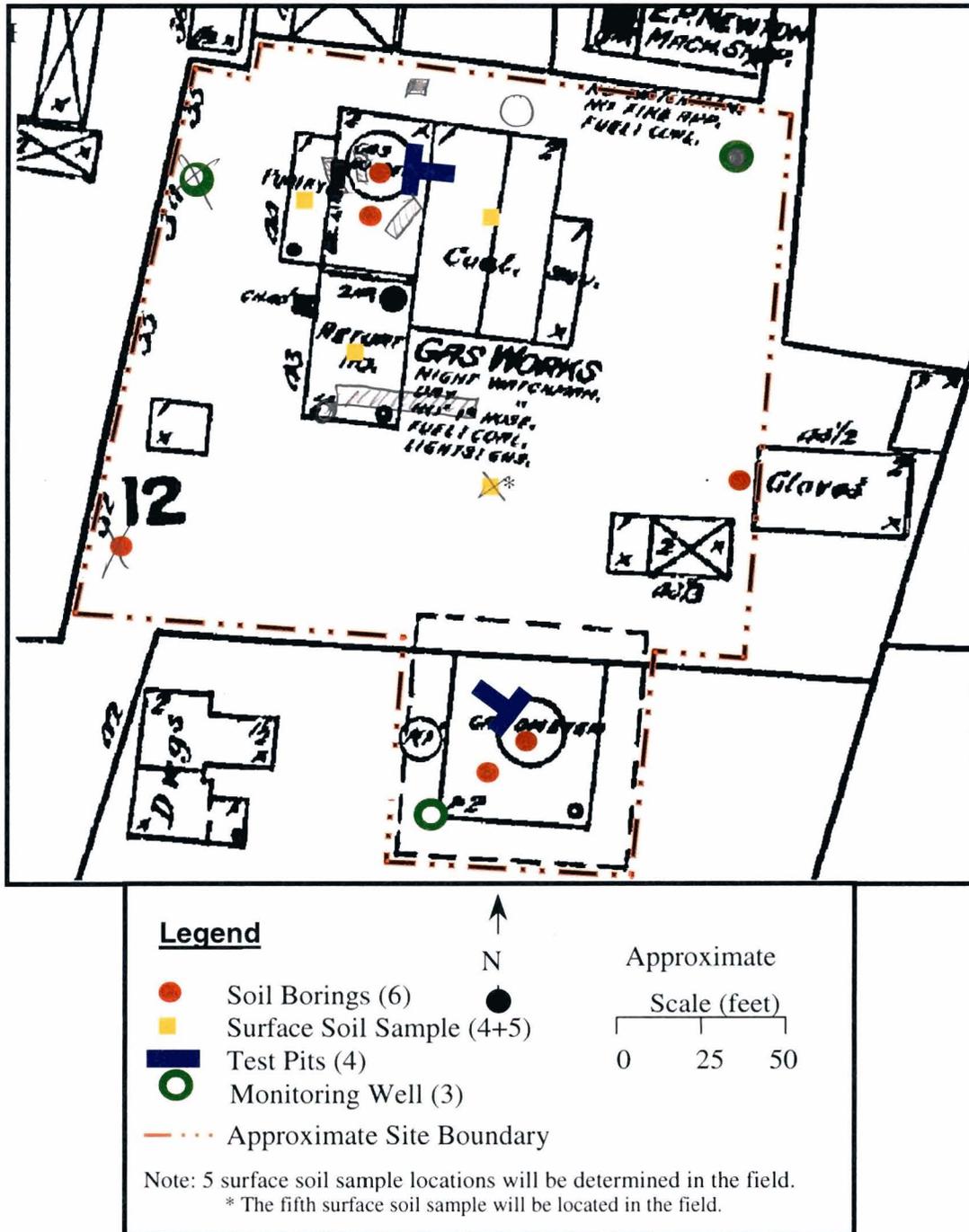
Aboveground structures related to the former MGP are no longer evident on-site and the Site is currently an open field. The Site is bounded by property owned by the Gloversville Fraternal Order of the Eagles to the North, Sunset Sheet Metal to the east, Family Counseling center to the South and Broadway Avenue to the west. The former MGP property and surrounding properties are zoned commercial residential.

3.0 SCOPE OF INVESTIGATION

The scope of the Site Characterization of the Gloversville (Washington Street) Non-owned Former MGP Site is described below. Preliminary sample locations are shown on Figure 4. Field activities will be performed in accordance with the Generic Plans.

