

# RECORD OF DECISION

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K - Babylon MGP  
State Superfund Project  
West Babylon, Suffolk County  
Site No. 152181  
March 2015



Prepared by  
Division of Environmental Remediation  
New York State Department of Environmental Conservation

# **DECLARATION STATEMENT - RECORD OF DECISION**

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K - Babylon MGP  
State Superfund Project  
West Babylon, Suffolk County  
Site No. 152181  
March 2015

## **Statement of Purpose and Basis**

This document presents the remedy for the K - Babylon MGP site, an inactive hazardous waste disposal site. The remedial program was chosen in accordance with the 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, 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 K - Babylon MGP site and the public's input to the selected remedy 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.

## **Description of Selected Remedy**

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. In-situ solidification (ISS) of on-site soils below the water table which:

- are grossly contaminated, as defined in 6 NYCRR Part 375-1.2(u);
- are visually impacted by coal tar or non-aqueous phase liquid; and
- have PAH levels exceeding restricted residential SCOs.

Vertically, the treatment zone will extend from the water table at approximately 8 feet below the existing grade, down to 25 feet below grade to solidify approximately 1,300 cubic yards of soil. ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination. Once the source of contamination is addressed, natural attenuation is expected to achieve ambient water quality criteria in groundwater in the long-term.

To facilitate the ISS implementation, on-site soils above the water table in the ISS area will be excavated to the water table (8 feet below ground surface). Approximately 400 cubic yards of soil will be excavated and stockpiled for re-use or transported off-site for disposal. Soil which does not exceed SCOs for restricted residential use and the protection of groundwater may be used to backfill the on-site excavation to the extent that a sufficient volume of on-site soil is available. Clean fill meeting the requirements of 6 NYCRR Part 375-6.9(d) for restricted residential use and protection of groundwater will be brought in to complete the backfilling of the on-site excavation and establish the designed grades at the site.

At the off-site commercial property recovery wells will be installed to collect NAPL from the deeper saturated zones from 30 to 40 feet bgs.

3. A site cover will be required to allow for restricted residential use and to protect the ISS component of the remedy. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising any site development, or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required, it will consist of a minimum of two feet of soil meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. In the on-site ISS treatment area, the soil cover will consist of a minimum of four feet of soil meeting the SCOs for restricted residential use, in order to protect the solidified mass from freeze/thaw cycles. Where the solidified mass underlies the cover, the mass itself will serve as the demarcation layer due to the physical nature of the material.

4. Imposition of an institutional control in the form of an environmental easement for the site and a site management plan for the site and adjacent affected commercial properties (subject to agreement), that:

- 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);
- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local

zoning laws;

- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- requires compliance with the Department approved Site Management Plan.

5. 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 affected area and details the steps and media-specific requirements necessary to ensure the following institutional and engineering controls remain in place and effective:

i. Institutional Controls:

- the environmental easement discussed in remedial element 5 above applicable only to the on-site area; and
- an agreement between National Grid and the adjacent property owner(s) for site access and any other pertinent provisions to enable the installation of the coal tar recovery wells, management of residual contamination, inspections, sampling and/or any other requisite activities.

ii. Engineering Controls: the solidified soil described in remedial element 2 and the cover system described in remedial element 3.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and engineering controls.

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

- monitoring of groundwater to assess the performance and effectiveness of the remedy; and
- a schedule of monitoring and frequency for submittals to the Department.

### **New York State Department of Health Acceptance**

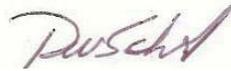
The New York State Department of Health (NYSDOH) concurs that the remedy for this site is protective of human health.

**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.

March 31, 2015

Date



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Robert W. Schick, P.E., Director  
Division of Environmental Remediation

# RECORD OF DECISION

K - Babylon MGP  
West Babylon, Suffolk County  
Site No. 152181  
March 2015

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## **SECTION 1: SUMMARY AND PURPOSE**

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of hazardous wastes at this site, as more fully described in this document, has contaminated various environmental media. The remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This Record of Decision (ROD) identifies the selected remedy, summarizes the other alternatives considered, and discusses the reasons for selecting the remedy.

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 document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

## **SECTION 2: CITIZEN PARTICIPATION**

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the selected remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

West Babylon Public Library  
211 Route 109  
West Babylon, NY 11704  
Phone: 631-669-5445

NYSDEC Region 1 Headquarters  
Attn: Walter Parish

50 Circle Road  
BY APPOINTMENT ONLY  
Stony Brook, NY 11790  
Phone: 631-444-0200

A public meeting was also conducted. At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) were presented along with a summary of the selected remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the selected remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of the ROD.

### **Receive Site Citizen Participation Information By Email**

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

### **SECTION 3: SITE DESCRIPTION AND HISTORY**

#### Location:

The Babylon MGP site is 0.8 acres in size and located at 29 Evergreen Street, in a suburban area of West Babylon, Suffolk County, New York. The site is currently bounded to the south/southwest by Long Island Railroad (LIRR) tracks, to the west/northwest by residential dwellings, and to the east/northeast by multi-unit residential buildings.

#### Site Features:

There is one occupied warehouse/office building on-site. The rest of the site is partially covered by asphalt and grass, with several sheds and storage containers. The site is completely fenced.

#### Current Zoning and Land Use:

The site is currently active and used for boat storage. The on-site building is currently vacant, and has both office and garage space. The current zoning is commercial, and the nearest residential properties border the site to the north and east.

#### Past Use of the Site:

Manufactured Gas Plant (MGP) operations began at the site during 1911 and continued through 1917. Compared with other MGP sites, gas manufacturing at the Babylon site were conducted on a small scale and for a short period of time. The South Shore Gas Company was originally an independent company, but was subsequently sold to the Long Island Lighting Company (LILCO).

By 1917 gas production had ceased on-site, and the site was converted to store and distribute gas manufactured at other MGP sites. LILCO was the site owner from 1915 to 1961. After that date, the site has been occupied by various commercial businesses (e.g., storm window manufacturer, fluorescent light manufacturer, and a fuel oil company). The fuel oil distribution facility occupied and operated at the site between 1980 and 2000.

#### Site Geology and Hydrogeology:

The site geology consists of fill material, consisting of sand, silt, gravel and debris, comprising the top 11 feet of the site. Below this material is sand for approximately 6 feet, then a gravel layer up to 11 feet thick. Below the gravel layer is another sand layer to at least 35 feet below ground surface.

Groundwater is unconfined in the Upper Glacial Aquifer, constrained only by the fresh water-saltwater interface. The groundwater table has been found between 6 and 8 feet below ground surface and flows to the southeast.

A site location map is attached as Figure 1.

### **SECTION 4: LAND USE AND PHYSICAL SETTING**

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the RI to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

### **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 PRPs for the site, documented to date, include:

National Grid

The Department and National Grid (formerly KeySpan) entered into a Consent Order in February 2007. The Order obligates the responsible party to implement a full remedial program.

On-site and off-site contamination unrelated to the former MGP activities identified during the environmental investigations will be addressed separately by the NYSDEC. The responsible party, in accordance with the Order on Consent, is not responsible for remediation of non-MGP related contamination.

## **SECTION 6: SITE CONTAMINATION**

### **6.1: Summary of the Remedial Investigation**

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. 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,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

#### **6.1.1: Standards, Criteria, and Guidance (SCGs)**

The remedy must conform to 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 soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: <http://www.dec.ny.gov/regulations/61794.html>

#### **6.1.2: RI Results**

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are

summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

COAL TAR	BENZO[K]FLUORANTHENE
BENZENE	BIPHENYL
ETHYLBENZENE	Chrysene
Isopropylbenzene	DIBENZ[A,H]ANTHRACENE
ACENAPHTHENE	FLUORANTHENE
ACENAPHTHYLENE	FLUORENE
BENZO(A)ANTHRACENE	indeno(1,2,3-cd)pyrene
BENZO(A)PYRENE	NAPHTHALENE
BENZO(B)FLUORANTHENE	PHENANTHRENE
	PYRENE

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

## **6.2: 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.

There were no IRMs performed at this site during the RI.

## **6.3: 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.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

Nature and Extent of Contamination:

Based upon investigations conducted to date, the primary contaminants of concern for the site include benzene, ethylbenzene, toluene and xylenes (collectively known as BTEX) and various polycyclic aromatic hydrocarbons (PAHs). These impacts were seen between 3 feet and 50 feet below ground surface (bgs) in on-site and off-site soils beneath the adjacent LIRR tracks and continuing to a commercial property.

Soil:

Concentrations of total BTEX found on-site ranged from non-detect to 180 parts per million (ppm). There were no detections for BTEX compounds at the off-site property. Concentrations of total PAHs found on-site ranged from non-detect to 3,400 ppm. Total PAHs found in the off-site soils ranged from non-detect to 410 ppm.

