

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

**New York State Electric and Gas Corporation
Waterville Former Manufactured Gas Plant
Waterville (V), Oneida County, New York
Site No. 6-33-041**

March 2002

New York State Department of Environmental Conservation

GEORGE E. PATAKI, *Governor*

ERIN M. CROTTY, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

New York State Electric and Gas Corporation Waterville Former Manufactured Gas Plant Waterville (V), Oneida County, New York Site No. 6-33-041

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Waterville Former Manufactured Gas Plant site which was chosen in accordance with the New York State Environmental Conservation Law. The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Waterville Former Manufactured Gas Plant site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site have been addressed by implementing the interim remedial measure identified in this ROD, therefore the site no longer represents a current or potential threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation and Interim Remedial Measure Reports for the Waterville Former Manufactured Gas Plant site and the criteria identified for evaluation of alternatives, the NYSDEC has selected No Further Action as the remedy for this site. The remedy will include continued monitoring of the groundwater at the site and institutional controls.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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RECORD OF DECISION

**New York State Electric and Gas Corporation
Waterville Former Manufactured Gas Plant
Waterville (V), Oneida County, New York
Site No. 6-33-041**

March 2002

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health has selected a remedy for the New York State Electric and Gas (NYSEG) Waterville Former Manufactured Gas Plant (MGP). As more fully described in Sections 3 and 4 of this document, operation of the former manufactured gas plant has resulted in the disposal of a number of hazardous wastes or substances, including benzene and polycyclic aromatic hydrocarbons (PAHs), at the site, some of which were released or migrated from the site to surrounding areas, including soils and groundwater on the lot south of the site. These disposal activities resulted in the following threats to public health and/or the environment:

- a threat to human health associated with the potential for exposure to PAHs from coal tar contamination in surface soil on the former MGP site;
- a threat to human health associated with the potential for direct contact exposure to coal tar contained within, and in close proximity to, subsurface structures of the former MGP;
- an environmental threat associated with contaminant levels in surface soil on terrestrial wildlife and vegetation; and
- an environmental threat associated with contaminant levels in shallow subsurface soil on burrowing wildlife.

During the course of the investigation, an action known as an interim remedial measure (IRM), was undertaken by NYSEG at the Waterville Former MGP, in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation/feasibility study. The IRM undertaken at this site included removal of the gas production building foundation, gas holder foundation, naphtha tank and coal tar contaminated soils in the vicinity of these structures. In addition, surface soil was removed across the entire site to a minimum depth of two feet below ground surface. All excavated areas were backfilled with imported clean fill.

The success of the above IRM and the findings of the investigation at this site indicate that the site no longer poses a potential threat to human health or the environment. Therefore “No Further Action” is selected as the remedy for this site. As part of the remedy, a monitoring plan will be developed and implemented to verify site conditions and monitor residual contamination in groundwater at the site. In addition, institutional controls in the form of deed restrictions or notification will be required to prevent potential exposures to site contaminants on the former MGP parcel located behind the residences of 139, 145 and 157 Babbott Avenue and the Waterville Cemetery Association owned property to the south. Land use at the former site location will remain residential and the following restrictions will be required for both properties: (a) worker notification if utility or other excavation work was planned; (b) notification to the NYSDEC prior to any intrusive activity at either property; (c) proper management of any contaminated soil or waste removed from below the soil cover of the former MGP site or the cemetery owned lot to the south; (d) prohibition of the development of water supply wells; and, (e) annual certification of the institutional controls and compliance with the elements of the remedy.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Waterville MGP Site is located in a residential area of the Village of Waterville, Oneida County, New York (Figure 1). The site of the former MGP is currently a private residential backyard owned by the residents of 139 Babbott Avenue as a supplemental lot. The area of the site is approximately 17,300 square feet (0.4 acres). There are no structures currently occupying the site. The site is located west of Babbott Avenue behind several residential properties and is bounded on the north and west by property owned by the Waterville Cemetery Association. An undeveloped parcel of land also owned by the cemetery is located directly south of the site. This parcel was the location of a municipal ash landfill. The site is moderately sloping to the south. A western flowing tributary to Big Creek forms the southern edge of the undeveloped property, approximately 150 feet south of the site. Following the IRM, the site was restored with grass and a variety of trees were planted in within the site boundary. The Village of Waterville is serviced by public water. Reservoirs along Big Creek approximately two miles east and upgradient of the site are the source of the municipal water. There have been no identified uses of groundwater around the site.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

A manufactured gas plant (MGP) was a facility where gas for lighting and heating homes and businesses was produced. The Waterville MGP began production in 1887 as the Waterville Gas Light Company. Gas was produced at the site using the carbureted water gas process. Historical maps indicate that the plant consisted of a production building, coal storage areas, a naphtha tank located under a lime storage building and a 10,000 cubic foot gas holder. In 1903 the Waterville Gas Light Company became known as the Waterville Gas and Electric Company. Operations continued until 1916, when a fire destroyed the plant. All aboveground structures were demolished. NYSEG acquired Waterville Gas and Electric in 1924. NYSEG never operated the plant. In 1948 ownership of the property was transferred for residential use.

The carbureted water gas process involved the passage of steam through burning coal. This formed a gaseous mixture that was passed through a super heater into which an oil feed stock was sprayed. The manufactured gas was subsequently condensed and purified prior to distribution.

The production of manufactured gas created many by-products, some of which remained on site after the closure of the plant. A dense, oily liquid known as coal tar would condense out of the gas at various stages during its production, purification and distribution. Recovery of the tar waste was incomplete and it leaked from storage and processing facilities, contaminating surface and subsurface soils as well as groundwater. Another by-product, purifier waste, was the discarded lime and/or wood chips treated with iron oxides to remove cyanide and sulfur from the gas.

3.2: Remedial History

In 1990, NYSEG started an investigation to determine the nature and extent of contamination derived from the operations at the former MGP site. The investigation was conducted in two phases. Phase I, Prioritization of the Former Waterville MGP Site, was completed in September 1991. Phase II, Initial Field Investigation Program was completed in February 1994.

In 1994, NYSEG signed a Consent Order with the NYSDEC to investigate and, if necessary, remediate 33 former MGP sites located in their service area. Based on the findings of these investigations, NYSEG included the Waterville MGP site in the “multi-site” Consent Order.

In November of 1997, the NYSDEC approved an IRM work plan for source and surface soil removal at the Waterville Former MGP site. NYSEG then conducted the IRM from November 17, 1997 through January 23, 1998, and final site restoration work was completed on June 5, 1998. The IRM consisted of the excavation and off-site disposal of MGP contaminated soil/debris and the former subsurface MGP structures.

In November of 1999, NYSDEC approved the scope of work for a post-IRM Supplemental Remedial Investigation (SRI). Results of the SRI are summarized in Section 4.1.3. The purpose of the investigation was to determine the effectiveness of the removal action and the extent of any residual MGP-related contamination. The field work for the SRI was conducted by NYSEG in two phases, November 1999 and August 2001. In February 2002, a report summarizing the findings was issued by NYSEG.

SECTION 4: SITE CONTAMINATION

In February 1994, NYSEG completed an investigation for the Waterville MGP site. The purpose of the investigation was to determine the nature and extent of MGP contamination present at the site and to evaluate ways to address any potential significant threats to human health and the environment posed by the presence of hazardous materials. As noted in greater detail in Section 4.2 of this PRAP, NYSEG also conducted an IRM to address the site contamination. A post-IRM Supplemental Remedial Investigation (SRI) was conducted by NYSEG to determine the effectiveness of the IRM. The SRI is described in Section 4.3 of this PRAP.

4.1: Summary of the Investigations

The purpose of the pre-IRM remedial investigations was to define the nature and extent of any contamination resulting from previous activities at the site. As noted above, there were multiple investigative phases both before and after the IRM. This section briefly summarizes pre-IRM site conditions.

The remedial investigation was conducted in two phases. The results of the first phase, conducted in December 1990, have been presented in Prioritization of Former Manufactured Gas Plant Site Waterville Site September 1991. The results of the second phase are presented in Task II Investigation Report for the Former Manufactured Gas Plant Site Waterville, New York February 1994. These two reports describe the field activities and findings prior to the IRM in detail.

