Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

NYSEG – Wadsworth St – Geneva MGP Site
Geneva, Ontario County, New York
Site Number 835015

March 2010

New York State Department of Environmental Conservation
DAVID A. PATERSON, *Governor* ALEXANDER B. GRANNIS, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

NYSEG – Wadsworth St. – Geneva MGP Inactive Hazardous Waste Disposal Site
Geneva, Ontario County, New York
Site No. 835015

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the NYSEG – Wadsworth St. – Geneva MGP site, an inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the NYSEG – Wadsworth St. – Geneva MGP inactive hazardous waste disposal site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. 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 releases of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and/or the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the NYSEG – Wadsworth St. – Geneva MGP site and the criteria identified for evaluation of alternatives, the Department has selected Removal of subsurface structure and MGP-related impacts at SB-14A, and installation of a surface cover as the remedy for this site. The components of the remedy are as follows:

1. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program and also to assess the viability of enhanced natural attenuation.

2. The removal of the subsurface structure and MGP-related impacted soil on the NYSEG property in the area of the tar structure (around soil boring SB-14A), as shown on Figure 6. This will remove all of the source material that is accessible on the site.

3. A site cover will be required for the properties comprising the site to allow for their continued commercial use. This cover will consist of the existing Public Safety Building and the associated pavement, sidewalks and parking lots as well as Railroad Place for the City owned properties. For the NYSEG owned property a soil cover will be installed in areas of exposed surface soil. The soil cover will consist of a minimum of one foot of soil, meeting the commercial use requirements for cover material set forth in 6 NYCRR Part 375-6.7(d), placed over a demarcation layer. The upper six inches of the soil will be of sufficient quality to maintain a vegetation layer.

4. The foundation slab remaining on the NYSEG property related to the former at grade gas holder (Gas Holder 3) will be uncovered, inspected and, if any tar is identified, cleaned. After the inspection and any required cleaning, the slab will remain, covering that portion of the site, with the surface restored as appropriate for the surrounding area.

5. Enhanced natural attenuation of the identified groundwater contamination will be evaluated during the design; and if a viable approach is identified, it will be implemented. The most likely form for such enhancement would be by increasing the amount of oxygen available to the soil bacteria which can naturally breakdown the MGP constituents present in the groundwater. Several means of delivering oxygen to the subsurface are available and will be considered as part of the design evaluation.

6. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

   (a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).
   (b) land use is subject to local zoning laws, the remedy allows the use and development of the controlled property for
   □ residential use □ restricted residential use X commercial use □ industrial use
   (c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH;
   (d) prohibits agriculture or vegetable gardens on the controlled property;
   (e) requires compliance with the Department approved Site Management Plan;

7. Since the remedy results in contamination remaining at the site that does not allow for unrestricted use, a Site Management Plan is required, which includes the following:

   (a) An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-

specific requirements necessary to assure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The environmental easement discussed in paragraph 5 above will be required for both the NYSEG and City owned parcels, as well as the area of Railroad Place.

Engineering Controls: The soil cover identified in paragraph 3, the existing buildings, streets, paved areas, and the sub-slab depressurization system installed in the Public Safety Building. The enhanced natural attenuation system, if implemented, would also require ongoing engineering controls to maintain its effectiveness.

This plan includes, but may not be limited to:

(i) Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination and disposal of any contaminated soils generated;
(ii) descriptions of the provisions of the environmental easements including any land use and groundwater use restrictions;
(iii) provisions for the management and inspection of the identified engineering controls;
(iv) maintaining site access controls and Department notification; and
(v) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and
(vi) provisions for the continued operation of the sub-slab depressurization system in the Public Safety Building.

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

(i) monitoring of groundwater to assess the performance and effectiveness of the remedy;
(ii) a schedule of monitoring and frequency of submittals to the Department;
(iii) provision to evaluate the potential for vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures;
(iv) provision to evaluate the potential for soil vapor intrusion for existing buildings if building use changes significantly.

7. Green remediation and sustainability efforts are considered in the design and implementation of the remedy to the extent practicable, including;

- energy efficiency and green building design
- using renewable energy sources

- reducing green house gas emissions
- encouraging low carbon technologies
- foster green and healthy communities
- increase recycling and reuse of clean materials
- preserve open space and working landscapes
- utilize native species and discourage invasive species establishment during restoration

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is 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.

MAR 3 0 2009

Date

Dale A. Desnoyers, Director
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RECORD OF DECISION

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Geneva, Ontario County, New York
Site No. 835015
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SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the above referenced site. The disposal of hazardous waste at the site has resulted in threats to public health and the environment that are be addressed by this remedy presented in this Record of Decision (ROD). The disposal of hazardous wastes at this site, as more fully described in Sections 5 of this document, have contaminated various environmental media. The remedy, discussed in detail in Section 8, is intended to attain the remedial action objectives identified for this site in Section 6 for the protection of public health and the environment. This ROD identifies the selected remedy, summarizes the other alternatives considered, and discusses the reasons for the selected remedy. The Department has selected a final remedy for the site after careful consideration of all comments received during the public comment period.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this ROD in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, 6 NYCRR Part 375.

SECTION 2: SITE DESCRIPTION AND HISTORY

2.1: Location and Description

The site is located in an urban setting at the northwestern corner of Railroad Place and Wadsworth Street in the City of Geneva, in Ontario County (Figure 1). The site is roughly 1 acre in size. Surrounding properties currently contain a mixture of residential and commercial uses.

Significant redevelopment and realignment of streets has taken place in the decades since manufacturing operations at the site ceased. The original foot print of the site extended south under what is now Railroad Place and the Public Safety Building (PSB) south of Railroad Place, and to the west under what is now a raised parking lot. Current and historic features of the site are shown on Figure 2.

The New York State Electric and Gas Corporation (NYSEG) owns a portion of the site, located to the north of Railroad Place. This parcel is zoned for commercial use and contains the raised parking lot used by the adjacent restaurant and a small gas regulator station on what is otherwise a vacant, grassy lot, which contains remnants of the at-grade holder (Gas Holder 3) and directly abuts a residence located on the northern site boundary. The balance of the site is owned by the city of Geneva and lies under Railroad Place and the PSB south of Railroad Place. The PSB building houses the city's jail, courthouse and police headquarters. It is in use 24 hours a day, seven days a week.

The soils beneath the site consist of an upper fill layer, consisting of soils, brick fragments, spent coal, wood fragment and other man-made items, which extends to between 4 and 8 feet below grade surface (bgs). Beneath the fill, a silt and clay layer extends to between 16 and 24 feet bgs. Below that is a sandy layer that is at least 22 feet thick. Bedrock has not been encountered during the investigations of the site. At another remedial site, roughly one mile away, bedrock was found roughly 200 feet bgs.

Groundwater at the site is found about 8 to 10 feet bgs. In the immediate vicinity of the site, groundwater flow is generally to the northeast. However, it is assumed that the groundwater eventually discharges into Seneca Lake, which is roughly 900 feet south of the site.

2.2: Operational/Disposal History

The site operated as a manufactured gas plant (MGP) from roughly 1853 through 1903. All the gas at this plant was produced by the coal carbonization method, in which coal was heated in a closed vessel to produce a combustible gas mixture. The gas was then cooled, purified, and distributed locally through a network of underground piping. Customers used the gas for heating, cooking, and lighting in much the same way that natural gas is used today.

At some time between 1903 and 1909, the plant was demolished and replaced by the Geneva/Border City MGP plant, roughly one mile east. A new, "remote" gas holder was constructed at Wadsworth Street to store gas produced at Border City, prior to distributing the gas for local consumption. The remote holder was demolished in 1946. However, subsurface structures, including building foundations and gas holder foundations from the original MGP, the remote gas holder foundation, and some tar-handling and storage structures, remained in place in the subsurface.

2.3: Remedial History

Prior to the initiation of the current Remedial Investigation, the following investigation and remediation activities had already taken place at the site:

- A NYSEG Site Screening Investigation was completed in September 1991.

- An interim remedial measure was completed in May 1999. This IRM was conducted to remove soil from a trench along the alignment of a new water line, which passed through the foundation of the gas holder from the original MGP.

SECTION 3: LAND USE

The Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings when assessing the nature and extent of contamination. Contaminant levels are compared to Standards, Criteria, and Guidance (SCGs), which have been set by the Department for different categories of land uses. For this site, alternatives that may restrict the use of the site to commercial criteria as described in Part 375-1.8 (g) are being evaluated (in addition to alternatives which do not restrict land use). The property owned by NYSEG is currently in use as a gas regulator station and is zoned for commercial use; and the property owned by the City is also currently used for commercial purposes. These uses are not anticipated to change in the near future. NYSEG intends to retain its property and continue operation of the regulator station; while the city has no plans to change the use of the PSB and has indicated a willingness to accept a commercial use restriction on its property.

A comparison of the SCGs for commercial land use and for unrestricted use is included in the Tables for the media being evaluated in section 5.1.2.

SECTION 4: 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. NYSEG owns a portion of the site, and is the corporate successor to the operator of the gas plant. As such, they are the only PRP identified for this site.

The Department and NYSEG entered into a Consent Order on March 30, 1994. The Order obligates NYSEG to investigate and, if necessary, remediate 33 former MGP sites in their service area. The Geneva Wadsworth MGP site is one of the sites included in the multi-site order.

SECTION 5: SITE CONTAMINATION

A remedial investigation has been conducted to determine the nature and extent of contamination and to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation

The purpose of the Remedial Investigation (RI) was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between December 2005 and February 2008. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information
- Survey of residential water supply wells
- Test pits, soil borings, and monitoring well installations
- Sampling of waste, surface and subsurface soils, groundwater and soil vapor
- Sampling of ambient air and indoor air
- Ecological and human health exposure assessments.