The subsurface soils both on-site and off-site are impacted by both MGP-related constituents, as well as co-mingled petroleum-related constituents. The on-site shallow soils (from 0 to 6 feet) exhibited levels that slightly exceed unrestricted SCOs, though no samples exceeded restricted residential SCOs. The petroleum-related impacts were mostly visual and olfactory, although three samples underwent fingerprint analysis and were determined to be gasoline-related. Evidence of petroleum-related impacts were generally observed in the shallower zones, from 6 to 9 feet bgs, closer to the water table, in an area down gradient of three former underground storage tanks. The MGP-related impacts were generally observed downgradient of the former gas holder, from a depth of 8 to 25 feet bgs.

At the off-site commercial property there were saturated lenses of NAPL from 30 to 40 feet bgs.

#### Groundwater:

BTEX was found at only one location in the on-site groundwater at a concentration of 230 parts per billion (ppb). Total PAHs were found at two locations in the on-site groundwater, at a range from 470 to 500 ppb. In the off-site property groundwater, BTEX ranged from non-detect to 19 ppb; and total PAHs ranged from non-detect to 400 ppb. The PAH groundwater plume extends approximately 250 feet to the southeast on the off-site property.

#### Soil Vapor:

Five soil vapor samples were collected (three on-site and two off-site) during the RI and tested for VOCs. While VOCs were found in each of the samples, the results did not indicate a need for further sampling or actions.

### **6.4: Summary of Human Exposure Pathways**

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

People are not drinking contaminated groundwater because the area is served by a public water supply that obtains its water from a different source. Since contaminated groundwater is greater than six feet below the ground surface, it is unlikely that people will come into contact with the groundwater unless they dig below this level. The site is completely fenced, which restricts public access; however persons who enter the site may come into contact with contaminants found in surface soils in the unpaved portion of the site. Also, if the ground surface is disturbed by digging or other intrusive activities, people may come into contact with residual soil contamination.

Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Sampling indicates that contact with manufactured

gas plant-related contaminants due to soil vapor intrusion is not a concern for on- and off-site buildings.

## **6.5: 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 action objectives for this site are:

### **Groundwater**

#### **RAOs for Public Health Protection**

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

#### **RAOs for Environmental Protection**

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

### **Soil**

#### **RAOs for Public Health Protection**

- Prevent ingestion/direct contact with contaminated soil.

#### **RAOs for Environmental Protection**

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

## **SECTION 7: SUMMARY OF THE SELECTED REMEDY**

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. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the feasibility study (FS) report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. 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. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's remedy is set forth at Exhibit D.

The selected remedy is referred to as the In-Situ Solidification and NAPL Recovery remedy.

The estimated present worth cost to implement the remedy is \$1,700,000. The cost to construct the remedy is estimated to be \$1,053,000 and the estimated average annual cost is \$62,400.

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. In-situ solidification (ISS) of on-site soils below the water table which:

- are grossly contaminated, as defined in 6 NYCRR Part 375-1.2(u);
- are visually impacted by coal tar or non-aqueous phase liquid; and
- have PAH levels exceeding restricted residential SCOs.

Vertically, the treatment zone will extend from the water table at approximately 8 feet below the existing grade, down to 25 feet below grade to solidify approximately 1,300 cubic yards of soil. ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination. Once the source of contamination is addressed, natural attenuation is expected to achieve ambient water quality criteria in groundwater in the long-term.

To facilitate the ISS implementation, on-site soils above the water table in the ISS area will be excavated to the water table (8 feet below ground surface). Approximately 400 cubic yards of soil will be excavated and stockpiled for re-use or transported off-site for disposal. Soil which does not exceed SCOs for restricted residential use and the protection of groundwater may be used to backfill the on-site excavation to the extent that a sufficient volume of on-site soil is available. Clean fill meeting the requirements of 6 NYCRR Part 375-6.9(d) for restricted residential use and protection of groundwater will be brought in to complete the backfilling of the on-site excavation and establish the designed grades at the site.

At the off-site commercial property recovery wells will be installed to collect NAPL from the deeper saturated zones from 30 to 40 feet bgs.

3. A site cover will be required to allow for restricted residential use and to protect the ISS component of the remedy. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising any site development, or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required, it will consist of a minimum of two feet of soil meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. In the on-site ISS treatment area, the soil cover will consist of a minimum of four feet of soil meeting the SCOs for restricted residential use, in order to protect the solidified mass from freeze/thaw cycles. Where the solidified mass underlies the cover, the mass itself will serve as the demarcation layer due to the physical nature of the material.

4. Imposition of an institutional control in the form of an environmental easement for the site and a site management plan for the site and adjacent affected commercial properties (subject to agreement), that:

- 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);
- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- requires compliance with the Department approved Site Management Plan.

5. 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 affected area and details the steps and media-specific requirements necessary to ensure the following institutional and engineering controls remain in place and effective:

i. Institutional Controls:

- the environmental easement discussed in remedial element 5 above applicable only to the on-site area; and
- an agreement between National Grid and the adjacent property owner(s) for site access and any other pertinent provisions to enable the installation of the coal tar recovery wells, management of residual contamination, inspections, sampling and/or any other requisite activities.

ii. Engineering Controls: the solidified soil described in remedial element 2 and the cover system described in remedial element 3.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and engineering controls.

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

- monitoring of groundwater to assess the performance and effectiveness of the remedy; and
- a schedule of monitoring and frequency for submittals to the Department.

## Exhibit A

### Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, 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 two categories: volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

### Waste/Source Areas

As described in the RI report, waste/source materials were identified at the site and are impacting groundwater and soil.

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(au). Source areas are areas of concern at a site where substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium, such as groundwater.

The production of manufactured gas created waste products which are resistant to natural decay and often results in potential effects on public health and the environment. The primary waste was an oily liquid known as coal tar, which condensed out of the gas at various stages of its production, purification and distribution. The coal tar contains certain hazardous substances of concern in the VOC and SVOC chemical classes. Specific VOCs of concern are benzene, toluene, ethylbenzene and xylenes (BTEX). Specific SVOCs of concern are the polycyclic aromatic hydrocarbons (PAHs):

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

Total PAH concentrations as referred to in this plan are the sum of the individual PAHs listed above.

Coal tar and its constituents were found in the subsurface at the Babylon Former MGP site. The RI report uses the term non-aqueous phase liquid (NAPL) to describe fluid coal tar. One source area was identified at the site that is associated with former MGP structures. NAPL was observed in the soils underneath and adjacent to a former oil tank. The bulk of the coal tar was observed within 25 feet of the surface. Coal tar appears to have migrated vertically, and spread laterally slightly with increasing depth. These impacts were characterized as blebs, lenses and stringers.

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

## Groundwater

Groundwater samples were collected and analyzed for VOCs, SVOCs, metals, PCBs and pesticides to assess groundwater conditions on and off-site.

Sampling results indicate that BTEX and the lower molecular weight PAH compounds are the prevalent contaminants within the former MGP site and off-site. Metals, PCBs and pesticides were not found at levels above standards. Groundwater exceeded standards or guidance values for these compounds at the site and off-site for approximately 250 feet. Samples collected from six monitoring wells at the south end of the adjacent off-site parcel did not exceed groundwater standards, indicating that the contaminant plume is limited to the site property, under the LIRR tracks, and the adjacent commercial property.

**Table #1 - Groundwater**

Detected Constituents	Concentration Range Detected (ppb) <sup>a</sup>	SCG <sup>b</sup> (ppb)	Frequency Exceeding SCG
<b>VOCs</b>			
Benzene	ND – 230	5	3 of 23
Ethylbenzene	ND – 11	5	2 of 23
Isopropylbenzene	ND – 5.6	5	1 of 23
<b>SVOCs</b>			
1,1-Biphenyl	ND – 58	5	6 of 63
Acenaphthene	ND – 42	20	1 of 63
Acenaphthylene	ND -- 26	NC	1 of 63
Benzo(a)anthracene	ND – 5.3	0.002	2 of 63
Benzo(a)pyrene	ND – 3.3	ND	1 of 63
Chrysene	ND – 4.6	0.002	1 of 63
Fluorene	ND – 70	50	3 of 63
Napthalene	ND – 220	10	9 of 63
Phenanthrene	ND -- 120	50	5 of 63
<b>Inorganics</b>			
Total Cyanide	ND -- 5	200	0 of 63

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).

NC – No Criteria.

Based on the findings of the RI, the presence of manufactured gas wastes 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, 1,1-biphenyl, naphthalene and phenanthrene. The elimination of the source material will result in the natural attenuation of groundwater over the long-term.