The pre-IRM site investigations included the following:

- Completion of drill rig split spoon borings and hand auger borings for collection and analysis of subsurface soil samples.
- Collection and analysis of surface soil samples.
- Collection and analysis of sediment samples from the tributary to Big Creek south of the site.
- Collection and analysis of surface water samples from the Big Creek tributary and a seep south of the former holder.
- Installation of monitoring wells for collection and analysis of groundwater samples.

To determine which media (soil, groundwater, etc.) are contaminated at levels of concern, the RI analytical data was compared to environmental standards, criteria, and guidance values (SCGs). Groundwater, drinking water and surface water SCGs identified for the Waterville MGP site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines. In addition, for soils, site specific background concentration levels can be considered for certain classes of contaminants. Guidance values for evaluating contamination in sediments are provided by the NYSDEC “Technical Guidance for Screening Contaminated Sediments”.

The investigation results indicated that some site-related contaminants in soil and groundwater samples exceeded the applicable SCGs, and there was potential for human health exposure and environmental damage from site-related contamination. Therefore, areas of the site required remediation. The conditions prompting this determination are summarized below. More complete information can be found in the pre-IRM investigative reports.

Chemical concentrations are reported in parts per billion (ppb) for groundwater and surface water and parts per million (ppm) for surface and subsurface soils and sediment. For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1: Site Geology and Hydrogeology

The results from the soil classification performed during the soil boring and monitoring well installations indicate that nearly all surficial soils have been altered due to historic operations at the site. The site subsurface consists of up to one foot of topsoil over a fill unit consisting of a substantial amount of ash as well as brown sand and gravel, coal fragments and bricks. The thickness of this unit was generally greater near the southern portion of the site where it was up to 12 feet thick. Below the fill is a unit of glacial outwash sand and silt ranging in thickness from 1 to 10 feet. The depth of the sand and silt unit decreases with proximity to the tributary to Big Creek. A dense kame moraine silt and gravel deposit of depths from 4 to 12 feet was found below the outwash unit. The unit is relatively uniform with greatest thickness found in the southernmost boring. The creek bed of the tributary to Big Creek corresponds to this unit. Below the silt and gravel deposit is a boulder till with some clay and silt. Bedrock was not encountered in any borings, however Onondaga limestone is believed to be present beneath the site.

The depth to groundwater ranges from approximately 4 to 12 feet below grade. The wells installed at the site monitor the shallow water table aquifer within the fill unit and the glacial outwash zone. The dense kame moraine deposit forms the base of the water table aquifer. Depth of groundwater was observed to be more shallow to the north and west and increased to the south. Groundwater flow through the site is to the south-southwest and discharges into the Big Creek tributary.

4.1.2: Nature of Contamination

As described in the reports, surface and subsurface soil, sediment, groundwater and surface water were collected at the Waterville MGP Site to characterize the nature and extent of contamination. These samples were analyzed for organic and inorganic constituents. The types of contaminants which exceeded their SCGs were volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). Other contaminants that sometimes may be associated with MGP sites, such as metals and cyanide, were generally not elevated in concentration.

Specific volatile organic compounds of concern in soil, sediment, groundwater and surface water are benzene, toluene, ethylbenzene and xylenes. The summation of these compounds is referred to as BTEX. The specific semivolatile organic compounds of concern in soil and groundwater are the following polycyclic aromatic hydrocarbons (PAHs):

acenaphthene	<i>chrysene</i>
acenaphthylene	fluoranthene
anthracene	fluorene
<i>benzo(a)anthracene</i>	<i>indeno(1,2,3-cd)pyrene</i>
<i>benzo(a)pyrene</i>	2-methylnaphthalene
<i>benzo(b)fluoranthene</i>	naphthalene
benzo(g,h,i)perylene	phenanthrene
<i>benzo(k)fluoranthene</i>	pyrene
<i>dibenzo(a,h)anthracene</i>	

PAH concentrations referred to in this plan are the summation or total of the individual PAHs listed above (i.e. total PAHs or tPAHs). The italicized PAHs are probable human carcinogens. The

summation or total of the probable carcinogenic PAHs is referred to in this document as total cPAHs or tcPAHs.

Two major types of waste materials are typically present at former MGP sites, coal tar and purifier waste. Coal tars are reddish brown to black, oily liquids which do not readily dissolve in water. Materials such as this are commonly referred to as a non-aqueous phase liquid, or NAPL. Although most tars are slightly more dense than water, the difference in density is slight. Consequently, they can either float or sink when in contact with water. Tars were discovered near structures of the former plant and have moved away from these locations through the subsurface. This migration resulted in contamination over an area greater than that occupied by the former plant.

Tars contain high levels of PAH compounds, often greater than 100,000 parts per million. Tars may also exceed SCGs for BTEX by several orders of magnitude. In certain tar samples, enough benzene may be present to require that the material be managed as a hazardous waste. The tar/NAPL is the source of the BTEX and PAHs identified in the various media at the site, discussed in section 4.1.3.

Another contaminant often associated with MGP sites is cyanide. Cyanide and sulfur are often found at high concentrations in purifier waste. Although gas purification was likely performed at the former plant, no indication of purifier waste disposal has been found and cyanide levels were mostly below detection limits.

Contamination containing certain metals such as arsenic, chromium, copper, iron, lead, mercury, nickel and zinc can also originate from MGP waste materials. Metals also occur naturally in soil and groundwater. Furthermore, many human activities besides the manufacture of gas can result in metals contamination. The investigation indicated that the metals found at this site were generally within the range of the background and upgradient sample results. Therefore, metals and cyanide are not considered contaminants of concern in either surface and subsurface soil, groundwater, surface water or sediments for the site.

4.1.3: Extent of Contamination

4.1.3.1 Pre-IRM Sampling

Tables 1A through 1E summarize the extent of contamination for the contaminants of concern that were present at the site prior to the IRM. The surface and subsurface soils, sediment, groundwater and surface water data is compared with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation. See Figure 2 for pre-IRM sampling locations.

Surface Soil

Five surface soil samples were taken during the pre-IRM investigation. Three were composite samples taken along transects through the site. The transect lengths ranged from 100 to 125 feet in length with soil collected every 25 feet. The other two were grab samples. Table 1A summarizes the analytical results for surface soil samples. Individual BTEX compounds were not detected for all five surface soils samples. Concentrations of tcPAHs ranged from 1.080 ppm to 352.0 ppm. Three out of five samples exceeded the 10 ppm tcPAH guidance. PAHs were found to be

significantly higher in the area of a former ash landfill located south of the site than from samples taken at the former plant. Cyanide was not detected in any of the surface soil samples.

Subsurface Soil

Twenty-nine subsurface soil samples were taken during the pre-IRM investigation. Table 1B summarizes the analytical results for subsurface soil samples. Nineteen samples were analyzed for BTEX. Benzene concentrations ranged from not detected in twelve samples to 11 ppm. The 0.06 ppm benzene guidance was exceeded in four of the samples. Toluene concentrations ranged from not detected in thirteen samples to 30 ppm. The 1.5 ppm toluene guidance was exceeded in one sample. Ethylbenzene concentrations ranged from not detected in thirteen samples to 15 ppm. The 5.5 ppm ethylbenzene guidance was exceeded in one sample. Xylene concentrations ranged from not detected in eleven samples to 42 ppm. The 1.2 ppm xylene guidance was exceeded in four of the samples. Total BTEX concentrations were below the detection limit for nine of the samples. The maximum BTEX concentration was 98 ppm from a boring located south of the holder. Twenty-nine samples were analyzed for PAH concentrations. Levels of tPAH ranged from not detected in ten of the samples to 1,776.5 ppm. Two samples exceeded the 500 ppm tPAH guidance. Cyanide was not detected in twenty subsurface soil samples.

Groundwater

Eight monitoring wells were installed prior to the IRM at or very near the site to determine potential site impacts on groundwater. Each well was sampled four times in 1992. Table 1C summarizes the results. Benzene concentrations ranged from not detected in twenty-five samples to 260 ppb. The 0.7 ppb benzene standard was exceeded in seven of the samples. Toluene concentrations ranged from not detected in twenty-two samples to 93 ppb. The 5 ppb toluene standard was exceeded in eight samples. Ethylbenzene concentrations ranged from not detected in twenty-one samples to 63 ppb. The 5 ppb ethylbenzene standard was exceeded in nine samples. Xylene concentrations ranged from not detected in twenty samples to 340 ppb. The 5 ppb xylene standard was exceeded in eleven of the samples. Total BTEX concentrations were below the detection limit for nineteen of the samples. The maximum BTEX concentration was 550 ppb. Levels of tPAH ranged from not detected in eight of the samples to 5,668 ppb. Concentrations of BTEX and total PAHs were not detected in the upgradient monitoring well. Concentrations were highest in well pair MW 91-2S/2D located downgradient of the former plant. Wells further downgradient showed levels of both BTEX and PAHs that were low, or below the detection limit.