1. Advancement of a maximum of six (6) soil borings to a target depth of 30 feet to assess subsurface conditions. Soil borings will be installed within the footprint of a given holder only if historical or test pit information (see #3, below) indicates that the holder was formerly a below-grade holder. Borings installed within former holder footprints will be advanced to the apparent bottom of the holder. A boring will be installed immediately adjacent to any below-grade holders to allow evaluation of subsurface soils below the holder bottom. The engineering consultant field crew will use the best field practice to confirm and approximate the bottom of the holder. Utilizing information from test pitting in conjunction with the soil boring installed inside the foot print of the holder a determination will be made as to the approximate depth of the holder, additionally, the boring outside the holder will then be advance below the approximate depth of the holder. If soil borings indicate the presence of MGP impacts, soil borings will be advanced deeper until there is reasonable assurance that the impacted zone has been penetrated. One to three soil samples will be collected from such impacted borings to define the nature and extent of contamination. One sample will be collected from borings that do not appear to be impacted by MGP constituents to verify soil conditions. One soil boring will be installed in a location to coincide, as closely as can be

Figure 4 : Site Characterization Samples and Test Pit Locations



determined, with the location of former subsurface structures reported to exist at the Site. Soil sampling will be performed according to the methodology described above.

2. Three (3) additional borings will be converted to monitoring wells to: a) confirm local groundwater flow direction, and b) evaluate groundwater quality entering and migrating from the site. One groundwater monitoring well will be installed in a location expected to be upgradient of MGP-related structures, in close proximity to the property line, if possible. One groundwater monitoring well will be installed in an on-site location expected to be

downgradient of former MGP-related structures, as close as possible to the property line. The third monitoring well will be placed in an on-site location to evaluate groundwater migrating off-site and local groundwater flow direction. If the locations of one or more of the soil borings installed per (1), above, meet groundwater monitoring objectives, they will be converted to monitoring well(s). Groundwater monitoring wells will be constructed of 2-inch PVC Schedule 40 screen and riser, with a target depth of 30 feet. The screened interval in the groundwater monitoring wells will be determined based on field observations of the corresponding subsurface borings. Monitoring wells will be installed if NAPL is identified in soil borings. Such wells will be equipped with a sump to collect mobile NAPL, if present, and to be used as a measuring point for such NAPL. If a confining geologic unit or bedrock is encountered during installation of borings for monitoring wells, the drilling program will be reevaluated. The nature and depth of the confining layer and subsurface conditions will be evaluated prior to continuation of the boring.

3. Excavation of four (4) test pits: two “T-shaped” test pits will be located across the wall of each gas holder to determine the location, construction, and whether MGP impacts associated with the holder are present. If test pits indicate that the holder was formerly an at-grade holder, four (4) subsurface soil samples will be collected below the holder bottom to document soil chemistry with respect to New York State standards, criteria, or guidance (SCGs). If the test pits indicate that the holder was formerly a below-grade holder, the holder will be further characterized using soil borings (see #1, above). All test pits will be back filled at the end of each workday, to minimize impacts to the local community.
4. Up to five (5) surface soil samples (0 to 2 inches below the vegetative cover, if any), may be collected (on Site), in the areas shown on Figure 4, if the ground surface does not appear to have been impacted by more recent operations (i.e. over the past 50 years), based on current Site conditions and/or other historical information. In addition, a total of five (5) off-site surface soil samples will be collected to determine background conditions. Their locations will be determined in the field in consultation with Niagara Mohawk, New York Department of Health and NYSDEC.
5. Analytical samples will be collected from specific sample locations/intervals based on field observations at the following frequency (see Table 1, below, for analytical testing details):
 - a) Up to three (3) soil samples will be collected from each soil boring and one soil sample will be collected from each monitoring well location. Subsurface soil samples will be analyzed for BTEX, PAHs and total cyanide; 10% of these subsurface soil samples will be analyzed for the suite of Target Compound List (TCL) and Target Analyte List (TAL) constituents (see #1, above) to determine whether impacts from operations other than the MGP are present on-site.
 - b) One soil sample will be collected from each soil boring location and analyzed for TOC. If soil samples are collected from boreholes installed for installation of monitoring wells (see #2, above), one TOC sample will be collected from these locations as well.
 - c) One (1) round of groundwater samples from each of the wells will be analyzed for full TCL/TAL parameters.