5.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and surface and subsurface soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in the following Sections list the applicable SCG in the footnotes. For a full listing of all SCGs see: **http://www.dec.ny.gov/regulations/61794.html**

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized in Section 5.1.2. More complete information can be found in the RI Report.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the Remedial investigation. As described in the RI report, waste/ source materials were identified at the site and are impacting groundwater, soil, and soil vapor. The principal waste product produced at the former MGP site was MGP tar, which is an oily, dark colored liquid with a strong, objectionable odor. Unlike most materials labeled as "tar", this is not a viscous material. Rather, it has a physical consistency similar to motor oil, which enables it to move through the subsurface. MGP tar is referred to as a dense non-aqueous phase

liquid or DNAPL, since it is heavier than water and will not readily dissolve in water. When released into the subsurface, it will sink through the groundwater until it reaches some impermeable material which it cannot penetrate. It can, under certain conditions, move laterally away from the point where it was initially released.

The tar contains high levels of volatile and semi-volatile organic compounds (VOCs and SVOCs). The principal MGP tar VOCs are benzene, toluene, ethylbenzene, and xylenes. These compounds, collectively known as BTEX, are slightly soluble in water. Groundwater which comes into contact with tar or tar-contaminated soils will become contaminated with BTEX compounds. This contaminated groundwater can then move through the subsurface along with the ordinary groundwater flow.

The principal MGP tar SVOCs are a group of compounds known as polycyclic aromatic hydrocarbons, commonly abbreviated as PAHs. PAH compounds are generally less soluble than BTEX, and are consequently less likely to dissolve in groundwater. This makes PAH compounds less mobile in the subsurface, so the highest levels of PAHs are normally found in close proximity to the tar from which they are derived. The specific semivolatile organic compounds of concern in soil and groundwater are the following polycyclic aromatic hydrocarbons (PAHs):

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

This section describes the findings for all environmental media that were evaluated. As described in the RI report, groundwater, soil, soil vapor and indoor air samples were collected to characterize the nature and extent of contamination.

For each medium, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into four categories; volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and inorganics (metals and cyanide). For comparison purposes the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCG identified in Section 3 are also presented.

Waste/Source Areas

Wastes are defined in 6 NYCRR Part 375-1.2 (aw) and include solid, industrial and/or hazardous wastes. Source Areas are defined in 6 NYCRR Part 375-1.2 (au). Source areas are areas of concern at a site were substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium. Wastes and Source areas were identified at the site include MGP tars associated with various historic structures on the site where

tar was generated, stored, or conveyed, and the subsurface soils surrounding those structures where tar has escaped.

The largest amount of tar was found in a subsurface wooden tar structure on the NYSEG-owned parcel, just north of Railroad Place (in the location of soil boring SB-14A). A thin layer of tar was also found at the bottom of the small gas holder foundation underneath Railroad Place. This represents a small volume of tar and appears to be contained in the intact holder. Tar has also been found in soils adjacent to these structures. There is some evidence of additional MGP tar, as indicated by sheens and odors found in borings immediately adjacent to the PSB and in soils beneath the PSB as well. This is shown on Figure 3.

The waste/source areas identified will be addressed in the remedy selection process.

Groundwater

Groundwater contamination at the site is very limited in its areal extent. Although one well has shown high levels of site related contamination (MW-3), there is no evidence of contaminated groundwater, above standards, leaving the site.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Benzene	ND – 1,600	1	1 of 9
Toluene	ND – 1,400	5	1 of 9
Ethylbenzene	ND – 220	5	1 of 9
Xylene	ND – 2,200	5	1 of 9
Styrene	ND – 170	5	1 of 9
SVOCs			
2,4 – Dichlorophenol	ND - 130	1	1 of 9
2 - Methylphenol	ND - 110	1	1 of 9
4- Methylphenol	ND - 130	1	1 of 9
Naphthalene	ND – 1,200	10	1 of 9
Phenol	ND - 38	1	1 of 9
Inorganics			
Cyanide	ND - 259	200	1 of 9

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.

b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

The primary contaminants of concern at the site are the BTEX compounds and PAHs. All of the BTEX and PAH contaminants which dissolve in groundwater are subject to degradation by natural processes. Common soil bacteria are capable of using these chemical compounds as a food source, converting them to carbon dioxide and water. This degradation process takes place more rapidly when abundant oxygen is present in the groundwater, and can in many cases be expedited by the introduction of additional oxygen. The PAH compounds which do not dissolve in water are far less likely to be degraded by microbes. The lower solubility of these compounds also makes them much less likely to be transported off-site by groundwater flow.

The groundwater at the site contains BTEX compounds and some site-related PAHs. However, these contaminants are not widely distributed, and some of them may not have originated at the MGP. Only one well (MW-3) contains contamination at levels above ambient groundwater standards. This well is located downgradient of the historic gas making facilities, but it is also immediately adjacent to the PSB. There is evidence that the PSB property had been previously used as an automobile repair shop, and it is likely that this shop was the source of some petroleum-related spills which may be contributing to the groundwater contamination in MW-3. The contaminants are notably absent in wells downgradient of the gas holder and tar-bearing structure. The impacted area is shown on Figures 3 and 4.

Based on the findings of the RI, the disposal of hazardous waste has resulted in the contamination of groundwater. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of groundwater to be addressed by the remedy selection process are: benzene, toluene, ethylbenzene, xylene, naphthalene and cyanide.

Soil

Surface and subsurface soil samples were collected at the site during the RI. Surface soil samples were collected from a depth of 0-2 inches to assess the potential for direct human exposure. Subsurface soil samples were collected from a depth of 2- 40 feet to assess the soil contamination's potential impacts to groundwater. The results indicate that the soils at the site exceed the unrestricted use SCG for volatile and semi-volatile organics and metals.

The highest contaminant concentrations are found around the areas of historic structures and in close proximity to the waste/ source areas.

Table 2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCO[b] (ppm)	Frequency Exceeding Unrestricted SCO	Commercial SCO[c] (ppm)	Frequency Exceeding Commercial SCO
VOCs					

Acetone	ND - 1.6	0.05	6 of 37	500	0 of 37
Benzene	ND - 240	0.06	11 of 37	44	2 of 37
Toluene	ND - 340	0.7	7 of 37	500	0 of 37
Ethylbenzene	ND - 42	1	5 of 37	390	0 of 37
Xylene	ND - 360	0.26	9 of 37	500	0 of 37
SVOCs					
2 - Methylphenol	ND – 3.6	0.33	2 of 37	500	0 of 37
4 - Methylphenol	ND – 2.5	0.33	1 of 37	500	0 of 37
Acenaphthene	ND – 180	20	3 of 37	500	1 of 37
Acenaphthylene	ND – 760	100	3 of 37	500	1 of 37
Anthracene	ND – 1,100	100	3 of 37	500	1 of 37
Benzo(a)anthracene	ND – 710	1	11 of 37	5.6	7 of 37
Benzo(a)pyrene	ND – 400	1	12 of 37	1	11 of 37
Benzo(b)fluoranthene	ND – 240	1	12 of 37	5.6	5 of 37
Benzo(k)fluoranthene	ND – 420	0.8	12 of 37	56	1 of 37
Chrysene	ND – 580	1	12 of 37	56	2 of 37
Dibenz(a,h)anthracene	ND – 46	0.33	9 of 37	0.56	7 of 37
Dibenzofuran	ND – 690	7	8 of 37	350	1 of 37
Fluoranthene	ND – 1,100	100	3 of 37	500	1 of 37
Fluorene	ND – 1,200	30	7 of 37	500	1 of 37
Indeno(1,2,3–cd)pyrene	ND – 100	0.5	11 of 37	5.6	4 of 37
Naphthalene	ND -3,100	12	7 of 37	500	2 of 37
Phenanthrene	ND – 2,100	100	4 of 37	500	2 of 37
Pyrene	ND – 870	100	3 of 37	500	2 of 37
Inorganics					
Cyanide	ND – 2,170	27	1 of 37	27	1 of 37

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCO: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCO: Part 375-6.8(b), Commercial Soil Cleanup Objectives.

The primary soil contaminants are BTEX and PAHs associated with wastes from the former MGP operations. As shown on Figure 4, the highest levels of contamination are found in close proximity to the former MGP structures including the subsurface gas holder, tar structure, and retort areas.

Surface soil on the NYSEG property exhibited a few PAHs which exceed the commercial use SCGs. The exceedances were in two locations, both in close proximity to the local streets.

Based on the findings of the Remedial Investigation, the disposal of hazardous waste has resulted in the contamination of soil. The site contaminants identified in soil which are considered to be the primary contaminants of concern, to be addressed by the remedy selection process are, benzene, toluene, ethylbenzene, xylene, benzo(a) anthracene, benzo(a)pyrene and benzo(b)fluoranthene.

Soil Vapor Intrusion

Soil vapor intrusion refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying buildings. The potential for soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by sampling sub-slab soil vapor under structures and by sampling indoor air inside structures. At this site, due to the presence of buildings in the impacted area, a full suite of samples was collected to evaluate whether actions are needed to address exposures related to soil vapor intrusion.

Subslab soil vapor, indoor air and outdoor air samples were collected at the PSB. The sampling results were reviewed and the indoor and outdoor air levels were generally within the background ranges found in commercial buildings. Petroleum related compounds were also detected in the subslab sample at levels that are higher than would be expected. Although these levels did not appear to be affecting the indoor air, additional samples were requested to be collected during the next heating season. Instead of collecting additional samples, NYSEG decided to install a subslab depressurization system at the PSB.