Cyanide concentrations ranged from not detected in thirty samples to 47 ppb. None of the samples exceeded the 200 ppb cyanide standard.

Sediments

Prior to the IRM, three sediment samples were collected from a westerly flowing tributary to Big Creek located about 150 feet south of the site. The samples were analyzed for BTEX, PAH compounds and cyanide. A summary of the results is presented in Table 1D. BTEX concentrations were below detection limits for all three samples and total PAHs ranged from 0.9 ppm to 1.74 ppm. Cyanide was not detected in each of the three sediment samples.

Surface Water

Prior to the IRM, four surface water samples were taken from the tributary to Big Creek located south of the site. One sample was also taken from a seep on the site south of the former holder location. All five samples were analyzed for MGP constituents. Table 1E summarizes the results. There were no detectable levels of BTEX, total PAHs or cyanide in the samples taken from the Big Creek tributary. During sampling of the surface water collected from the groundwater seep, tar odors were evident. Levels of each of the BTEX compounds exceeded the surface water standard in the seep sample. Total BTEX was detected at 3,890 ppb. Total PAHs were detected at 430 ppb. Cyanide was not detected in the seep sample.

Air

During the pre-IRM investigation, the air quality was measured during soil disturbing investigation activities, when volatilization might generate unfavorable environmental conditions. Air monitoring with a photoionization detector during all aspects of the field work did not indicate the presence of volatile organic compounds in the breathing zone above the action levels specified in the project health and safety plan.

4.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the Remedial Investigation/Feasibility Study (RI/FS).

The findings of the pre-IRM investigation indicated a subsurface source area of coal tar and residual MGP constituents in surface soils on the residential property that was the location of the former MGP. Based on these findings, NYSEG proposed an IRM to address the contamination. The IRM was carried out by NYSEG under NYSDEC oversight from November 1997 to February 1998. The IRM consisted of excavation and off-site disposal of the gas production building foundation, gas holder foundation, naphtha tank and MGP impacted soil/debris in the vicinity of these structures. The excavation was limited to the backyard of 139 Babbott Avenue and a small portion of the cemetery property west of the site. Figure 3 shows the approximate area of the excavation.

A minimum of 2 feet of soil was removed from the surface of the entire site (17,300 ft²). The shallow soil was stockpiled in storage bins and sampled. Analytical results indicated that approximately 2,500 tons of near surface soil was acceptable for use as deep subsurface fill in the areas of the former gas holder and production building foundations. Excavations in the areas of the former MGP structures continued to a maximum depth of approximately 14 feet below ground surface, four feet below the groundwater table. Material within the gas holder consisted of tarry waste, small piping, metal, bricks, stones, wood and soil. The foundation, constructed of brick and mortar, was removed. In the area of the former gas production building, the foundation and naphtha tank were removed. The excavation continued until all visibly impacted soil was removed and confirmation sample results were below cleanup goals.

Nearly 5,300 tons of contaminated soil was removed from the site and disposed of at approved off-site waste disposal facilities. In addition to the contaminated soils, all former subsurface structures were removed for off-site disposal. Approximately 26,000 gallons of water encountered during the

excavation was pumped into tankers for off-site disposal. The entire site was covered with clean imported common fill and rough grading was completed to approximate original conditions.

Post excavation confirmation soil sample analytical results demonstrated that the IRM was successful in reducing site contaminants. Table 2 presents the analytical results for confirmation soil samples and soil cleanup objectives for benzene, naphthalene, tPAHs and tcPAHs. The soil analytical results indicate that cleanup objectives were met for all but one of the confirmation samples. The sample was located directly below the former gas holder at a depth of 14 feet below grade. This sample was located approximately 4 feet below groundwater.

Four new groundwater monitoring wells were installed at the site during the June 1998 final site restoration. Two are located near the southwest corner of the property and the other two near the southeast corner of the gas holder area. The new wells and the remaining wells installed in 1991 were incorporated into the supplemental remedial investigation groundwater monitoring program. The locations of all wells sampled as part of the SRI are indicated in Figure 4.

4.3: Supplemental Remedial Investigation

In November of 1999, following completion of the IRM, NYSEG initiated a supplemental remedial investigation (SRI) of the Waterville Former MGP site. The objectives of the SRI were to determine the effectiveness of the IRM, the extent of any residual MGP impacts, if any, in subsurface soil below and outside the limits of the IRM excavation and the quality of groundwater after the remediation. The SRI was conducted in two phases, the first in November 1999. Results of this investigation indicated that further work was required to investigate elevated levels of polycyclic aromatic hydrocarbons (PAHs) found in the backyard of 135 Babbott Avenue and MGP impacts downgradient of the IRM area. A second phase of the SRI was subsequently conducted in August, 2001.

A report entitled, Off-Site Supplemental Remedial Investigation (SRI) NYSEG Waterville MGP, dated February 2002 has been prepared which describes the field activities and findings of the SRI in detail.

The SRI included the following activities:

- Completion of soil borings on-site and off-site for collection and analysis of subsurface soil samples.
- Collection and analysis of surface soil samples both on-site and off-site.
- Collection and analysis of sediment samples from the tributary to Big Creek south of the site.
- Collection and analysis of surface water samples from the Big Creek tributary.
- Collection and analysis of groundwater samples taken from monitoring wells.
- Chemical forensics analysis for PAH concentrations in soils.

- Microscopic analysis of dark surface soil residue found across the site.

Tables 3A through 3E summarize the result of the supplemental investigation and extent of contamination for the contaminants of concern remaining at the site following the IRM. The surface and subsurface soils, sediment, groundwater and surface water data is compared with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation. See Figure 4 for post-IRM sampling locations.

Surface Soil

Twenty-one surface soil samples were analyzed to determine the potential for direct contact exposure in and around the former MGP. Samples were collected as a composite of five grab samples, each at a depth of 0-2 inches, from a 1-meter square. Three samples were analyzed for BTEX compounds. All surface soil samples were analyzed for PAH concentrations. Results are presented in Table 3A. The two phases of the investigation were consistent and show that MGP constituents do not appear to be impacting surface soils in the site vicinity. Of the BTEX compounds, only toluene was detected but at orders of magnitude below the guidance value. Total cPAHs ranged from not detected in three samples to 98.500 ppm. The twenty-one surface samples collected came from four distinct areas, the site of the former MGP, outside the IRM excavation downgradient of the site, the backyards along Babbott Avenue adjacent to the site and the backyard of 135 Babbott Avenue. Total cPAH concentrations were consistent in surface soils taken from each of these areas. Concentrations of tcPAHs in the six samples from the soil cover at the site of the former MGP ranged from not detected to 0.477 ppm. In the three samples taken downgradient of the site and outside of the excavation, in the area of a former ash landfill, tcPAH concentrations ranged from 0.385 ppm to 0.465 ppm. Concentrations of tcPAHs in the four samples taken from the backyards of residences along Babbott Avenue which adjoin the site ranged from 0.657 ppm to 0.960 ppm. Levels of tcPAHs in the six samples taken from the backyard of 135 Babbott Avenue were significantly higher than the surrounding area. Concentrations of tcPAHs ranged from 0.333 ppm to 98.5 ppm and were over the 10 ppm guidance in five samples. A sample taken from the front yard of 135 Babbott Avenue had levels of tcPAHs consistent with the background sample taken near the Waterville Cemetery with tcPAHs detected at 2.410 ppm and 2.627 ppm, respectively.

Samples from the backyard of 135 Babbott Avenue were collected and compared, using environmental forensics, to samples from coal tar contaminated material from the MGP site and ash from the former landfill south of the site. Results of the chemical fingerprinting revealed an unrecognizable pattern of PAHs, dissimilar to those found at the former site and the ash landfill. However, ash was visible immediately below the vegetative layer throughout the backyard of 135 Babbott Avenue. Thus the PAHs are likely from historic ash landfilling activities which took place in this area and are unrelated to the MGP.