### Soil

Surface and subsurface soil samples were collected and analyzed for volatile, semi-volatile, cyanide and metals during the remedial investigation to determine the nature and extent of impacts to soil as a result of the former MGP operations. There were no sample locations that exceeded unrestricted SCOs for metals or cyanide.

Surface soil samples were collected from twelve locations on site at a depth of 0-2 inches below ground surface. Subsurface soil samples were collected below a two-inch depth.

No VOCs or BTEX compounds were detected in surface soil samples at concentrations exceeding unrestricted use. There was only one sample location that exceeded unrestricted and commercial SCOs in surface soil, for benzo(a)pyrene.

In subsurface soil, individual BTEX compounds exceeded unrestricted SCOs at only two locations; one on-site and one off-site. Both of these areas coincided with visual petroleum-type impacts. The on-site sample also exceeded the restricted residential SCOs for ethylbenzene. Soil containing greater than 500 ppm PAHs was consistently associated with a visual characterization as containing coal tar in the form of a sheen, bleb or saturation.

**Table #2 – Shallow Soil (0-2”)**

Detected Constituents	Concentration Range Detected (ppm) <sup>a</sup>	Unrestricted SCG <sup>b</sup> (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG <sup>c</sup> (ppm)	Frequency Exceeding Restricted SCG
<b>SVOCs</b>					
Benzo(a)pyrene	ND – 1.6	1	1 of 12	1	1 of 12
Benzo(a)anthracene	ND – 1.6	1	1 of 12	1	1 of 12
Benzo(b)fluoranthene	ND – 2.5	1	1 of 12	1	1 of 12

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.

c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Restricted Residential Use, unless otherwise noted.

**Table #3 – Subsurface Soil**

Detected Constituents	Concentration Range Detected (ppm) <sup>a</sup>	Unrestricted SCG <sup>b</sup> (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG <sup>c</sup> (ppm)	Frequency Exceeding Restricted SCG
<b>VOCs</b>					
Benzene	ND – 4.4	0.06	2 of 45	4.8	0 of 45
Toluene	ND – 2.1	0.7	1 of 45	100	0 of 45
Ethylbenzene	ND -- 71	1.0	1 of 45	41	1 of 45
<b>SVOCs</b>					
Benzo(a)anthracene	ND – 330	1	12 of 45	1	12 of 45
Benzo(a)pyrene	ND – 250	1	13 of 45	1	13 of 45
Benzo(b)fluoranthene	ND – 200	1	12 of 45	1	12 of 45
Benzo(k)fluoranthene	ND – 72	0.8	8 of 45	3.9	5 of 45
Chrysene	ND – 270	1	13 of 45	3.9	6 of 45
Dibenz(a,h)anthracene	ND – 14	0.33	17 of 45	0.33	17 of 45
Fluoranthene	ND -- 600	100	3 of 45	100	3 of 45

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.

c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Restricted Residential Use, unless otherwise noted.

Based on the findings of the Remedial Investigation, the presence of MGP-related contaminants 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, PAHs (polycyclic aromatic hydrocarbons), benzene and toluene.

### Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by the sampling of soil vapor. At this site no buildings were present in impacted areas, so only soil vapor was evaluated.

Five soil vapor samples were collected during the remedial investigation, three from on-site and two from the adjacent commercial property. In general, low levels of BTEX constituents, compounds found in fuels as well as MGP residuals, were detected at all five locations. The compound found at the highest concentration was dichlorodifluoromethane, also known as Freon-12, which is a refrigerant and aerosol, and its presence is unrelated to the MGP activities at the site.

Based on the concentration detected, and in comparison with the NYSDOH Soil Vapor Intrusion Guidance, no site-related soil vapor contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for soil vapor.

## Exhibit B

### Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

#### **Alternative 1: No Action**

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition and does not provide any additional protection to public health and the environment.

#### **Alternative 2: Coal Tar Recovery and Natural Attenuation**

This alternative will include the following components:

- Coal tar recovery from impacted areas of the site and the off-site commercial property.
- Natural Attenuation of dissolved-phase impacts on the on-site and off-site commercial properties.
- Placement of an institutional control in the form of an environmental easement to restrict the use of the on-site property to commercial or industrial uses and restrict the use of groundwater.
- Development of a Site Management Plan to include institutional controls to address soil and groundwater contamination remaining following the remedy. A voluntary agreement between National Grid and the off-site property owner will be necessary to grant site access for the installation of the recovery wells, sampling, and any other necessary site management activities on that property.

Present Worth: .....	\$600,000
Capital Cost:.....	\$238,000
Annual Costs:.....	\$67,200

#### **Alternative 3: Excavation, In-Situ Solidification and Natural Attenuation**

This alternative will include the following components:

- In-situ solidification of the on-site contaminant source area, including soils visually impacted with coal tar and non-aqueous phase liquid. Soil containing greater than 500 ppm PAHs will also be treated via ISS. ISS will extend to a depth of 25 feet below the existing grade to solidify approximately 1,300 cubic yards of soil.
- To facilitate the ISS, soils above the water table in the ISS area will be excavated and either stockpiled for re-use, or disposed off-site (approximately 400 cy).
- Stockpiled soil that meets the SCOs for restricted residential use and protection of groundwater will be placed as backfill first, then clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades.
- Installation of coal tar recovery wells at the off-site property area of impacted soils.

- Installation of a cover system on the site to allow for restricted residential use and protect the solidified mass. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs. Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use, except in areas treated by ISS. The soil cover will be placed over a demarcation layer. Areas receiving ISS will require a soil cover of at least four feet thick to protect the solidified mass from freeze/thaw cycles.
- Placement of an institutional control in the form of an environmental easement to restrict the use of the on-site property to restricted residential, commercial or industrial uses and restrict the use of groundwater.
- Development of a Site Management Plan to include institutional controls to address residual soil and groundwater contamination remaining following the remedy. A voluntary agreement between National Grid and the off-site property owner will be necessary to grant site access for the installation of the recovery wells, sampling, and any other necessary site management activities on that property.

Present Worth: .....	\$1,700,000
Capital Cost:.....	\$1,100,000
Annual Costs: .....	\$62,400

**Alternative 4: Excavation, Coal Tar Recovery and Natural Attenuation**

This alternative will include all of the following components:

- Installation of approximately 250 linear feet of sheet pile to a depth of 50 feet below ground surface to support excavation to a practical depth of 20 feet below ground surface and control the intrusion of water.
- Excavation and disposal of approximately 600 cubic yards of soil containing visible coal tar and PAH concentrations greater than 500 ppm.
- Installation of coal tar recovery wells at the off-site property area of impacted soils.
- Installation of a cover system on the site to allow for restricted residential use. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs. Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use, except in areas to receive ISS. The soil cover will be placed over a demarcation layer. Areas receiving ISS will require a soil cover of at least four feet thick to protect the solidified mass from freeze/thaw cycles.
- Placement of an institutional control in the form of an environmental easement to restrict the use of the on-site property to restricted residential, commercial or industrial uses and restrict the use of groundwater.
- Development of a Site Management Plan to include institutional controls to address residual soil and groundwater contamination remaining following the remedy. An agreement with the off-site property owner will be necessary to implement any necessary site management on that property.

Present Worth: .....	\$3,000,000
Capital Cost:.....	\$2,000,000
Annual Costs: .....	\$62,400

### **Alternative 5: Restoration to Unrestricted Conditions**

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A and soil meets the unrestricted soil clean objectives listed in Part 375-6.8(a). This alternative would include the removal of all source areas and the excavation of all contaminants of concern greater than the Part 375 unrestricted use SCOs, from both on- and off-site. Approximately 25,000 cubic yards of soil will be removed for off-site treatment or disposal followed by the backfill of soil meeting unrestricted use SCOs. Removal would extend to a depth of 50 feet. Construction time is an estimated one year. Remedial goals are expected to be satisfied immediately upon completion of the construction.

Capital Cost:.....\$29,000,000

**Exhibit C****Remedial Alternative Costs**

<b>Remedial Alternative</b>	<b>Capital Cost (\$)</b>	<b>Annual Costs (\$)</b>	<b>Total Present Worth (\$)</b>
1: No Action	0	0	0
2: Coal Tar Recovery and Natural Attenuation	238,000	67,200	600,000
3: Excavation and Solidification	1.1 million	62,400	1.7 million
4: Excavation and Coal Tar Recovery	2.0 million	62,400	3.0 million
5: Restoration to Unrestricted	29 million	0	29 million

## Exhibit D

### SUMMARY OF THE SELECTED REMEDY

The Department has selected Alternative 3, excavation and in-situ solidification as the remedy for this site. Alternative 3 would achieve the remediation goals for the site by immobilizing the contaminant mass and providing a suitable soil cover in areas of potential exposure. The elements of this remedy are described in Section 7. The selected remedy is depicted in Figure 3.