Based on the concentration detected, and in comparison with the NYSDOH Soil Vapor Intrusion Guidance, soil vapor contamination identified during the RI has already been addressed during the interim remedial measure described in the next section of this document, Section 5.2. Consequently, only the maintenance of the soil vapor intrusion remedy needs to be addressed during the remedy selection process.

5.2: 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 issuance of the Record of Decision.

Prior to the start of the remedial investigative work, an IRM was performed in Railroad Place. The details of the IRM are discussed in Section 2.3.

Mitigation measures were taken at the PSB as an IRM to address the potential for future indoor air contamination of volatile organic compounds associated with soil vapor intrusion. These measures included the installation of a subslab depressurization system at the PSB and adjustments to the HVAC system were made where subslab depressurization could not be achieved. Communication testing and follow-up indoor air sampling was conducted to ensure the SSDS and the modifications addressed the potential for soil vapor intrusion.

5.3: Summary of Human Exposure Pathways:

This section describes the current or potential human exposures (the way people may come in contact with contamination) that may result from the site contamination. A more detailed discussion of the human exposure pathways can be found in the RI report available at the document repository. An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

There are no completed exposure pathways at this site. Contaminated groundwater is not being used for drinking water because the area is served by the public water supply. A sub-slab depressurization system is being operated and maintained to ensure that contaminants present beneath the on-site building do not affect the indoor air quality. A building with a paved parking lot covers the subsurface soil contamination on one section of the site and the other section is fenced to restrict public access. However, people may come into contact with contaminated soil and groundwater if ground-intrusive activities are completed at this site. Exposures related to soil vapor intrusion may also occur if new buildings are constructed on-site.

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The Fish and Wildlife Impact Analysis (FWIA), which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site poses to fish and wildlife receptors.

The FWIA did not identify any current or potential impacts to ecological resources.

Surface water resources at or near the site include, Seneca Lake and Marsh Creek. Seneca Lake is the largest and deepest of the Finger Lakes, and is located roughly 900 feet to the southeast. It is classified as a Class B water body, meaning that it is suitable for primary and secondary contact recreation, and is considered a major lake trout habitat. Marsh Creek is a class C stream located

roughly 1,500 feet to the east. No current or potential site-related surface water impacts have been identified.

Groundwater resources at the site include an overburden aquifer which begins at a depth of roughly 8 to 10 feet bgs. The groundwater flows to the northeast. Whether it discharges directly to Seneca Lake at a point east of the site or whether it discharges to Marsh Creek, which in turn drains into the lake, is not known. In either case, Seneca Lake would be the ultimate destination for groundwater flowing away from the site.

Site related contamination is impacting groundwater in the immediate vicinity of the site. However, the groundwater is not used as a source of potable water, and the contaminated groundwater does not appear to extend beyond the site boundaries.

SECTION 6: SUMMARY OF THE REMEDIATION OBJECTIVES

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial objectives for this site are:

Public Health Protection

Groundwater

- Prevent people from drinking groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with contaminated groundwater.
- Prevent inhalation of contaminants from groundwater.

Soil

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of contaminants volatilizing from the soil.
- Prevent inhalation of contaminated particulates from the soil.

Soil Vapor

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into the indoor air of buildings at or near a site.

Environmental Protection

Groundwater

- Restore the groundwater aquifer to meet ambient groundwater quality criteria, to the extent feasible.

- Prevent discharge of contaminated groundwater to surface water.

Soil

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

To be selected, the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Site were identified, screened and evaluated in the Feasibility Study which is available at the document repositories established for this site.

A summary of the remedial alternatives that were considered for this site is presented below. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

7.1: Description of Remedial Alternatives

The following alternatives were considered to address the contaminated media identified at the site as describe in Section 5:

Alternative 1: No Further Action

The No Further Action Alternative recognizes the remediation of the site already achieved by the IRM(s) described in Section 5.2. This alternative leaves the site in its present condition and does not provide any additional protection of the environment.

Alternative 2: Site Management

The site management alternative recognizes the remediation of the site already achieved by the IRM described in Section 5.2. Engineering controls and institutional controls will be necessary to confirm and maintain the effectiveness of the IRM. This alternative maintains engineering controls which were part of the IRM and includes institutional controls, in the form of an environmental easement and site management plan, to protect public health and the environment from contamination remaining at the site. The easement would include a prohibition on groundwater use without proper treatment approved by the Department, restrictions on the excavation, handling, and disposal of any soils generated during future subsurface activities at the site, and soil vapor intrusion evaluations and actions if any new buildings are constructed on-site or if the land use changes.

Present Worth: *$938,000*
Capital Cost: *$321,000*
Annual Costs: *$40,000*

Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative would achieve all of the SCGs discussed in Section 5.1.1 and soil would achieve the unrestricted soil clean objectives listed in Part 375-6.8 (a). This alternative would include: excavation and off-site disposal, at a permitted facility, of all waste and soil contamination above the unrestricted soil cleanup objectives as shown on Figure 5. This excavation would cover an extensive area, and would require demolition of the existing buildings on the site, including the PSB.

There would be no ongoing monitoring costs or other annual costs, since all contamination would be removed.

Present Worth: $9,420,000
Capital Cost: *$9,420,000*
Annual Cost: *$0*

Alternative 4: Removal of subsurface structure and MGP-related impacts at SB-14A, and installation of a surface cover

This alternative would include excavation and off-site disposal of the subsurface wooden structure and any associated MGP-impacted soil in the area of soil boring SB-14A, as well as the installation of a soil cover on the NYSEG-owned parcel, as shown on Figure 6. Impacted areas under the street and under the PSB would remain in place. Commercial SCOs would be met, because these areas are covered with buildings, pavement, or at least one foot of soil. On the NYSEG parcel, the installation of the cover would require the removal of existing surface soil, re-grading of the property to ensure proper drainage, installation of a demarcation layer and placement of at least one foot of clean soil from off-site sources.

Additional studies would be conducted to determine if the existing natural attenuation of the groundwater coming from beneath the PSB can be enhanced. If enhanced natural attenuation is possible, most likely by increasing the oxygen content of the groundwater, then the enhancement will be implemented.

This alternative would also include the use of institutional and engineering controls to protect public health and the environment from contamination remaining at the site, as described in Alternative 2.

Present Worth: *$1,280,000*
Capital Cost: *$657,000*
Annual Costs: *$50,000*

Alternative 5: Removal of subsurface structure and MGP-related impacts at SB-14A, containment of Gas Holder 1, and installation of a surface cover

This alternative would include the same elements as Alternative 4 and would include the installation of a containment barrier surrounding the gas holder located under Railroad Place, as shown on Figure 7. In conjunction with this remedy, the institutional controls would be required to ensure the continued effectiveness of the containment barrier.

Present Worth: *$3,610,000*
Capital Cost: *$2,990,000*
Annual Costs: *$50,000*

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which sets forth the requirements for the remediation of inactive hazardous waste disposal sites in New York. A detailed discussion of the evaluation criteria and comparative analysis is included in the feasibility study.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The costs for each alternative are presented in the Remedial Alternatives Cost Table 3.

Table 3
Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
Site Management	321,000	40,000	938,000
Restoration to Unrestricted Conditions	9,420,000	0	9,420,000
Removal of Impacts at SB-14A, and soil cover	657,000	50,000	1,280,000
Removal of Impacts at SB-14A, soil cover, and containment of Holder 1	2,990,000	50,000	3,610,000

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the Department addressed the concerns raised.

No significant public comments were received.

SECTION 8: SUMMARY OF THE PROPOSED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the Department has selected Alternative 4, Removal of subsurface structure and MGP-related impacts at SB-14A, and installation of a surface cover as the remedy for this site. The elements of this remedy are described at the end of this section.

8.1 Basis for Selection

The selected remedy is based on the results of the RI and the evaluation of alternatives.

Alternative 4 is selected because, as described below, it satisfies the threshold criteria and provides the best balance of the balancing criteria described in Section 7.2. It would achieve the remediation goals for the site by removing the subsurface contamination which is most likely to be directly contacted by utility workers and the surface contamination which would be most likely to be contacted by trespassers and residents of the adjacent property to the north. The only remaining contamination would be at depth under the street and under the PSB. The groundwater is not used for drinking water and the limited plume will be addressed through long-term monitoring and, if viable, enhanced natural attenuation.

Alternative 1 (No Action) does not provide additional protection to public health and the environment and will not be evaluated further. Alternatives 2, 3, 4 and 5 satisfy the threshold criteria, therefore the remaining criteria are particularly important in selecting a final remedy for the site.

Long-term effectiveness is best accomplished by those alternatives involving excavation and permanent removal. Alternative 3 would remove all the contaminated soil and source material, and would thus provide the greatest long-term permanence. It would also achieve the remedial goals in the shortest period of time Alternatives 4 and 5 provide a somewhat lower degree of permanence by removing the contaminants most likely to create exposures in the future.

While Alternative 2 would create the fewest short-term impacts, it provides a much lower degree of long-term permanence because no material would be removed. If the structure at SB-14A degrades or leaks in the future, contamination could spread through the soil and create a larger groundwater contamination problem than currently exists. Alternatives 4 and 5 would provide similar levels of long-term effectiveness with similar removals; however, containment of the Gas Holder under Alternative 5 would provide an incremental increase in permanence.

Alternative 2 would control potential exposures with institutional controls only and would provide no reduction in the toxicity, mobility, or volume of the contaminants. Alternative 3 would provide the maximum reduction in volume by excavating and disposing all of the contaminants at off-site disposal facility. Alternative 5 would reduce the same volume of contaminants as Alternative 4, with similar excavations, and would additionally reduce the mobility of contaminants in the gas holder. However, the holder appears to be intact and effective at reducing the mobility of the small amount of contamination within it, so the significance of this additional containment is not great.