Cyanide was not detected in any of the surface soils samples.

During a site visit on June 19, 2001, a dark residue was observed on surface soils throughout the site. Samples of the dark residue were collected from various surface locations across the study area the following day. The samples were composited for analysis. The sample did not have PAH concentrations above the detection limit. An herbicide, 2,4-D was detected at low levels in the

sample. An additional sample was composited for microscopic analysis during the August 2001 SRI field work. The use of polarized light microscopy (PLM) revealed that the residue was composed primarily of decaying plant matter. Two surface soils sampled during the SRI for herbicide analysis did not have any detections of 2,4-D, consistent with its approximate ten day half-life. The most likely source of the herbicide was a lawn care product which was reported to have been spread on the property prior to the site visit.

Subsurface Soil

Twenty subsurface soil samples were analyzed from seventeen direct push borings. Table 3B summarizes the analytical results for subsurface soil samples. All samples were analyzed for BTEX and PAH compounds. Benzene concentrations ranged from not detected in fifteen samples to 0.2 ppm. The 0.06 ppm benzene standard was exceeded in one of the samples. Toluene concentrations ranged from not detected in five samples to 4.1 ppm. The 1.5 ppm toluene standard was exceeded in one sample. Ethylbenzene concentrations ranged from not detected in twelve samples to 2.2 ppm. The 5.5 ppm ethylbenzene standard was not exceeded in any of the samples. Xylene concentrations ranged from not detected in nine samples to 8.5 ppm. The 1.2 ppm xylene standard was exceeded in two of the samples. Total BTEX concentrations were below the detection limit for five of the samples. The maximum BTEX concentration was 14.2 ppm from a boring located south of the holder.

Levels of tPAH ranged from not detected in two of the samples to 404.5 ppm. The highest concentrations of PAH compounds were found downgradient of the former holder and production building outside of the IRM excavation and, to a lesser extent, at the location of the former ash landfill. Subsurface MGP contamination was not found in the backyards of Babbott Avenue. Cyanide was detected in only one subsurface soil sample, at a concentration of 1.98 ppm.

Groundwater

Eight groundwater monitoring wells were sampled periodically following completion of the IRM, from November 1998 through August 2001. Results are summarized in Table 3C.

Sixty-three groundwater samples were analyzed for BTEX. Total BTEX concentrations were below the detection limit for forty-six of the samples. The maximum BTEX concentration was 1031 ppb. Individual BTEX compounds exceeded the groundwater standards in two monitoring wells: MW 98-7D and MW 91-5. Concentrations of each of the individual BTEX compounds exceeded the groundwater standard for all eight samples analyzed from MW 98-7D. Benzene concentrations ranged from 110 ppb to 540 ppb. Toluene concentrations ranged from 22 ppb to 220 ppb. Ethylbenzene concentrations ranged from 40 ppb to 110 ppb. Xylene concentrations ranged from 77 ppb to 161 ppb. MW 91-5 also had individual BTEX concentrations in exceedence of the groundwater standards, but at significantly lower levels than MW 98-7D. Benzene concentrations ranged from not detected in two samples to 88 ppb. The 0.7 ppb benzene standard was exceeded in six samples. Toluene concentrations ranged from not detected in seven samples to 1 ppb. The 5 ppb toluene standard was not exceeded by any samples. Ethylbenzene concentrations ranged from not detected in six samples to 6 ppb. The 5 ppb ethylbenzene standard was exceeded in one sample. Xylene concentrations ranged from not detected in three samples to 45 ppb. The 5 ppb xylene standard was exceeded in three of the samples.

Individual PAH compounds exceeded the groundwater standards in three monitoring wells: MW 98-7D, MW 91-5 and MW 98-7S. Total PAH concentrations ranged from not detected in twenty-eight of the samples to 2,919 ppb.

Groundwater has not been impacted by cyanide.

Concentrations of BTEX and total PAHs were not detected in the upgradient monitoring well, MW 91-1, located in the Waterville Cemetery. Concentrations were highest in well pair MW 98-7D/7S located downgradient of the former plant. MW 91-5, located further downgradient showed significantly lower levels of both BTEX and PAHs. All other wells had contaminant concentrations below the standard values, or were not detected. BTEX concentrations detected in MW 98-7D and MW 91-5 have declined steadily since completion of the IRM. PAH concentrations have remained relatively unchanged.

Sediments

Sediments along the northern bank of the Big Creek tributary were probed with a stainless steel auger at 25-foot intervals between Buell Road and Babbott Avenue. Probing did not reveal any evidence of MGP residues (oily sheens or coal tar). Five sediment samples were collected and analyzed from the tributary to Big Creek located south of the site. Results are presented in Table 3D. Of the BTEX compounds only toluene was detected in one sample located directly downgradient from the site at 0.0003 ppm. Total PAH concentrations ranged from 1.171 ppm to 5.518 ppm, below levels of concern. Concentrations of total cyanide ranged from not detected in four samples to 1.29 ppm in a sample taken slightly downstream of the site. Further downstream, total cyanide was not detected.

Surface Water

Four surface water samples from the Big Creek tributary were collected and analyzed. Each of these samples did not contain any detectable levels of MGP related constituents. Results are presented in Table 3E.

Air

The air quality was measured during soil disturbing investigation activities, when volatilization might generate unfavorable environmental conditions. Air monitoring with a photoionization detector during all aspects of the field work did not indicate the presence of volatile organic compounds in the breathing zone above the action levels specified in the project health and safety plan.

4.4: Summary of Human Exposure Pathways:

This section describes the types of potential human exposures that may present added health risks to persons at or around the site. This summary of human exposure discusses pre-IRM and post IRM conditions at the remediated site based on data in the reports.

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure;

and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Potential pathways of exposure which were known to have existed or may have existed at the site prior to the IRM were:

- Incidental ingestion and dermal contact with PAH contaminated surface soil;
- Inhalation of volatile vapors and fugitive dust from soils;
- Incidental ingestion of, and direct contact with, PAH contaminated subsurface soil and groundwater among utility workers during subsurface excavation;
- Incidental ingestion and dermal contact with contaminated surface water from a seep located south of the former holder.

After the soil removal IRM, these potential exposure pathways were either eliminated or mitigated. The potential for exposure to BTEX and PAHs no longer poses a health risk. Surface soil was removed over the entire MGP site and replaced by clean soil. Surface soil samples outside the excavation area indicate levels at or below background levels for tcPAHs, with the exception of the surface soil in the backyard of 135 Babbott Avenue. The contamination found in these surface soils is not MGP related but from historic ash landfilling activities which took place in the area. Residual contamination remains in subsurface soils and groundwater downgradient of the former plant structures, however the source of this contamination has been removed. Currently, no drinking water or irrigation wells have been identified in the impacted area, therefore potential exposure to contaminated groundwater and subsurface soils is limited to future installation of wells or during intrusive activities on the site.

4.5: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site.

The following pathways for environmental exposure and/or ecological risks had been identified prior to the IRM.

- Direct contact with subsurface soil by burrowing wildlife.

Based on the surface water and sediment data, it appears contaminants have not migrated into the tributary to Big Creek.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The NYSDEC and NYSEG entered into a Consent Order on March 30, 1994. The Order on Consent, Index # DO-002-9309, obligates NYSEG to investigate and, if necessary, remediate 33 MGP site located in their service area. The Waterville Former MGP site is included in the multi-site Consent Order.

SECTION 6: SUMMARY OF THE REMEDIAL GOALS AND PROPOSED ACTION

The selected remedy for any site should, at a minimum, eliminate or mitigate all significant threats to the public health or the environment presented by the waste present at the site. The State believes that the remediation now in place, which is described in Section 4.2 Interim Remedial Measures, will accomplish this objective provided that it continues to be monitored and institutional controls remain in effect.

During the subsequent supplemental investigation, borings were advanced at the location of the former holder and at several points downgradient. Areas contaminated with coal tar residue exist; however, exposure to subsurface soils in these areas is unlikely as a minimum soil cover of two feet exists over the entire site. Therefore, the exceedance does not represent a public health concern. The confirmation soil samples indicate the IRM reduced the potential for MGP residues to impact groundwater and eliminated, to the extent practicable, potential exposure to contaminated surface and subsurface soil.

