RECORD OF DECISION

NYSEG - Dansville MGP
Operable Unit Number 02: Onsite and Offsite Soil and Groundwater
State Superfund Project
Dansville, Livingston County
Site No. 826012
March 2017

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

DECLARATION STATEMENT - RECORD OF DECISION

NYSEG - Dansville MGP
Operable Unit Number: 02
State Superfund Project
Dansville, Livingston County
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Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 02: Onsite and Offsite Soil and Groundwater of the NYSEG - Dansville MGP site, a Class 2 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 Operable Unit Number: 02 of the NYSEG - Dansville MGP site and the public's input to the proposed 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, 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. A site cover currently exists on the NYSEG-owned portion of OU2 in areas not occupied by buildings and will be maintained to allow for commercial use of the site. Any site redevelopment will maintain the existing site cover. The site cover may include paved surface parking areas, sidewalks or soil where the upper one foot of exposed surface soil meets the applicable SCOs for commercial use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

3. Installation and operation of coal tar recovery wells to manually remove mobile coal tar (if present) from the subsurface. The number, depth, type and spacing of the recovery wells will be determined during the design phase of the remedy. Coal tar will be collected periodically from each well (if present) and transported to an off-site disposal facility; however, if wells are determined by the Department to accumulate large quantities of coal tar over extended time periods, the wells will be converted to automated collection system.

4. In-situ enhanced biodegradation will be employed to treat BTEX and PAH compounds in groundwater via application wells installed within the roadways and right-of-ways, at select locations on private property, and/or at the NYSEG-owned property. The biological breakdown of contaminants through aerobic respiration will be enhanced by the placement of an oxygen release compound (ORC), or similar material into the subsurface via application wells. The number and location of application wells will be evaluated as part of the remedial design. Other groundwater amendments may include nutrients such as a sulfate/nitrate product to enhance the already occurring aerobic degradation processes.

5. The site management plan (SMP) required for OU1 of the site will be revised to incorporate the OU2 remedy, and will include the following:

a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the OU2 area and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement for the NYSEG-owned portion of OU2.

Engineering Controls: The site cover discussed in paragraph 2, coal tar recovery wells discussed in paragraph 3 and the enhanced bioremediation addition discussed in paragraph 4 above.

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;

- a provision that should a building foundation or building slab be removed in the future on the NYSEG owned property, a cover system consistent with that described in Paragraph 2 above will be placed in any areas where the upper one foot of exposed surface soil exceed the applicable SCOs.
- an agreement with property owners to implement any necessary future site management plan on the off-site properties;
- a provision for further investigation and remediation should large scale redevelopment occur in OU2;
- descriptions of the provisions of the environmental easement placed on the NYSEG property, including any land use and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls.
- a provision for evaluation of the potential for soil vapor intrusion for future buildings developed within the area of site management, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.

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;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any new buildings developed in the area of site management, as may be required by the institutional and engineering control plan discussed above.

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 29, 2017
Date

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

RECORD OF DECISION

NYSEG - Dansville MGP
Dansville, Livingston County
Site No. 826012
March 2017

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 proposed 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:

Dansville Public Library
200 Main Street
Dansville, NY 14437
Phone: 585-335-6720

New York State Department of Environmental Conservation
Attn: Linda Vera

6274 East Avon-Lima Road
Avon, NY 14414
Phone: 585-226-5324

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 proposed remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the proposed 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 New York State Electric and Gas (NYSEG) Dansville former manufactured gas plant (MGP) site is located on a 2.25 acre parcel of land at 50 Ossian Street in the Village of Dansville, Livingston County, New York.

Site Features: The site is mostly vacant other than a small active gas regulator station. Buildings on the site were razed in the summer of 2012. The site is flat with no significant topographic or geologic features. About three quarters of the site surface is covered with stone or paved, with the remaining portion covered with grass.

Current Zoning/Use: The property comprising the former MGP site is zoned for commercial use and is mostly vacant other than a small active, unoccupied, gas regulator station. Land use in the surrounding area is mixed with commercial and residential properties. A former dry cleaning property is located adjacent to the southeast side of the former MGP site and is listed as a Class 2 inactive hazardous waste disposal site.

Past Use of the Site: A former manufactured gas plant was operated at the site from 1861 through 1930. In later years after gas production ceased, the site was used as a regional service center for NYSEG. Service center operations ceased in 2010 and the remaining building was demolished in 2012.

Operable Units: The site is divided into two operable units (OUs). An operable unit represents a

portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. OU1 is the on-site source area, consisting of soil above and below the groundwater table. OU2 is comprised of soil from the remaining portion of the MGP property not covered by OU1, and groundwater both on and off-site. The selected remedy for OU1 was implemented beginning in 2014 and completed in 2015 and included excavation and off-site treatment and or disposal of MGP-impacted soil.

Site Geology and Hydrogeology: The site consists of fill material underlain by layers of fine grained sand and silt, cobbles and gravel, and silt with interbedded fine grained sands. Soil beneath this material is a silty clay. Groundwater is present between nine and thirteen feet below the ground surface at this site and flows in a northwest direction.

Operable Unit (OU) Number 02 is the subject of this document.

A Record of Decision was issued previously for OU 01.

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 commercial use (which allows for 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:

NYSEG

The Department and NYSEG entered into a Consent Order, Index #DO-0002-9309, on March 30, 1994. The order obligates NYSEG to implement a full remedial program for MGP-related contamination both on and off the site.

On-site and off-site contamination unrelated to former MGP activities identified during the environmental investigations is being addressed separately by the Department. The responsible

party, in accordance with the Consent Order, is not responsible for non-MGP contamination, with the exception of areas containing comingled waste.