Alternative 3 would create the most short-term impacts. It would require the demolition and replacement of the PSB, a busy and key facility in the city (section 2.1), the disruption of a large section of Railroad Place, and months of excavation work. The large scale excavation would require extensive odor control, most likely in a temporary enclosure, and extensive excavation support systems for the large area and vertical extent. Approximately 1,500 truckloads of contaminated soil would need to be transported from the site, and a similar number of truck trips would be required to bring in clean soil to backfill the excavation. Alternative 4 would have a relatively small short-term impact. Railroad Place would likely remain open, and little or no impact is anticipated on the operations at the PSB. The small area of the excavation means that odors can be controlled easily and that the required excavation support would be minimal. Alternative 5 would likewise have a smaller short-term impact than Alternative 3, but it would still require the closing and disruption of Railroad Place and would require adjustments to several of the functions of the PSB during the work. Furthermore, several utilities run along Railroad place, including the water line mentioned in section 2.3, which would have to be moved, requiring more excavation work in the street. Alternative 2 would have no discernible short-term impacts.

Alternatives 2 and 4 would be readily implementable. The excavation proposed in Alternative 3 would require extensive support and odor control provisions, but these are readily available. More important implementation concerns with Alternative 3 would be the required extensive coordination with the local municipality and disruption to the operations of the PSB requiring temporary relocation and, likely, a move back into a reconstructed PSB. Further coordination/disruption would result from the need to move the utilities and find alternate traffic routes around the excavation in Railroad Place. The containment aspect of Alternative 5 would also be implemented with any one of several readily available technologies, but specialty equipment would be required to install the containment wall. A high degree of municipal coordination/disruption would be required in order to reroute utilities and traffic around Railroad Place, although considerably less than Alternative 3. The excavation and cover portions of Alternatives 4 and 5 are both readily implemented with available technologies. Alternative 4 would require less coordination with the local municipality, and would require only basic excavation and odor control equipment. Alternative 2 is also easily implemented as NYSEG owns the main property.

The costs of the alternatives vary significantly. Alternative 2 has a low cost, but as the contaminated material would remain, there is a potential for much higher long-term costs associated with site management. With the large volume of soil to be handled and the demolition of the PSB, alternative 3 has the highest present worth cost, with little incremental gain in protectiveness over Alternatives 4 or 5. Alternatives 4 and 5 would have similar long-term annual costs, but the capital cost of alternative 5 is much higher than alternative 4 due to the costs of installing the containment (e.g. time and materials for installation of the containment structure and costs associated traffic and utilities management).

The reasonably anticipated future use of the parcels is commercial and all of the Alternatives would permit the site to be used for commercial purposes. Alternative 2 would not readily allow for future changes in land use or redevelopment, where alternatives 4 and 5 would permit future development for new commercial uses on the NYSEG owned parcel. Future redevelopment of

the PSB, if the City so desired, could also be accommodated. Alternative 3, with the removal of all contaminated soils, would allow all the parcels to be used without restrictions.

The estimated present worth cost to implement the remedy is $1,280,000. The cost to construct the remedy is estimated to be $657,000 and the estimated average annual costs for 30 years is $50,000.

8.2 Elements of the Selected Remedy

The elements of the selected restricted use remedy are as follows:

1. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program and also to assess the viability of enhanced natural attenuation.

2. The removal of the subsurface structure and MGP-related impacted soil on the NYSEG property in the area of the tar structure (around soil boring SB-14A), as shown on Figure 6. This will remove all of the source material that is accessible on the site.

3. A site cover will be required for the properties comprising the site to allow for their continued commercial use. This cover will consist of the existing Public Safety Building and the associated pavement, sidewalks and parking lots as well as Railroad Place for the City owned properties. For the NYSEG owned property a soil cover will be installed in areas of exposed surface soil. The soil cover will consist of a minimum of one foot of soil, meeting the commercial use requirements for cover material set forth in 6 NYCRR Part 375-6.7(d), placed over a demarcation layer. The upper six inches of the soil will be of sufficient quality to maintain a vegetation layer.

4. The foundation slab remaining on the NYSEG property related to the former at grade gas holder (Gas Holder 3) will be uncovered, inspected and, if any tar is identified, cleaned. After the inspection and any required cleaning, the slab will remain, covering that portion of the site, with the surface restored as appropriate for the surrounding area.

5. Enhanced natural attenuation of the identified groundwater contamination will be evaluated during the design; and if a viable approach is identified, it will be implemented. The most likely form for such enhancement would be by increasing the amount of oxygen available to the soil bacteria which can naturally breakdown the MGP constituents present in the groundwater. Several means of delivering oxygen to the subsurface are available and will be considered as part of the design evaluation.

6. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

(a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).
(b) land use is subject to local zoning laws, the remedy allows the use and development of the controlled property for
□ residential use □ restricted residential use X commercial use □ industrial use
(c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH;
(d) prohibits agriculture or vegetable gardens on the controlled property;
(e) requires compliance with the Department approved Site Management Plan;

7. Since the remedy results in contamination remaining at the site that does not allow for unrestricted use, a Site Management Plan is required, which includes the following:

(a) An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to assure the following institutional and/or engineering controls remain in place and effective:

> Institutional Controls: The environmental easement discussed in paragraph 5 above will be required for both the NYSEG and City owned parcels, as well as the area of Railroad Place.
>
> Engineering Controls: The soil cover identified in paragraph 3, the existing buildings, streets, paved areas, and the sub-slab depressurization system installed in the Public Safety Building. The enhanced natural attenuation system, if implemented, would also require ongoing engineering controls to maintain its effectiveness.

This plan includes, but may not be limited to:

(i) Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination and disposal of any contaminated soils generated;
(ii) descriptions of the provisions of the environmental easements including any land use and groundwater use restrictions;
(iii) provisions for the management and inspection of the identified engineering controls;
(iv) maintaining site access controls and Department notification; and
(v) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and

(vi) provisions for the continued operation of the sub-slab depressurization system in the Public Safety Building.

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

(i) monitoring of groundwater to assess the performance and effectiveness of the remedy;
(ii) a schedule of monitoring and frequency of submittals to the Department;
(iii) provision to evaluate the potential for vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures;
(iv) provision to evaluate the potential for soil vapor intrusion for existing buildings if building use changes significantly.

7. Green remediation and sustainability efforts are considered in the design and implementation of the remedy to the extent practicable, including;

- energy efficiency and green building design
- using renewable energy sources
- reducing green house gas emissions
- encouraging low carbon technologies
- foster green and healthy communities
- increase recycling and reuse of clean materials
- preserve open space and working landscapes
- utilize native species and discourage invasive species establishment during restoration

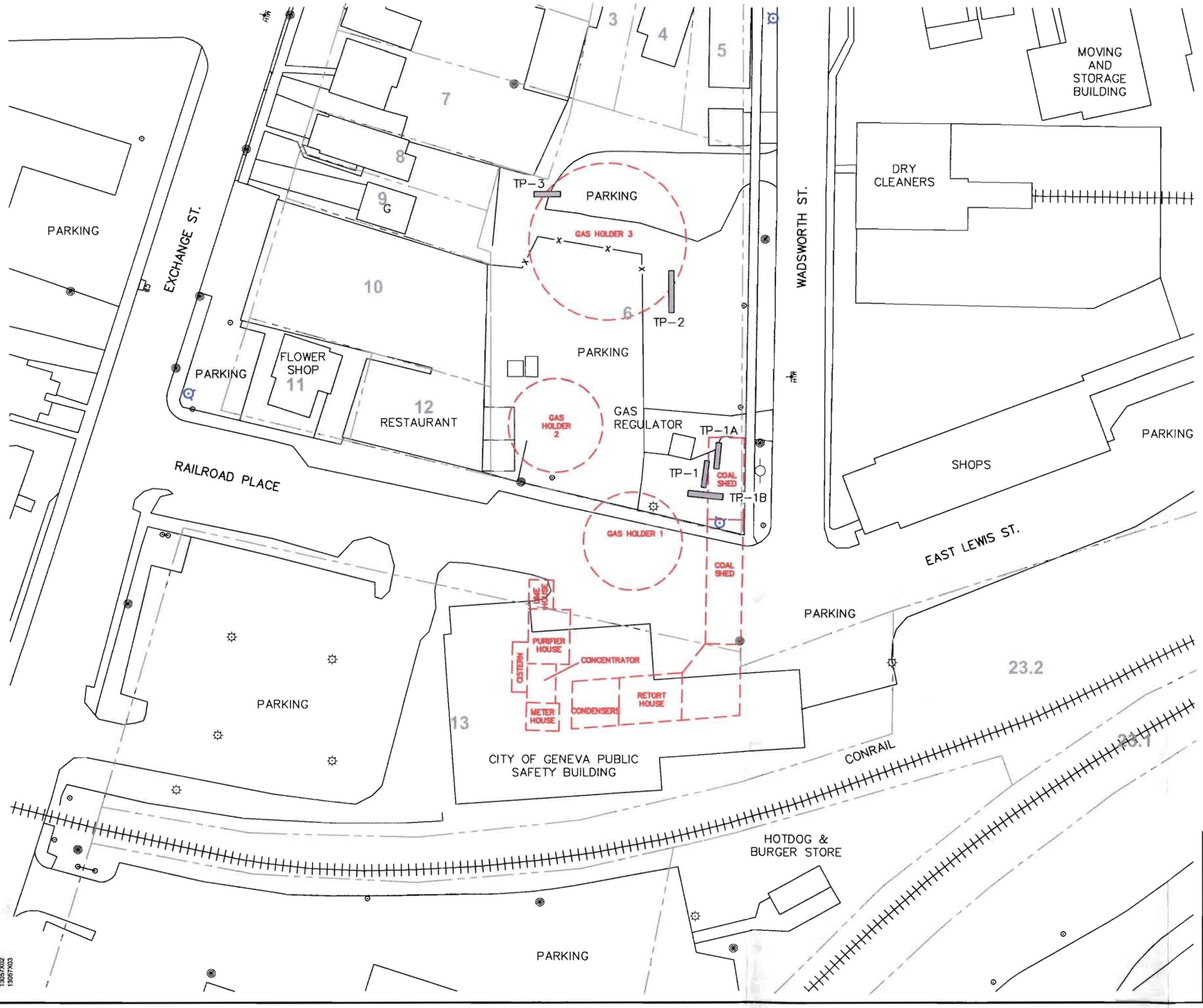
SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken 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:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.
- A fact sheet was sent to the public contact list.
- A public meeting was held on March 11, 2010 to present and receive comment on the PRAP.

- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

NYSEG - Wadsworth St. - Geneva MGP
Site No: 835015
Figure 1
Record of Decision



LEGEND:

- TEST PIT LOCATION
- FENCE
- RAILROAD
- PROPERTY BOUNDARY
- UTILITY POLE W/ GUY
- POWER POLE
- LIGHT POLE
- POST, SIGN
- HYDRANT
- FORMER MGP STRUCTURE
- MANHOLE

NOTE:

1. BASE MAP BASED ON SURVEYS COMPLETED BY NYSEG ON DECEMBER 14, 2005 AND OCTOBER 2006. ELEVATIONS IN REFERENCE TO NGVD 1929, HORIZONTAL DATUM IS NAD 83 STATEPLANE, NEW YORK CENTRAL.
2. ALL LOCATIONS ARE APPROXIMATE.
3. PROPERTY BOUNDARIES WERE DIGITIZED FROM CITY OF GENEVA, ONTARIO COUNTY, NEW YORK TAX MAP [104.35], DATED MAY 1, 2008.

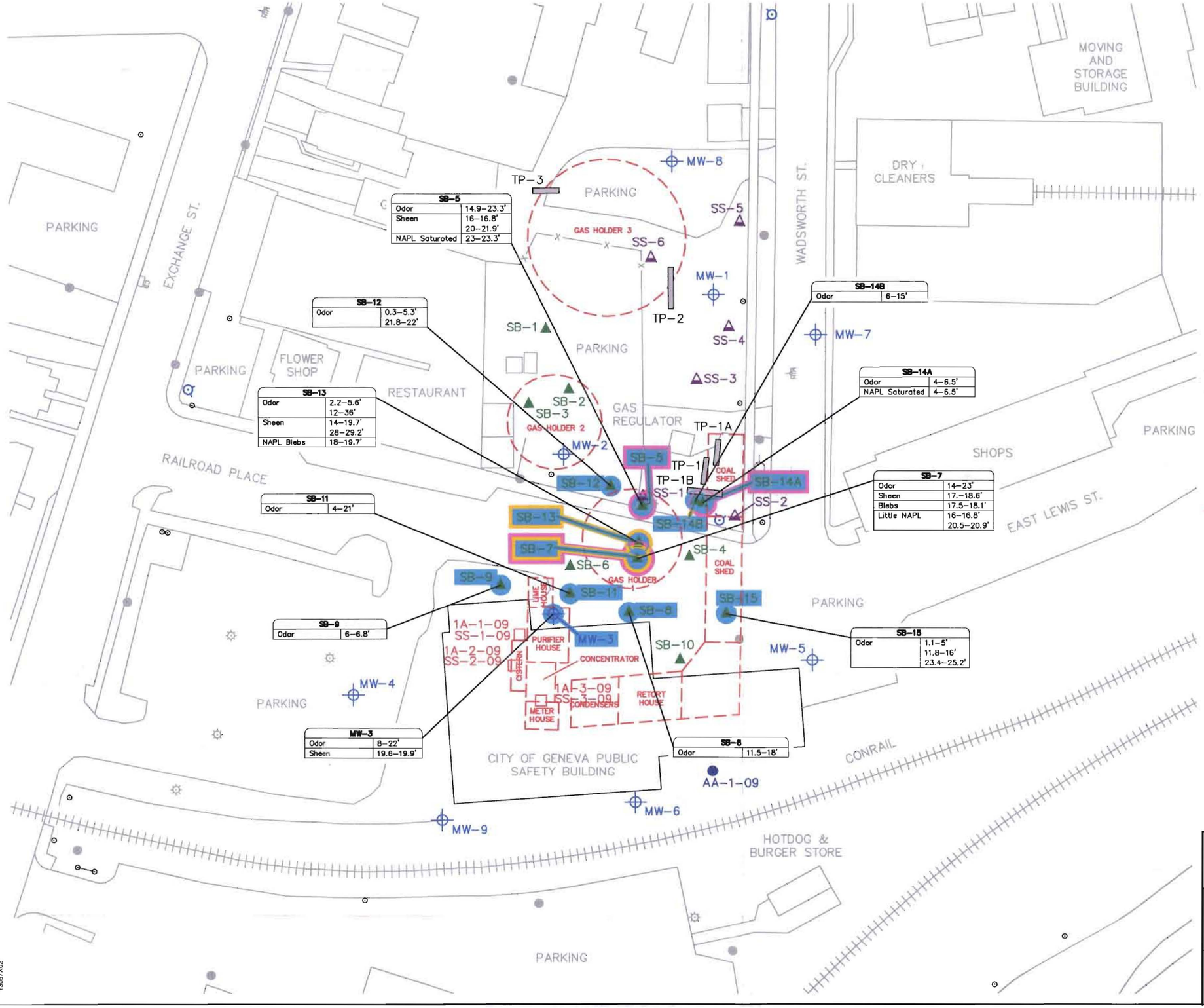
0 60' 120'

GRAPHIC SCALE

NYSEG - Wadsworth St. - Geneva MGP
Site No: 835015

Historic Structures

FIGURE **2**



LEGEND:

- INDOOR AIR/SUB–SLAB AIR SAMPLE LOCATION
- AMBIENT AIR SAMPLE LOCATION
- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- SURFACE SOIL LOCATION
- TEST PIT LOCATION
- FENCE
- RAILROAD
- UTILITY POLE W/ GUY
- POWER POLE
- LIGHT POLE
- POST, SIGN
- HYDRANT
- FORMER MGP STRUCTURE
- MANHOLE
- ODOR/SHEENS
- NAPL BLEBS
- NAPL SATURATED

NOTE:

BASE MAP BASED ON SURVEYS COMPLETED BY NYSEG ON DECEMBER 14, 2005 AND OCTOBER 2006. ELEVATIONS IN REFERENCE TO NGVD 1929, HORIZONTAL DATUM IS NAD 83 STATEPLANE, NEW YORK CENTRAL.

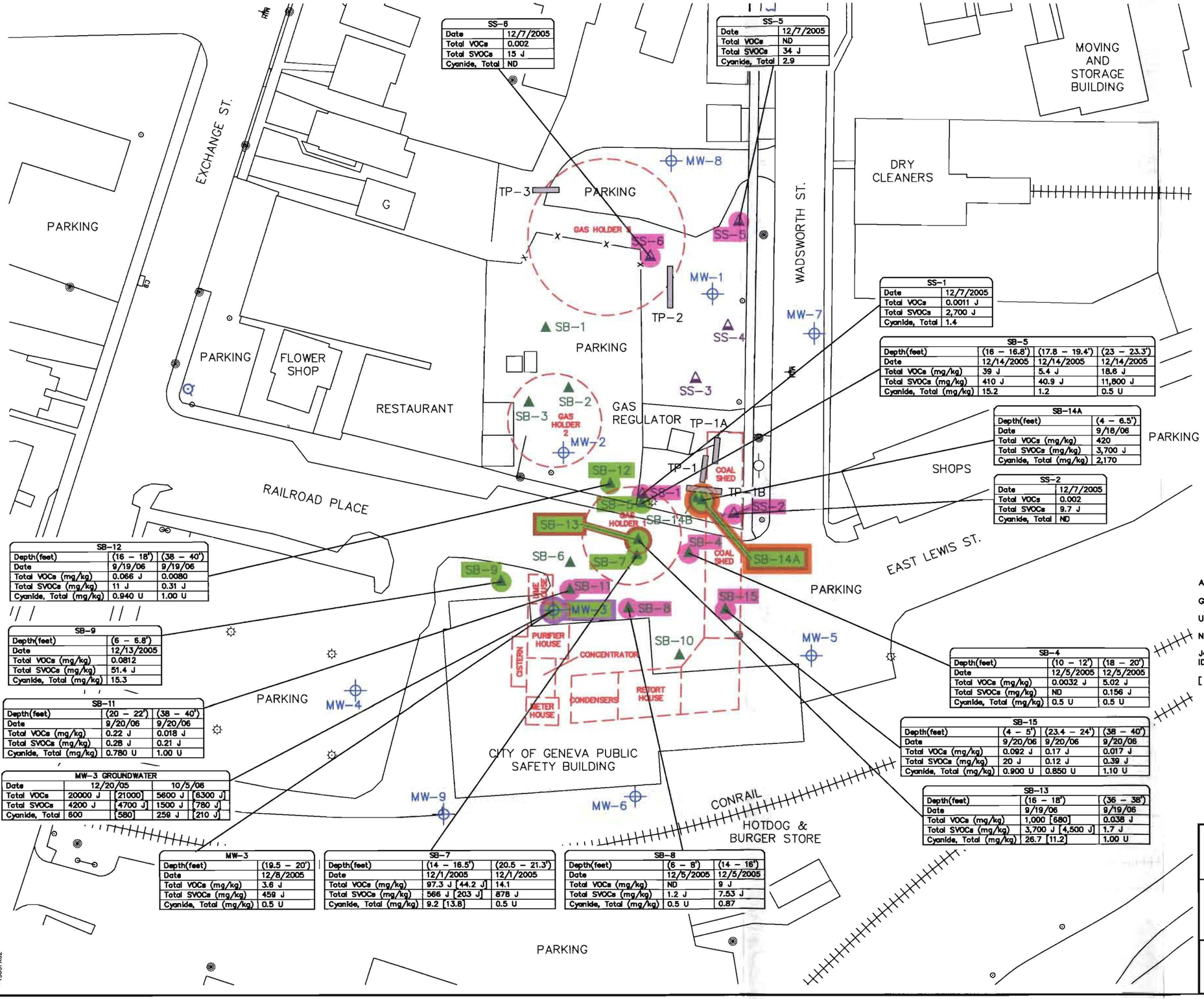
0 60' 120'