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- d) Based on field observations, the engineering consultant may collect one sample for GC fingerprint analysis, particularly if non-MGP impacts are suspected.
 - e) If soil borings indicate the presence of an unconsolidated confining layer, one (1) Shelby tube sample will be collected for analysis of geotechnical parameters (i.e., porosity, permeability, bulk density, grain size, Atterberg Limits, % moisture, and specific gravity).
 - f) Surface soil samples will be analyzed for TCL/TAL parameters.
6. A baseline ground survey of the Site will be performed to develop a base map of the Site for development of the Site GIS and for presentation of data. This baseline survey will encompass surveying surface features, elevations (two-foot contours), underground utilities, structures, materials of construction, easements, property lines, and other relevant information located within the survey limits identified for the Site. The second phase, Post Investigation Survey, will be conducted upon completion of the field investigation activities and will include the survey of wells installed, soil borings drilled, test pits excavated, and surface soil sampling locations.
7. Maps depicting the groundwater flow direction and the soil and groundwater analytical data will be developed in the GIS for incorporation into the Site Characterization Report (see below). The figures will provide a graphical summary of the data. Boring logs and cross sections will also be developed based on the field data for presentation in the Site Characterization Report.
8. The analytical data generated from the field activities will undergo data validation. A Data Usability Summary Report (DUSR) will be prepared following completion of the data validation task.
9. Data obtained through the Site Characterization will be presented in a Site Characterization Report (SCR) for the Site. The SCR will include a qualitative evaluation of potential risks to human health and environment based on site characterization data.

4.0 HEALTH AND SAFETY INFORMATION

Health and safety requirements for Site Characterization activities are provided in the Generic Health and Safety Plan. The Site-Specific Hospital Route Map and Emergency and Site Contacts are provided as Attachments A and B to this Work Plan.

TABLE 1
Summary of Laboratory Analyses for Site Characterization
Gloversville (Washington Street) Non-owned Former MGP Site

Subtask	Sample Matrix	Laboratory Analysis	Field QC Samples			Laboratory QC Samples			
			No. of Samples	Trip Blanks ³	Field Duplicates	Equipment/Field Blanks	MS/MSD ¹	MSB/LCS ²	Total
Surface Soil	Soil	TCL VOCs, SVOCs, TAL metals, TOC	9-10	0	1	1	1/1	1/1	15-16
Subsurface Soil	Soil	BTEX, PAHs, total CN	9-23 ⁵	0	2	2	2/2	2/2	21-35
		TOC	9	0	0	0	0	0	9
		GC Fingerprint	≤1	0	0	0	0	0	≤1
		TCL VOCs, SVOCs, PCBs/Pest. TAL metals,	1-2	0	1	1	1	1/1	7-8
		Geotechnical parameters ⁴	≤1	0	0	0	0	0	≤1
Groundwater	Water	TCL VOCs, SVOCs, TAL metals.	3 ⁶	1	1	1	1/1	1/1	10

NOTES:

¹ MS/MSD: matrix spike/matrix spike duplicate.

² MSB/LCS: matrix spike blank/laboratory control sample.

³ Trip blanks will be analyzed for TCL VOC parameters only.

⁴ Porosity, permeability, bulk density, grain size, Atterberg Limits, % moisture and specific gravity.

⁵ Minimum quantity based on assumption that holder foundation is at-grade. One sample will be collected from each test pit and one sample will be collected from each monitoring well location. Totals for BTEX, PAHs and total cyanide reflect subtraction of 10% (two samples) to be analyzed for TCL/TAL parameters.

⁶ Based on one round of groundwater sampling, to be performed a minimum of 6 weeks following groundwater monitoring well installation.

5.0 PROJECT SCHEDULE

The proposed project schedule for implementation of the Gloversville (Washington Street) Non-owned Former MGP Site Characterization activities is as follows.

Duration or Date (Calendar Days)	Activity
January 31, 2003	Niagara Mohawk submits Site-specific Work Plan for Site Characterization.
60 days after NYSDEC approval of final Site-specific Work Plan for Site Characterization	Niagara Mohawk procures consultant to implement Site Characterization efforts.
30 days after procurement of consultant to implement Site Characterization.	Niagara Mohawk submits locations for proposed background samples and performs Site reconnaissance.
14 days after NYSDEC approval of background sample locations	Niagara Mohawk mobilizes for survey and Site Characterization activities.
14 days after initiation of the investigation	Niagara Mohawk performs post-investigation survey and mapping.
60 days after completion of Site Characterization activities.	Niagara Mohawk submits Data Usability Summary Report to NYSDEC.
170 days after submission of Data Usability Summary Report.	Niagara Mohawk submits draft Site Characterization Report to NYSDEC.

This conceptual project schedule identifies major milestones for the overall Site Characterization for the Gloversville (Washington Street) Non-owned Former MGP Site. Niagara Mohawk may perform Site Characterization activities at a number of Sites subject to the VCO concurrently. In order to complete these investigations as efficiently as possible, Niagara Mohawk may adjust the schedule of intermediate activities (e.g., field investigation, survey, etc.) at the Gloversville (Washington Street) Non-owned Former MGP Site to coincide with activities at other non-owned former MGP Sites, if feasible.