Based on the results of the investigations and the IRM that was performed at the site, the NYSDEC is selecting "No Further Action" as the remedy for the site. In selecting this remedy, the NYSDEC will require NYSEG, with state oversight, to conduct monitoring at the site and will require the implementation of deed restrictions to ensure the effectiveness of the site remedy.

While the IRM was successful at removing the source of MGP contaminated soil at the former plant site, some limited areas of contaminated subsurface soil and groundwater remain. Therefore, institutional controls in the form of deed restrictions or notification will be required to prevent future exposures to site contaminants on the former MGP parcel located behind the residences of 139, 145 and 157 Babbott Avenue and the Waterville Cemetery Association owned property to the south. Land use at the former site location would remain residential and the following restrictions would be required for both properties: (a) worker notification if utility or other excavation work was planned; (b) notification to the NYSDEC prior to any intrusive activity at either property; (c) proper management of any contaminated soil or waste removed from below the soil cover of the former MGP site or the cemetery owned lot to the south; (d) prohibition of the development of water supply wells; and, (e) annual certification of the institutional controls and compliance with the elements of the remedy, including the maintenance of a sufficiently vegetated surface to assure the continued integrity of the soil cover.

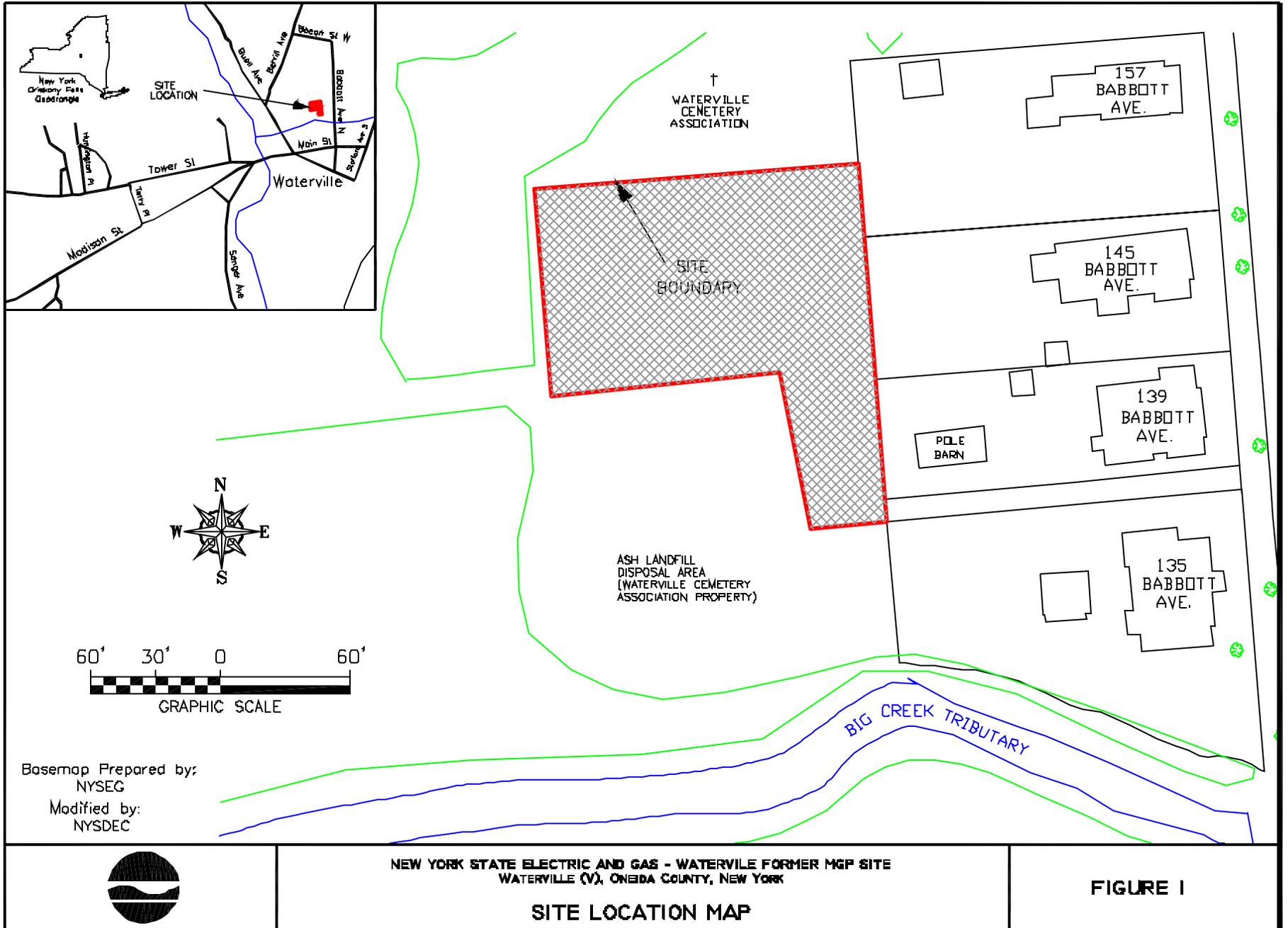
In addition, in the event that surface seeps are observed during groundwater monitoring events, or through notification by the property owner, soil and water samples will be collected for analysis.

To monitor the residual groundwater contamination noted in wells near the former MGP, a groundwater monitoring program will be implemented. This will consist of sampling of the eight existing monitoring wells for a period of two years. At the end of the two year period, NYSEG could propose ending the monitoring effort if natural attenuation of the BTEX compounds is occurring. The NYSDEC will also evaluate NYSEG's obligations to remediate the Waterville Former MGP as specified under the multi-site Consent Order as completed.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- A repository for documents pertaining to the site was established.
- A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.
- In November of 1997 a fact sheet was sent to the mailing list announcing a public meeting to discuss the proposed IRM for the site.
- The citizen participation plan for the site was approved in December 1997.
- A public meeting to discuss the IRM was held on November 12, 1997.
- November 1999 a Fact sheet was sent to the mailing list announcing the start of the Supplemental RI to evaluate post-IRM conditions at the site.
- In February 2002 the Proposed Remedial Action Plan (PRAP) was released for public comment and a fact sheet was sent to the site mailing list summarizing the PRAP, identifying the public comment period start and providing the date of a public meeting to present the PRAP.
- On March 7, 2002 the NYSDEC held a public meeting to solicit public comment on the PRAP.
- In March 2002 a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.



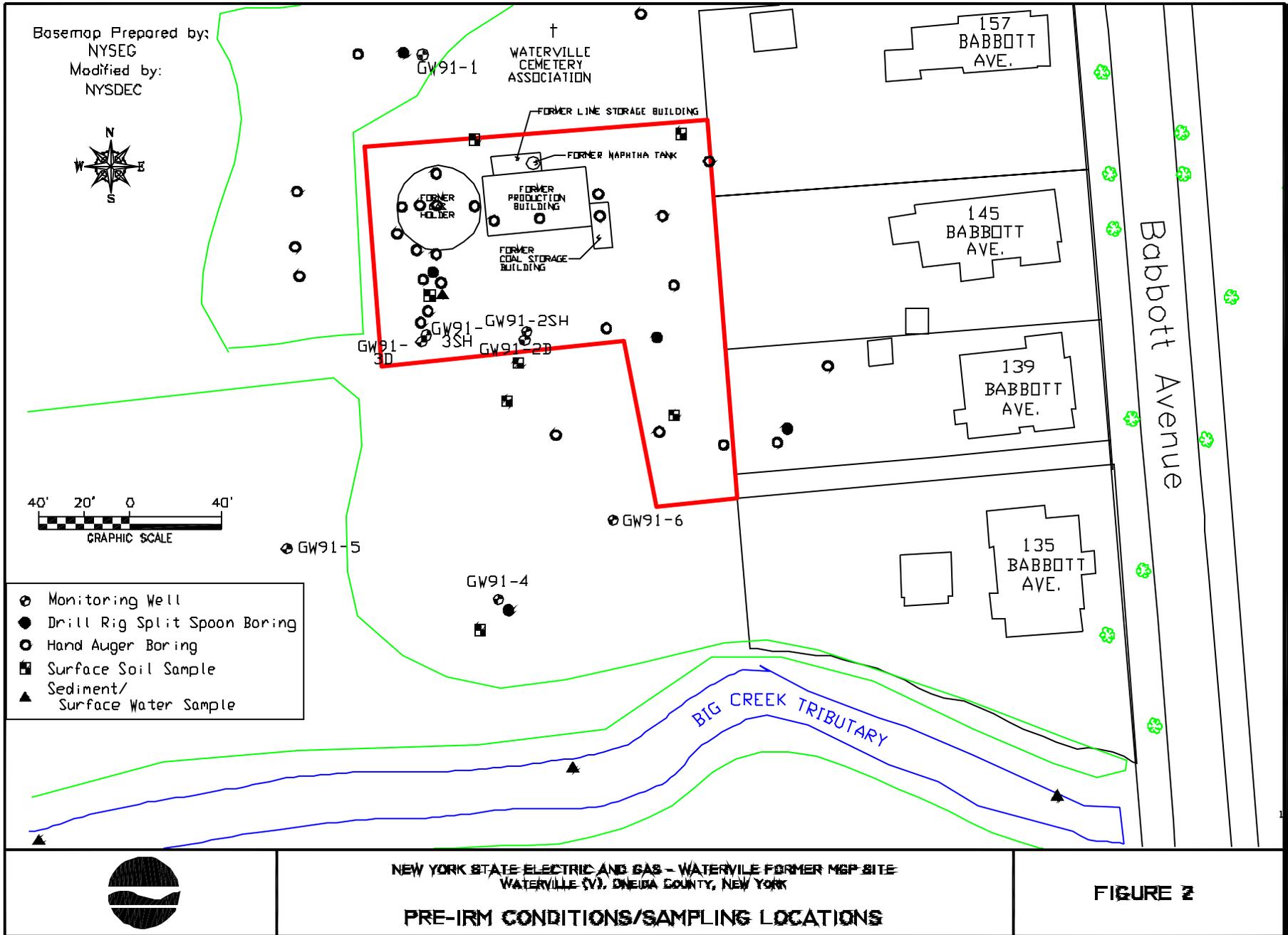
Basemap Prepared by:
NYSEG
Modified by:
NYSDEC