GRAPHIC SCALE

NYSEG - Wadsworth St. - Geneva MGP
Site No: 835015

OBSERVATIONS OF NAPL, SHEEN AND ODOR

FIGURE **3**



SS-8	
Date	12/7/2005
Total VOCs	0.002
Total SVOCs	15 J
Cyanide, Total	ND

SS-5	
Date	12/7/2005
Total VOCs	ND
Total SVOCs	34 J
Cyanide, Total	2.9

SS-1	
Date	12/7/2005
Total VOCs	0.0011 J
Total SVOCs	2,700 J
Cyanide, Total	1.4

SB-5			
Depth(feet)	(16 – 16.8')	(17.8 – 19.4')	(23 – 23.3')
Date	12/14/2005	12/14/2005	12/14/2005
Total VOCs (mg/kg)	39 J	5.4 J	18.8 J
Total SVOCs (mg/kg)	410 J	40.9 J	11,800 J
Cyanide, Total (mg/kg)	15.2	1.2	0.5 U

SB-14A	
Depth(feet)	(4 – 6.5')
Date	9/18/06
Total VOCs (mg/kg)	420
Total SVOCs (mg/kg)	3,700 J
Cyanide, Total (mg/kg)	2,170

SS-2	
Date	12/7/2005
Total VOCs	0.002
Total SVOCs	9.7 J
Cyanide, Total	ND

SB-12		
Depth(feet)	(16 – 18')	(38 – 40')
Date	9/19/06	9/19/06
Total VOCs (mg/kg)	0.066 J	0.0080
Total SVOCs (mg/kg)	11 J	0.31 J
Cyanide, Total (mg/kg)	0.940 U	1.00 U

SB-9	
Depth(feet)	(6 – 6.8')
Date	12/13/2005
Total VOCs (mg/kg)	0.0812
Total SVOCs (mg/kg)	51.4 J
Cyanide, Total (mg/kg)	15.3

SB-11		
Depth(feet)	(20 – 22')	(38 – 40')
Date	9/20/06	9/20/06
Total VOCs (mg/kg)	0.22 J	0.018 J
Total SVOCs (mg/kg)	0.28 J	0.21 J
Cyanide, Total (mg/kg)	0.780 U	1.00 U

MW-3 GROUNDWATER				
Date	12/20/05		10/5/06	
Total VOCs	20000 J	[21000]	5600 J	[6300 J]
Total SVOCs	4200 J	[4700 J]	1500 J	[780 J]
Cyanide, Total	600	[580]	259 J	[210 J]

MW-3	
Depth(feet)	(19.5 – 20')
Date	12/8/2005
Total VOCs (mg/kg)	3.6 J
Total SVOCs (mg/kg)	459 J
Cyanide, Total (mg/kg)	0.5 U

SB-7		
Depth(feet)	(14 – 16.5')	(20.5 – 21.3')
Date	12/1/2005	12/1/2005
Total VOCs (mg/kg)	97.3 J [44.2 J]	14.1
Total SVOCs (mg/kg)	566 J [203 J]	878 J
Cyanide, Total (mg/kg)	9.2 [13.8]	0.5 U

SB-8		
Depth(feet)	(6 – 8')	(14 – 16')
Date	12/5/2005	12/5/2005
Total VOCs (mg/kg)	ND	9 J
Total SVOCs (mg/kg)	1.2 J	7.53 J
Cyanide, Total (mg/kg)	0.5 U	0.87

SB-4		
Depth(feet)	(10 – 12')	(18 – 20')
Date	12/5/2005	12/5/2005
Total VOCs (mg/kg)	0.0032 J	5.02 J
Total SVOCs (mg/kg)	ND	0.156 J
Cyanide, Total (mg/kg)	0.5 U	0.5 U

SB-15			
Depth(feet)	(4 – 5')	(23.4 – 24')	(38 – 40')
Date	9/20/06	9/20/06	9/20/06
Total VOCs (mg/kg)	0.092 J	0.17 J	0.017 J
Total SVOCs (mg/kg)	20 J	0.12 J	0.39 J
Cyanide, Total (mg/kg)	0.900 U	0.850 U	1.10 U

SB-13		
Depth(feet)	(16 – 18')	(36 – 38')
Date	9/19/06	9/19/06
Total VOCs (mg/kg)	1,000 [680]	0.038 J
Total SVOCs (mg/kg)	3,700 J [4,500 J]	1.7 J
Cyanide, Total (mg/kg)	26.7 [11.2]	1.00 U

LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- TEST PIT LOCATION
- FENCE
- RAILROAD
- UTILITY POLE W/ GUY
- POWER POLE
- LIGHT POLE
- POST, SIGN
- HYDRANT
- FORMER MGP STRUCTURE
- MANHOLE
- SURFACE SOIL SAMPLING LOCATION
- SOIL SAMPLE ONLY EXCEEDED PART 375 RESTRICTED USE SCOs (COMMERCIAL) FOR ONE OR MORE CONTAMINANTS
- SUBSURFACE SOIL SAMPLE EXCEEDED PART 375 RESTRICTED USE SCOs (COMMERCIAL) FOR ONE OR MORE SVOCs
- SUBSURFACE SOIL SAMPLE EXCEEDED PART 375 RESTRICTED USE SCOs (COMMERCIAL) FOR ONE OR MORE VOCs
- SUBSURFACE SOIL SAMPLE EXCEEDED PART 375 RESTRICTED USE SCOs (COMMERCIAL) FOR TOTAL CYANIDE
- GROUNDWATER SAMPLE EXCEEDS THE NYSDEC CLASS GA GROUNDWATER STANDARD OR GUIDANCE VALUE (TOGS 1,1,1,) FOR ONE OR MORE VOC/SVOC CONSTITUENTS AND/OR TOTAL CYANIDE.

ANALYTICAL NOTES:

GROUNDWATER UNITS GIVEN IN ug/L

U= THE COMPOUND WAS NOT DETECTED AT THE INDICATED CONCENTRATION.

ND= NOT DETECTED.

J= DATA INDICATE THE PRESENCE OF A COMPOUND THAT MEETS THE IDENTIFICATION CRITERIA. THE CONCENTRATION GIVEN IS AN APPROXIMATE VALUE.

[ ]= DUPLICATE SAMPLE.

NOTES:

1. BASE MAP BASED ON SURVEYS COMPLETED BY NYSEG ON DECEMBER 14, 2005 AND OCTOBER 2006. ELEVATIONS IN REFERENCE TO NGVD 1929, HORIZONTAL DATUM IS NAD 83 STATEPLANE, NEW YORK CENTRAL.
2. ALL LOCATIONS ARE APPROXIMATE.

0 60' 120'