### Basis for Selection

The selected remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the Feasibility Study report.

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.

Alternative 1 (No Action) does not include active remedial actions and thus will not provide any additional protection to human health and the environment compared to what currently exists. Additionally, this alternative will not comply with SCGs, since source material will remain in place and continue to pose a threat to both human health and the environment. Therefore, Alternative 1 is eliminated from further evaluation.

Alternatives 2 through 5 will all provide comparable levels of protection to public health and were retained for further evaluation. An agreement between National Grid and the off-site property owner to implement the elements of the remedy will be necessary for these alternatives to remain protective. Common elements of these alternatives that provide protection of human health are the clean soil cover and the land and groundwater use restrictions.

Alternatives 2 and 4 would both leave some untreated grossly impacted soil in place, which would continue to impact groundwater. Alternative 3, Excavation and In-Situ Solidification, will provide protection to human health and the environment by solidifying the source material on-site to a depth of 25 feet, thereby reducing the potential for direct contact with, and continued migration of, the contaminants of concern. Alternative 5, which provides for the total removal and off-site treatment and/or disposal of MGP-impacted material will provide the highest level of protection compared to the other alternatives. The removal or treatment of MGP source material, along with any associated excavation dewatering, will create the conditions necessary for contaminants in groundwater to naturally attenuate and protect the groundwater resource.

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.

Alternatives 2 through 5 will all comply with SCGs. Alternatives 2 and 4 will comply with SCGs by removing MGP-residuals and restricting land and groundwater use. Alternative 3 conforms to the applicable soil SCGs through the implementation of soil excavation and ISS. Alternative 5 will achieve soil SCGs through the removal of soils exceeding the SCOs for unrestricted use. The treatment of the soil source material will address the source of groundwater contamination. Once the source of contamination is addressed, natural attenuation is expected to achieve ambient water quality criteria in the long term.

Because Alternatives 2 through 5 satisfy the threshold criteria, the remaining criteria are particularly important in selecting a final remedy for the site.

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.

Alternative 5, restoration to unrestricted conditions, provides the greatest long-term effectiveness and permanence because it permanently removes all soil contributing to groundwater contamination and does not rely upon institutional controls. Alternative 2 does not address contaminated soil below the water table, and Alternative 4 only addresses impacted soils to a depth of approximately 20 feet, and would not address the full saturated zone that is contributing to groundwater contamination. Alternative 3, excavation and ISS, provides a higher level of effectiveness and permanence than Alternatives 2 and 4 since the deeper source area on-site is addressed to a depth of 25 feet through solidification. Since Alternatives 2 through 4 do not completely remove contaminant source areas, an institutional control in the form of an environmental easement and a site management plan will be required as a remedy component, to control the use of groundwater and the development of the site.

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.

Comparing Alternatives 2 through 5, Alternative 5 provides the greatest reduction in toxicity, mobility and volume while Alternative 2 provides the least reduction. The excavation components of Alternative 4 and 5 would reduce the volume of contamination by treating the excavated materials at the off-site disposal facility. Alternative 5 would remove approximately 17,000 cubic yards (cy) of contaminated soil. Alternative 4 removes approximately 600 cy of contaminated soil. Alternative 3 would immobilize 1,300 cy of soil through solidification, which reduces the mobility of the contamination.

The site and off-site areas contain an estimated 15,000 cy of contaminated soil. Alternatives 2 through 4 would address approximately 3,000 cy of soil meeting this criteria. Alternative 5 addresses all source material and contaminated soil exceeding the unrestricted use SCOs.

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.

Alternatives 2 through 5 all have short-term impacts due to the construction activity, but will be controlled through Department-approved plans. Alternative 5 has the greatest short-term adverse impact to the community. The extensive excavation and dewatering to be performed under Alternative 5 for approximately one year will result in a large amount of excavated material in need of transport through the community for off-site treatment or disposal, as well as roughly the same amount of material to backfill the excavation. Alternatives 3 and 4 would have significantly less truck loads and construction durations (3 months). Alternative 2 would involve no off-site soil disposal.

A remedial goal for the site will be attainment of the groundwater standards. Therefore, alternatives that more rigorously address source areas will achieve the remedial objectives sooner. Thus, Alternative 5 is expected to achieve the remedial goals in the shortest amount of time, followed by Alternatives 3, and 4, respectively. Alternative 2 would require a significantly longer period of time to achieve groundwater standards.

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.

Alternative 5 will be very difficult to implement, and may not be technically feasible due to the depth of excavation, shoring required by the LIRR and dewatering necessary. Alternative 2 is readily implementable due to the non-specialized equipment and labor needed. Alternative 3 is also implementable, although specialized equipment and potentially bench studies are needed for the solidification component of this alternative. Alternative 4 is implementable, but may be difficult to construct the shoring component needed.

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.

Alternative 2 has the smallest present worth cost, but the long-term maintenance costs would be higher. With its large volume of soil handling and large scale dewatering effort, Alternative 5 is by far the most expensive. Alternatives 3 and 4 have similar costs, but Alternative 3 addresses more of the source material on-site.

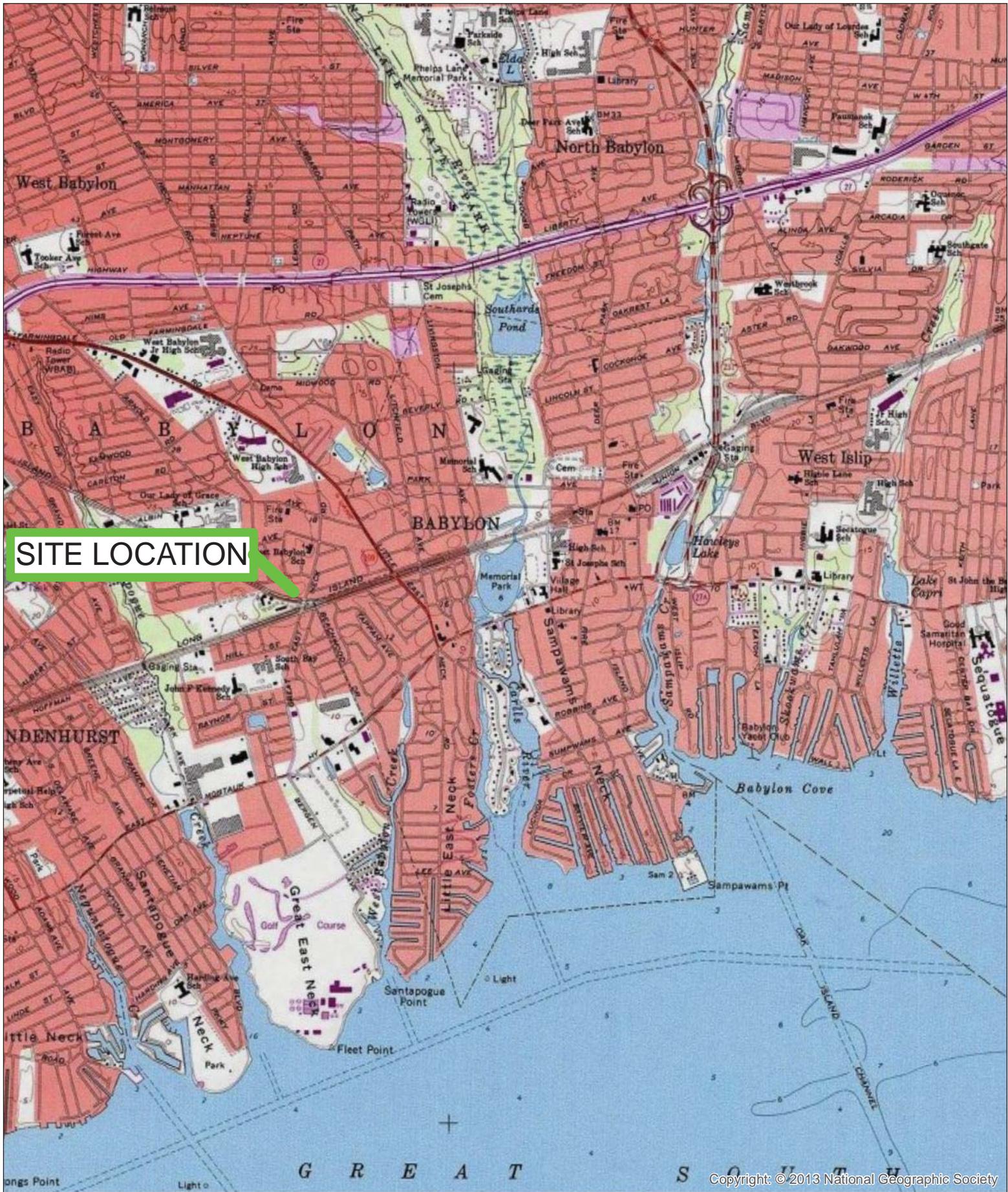
8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

Due to the presence of MGP-related impacts at depths up to 50 feet, a cleanup to unrestricted use (Alternative 5) may not be feasible. Although the site is zoned for commercial use, the neighboring properties to the north and east are zoned for use as residential properties. Alternatives 2 through 4 would comply with this criterion, by meeting restricted residential SCOs in the remaining soil above the solidified mass, as well as all soil on the rest of the site property. Alternatives 2 through 4 would require an environmental easement consistent with restricted residential, commercial or industrial use.