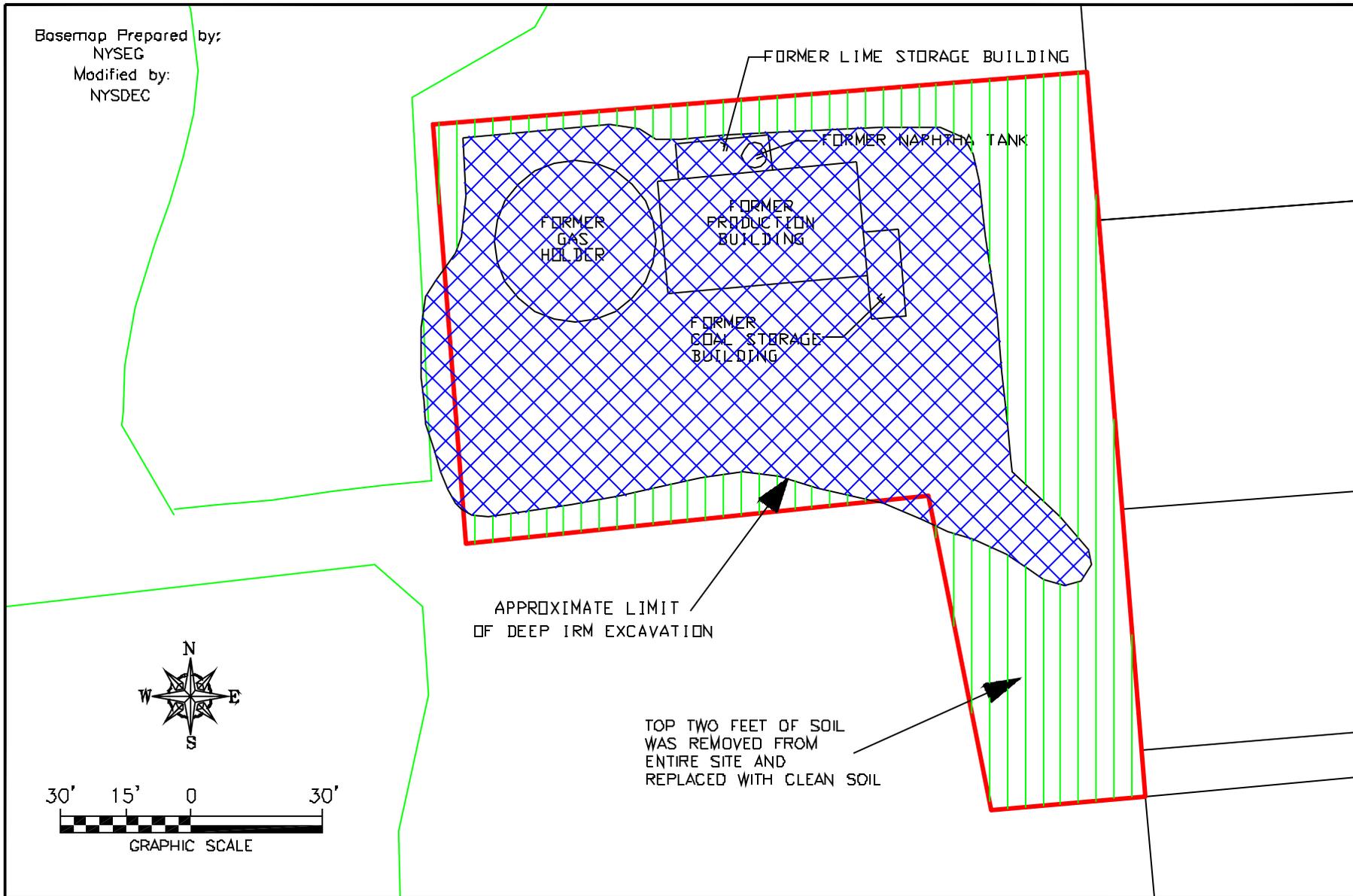
NEW YORK STATE ELECTRIC AND GAS - WATERVILLE FORMER MGP SITE
WATERVILLE (V), ONEIDA COUNTY, NEW YORK