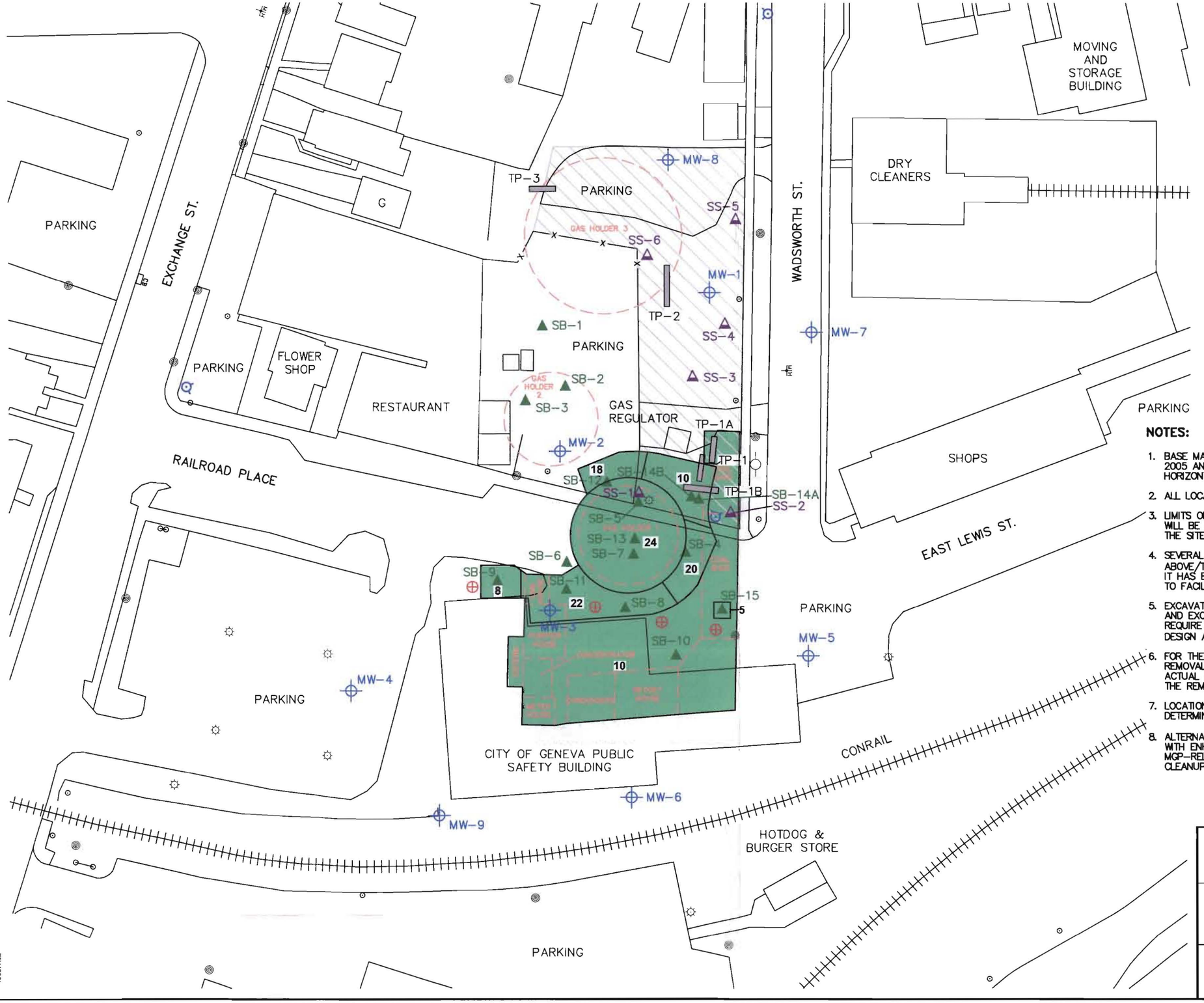
GRAPHIC SCALE

NYSEG - Wadsworth St. - Geneva MGP
Site No: 835015

Groundwater and Soil Analytical Results

FIGURE 4

Record of Decision



LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- SURFACE SOIL LOCATION
- PROPOSED OXYGEN ENHANCEMENT WELLS
- TEST PIT LOCATION
- SURFACE SOIL REMOVAL AREA
- 8 — SOIL REMOVAL AREA (DEPTH IN FEET)
- FENCE
- RAILROAD
- UTILITY POLE W/ GUY
- POWER POLE
- LIGHT POLE
- POST, SIGN
- HYDRANT
- FORMER MGP STRUCTURE
- MANHOLE

NOTES:

1. BASE MAP BASED ON SURVEYS COMPLETED BY NYSEG ON DECEMBER 14, 2005 AND OCTOBER 2006. ELEVATIONS IN REFERENCE TO NGVD 1929, HORIZONTAL DATUM IS NAD 83 STATEPLANE, NEW YORK CENTRAL.
2. ALL LOCATIONS ARE APPROXIMATE.
3. LIMITS OF SOIL REMOVAL AREAS ARE APPROXIMATE. ACTUAL REMOVAL LIMITS WILL BE DETERMINED AS PART OF THE DESIGN OF THE CHOSEN REMEDY FOR THE SITE
4. SEVERAL UNDERGROUND UTILITIES ARE KNOWN TO BE PRESENT ABOVE/THROUGH THE HOLDER #1 FOUNDATION. FOR ESTIMATING PURPOSES, IT HAS BEEN ASSUMED THESE UTILITIES WILL BE TEMPORARILY RELOCATED TO FACILITATE HOLDER #1 REMOVAL ACTIVITIES.
5. EXCAVATION ADJACENT TO THE CITY OF GENEVA PUBLIC SAFETY BUILDING AND EXCAVATION ASSOCIATED WITH THE REMOVAL OF HOLDER #1 WILL REQUIRE A NEW YORK STATE REGISTERED PROFESSIONAL ENGINEER TO DESIGN AND APPROVE THE EXCAVATION SUPPORT SYSTEM(S).
6. FOR THE PURPOSES OF THIS FS REPORT, THE DEPTH OF SURFACE SOIL REMOVAL HAS BEEN ESTIMATED AT 1 FOOT bgs FOR THE AREA SHOWN. ACTUAL DEPTH AND EXTENT OF SOIL REMOVAL WILL BE DETERMINED DURING THE REMEDIAL DESIGN PHASE.
7. LOCATION OF OXYGEN ENHANCEMENT WELLS ARE APPROXIMATE AND WILL BE DETERMINED DURING A PRE-DESIGN INVESTIGATION.
8. ALTERNATIVE V INCLUDES INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS WITH ENHANCED NATURAL ATTENUATION, AND REMOVAL OF SOIL CONTAINING MGP-RELATED CHEMICAL CONSTITUENTS GREATER THAN PART 375 SOIL CLEANUP OBJECTIVES FOR UNRESTRICTED USE.

0 60' 120'

GRAPHIC SCALE

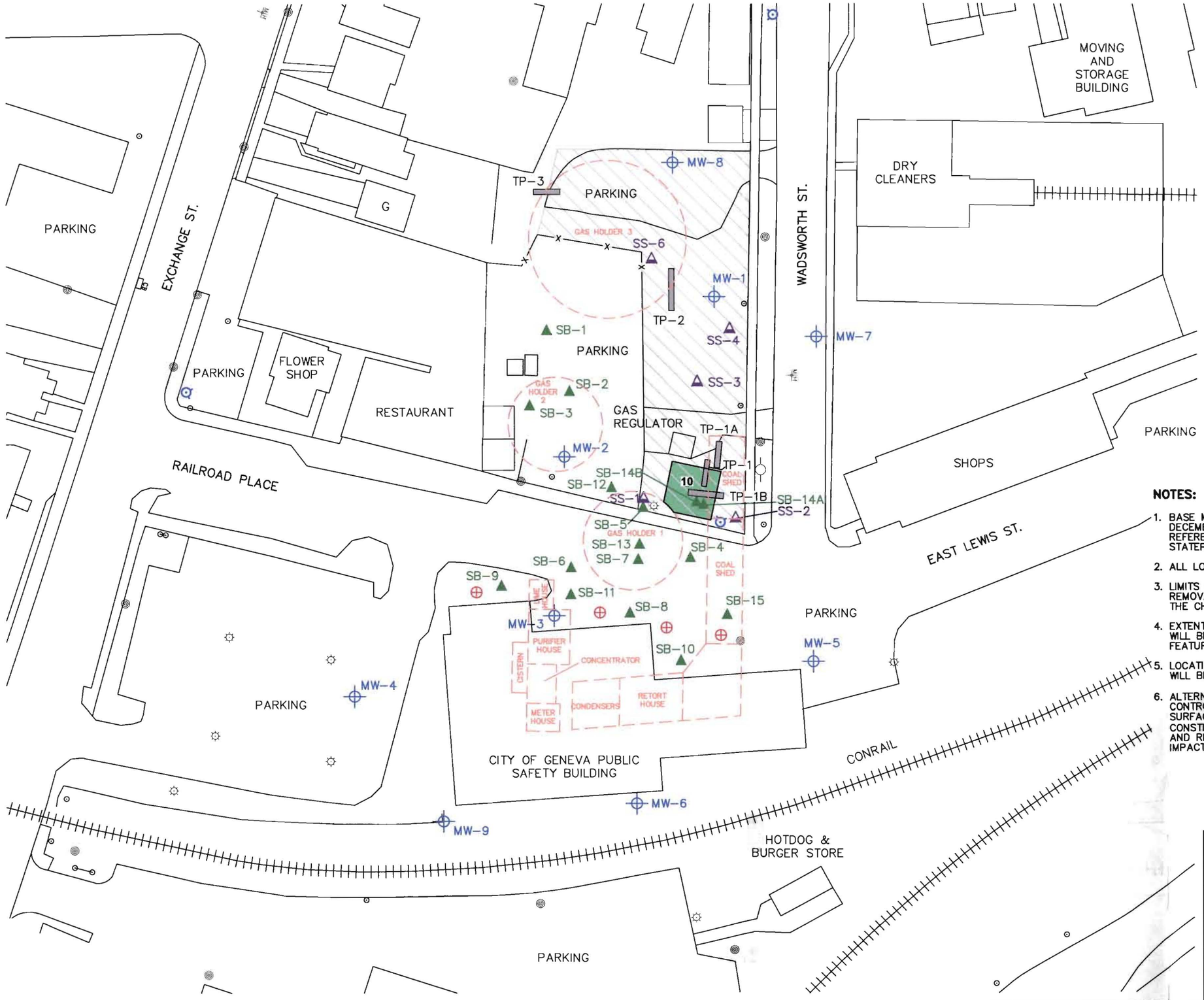
NYSEG - Wadsworth St. - Geneva MGP
Site No: 835015

Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions

Alternative 3

FIGURE **5**

Record of Decision



LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- SURFACE SOIL LOCATION
- PROPOSED OXYGEN ENHANCEMENT WELLS
- TEST PIT LOCATION
- 10 — SOIL REMOVAL AREA (DEPTH IN FEET)
- FENCE
- RAILROAD
- UTILITY POLE W/ GUY
- POWER POLE
- LIGHT POLE
- POST, SIGN
- HYDRANT
- FORMER MGP STRUCTURE
- PROPOSED EXTENT OF ASPHALT SURFACE COVER
- MANHOLE

NOTES:

1. BASE MAP BASED ON SURVEYS COMPLETED BY NYSEG ON DECEMBER 14, 2005 AND OCTOBER 2006. ELEVATIONS IN REFERENCE TO NGVD 1929, HORIZONTAL DATUM IS NAD 83 STATEPLANE, NEW YORK CENTRAL.
2. ALL LOCATIONS ARE APPROXIMATE.
3. LIMITS OF SOIL REMOVAL AREAS ARE APPROXIMATE. ACTUAL REMOVAL LIMITS WILL BE DETERMINED AS PART OF THE DESIGN OF THE CHOSEN REMEDY FOR THE SITE.
4. EXTENT AND ELEVATIONS OF PROPOSED ASPHALT SURFACE COVER WILL BE DETERMINED DURING DESIGN PHASE BASED ON EXISTING FEATURES AND SITE CONSTRAINTS.
5. LOCATION OF OXYGEN ENHANCEMENT WELLS ARE APPROXIMATE AND WILL BE DETERMINED DURING A PRE-DESIGN INVESTIGATION.
6. ALTERNATIVE III INCLUDES INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS WITH ENHANCED NATURAL ATTENUATION, ASPHALT SURFACE COVER OVER SURFACE SOIL CONTAINING CHEMICAL CONSTITUENTS GREATER THAN PART 375 UNRESTRICTED USE SCO's, AND REMOVAL OF SUBSURFACE STRUCTURE AND MGP-RELATED IMPACTS AT SB-14A.