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 were evaluated. A responsiveness summary was prepared that describes public comments received and the manner in which the Department addressed the concerns raised.

Alternative 3 is being selected because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.



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Figure:  
**1**

Site Locus  
Babylon Former MGP Site  
West Babylon, New York

Scale: As Shown	Date: 01/2014	Project Number: 6028769.2000
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AECOM ENVIRONMENT  
2 TECHNOLOGY PARK DRIVE  
WESTFORD, MA 01886  
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**AECOM**

1 inch = 2,500 feet

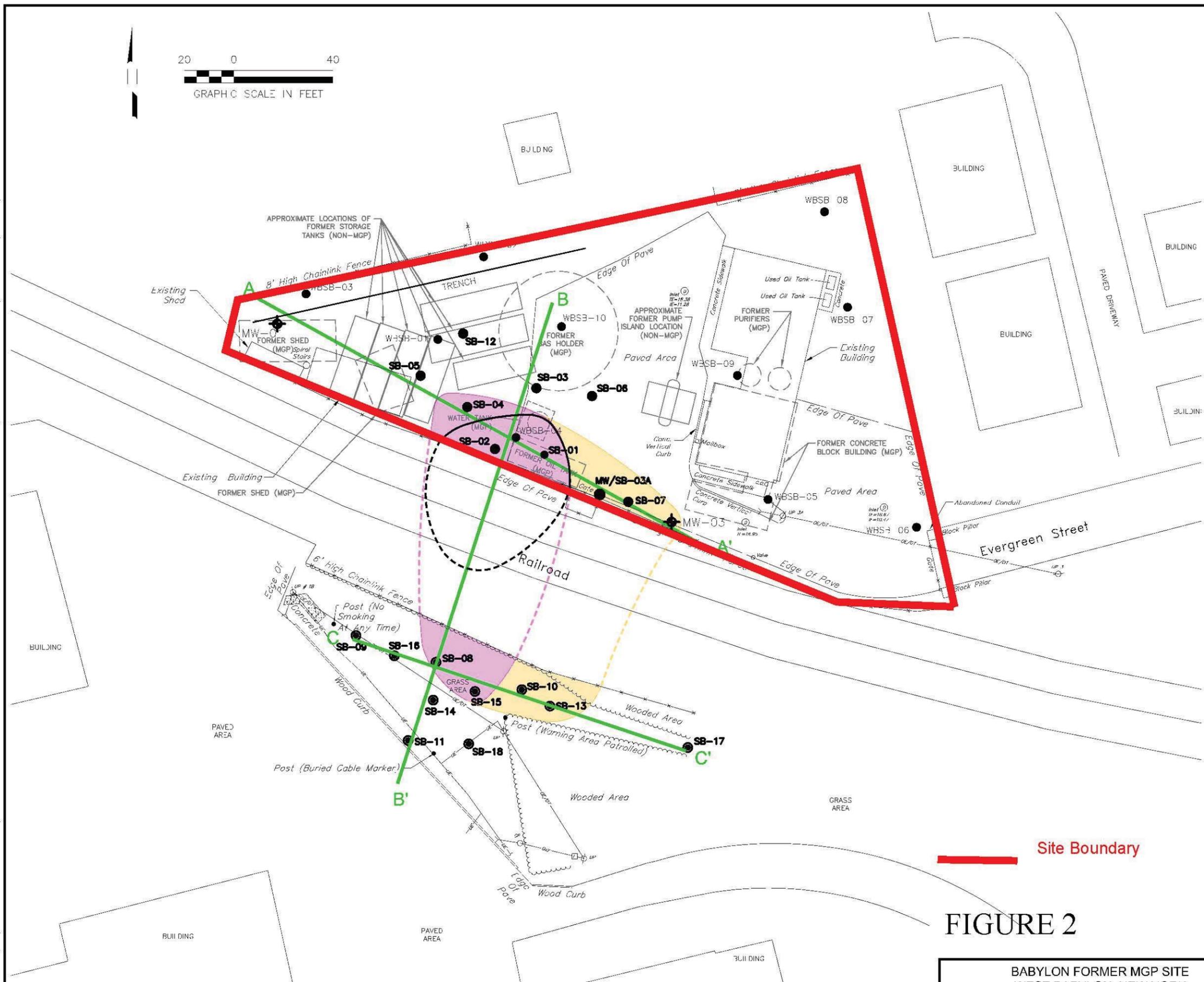
0256001,000  
Feet





**LEGEND**

- PSA SOIL SAMPLE LOCATION
- RI SOIL SAMPLE LOCATION
- ⊙ RI SOIL/GROUNDWATER SAMPLE LOCATION
- ⊕ MONITORING WELL LOCATION
- - - - - FORMER MGP STRUCTURE
- FORMER FUEL TANK STRUCTURE
- CROSS-SECTION LOCATION LINE
- ⊗ UTILITY POLE
- ⊙ DRAIN
- ⊙ CLEAN OUT
- MAILBOX
- ⊙ VALVE
- GUY WIRE
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC/TELEPHONE
- ~ TREE LINE
- ⊕ ELECTRIC BOX
- POST
- MGP CONSTITUENT CONCENTRATIONS GREATER THAN NYSDEC COMMERCIAL CRITERIA
- VISIBLE EVIDENCE OF IMPACTS - LENSES
- VISIBLE EVIDENCE OF IMPACTS - STRINGERS/BLEBS
- \*DASHED BOUNDARIES WHERE INFERRED