SITE LOCATION MAP

FIGURE I



Basemap Prepared by:
NYSEG
Modified by:
NYSDEC



NEW YORK STATE ELECTRIC AND GAS - WATERVILLE FORMER MGP SITE
WATERVILLE (V), ONEIDA COUNTY, NEW YORK

EXTENT OF IRM EXCAVATIONS

FIGURE 3

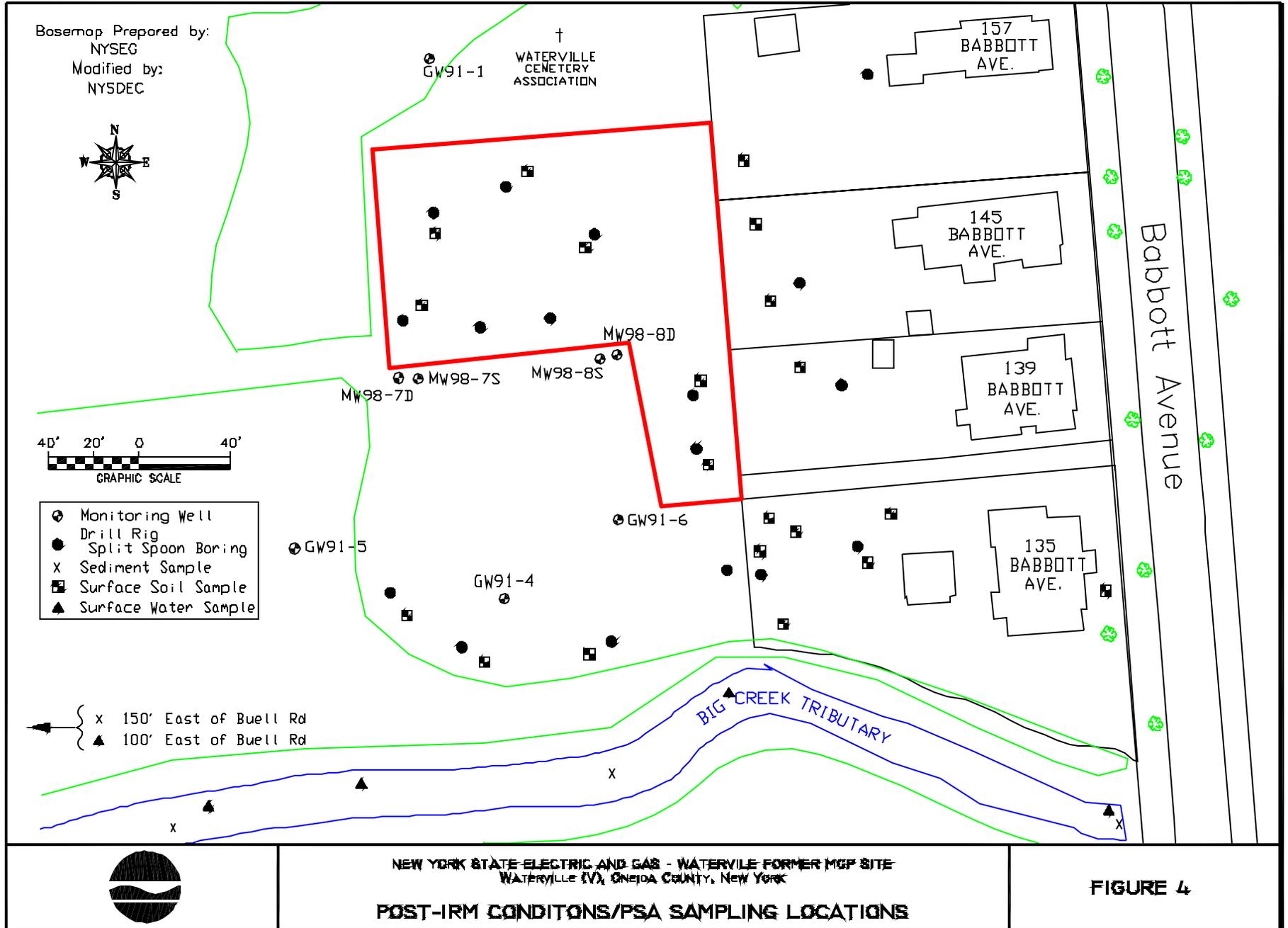


Table 1A
Nature and Extent of Contamination -Surface Soil
New York State Electric and Gas - Waterville MGP Site
Pre-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Benzene	ND (< 0.005)	0/5	0.06
Toluene	ND (< 0.005)	0/5	1.5
Ethylbenzene	ND (< 0.005)	0/5	5.5
Xylenes	ND (< 0.005)	0/5	1.2
Total BTEX	ND	NA	NA
Total cPAHs	1.080 - 352.0	3/5	10
Cyanide	ND (< 1.8)	NA	NA

Table 1B
Nature and Extent of Contamination -Subsurface Soil
New York State Electric and Gas - Waterville MGP Site
Pre-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Benzene	ND - 11	4/19	0.06
Toluene	ND - 30	1/19	1.5
Ethylbenzene	ND - 15	1/19	5.5
Xylenes	ND - 42	4/19	1.2
Total BTEX	ND - 98	NA	NA
Total PAHs	ND - 1776.5	2/29	500
Cyanide	ND (<1.8)	NA	NA

Table 1C
Nature and Extent of Contamination -Groundwater
New York State Electric and Gas - Waterville MGP Site
Pre-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG (ppb)
Benzene	ND - 260	7/32	0.7
Toluene	ND - 93	8/32	5
Ethylbenzene	ND - 63	9/32	5
Xylenes	ND - 340	11/32	5
Total BTEX	ND - 550	NA	NA
Total PAHs	ND - 5,668	NA	NA
Cyanide	ND - 47(11)	0/32	200

Table 1D
Nature and Extent of Contamination -Sediment
New York State Electric and Gas - Waterville MGP Site
Pre-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Benzene	ND (< 0.005)	NA	NA
Toluene	ND (< 0.005)	NA	NA
Ethylbenzene	ND (< 0.005)	NA	NA
Xylenes	ND (< 0.005)	NA	NA
Total BTEX	ND	NA	NA
Total PAHs	0.9 - 1.74	0/3	4.0
Cyanide	ND (< 1.4)	NA	NA

Table 1E
Nature and Extent of Contamination -Surface Water
New York State Electric and Gas - Waterville MGP Site
Pre-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG (ppb)
Benzene	ND - 1,900	1/5	760
Toluene	ND - 580	1/5	480
Ethylbenzene	ND - 610	1/5	150
Xylenes	ND - 800	1/5	590
Total BTEX	ND - 3,890	NA	NA
Total PAHs	ND - 430	NA	NA
Cyanide	ND (< 20)	0/5	22

Table 2
Nature and Extent of Contamination
New York State Electric and Gas - Waterville MGP Site
Results of Confirmation Soil Samples Collected for the IRM

SAMPLE DEPTH	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING RAOs	IRM RAOs (ppm)
2' - 8'	Benzene	ND	0/12	0.06
2' - 8'	Naphthalene	ND - 0.360	NA	NA
2' - 8'	tPAHs	ND - 15.41	0/12	100
2' - 8'	tcPAHs	ND - 4.190	0/12	10
> 8'	Benzene	ND - 0.520	1/18	0.1
> 8'	Naphthalene	ND - 8.100	0/18	13.0
> 8'	tPAHs	ND - 84.73	0/18	500
> 8'	tcPAHs	ND - 35.30	0/18	50

Table 3A
Nature and Extent of Contamination -Surface Soil
New York State Electric and Gas - Waterville MGP Site
Post-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Benzene	ND (< 0.006)	0/3	0.06
Toluene	0.003 - 0.007	0/3	1.5
Ethylbenzene	ND (< 0.006)	0/3	5.5
Xylenes	ND (< 0.006)	0/3	1.2
Total BTEX	0.003 - 0.007	NA	NA
Total cPAHs	ND - 2.627	0/15	10
Total cPAHs (non-site related) ¹	0.333 - 98.5	5/6	10
Cyanide	ND (< 1.1)	NA	NA

1- Samples taken from backyard of 135 Babbott Avenue in an area of ash disposal unrelated to the MGP

Table 3B
Nature and Extent of Contamination -Subsurface Soil
New York State Electric and Gas - Waterville MGP Site
Post-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Benzene	ND - 0.2	1/20	0.06
Toluene	ND - 4.1	1/20	1.5
Ethylbenzene	ND - 2.2	0/20	5.5
Xylenes	ND - 8.5	2/20	1.2
Total BTEX	ND - 14.2	NA	NA
Total PAHs	ND - 404.5	0/20	500
Cyanide	ND - 1.98	NA	NA

Table 3C
Nature and Extent of Contamination -Groundwater
New York State Electric and Gas - Waterville MGP Site
Post-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG (ppb)
Benzene	ND - 540	14/63	0.7
Toluene	ND - 220	7/63	5
Ethylbenzene	ND - 110	7/63	5
Xylenes	ND - 161	9/63	5
Total BTEX	ND - 1031	NA	NA
Total PAHs	ND - 2,919	NA	NA
Cyanide	ND (< 20)	0/63	200

Table 3D
Nature and Extent of Contamination -Sediment
New York State Electric and Gas - Waterville MGP Site
Post-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Benzene	ND (< 0.005)	NA	NA
Toluene	ND - 0.0003	NA	NA
Ethylbenzene	ND (< 0.005)	NA	NA
Xylenes	ND (< 0.005)	NA	NA
Total BTEX	ND - 0.0003	NA	NA
Total PAHs	1.171 - 5.518	1/5	4.0
Cyanide	ND - 1.29	NA	NA

Table 3E
Nature and Extent of Contamination -Surface Water
New York State Electric and Gas - Waterville MGP Site
Post-IRM

CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG/ Bkgd. (ppb)
Benzene	ND (< 5)	0/4	670
Toluene	ND (< 5)	0/4	480
Ethylbenzene	ND (< 5)	0/4	150
Xylenes	ND (< 5)	0/4	590
Total BTEX	ND	NA	NA
Total PAHs	ND	NA	NA
Cyanide	ND(< 10)	0/4	22

ppm - parts per million
 ppb - parts per billion
 SCG - environmental standards, criteria, or guidance values
 RAO - remedial action objective set forth in the interim remedial measure
 NA - no applicable standard or background value available
 ND - sample not detected above concentration limits
 detection limit given in parenthesis to the right

APPENDIX A

RESPONSIVENESS SUMMARY

**Waterville Former MGP Site
Proposed Remedial Action Plan
Waterville (V), Oneida County
Site No. 6-33-041**

The Proposed Remedial Action Plan (PRAP) for the Waterville Former MGP Site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on February 21, 2002. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil and sediment at the Waterville Former MGP Site. The preferred remedy requires no further action beyond the interim remedial measure implemented at the site along with deed restrictions or notices and a groundwater monitoring program.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on March 7, 2002 at the Waterville Village Hall, which included a presentation of the Remedial Investigation (RI) and the Interim Remedial Measure (IRM) undertaken at the site, as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. No written comments were received.