0 60' 120'

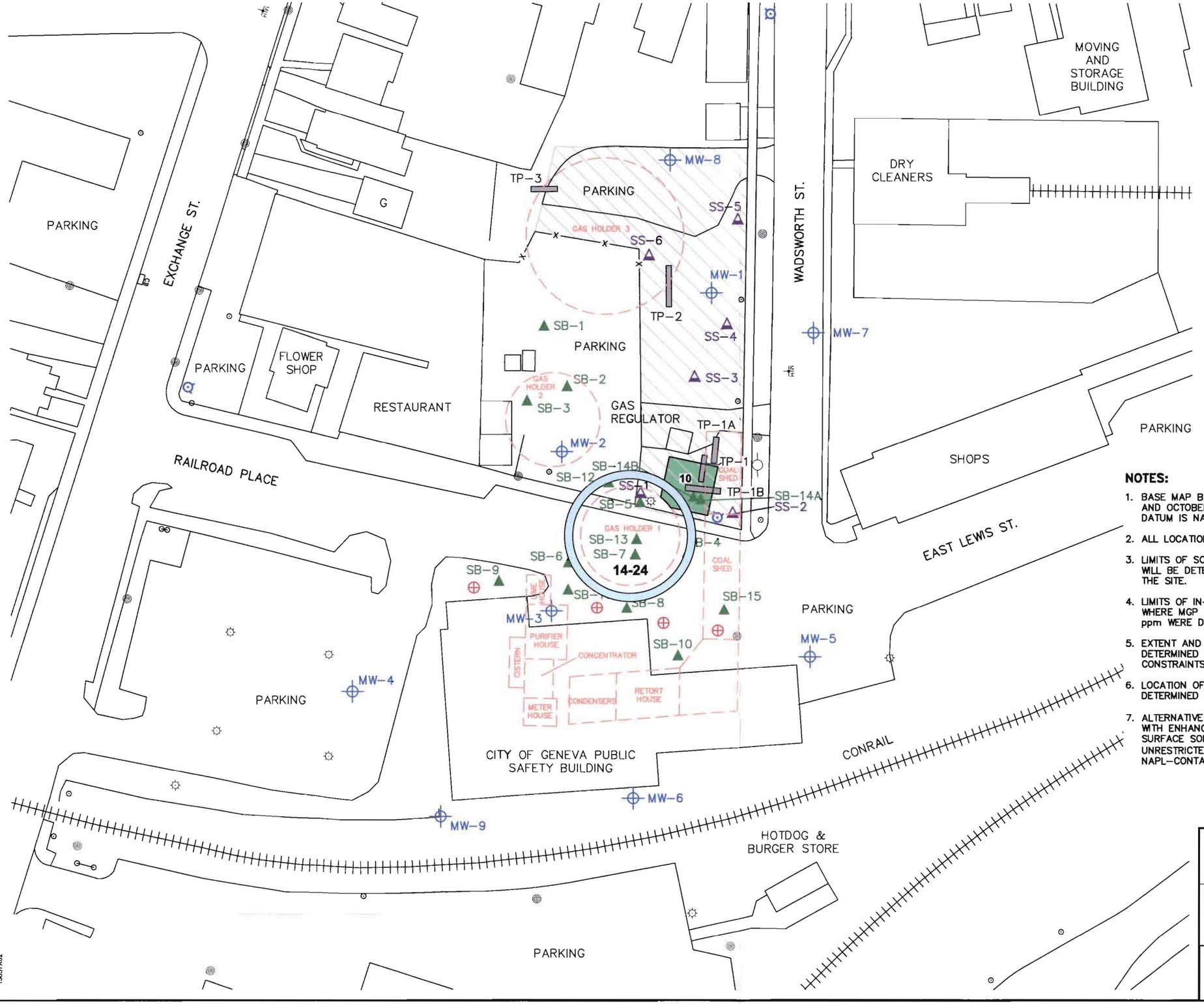
GRAPHIC SCALE

NYSEG - Wadsworth St. - Geneva MGP
Site No: 835015

Removal of subsurface structure and MGP-related impacts at SB-14A, and installation of a surface cover

Alternative 4 | FIGURE 6

Record of Decision



LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- SURFACE SOIL LOCATION
- PROPOSED OXYGEN ENHANCEMENT WELLS
- TEST PIT LOCATION
- 10 — SOIL REMOVAL AREA (DEPTH IN FEET)
- CONTAINMENT BARRIER
- FENCE
- RAILROAD
- UTILITY POLE W/ GUY
- POWER POLE
- LIGHT POLE
- POST, SIGN
- HYDRANT
- FORMER MGP STRUCTURE
- PROPOSED EXTENT OF ASPHALT SURFACE COVER
- MANHOLE

NOTES:

1. BASE MAP BASED ON SURVEYS COMPLETED BY NYSEG ON DECEMBER 14, 2005 AND OCTOBER 2006. ELEVATIONS IN REFERENCE TO NGVD 1929, HORIZONTAL DATUM IS NAD 83 STATEPLANE, NEW YORK CENTRAL.
2. ALL LOCATIONS ARE APPROXIMATE.
3. LIMITS OF SOIL REMOVAL AREAS ARE APPROXIMATE. ACTUAL REMOVAL LIMITS WILL BE DETERMINED AS PART OF THE DESIGN OF THE CHOSEN REMEDY FOR THE SITE.
4. LIMITS OF IN-SITU STABILIZATION WERE SELECTED TO ENCOMPASS THE AREAS WHERE MGP NAPL-CONTAINING SOILS WERE OBSERVED OR WHERE PAHs >500 ppm WERE DETECTED.
5. EXTENT AND ELEVATION OF PROPOSED ASPHALT SURFACE COVER WILL BE DETERMINED DURING DESIGN PHASE BASED ON EXISTING FEATURES AND SITE CONSTRAINTS.
6. LOCATION OF OXYGEN ENHANCEMENT WELLS ARE APPROXIMATE AND WILL BE DETERMINED DURING A PRE-DESIGN INVESTIGATION.
7. ALTERNATIVE IVC INCLUDES INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS WITH ENHANCED NATURAL ATTENUATION, ASPHALT SURFACE COVER OVER SURFACE SOIL CONTAINING CHEMICAL CONSTITUENTS GREATER THAN PART 375 UNRESTRICTED USE SCO's, AND (GAS HOLDER 1) CONTAINMENT OF MGP NAPL-CONTAINING SOIL AND SOIL CONTAINING PAHs >500 ppm.

0 60' 120'

GRAPHIC SCALE

NYSEG - Wadsworth St - Geneva MGP
Site No: 835015

Removal of subsurface structure and MGP-related impacts at SB-14A, containment of Gas Holder 1, and installation of a surface cover

Alternative 5 | FIGURE 7

Record of Decision

CITY:Syracuse GROUP: ENV-141 DB: AMS PGL PM: A. FALZARANO LYR: ON=*;OFF=*REF; (FRZ
G:\CADACT\2001\13057\00010\001\DWG\13057B11.DWG LAYOUT: TC SAVED: 7/15/2008 1:54 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: —
XREFS: IMAGES: PROJECTNAME: —
13057X01
13057X02

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

NYSEG – Wadsworth St. – Geneva MGP
Geneva, Ontario County, New York
Site No. 835015

The Proposed Remedial Action Plan (PRAP) for the NYSEG – Wadsworth St. – Geneva MGP site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 26, 2010. The PRAP outlined the remedial measure proposed for the contaminated soil, groundwater, and soil vapor at the NYSEG – Wadsworth St. – Geneva MGP site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 11, 2010, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) 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. No one attended the public meeting. The public comment period for the PRAP ended on March 29, 2010.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

NO PUBLIC COMMENTS WERE RECEIVED.

APPENDIX B

Administrative Record

Administrative Record

NYSEG – Wadsworth St. – Geneva MGP
Site No. 835015

1. Proposed Remedial Action Plan for the NYSEG – Wadsworth St. – Geneva MGP site, dated February 2010 , prepared by the Department.

2. Order on Consent, Index No. D0-0002-9309, between the Department and New York State Electric & Gas Corporation, executed on March 30, 1994.

3. "Remedial Investigation Report," February 2008, prepared by Arcadis BBL.

4. "Feasibility Study Report," February 2010, prepared by Arcadis BBL.

5. "Fence Interim Site Management Plan Work Plan," February 2010, by Arcadis BBL.

6. "Post Sub-Slab Depressurization System Installation Vapor Intrusion Evaluation Summary Report," March 2010, by Arcadis BBL.

7. Fact sheet, dated February 2010.