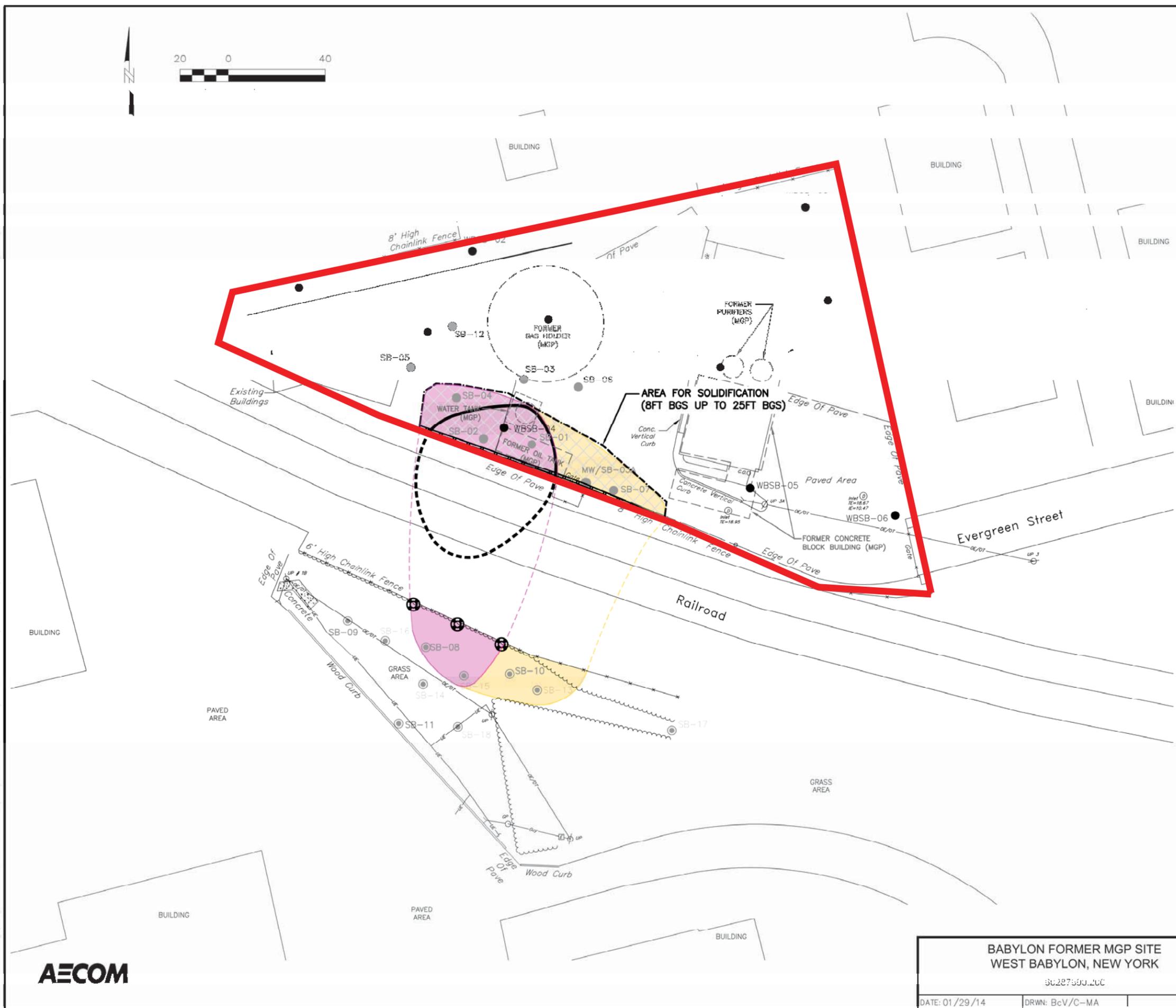
Site Boundary

**FIGURE 2**



BABYLON FORMER MGP SITE WEST BABYLON, NEW YORK 60287690.200		MGP RESIDUAL IMPACTS IN SOIL AND CROSS SECTION LOCATIONS	
DATE: 01/23/2014	DRWN: BcV/C-VA		FIGURE 4-1

File: \\Ren\_Eng\Project\_Files\National\_Grid\Babylon\_Site\7.0 Project Documents\7.2 CAD\ACM-60287600-200\2014-01-29\ACM-60287600-200.dwg Plot: Jan 29, 2014 9:51 AM User: g. Lay