6.0 REFERENCES

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Decker, L. E., 1998, *Images of America: Gloversville*, Arcadia Publishing.

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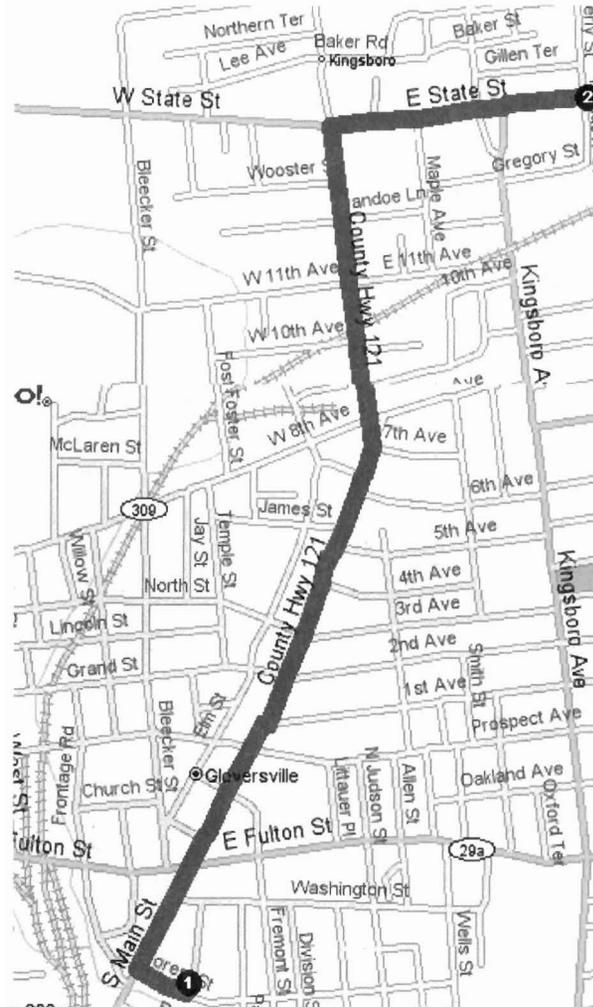
State of New York, 1907, *Second Annual Report of the Commission of Gas and Electricity of the State of New York*, Albany, New York.

Stranahan J. J., and Nichols, B., 1868, Atlas of Montgomery and Fulton Counties.

USGS, 1997, Aerial photographs of Gloversville, New York dated 4/30/1997 (from <http://terraserver.homeadvisor.msn.com>).

USGS, 1970, Gloversville, New York, Topographic Quadrangle, 7.5-Minute Series (from <http://topozone.com>).

**ATTACHMENT A
HOSPITAL ROUTE MAP**



Nathan Littauer Hospital
99 E. State Street, Groversville, NY 12078
(518) 725-8621

DIRECTIONS:

1. Start on BROADWAY Street going south.
2. Turn Right onto FOREST Street
3. Turn Right onto S. MAIN Street -.Continue on N. MAIN Street.
4. Turn Right onto E. STATE Street to 99 E. State Street

**ATTACHMENT B
EMERGENCY AND SITE CONTACTS**

EMERGENCY AND SITE CONTACTS

Contact	Firm or Agency	Telephone Number
Police	Gloversville Police Dept.	(518) 773-7514
Fire	Gloversville Fire Dept.	(518) 725-3124
Hospital	Nathan Littauer Hospital 99 E. State Street Gloversville, NY	518-725-8621
Ambulance		911
NM Project Manager Edward F. Neuhauser, Ph.D.	Niagara Mohawk	315-428-3355
NM Safety Department Brian Powell	Niagara Mohawk	315-428-6194
Project Manager – TBD*	Consultant	XXX-XXX-XXXX
Project Environmental and Safety Manager – TBD*	Consultant	XXX-XXX-XXXX
FOL – TBD*	Consultant	XXX-XXX-XXXX
Chemtrec		800-424-9300
National Response Center		800-424-8802
NYSDEC Spill Hotline	NYSDEC	800-457-7362 518 457-7362
Poison Control Center		800-336-6997
Underground Facility Protective Organization	UFPO	800-962-7962
Utility Emergencies (Electric & Gas)	Niagara Mohawk	800-932-0301

The Emergency Phone Numbers listed are preliminary. Upon mobilization, the FOL will verify all numbers, and document the changes in the Site Logbook. Any changes will also be documented with a field change request form and appended to this Site-Specific Work Plan.

* TBD to be determined