The public comment period for the PRAP ended on March 25, 2002. This Responsiveness Summary responds to all questions and comments raised at the March 7th public meeting.

The following are the comments received at the public meeting, with the State's responses:

COMMENT 1: Residents commented that a "skunk-like smell" is observed in the yard area in the morning after a rain event.

RESPONSE 1: There is no evidence of a MGP related material present at the site which would result in the skunk-like smell. This odor is most likely from naturally occurring sources in the vicinity of the property.

COMMENT 2: What is the time frame for NYSEG/NYSDEC involvement with the site? When will the problem be completely resolved?

RESPONSE 2: NYSEG will continue to gather groundwater data for at least the next two years semiannually, under NYSDEC and NYSDOH oversight. At the end of two years, NYSDEC/NYSDOH will evaluate the data and determine whether natural attenuation is continuing to reduce residual groundwater contamination. This trend has already been demonstrated by the post-IRM groundwater monitoring. Monitoring well 98-7D, the most impacted of the two wells where the volatile organic compounds benzene, toluene, ethylbenzene and xylene (BTEX) were found, is located just outside the IRM excavated area in the southwest corner of the property. Total BTEX levels in this well have decreased in concentration from 1031 ppb in February of 1999 to 251 ppb in August of 2001 and with the source of this contamination removed, this downward trend is expected to continue.

If the results of this monitoring program continue to be favorable NYSEG, with the approval by the NYSDEC and NYSDOH, may modify the groundwater monitoring plan to either continue monitoring on a less frequent interval or discontinue it. The deed restrictions or notices to be placed on the property will remain in effect indefinitely. An annual certification of compliance with deed restrictions will be required by NYSEG. This certification, will necessitate NYSEG, at a minimum, conduct a yearly site inspection to insure the continued integrity of the vegetated soil cover at the site, and would include provision for any necessary repairs of the cover.

COMMENT 3: Concern was expressed that the required deed restrictions may adversely impact future sale of the adjacent properties.

RESPONSE 3: The former MGP property has been determined to be suitable for restricted residential use, indicating that a very protective remediation of the site has been accomplished. The required deed restrictions/notices are intended to insure that anyone developing the site in the future is aware that a former MGP was located here and will remain in effect if the property is sold. Potential buyers must be made aware of the deed restrictions and NYSEG's involvement. Documentation from the State will be provided to each of the adjacent property owners to demonstrate that the site has been effectively remediated. This high level of site specific information on the former MGP and the surrounding properties, information not typically available in many real estate transactions, should work in the seller's favor in many instances.

COMMENT 4: The site restoration that we were promised was to include six inches of topsoil. I am concerned that the topsoil used for site restoration was not good enough topsoil to support a healthy lawn.

RESPONSE 4: The IRM workplan approved by the NYSDEC did not contain a specification for topsoil to be used in the restoration. However, the IRM was to result in a two foot depth of clean soil, what the NYSDEC and NYSDOH consider a vegetated soil cover over the entire former MGP site. If a specific topsoil layer or type of seeding was agreed to in individual property owner negotiations with NYSEG, this should be taken up with NYSEG. The NYSDEC does however

expect that a sufficiently vegetated layer will be established on the property to insure the integrity of the two foot thick soil layer, the integrity of which must be certified by NYSEG on an annual basis.

COMMENT 5: Is the water from the seep present on the site OK for the dog to drink?

RESPONSE 5: Due to the intermittent nature of the seep, NYSEG has not been able to be present at a time when a sample of the water could be obtained for analysis. However, monitoring wells upgradient of the seeps location have not identified any MGP contaminants of concern in the groundwater. The seep observed from the seep appears to be from iron, a naturally occurring element in groundwater throughout the State. Iron standards set for human consumption of groundwater are not based on direct health concerns but on aesthetics and the effect of the iron on plumbing fixtures as well as the potential to impact the effectiveness of water treatment systems designed to treat other compounds which may impact human health. Iron compounds will probably not adversely affect the dog. NYSEG will continue to inspect the seep area during groundwater monitoring events and residents are urged to contact NYSEG when the seep is active so that NYSEG can dispatch field personnel to attempt to collect samples of the water for analysis.

COMMENT 6: Since polycyclic aromatic hydrocarbons (PAHs) were found at the property of 135 Babbott, why doesn't that property require cleanup, despite the fact that the contamination is not related to the MGP?

RESPONSE 6: PAHs are a large group of individual compounds with similar chemical structure and properties, which are present in the environment from a great many sources, all resulting from some form of incomplete combustion, such as coal ash, vehicle emissions, forest fires, etc.. The PAHs identified at this location have been determined to be from a different source than the MGP, most likely the result of disposal of ash from coal burning for home heating. Ashes from residential coal burning were routinely deposited in backyards, roads and driveways in many areas in the Northeast. In this case it has been reported that a historic ash landfill existed at the foot of the slope, along the creek bank. Since these PAHs are not attributable to the MGP, the NYSDEC cannot require a cleanup of contaminated soil from this historical practice by NYSEG. While these ashes may present a health concern if ingested or inhaled, in their present location where they are covered by an established lawn, exposure is expected to be negligible.

COMMENT 7: Is there any danger for kids going in the back (ash landfill area) and picking up/collecting coal or clinker material?

RESPONSE 7: While coal and clinker contains PAHs, they are tightly bound in the solid matrix of the mineral and are unlikely to pose a risk.

COMMENT 8: The deep IRM excavation appears to have terminated along the fenceline in the northwest corner of the site. Was this out of convenience leaving contamination in place outside the excavation?

RESPONSE 8: The deep IRM excavation north and west of the former gas holder came within approximately five feet of the property line. On the north side the excavation was stabilized using shoring. Of three samples taken along the sidewalls of the excavation in this area, none had levels of contamination above cleanup objectives. Groundwater flow at the site is to the south, toward the creek, therefore the residual contamination which is located outside the excavation to the south would not be expected to recontaminate the fill material in the northwest corner.

COMMENT 9: Considering the problems in dealing with wet conditions, why was the IRM conducted from November - January?

RESPONSE 9: The IRM was conducted during these months because the combination of cooler temperatures and less intense sunlight significantly decreases the potential for volatilization of coal tar compounds and the subsequent generation of nuisance odors or airborne contaminants.

COMMENT 10: Would it be a requirement for a property owner living adjacent to the site to disclose the site history of other bordering property owners?

RESPONSE 10: It is the NYSDEC's understanding that a residential property owner (as a seller) is required to notify a potential buyer of any information the seller may possess regarding environmental conditions on his or her property, such as sampling conducted on the property, and provide any information, such as the reports, etc., of which they may be aware, to the buyer. Whether it is a requirement for a seller to notify a potential buyer of conditions on a neighboring property is an issue best discussed with a qualified real estate attorney.

APPENDIX B

Administrative Record

Prioritization of Former Manufactured Gas Plant Site Waterville Site, September 1991, Engineering-Science, Inc.

Task II Investigation Report for the Former Manufactured Gas Plant Site, Waterville, New York, February 1994, Engineering-Science, Inc.

Interim Remedial Measures Work Plan For Activities At Waterville Former MGP Site, Waterville, New York, November 1997, New York State Electric and Gas Corporation.

Interim Remedial Measures Final Engineering Report For Activities At Waterville Former MGP Site, Waterville, New York, July 1998, New York State Electric and Gas Corporation.

Report Off-Site Supplemental Remedial Investigation (SRI), Former Manufactured Gas Plant, NYSEG Waterville, Oneida County, New York, February 2002, Stearns and Wheler, LLC.

Letter from Gary Litwin of the New York State Department of Health, to Michael O'Toole, P.E., NYSDEC, dated February 20, 2002 concurring with the PRAP.

New York State Gas and Electric Corporation Waterville Former MGP Site Proposed Remedial Action Plan, Waterville (V), Oneida County, Site No. 6-33-041, dated February 2002