**LEGEND**

- PSA SOIL SAMPLE LOCATION
- RI SOIL SAMPLE LOCATION
- ⊙ RI SOIL GROUNDWATER SAMPLE LOCATION
- ⊙ TYPICAL RECOVERY WELL LOCATION
- FORMER MGP STRUCTURE
- FORMER FUEL TANK STRUCTURE
- ⊘ UTILITY POLE
- DRAIN
- CLEAN OUT
- FENCE
- VALVE
- GUY WIRE
- UE UNDERGROUND ELECTRIC
- OE/OT OVERHEAD ELECTRIC/TELEPHONE
- ~~~~~ TREE LINE
- ⊠ ELECTRIC BOX
- POST
- ▨ AREA FOR SOLIDIFICATION
- MGP CONSTITUENT CONCENTRATIONS GREATER THAN NYSDEC COMMERCIAL CRITERIA
- ▨ VISIBLE EVIDENCE OF IMPACTS - LENSES
- ▨ VISIBLE EVIDENCE OF IMPACTS - STRINGERS/BLEBS
- \* DASHED BOUNDARIES WHERE INFERRED
- Site Boundary



**FIGURE 3**

BABYLON FORMER MGP SITE WEST BABYLON, NEW YORK 60287600-200		RECOMMENDED REMEDY (PLAN VIEW)	
DATE: 01/29/14	DRWN: BcV/C-MA	<b>FIGURE 7-1</b>	

# **APPENDIX A**

## **Responsiveness Summary**

# RESPONSIVENESS SUMMARY

## **K - Babylon MGP Site West, Babylon, Suffolk County, New York Site No. 152181**

The Proposed Remedial Action Plan (PRAP) for the Babylon 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 13, 2015. The PRAP outlined the remedial measure selected for the contaminated soil and groundwater at the Babylon 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 selected remedy.

A public meeting was held on February 26, 2015, which included a presentation of the remedial investigation feasibility study (RI/FS) for the Babylon MGP site as well as a discussion of the selected remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the selected remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 16, 2015.

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:

### **The following comments were received during the February 26, 2015 public meeting:**

**COMMENT 1:** Is there contamination offsite and is a cleanup needed?

**RESPONSE 1:** There is contamination off-site under the LIRR embankment which extends to a small area on the commercial property located south of the site and LIRR tracks. This contamination consists of groundwater and minor soil impacts found as deep as 44 feet below ground surface. The selected remedy includes the installation of recovery wells on the commercial property to collect, and allow removal, of coal tar from the subsurface, limiting further contamination of the groundwater.

**COMMENT 2:** Has the residential area been investigated?

**RESPONSE 2:** Samples collected during the remedial investigation demonstrated that there was no contamination leaving the site that would affect the adjacent residential areas located to the north and south of the site.

**COMMENT 3:** Will local residents be notified before construction starts?

**RESPONSE 3:** Yes, facts sheets and public notices to announce the start of construction will be distributed in advance. The public is encouraged to sign up for the Department's listserv for Suffolk County in order to receive fact sheets and notices on this and other remedial sites in the county (see <http://www.dec.ny.gov/chemical/61902.html>).

**COMMENT 4:** Why is the contamination being solidified and not removed? Has the solidification remedy been chosen because of the cost?

**RESPONSE 4:** The Department has a preference for a permanent remedy; however specific conditions at this site limit the feasibility of fully excavating the contaminated soil. The high water table and proximity of the contaminated area to the adjacent LIRR tracks are significant impediments to fully excavating the contamination. The Department's experience is that a significant setback distance is required in order obtain the approvals necessary to excavate near railroad track embankments, which would leave a significant amount (approximately half) of the coal tar unexcavated or to be addressed by ISS as selected. This excavation would also require extensive dewatering of the excavation and/or the material removed from the excavation. This dewatering effort would require on-site treatment and disposal of large amounts of treated water. A 25 foot dewatered excavation would be required immediately adjacent to the railroad tracks, which could result in destabilizing the railroad embankment. Also, the small size of the site and surrounding development, and the proximity to the LIRR tracks, provide little available space to support such excavation and groundwater treatment, without resulting in additional short-term impacts on the surrounding community.

There are also impacts to the local community that need to be taken into consideration. Excavation of MGP-impacted material can be odorous and an unacceptable nuisance to surrounding properties. While the odors from lesser impacted soils can be controlled by products sprayed on the soil, soils which contain coal tar, such as found at this site, are much more of a concern. Typically, these excavations would be performed under a tent structure to minimize these impacts. Due to the location of the steep slope adjacent to the impacted area, the use of a tent is not possible.

ISS is a technology that is routinely used at MGP sites such as this one for both contaminant treatment and soil stabilization, which will enable the contamination closest to the railroad tracks to be safely treated. It is therefore best suited for the environmental and geotechnical conditions of the site.

As for the cost, the ISS remedy was not the least expensive alternative considered. ISS to the depths defined in the ROD will however be less expensive than the excavation remedy, while providing a higher level of overall protectiveness, with fewer impacts to the surrounding community. The ISS remedy was chosen because it was determined to be the best balance of the selection criteria. For a thorough discussion of the selection criteria, please see "Summary of the Proposed Remedy", in Exhibit E of the ROD.

**COMMENT 5:** Would excavation result in less contamination down gradient from the site?

**RESPONSE 5:** No, the excavation would not be able to remove all of the material contributing to the groundwater contamination under the LIRR embankment downgradient from the site. The

selected remedy would treat all of the on-site source material resulting in a greater contaminant reduction and enhancement of the natural attenuation process.

**COMMENT 6:** Where is the contaminated groundwater going to?

**RESPONSE 6:** The groundwater flow direction is to the southeast under the LIRR tracks and onto the commercial property. The groundwater plume (impacted) was shown during the remedial investigation to extend approximately 250 feet onto this property. There are several wells beyond this point which show that the contamination is confined to the commercial property, and has not migrated off of this property.

**COMMENT 7:** Why do we need to know the costs of each alternative?

**RESPONSE 7:** Cost effectiveness is one of the balancing criteria used to evaluate an alternative or remedy.

**COMMENT 8:** How much time will each alternative take to complete? What is the timeline for this project (work to start)?

**RESPONSE 8:** Estimated completion times for each alternative is as follows: Alternative 2 is one month; Alternative 3 is two to three months; Alternative 4 is three to four months; and Alternative 5 is twelve months.

After the ROD is finalized, National Grid will begin selecting a contractor for the development of the remedial design. Once the design is approved, procurement for a remedial contractor will begin, and access agreements will be need to completed. Based on this current schedule, the design process could take up to 24 months.

**COMMENT 9:** Will solidification leave behind less contamination when completed than the other alternatives?

**RESPONSE 9:** Yes, the selected remedy of ISS will solidify all of the source material on-site which the other alternatives do not address.

**COMMENT 10:** How deep will the solidification be going?

**RESPONSE 10:** The solidification will be completed to a depth of 25 feet below ground surface.

**COMMENT 11:** What will happen to the contamination under the LIRR tracks? Has the LIRR been involved or commented about the cleanup method?

**RESPONSE 11:** Due to the location of the tracks on an elevated bed, there has been no investigation under this parcel. The remedial investigation showed that the soil impacts just south of the tracks are up to 45 feet below ground surface, but the degree of contamination is very limited, which demonstrates a lack of outward mobility of the source material from the site. Any small particles of separate phase coal tar that could migrate under the tracks and contribute to the

dissolved phase groundwater plume are expected to be intercepted and removed by the recovery wells on the commercial property.

During the development of the remedial design, National Grid will consult with the LIRR regarding work in proximity to the right-of-way. An access agreement between the two parties will need to be completed before work is initiated.

**COMMENT 12:** How did the groundwater contamination get under the LIRR tracks?

**RESPONSE 12:** Groundwater flows to the southeast from the site under the LIRR tracks and continues in that direction. The contamination resulted from clean groundwater coming into contact with impacted soil.

**COMMENT 13:** Will the solidification cause the groundwater to change its flow direction and cause flooding of my house?

**RESPONSE 13:** It is not expected that there will be a groundwater mounding problem given the very permeable soils. A hydraulic analysis will be performed during the design to ensure that there are no unintended complications from the redirection of groundwater. If the models anticipate mounding, this can be mitigated to allow groundwater flow over or around the solidified area.

**COMMENT 14:** How long will the solidification last in the ground? Will the groundwater cause the cement to breakdown over time?

**RESPONSE 14:** Monoliths formed by the solidification process meet the basic definition of concrete, which has been used in existing structures created hundreds of years ago. Studies conducted on soil solidification projects completed over 15 years ago demonstrated that the properties of the treated material have not changed.

Groundwater is not anticipated to break down the solidified mass. The permeability of the solidified mass will be much lower than the surrounding soils, which will cause groundwater to follow the path of least resistance around the mass.

**COMMENT 15:** When was the last groundwater sampling conducted and what were the results?

**RESPONSE 15:** The last round of sampling occurred at the end of the remedial investigation in 2011. The results indicated there were both volatile organic compounds and semi-volatile organic compounds detected at the off-site property, but that the groundwater plume does not migrate beyond that property.

**COMMENT 16:** How long will the site be monitored?

**RESPONSE 16:** Groundwater monitoring will be conducted to determine the degree of contaminant reduction associated with the source treatment and natural attenuation processes. Initially groundwater monitoring will be conducted on at least an annual basis. The frequency and

duration will be evaluated over time; however, monitoring will continue until it has been shown that the remedy has successfully achieved its objective, of achieving groundwater standards.

**COMMENT 17:** How successful has this type of remedy been at other MGP sites?

**RESPONSE 17:** Solidification is an established technology that has been used for over 20 years to treat a variety of residual wastes at industrial sites. ISS was implemented in 1992 at a former MGP site in Columbus, Georgia for the treatment of coal tar residues in the saturated zone soil. The first use of ISS at an MGP site in New York was in 2007 at the Nyack Former MGP. ISS has been employed at 8 MGP sites across the state and is proposed and/or currently in design at 6 others.

**COMMENT 18:** Do any of these contaminants cause cancer?

**RESPONSE 18:** Some of the chemicals of concern are classified as known or suspected carcinogens.

**COMMENT 19:** What happens if the monitoring of the site shows that the problem has not been resolved?

**RESPONSE 19:** If the groundwater monitoring shows that attenuation after source control is not taking place, an enhancement to the attenuation process could be implemented. See also Responses 14 and 16.

**COMMENT 20:** Will the contaminated groundwater flowing off-site containing these chemicals be cleaned up or allowed to just move away?

**RESPONSE 20:** The selected remedy includes the installation of coal tar recovery wells along the south side of the LIRR tracks on the off-site property. These will remove any of the tar that may be remaining under the tracks and become mobilized in the groundwater. With the removal and treatment of the source material on-site, the groundwater will naturally attenuate over time, which will reduce the contaminant plume. Natural attenuation has been demonstrated to be effective in cleaning up groundwater containing the compounds associated with MGP tar. A monitoring program will be in place to verify the effectiveness of the remedy. See Responses 1, 6, 11 and 16.

**COMMENT 21:** How does the BTEX contamination found at this site compare to the groundwater standards? Will this be treated?

**RESPONSE 21:** Total BTEX was only seen at one location on-site, in the area of the highest degree of soil impacts, at a concentration of 230 parts per billion (ppb). On the off-site property the concentration was 19 ppb. The standard for benzene is 1 ppb, and 5 ppb for toluene, ethylbenzene and xylene. There is no groundwater treatment planned, but the isolation of the source material from the groundwater will allow these constituents to naturally attenuate over time.

**COMMENT 22:** Will this contamination effect the bay?

**RESPONSE 22:** No. The remedial investigation showed that the groundwater plume extended only 250 feet onto the adjacent commercial property.

**COMMENT 23:** This information should be put in the South Bay Newspaper so more residents know about this site.

**RESPONSE 23:** This contact has been added to the site contact list for future notices.

**COMMENT 24:** Removal is better than putting a band aid on the problem.

**RESPONSE 24:** The selected remedy will address all of the source material on-site, and allow the property to be used for a higher use (restricted residential) than it is zoned for now (commercial).

**COMMENT 25:** Public involvement and communication has been lacking at this site. There should be signs noting that work is ongoing once it starts. The Town requires you to put up a sign when you do work at your house, and this work should meet the same requirements. More outreach should be done to the local media (South Bay News). More community groups should also be notified. People are told not to come to the door if they don't know who is there. More mailings about this site should be done.

**RESPONSE 25:** The notifications were sent out via the state's electronic delivery system, which all interested parties are encouraged to sign up for. This distribution includes regional and local news outlets and environmental groups to ensure wide distribution of announcements. National Grid also provided hardcopies to all addresses within a 1/8 mile radius of the site. A website and hotline will be setup prior to the implementation of work at the site. The Department will continue to work with National Grid to keep the public informed of site information and address any concerns they may have as implementation of the remedy goes forward.

**Suzanne M. Avera, Attorney, Garfunkel Wild P.C., representing Allen Realty LLC (property owner), submitted a letter dated March 5, 2015, which included the following comments:**

**COMMENT 26:** In the February 2015 Proposed Remedial Action Plan ("PRAP"), Section 7 "Summary of the Proposed Remedy", the Department sets forth the legal mandates for the selection of the remedy: "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. The remedy must also attain the remedial action objectives identified for the site..." (PRAP at p. 8). Further, in Section 6.5 of this leading document, the NYSDEC states that the remedial action objectives ("RAOs") for the Site are to pre-disposal conditions to the extent feasible." (6 NYCRR Part 375; PRAP at p. 7).

Accordingly, in order to fulfill these legal requirements and to be fully protective, the Department must require implementation of Alternative #5 – Restoration to Unrestricted Conditions, or at the least, Alternative #4 – Excavation, Coal Tar Recovery and Natural Attenuation. Clearly, the best

and only way to achieve pre-disposal conditions is aggressive excavation of the source areas of the contaminated soils.

**RESPONSE 26:** The selected remedy was chosen because it provided the best balance of the selection criteria, while providing the same level of overall protectiveness as Alternative #5, and a higher level of protectiveness than Alternative #4. As stated in Response #4, site specific conditions limit the feasibility of the full excavation alternative that would achieve the unrestricted conditions. In this case both the high water table and the close proximity to the LIRR tracks pose the greatest technical challenges that favor the ISS technology over excavation. Also, as shown in the remedial investigation report, there is petroleum contamination on the property unrelated to the former MGP operations, which is not considered the responsibility of National Grid. This remaining petroleum contamination is also inconsistent with unrestricted conditions.

**COMMENT 27:** Many, if not most of these contaminants of concern (VOCs and SVOCs) are cancer-causing, which of course is the driving factor to the purported aggressive cleanups of these past MGP sites mandated by the Department, and also is the basis for the alarming concern of my client and his neighbors. These BTEX compounds and polyaromatic hydrocarbons (“PAHs”) mentioned above exist in the soils from 3 feet to 50 feet below ground surface (bgs) both on and off-site the Property. The on-site levels for BTEX in soils exist up to 180 parts per million (“ppm”) and for the PAHs up to 3,400 pp. BTEX in groundwater was found on-site at a concentration of 230 parts per billion (“ppb”). Total PAHs were found on-site at a concentration range of 470 ppb to 500 ppb. (PRAP at p. 6). These COCs are at levels that present a clear and present exposure to human health and the environment. The risk exposure from these COCs at the Site should not be compromised by the application of a lesser unproven remedy such as In-Situ Solidification (“ISS”) which has too many margins of error and too many past claims of performance failure to be considered reliable.

**RESPONSE 27:** Since the contaminants are below the surface it is unlikely that people visiting the site will come into contact with contaminated material. Soils in the top six feet of soil meet standards set for the planned restricted residential use. If someone were to dig deeper than six feet below the surface on site, they may be exposed to site-related contamination. However, the proposed remedy requires a Site management Plan that will prohibit disturbing soil cover without procedures to address potential exposures that will be outlined in that Plan.

**COMMENT 28:** Most of the Superfund sites where this remedy was used was to bind metal containing wastes, not organic wastes. Furthermore, performance testing for ISS waste products can only be conducted after curing is completed, and only limited data are available on long-term performance of ISS at Superfund remedial sites. Although originally used more frequently at Superfund sites in the early 1990s, ISS use fell off significantly immediately thereafter, due to several very salient reasons: the community expressed concerns about on-site treatment of wastes; there were problems with implementing ISS, and; ISS could not significantly reduce the mobility of a specific waste. Id. at p. 4. There are also perilous issues with the application and long-term impact of the binding agents themselves, which can contain proprietary and therefore unknown potentially hazardous chemical reagents.

**RESPONSE 28:** The early application of ISS was for inorganic wastes, but the technology has been applied to numerous sites containing organic wastes such as coal tar over the last 15 years with much success. Performance testing is completed at different intervals of the project to verify that the design criteria has been met. Testing of the preferred mixture will also be performed prior to full-scale application of the remedy. Several studies have been performed since the year 2000 that have repeatedly demonstrated that ISS is viable long-term remedial technology for these sites. The mixture will contain binding agents such as Portland cement, bentonite, fly ash, and/or cement kiln dust. The specific binding agents and their ratios will be dependent on the contractor and the results of the bench scale tests. See also Responses 14, 17 and 19.

**COMMENT 29:** The ISS injected from 8 to 25 feet below ground surface (“bgs”) can also potentially cause contaminated groundwater to dam up and to eventually flow around it. This damming effect may even cause an already shallow water table to rise.

**RESPONSE 29:** The contaminated groundwater is a result of clean water moving through the impacted soils. Once the soils have been solidified, the groundwater will no longer be affected by these contaminants. Upgradient (north) is not impacted by any contaminants, so as this water flows around the monolith it will remain clean. See also Responses 12, 13 and 16.

**COMMENT 30:** Furthermore, this proposed ISS barrier will not be continuous and solid, but rather injected in columns that will not overlap. As previously mentioned, there is no way to even tell if the ISS is working or failing until after years of monitoring. Thus, this cannot be considered to be a permanent solution, one of the legal requirements for choice of a remedy as mentioned above.

**RESPONSE 30:** The monolith will in fact be continuous and solid, completely binding the impacted soils within it. The implementation of the ISS is dependent on the selected contractor, and will be discussed in the remedial design. If the method chosen by the selected contractor was columns, all of the columns would overlap. A sampling program will be performed during the solidification process, which will ensure that homogeneity performance standards are met.

**COMMENT 31:** The faulty conclusions drawn by the Department that harm would not exist with the proposed remedy #3 were made with seemingly complete disregard for the future use of the Property, which our client, the owner, intends to develop. For example, one of the most dangerous exposure pathways, the potential for soil vapor intrusion and adverse indoor air quality, was not even tested. The NYSDEC blithely remarked that soil vapor intrusion “is not a concern for on or off-site buildings”, without any further testing or comment. (PRAP at p. 6).

**RESPONSE 31:** Soil vapor sampling on and off site showed very low levels of site-related contaminants. Given the low levels of site-related contaminants in soil gas, soil vapor intrusion into on and off-site buildings is not a concern. Freon 12, a chemical not associated with manufactured gas plants, was found at an elevated concentration. The source of Freon 12 found in soil gas is unknown and unrelated to the Babylon MGP site. Therefore, Freon 12 will not be addressed by the responsible party under this program.

**COMMENT 32:** Section 4 of the PRAP on Land Use and Physical Setting says that “the Department may consider the current, intended and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation.” (p. 3). Currently the use of the surrounding properties are all residential to the north and to the east and further west. The Long Island Railroad is located immediately to the south. As mentioned, my client intends to build senior assisted living at the target location and had already initiated and demonstrated such intent by meeting with the town board and zoning departments. These entities indicated such plans to be amenable to the town, and, in fact, preferable to continuing the present use of the Site. As vociferously expressed at the public meeting, the surrounding Property owners also prefer a highest and best residential development at the target Property instead of commercial, which presently involves storage of boats and changes depending on the availability of tenants. If the remedy as selected goes forward, my client will be unfairly penalized into dealing with a commercial use only.

**RESPONSE 32:** The selected remedy allows for restricted residential use of the site, which includes multi-family developments such as apartments or condominiums, but not single-family housing. This type of development is what the property owner is proposing.

**James M. DeMartinis, Senior Hydrogeologist, Seaciff Environmental submitted a letter dated March 10, 2015, which included the following comments:**

**COMMENT 33:** The on-site area to be remediated is small and can easily be excavated.

**RESPONSE 33:** See Response 4.

**COMMENT 34:** Excavation is a proven and permanent technology that removes both soil and groundwater contamination.

**RESPONSE 34:** See Response 4.

**COMMENT 35:** The proposed alternative is potentially flawed, removes nothing, and is not permanent.

**RESPONSE 35:** The selected remedy will be a permanent solution to the contamination. By creating a monolith which contains all of the impacted material, groundwater flowing across the site will no longer become contaminated as it passes through this area. While further soil borings and groundwater sampling points will need to be installed prior to implementation of the selected remedy, these are necessary to further define the impacted area to ensure nothing has changed since the remedial investigation. This pre-design investigation would be necessary for any alternative chosen, including excavation. See also Responses 12, 14, 17 and 30.

**COMMENT 36:** Excavation is permanent, quicker to implement, and will work.

**RESPONSE 36:** The completion time referenced in the Feasibility Study for the excavation is approximately 2 weeks. However, the installation of the excavation support, dewatering system and restoration of the property would make the entire process 3 to 4 months in length. The selected remedy is expected to be completed in a shorter amount of time. See also Responses 4, 8, 33, 34 and 35.

**COMMENT 37:** The property use will become unrestricted if excavation is implemented.

**RESPONSE 37:** See Responses 26, 32 and 33.

**Several commenters submitted emails with the following comment:**

**COMMENT 38:** I have concerns regarding the In-Situ Solidification (ISS) remedial alternative selected, and believe that excavation of the site would provide a better solution to the problem and allow for better future use of the property.

**RESPONSE 38:** See Responses 4, 5, 14, 17, 24, 32, 33 and 34.

# **APPENDIX B**

## **Administrative Record**

# **Administrative Record**

**K – Babylon MGP Site  
Manufactured Gas Plant Project  
West Babylon, Suffolk County, New York  
Site No. 152181**

1. Proposed Remedial Action Plan for the K-Babylon MGP Site, dated February 2015, prepared by the Department.
2. Order on Consent, Index No. A2-0552-0606, between the Department and National Grid, executed in February 2007.
3. “Preliminary Site Assessment Report, Order on Consent D1-0001-99-05, NYSDEC Site No. 152181, Babylon Former MGP Site, West Babylon, Suffolk County, New York”, February 2003, prepared by Vanasse Hangen Brustlin, Inc.
4. “Remedial Investigation Report for the Babylon Former MGP Site, West Babylon, Suffolk County, New York”, December 2012, prepared by Tetra Tech EC, Inc.
5. “Feasibility Study, Former Babylon Manufactured Gas Plant Site, West Babylon, New York, Administrative Order on Consent Index A2-0552-0606”, November 2014, prepared by AECOM.
6. Letter dated March 5, 2015 from Suzanne M. Avena, Attorney at Law, representing Allen Realty, LLC, site owner.
7. Letter dated March 10, 2015 from James M. DeMartinis, Senior Hydrogeologist, Seacliff Environmental, representing Allen Realty, LLC, site owner.
8. Email dated March 12, 2015 from A.J. Sweeney, General Manager, Allen Realty, LLC, providing comments on the PRAP.
9. Email dated March 12, 2015 from Bridget McAuley, providing comments on the PRAP.
10. Email dated March 12, 2015 from Lee Ann Pietroricca, providing comments on the PRAP.
11. Email dated March 13, 2015 from Peter Pietroricca, providing comments on the PRAP.