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:

- air
- 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 for this Operable Unit at this site is/are:

benzene	dibenz[a,h]anthracene
ethylbenzene	naphthalene
toluene	phenanthrene
xylene (mixed)	indeno(1,2,3-CD)pyrene
benzo(a)anthracene	acenaphthene
chrysene	coal tar

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.

The Fish and Wildlife Resources Impact Analysis (FWRIA) for OU 02, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination for OU2:

Site investigations conducted to date indicate that coal tar has migrated off-site, resulting in both soil and groundwater contamination. Coal tar is a reddish-brown oily liquid by-product which formed as a condensate during the gas manufacturing process as the gas cooled. Coal tar does not readily dissolve in water and materials such as coal tar are commonly referred to as non-aqueous phase liquids, or NAPLs. The terms NAPL and coal tar are used interchangeably in this document.

Specific volatile organic compounds (VOCs) of concern detected in OU2 and related to the former MGP site are benzene, toluene, ethylbenzene, and xylenes, referred to collectively as BTEX in this document. Semi-volatile organic compounds (SVOCs) of concern are polycyclic aromatic hydrocarbons (PAHs).

In addition to MGP-related impacts, chlorinated volatile organic compounds (CVOCs) have been detected at concentrations exceeding the SCGs in soil, groundwater, soil vapor, and indoor air samples collected in OU2. The chlorinated compounds are not associated with the former MGP operations and appear to originate from the adjacent former Pappas Dry Cleaners property (Site Number 826018), which is being addressed by the Department as part of the State Superfund Program.

Soil:

NYSEG-owned property:

Remediation of the OU1 portion of the former MGP site has been completed. Prior to remediation, the primary contaminants of concern were BTEX and PAHs. Remedial actions have successfully achieved soil cleanup objectives for commercial use in OU1. Contamination remaining within the OU2 portion of the MGP site includes small NAPL drops remaining beneath the northern portion of the property at depths of approximately 5 feet and 10 to 12 feet below ground surface (bgs). Sheens remain in the soil on the southwest portion of the property at depths of 7 to 8 feet, 11 to 12 feet, and 16 to 18 feet bgs.

Other OU2 properties:

Sheens and small droplets of coal tar were observed in subsurface soil beneath OU2 at thicknesses of generally two feet or less, at depths from approximately 11 to 17 feet bgs. Subsurface soil samples contained BTEX and PAHs at concentrations exceeding the Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted Residential SCOs (RRSCOs) at depths corresponding with the observed coal tar droplets.

BTEX compounds detected in soil at concentrations greater than the RRSCOs include benzene, ethylbenzene and total xylenes at maximum concentrations of 0.64, 3.6 and 4.2 parts per million (ppm), respectively. PAHs and their respective maximum concentrations detected include benzo(a)anthracene (14 ppm), benzo(a)pyrene (9.8 ppm), benzo(b)fluoranthene (4.4 ppm), benzo(k)fluroanthene (5.6 ppm), chrysene (13 ppm), dibenzo(a,h)anthracene (0.68 ppm), indeno(1,2,3-cd)pyrene (3.5 ppm), and naphthalene (16 ppm).

The UUSCOs and RRSCOs for each individual compound detected are listed in Table 2 of Exhibit A

Analytical results from five surface soil samples collected at depths between 0 and 2 inches bgs did not show evidence of surficial soil impacts related to MGP activities at the site.

Groundwater: Groundwater samples collected in OU2 contained contaminants at concentrations exceeding the New York State Ambient Water Quality Standards and Guidance values (SCGs). BTEX and PAH compounds were the primary MGP-related contaminants identified in groundwater samples collected at OU2. BTEX compounds detected at concentrations greater than the SCGs include benzene, toluene, ethylbenzene, and xylenes at maximum concentrations of 93, 3.6, 210, and 150 parts per billion (ppb), respectively. The remaining VOCs detected in groundwater and corresponding concentrations are listed in Table 1 of Exhibit A.

Total PAHs were detected in groundwater samples collected in OU2 at concentrations ranging from non-detect to approximately 1,300 ppb. Individual PAH compounds of concern identified in groundwater samples exceeding the SCGs include: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and naphthalene, detected at maximum concentrations of 1, 0.7, 0.6, 0.8, and 550 ppb, respectively. The remaining PAHs detected in groundwater and corresponding concentrations are listed in Table 1 of Exhibit A.

Non-MGP chlorinated volatile organic compounds (CVOCs) including 1,2-dichloroethene (DCE), tetrachloroethene (PCE), and trichloroethene (TCE) were also detected at concentrations exceeding the SCGs in groundwater collected from OU2. Tetrachloroethene was detected in groundwater at a maximum concentration of 4,800 ppb (standard is 5 ppb), TCE up to 3,200 ppb (standard is 5 ppb), and DCE up to 1,640 ppb (standard is 5 ppb). These contaminants are not known to be associated with previous MGP operations and appear to have originated from the adjacent Pappas Dry Cleaners which is been addressed under a State-funded remedial program.

Soil Vapor, Sub-Slab and Indoor Air: Soil vapor samples were collected in March 2006 from OU2 at locations northwest of the site in the areas of Battle and Franklin Street at depths ranging from six to eight feet bgs. Individual BTEX compounds were detected in soil gas samples as follows: benzene at a maximum concentration of 28 µg/m3, toluene up to 69 µg/m3, ethylbenzene up to 8.2 µg/m3, and total xylenes up to 40.1 µg/m3. Chlorinated compounds including TCE, PCE, and DCE were also detected in soil vapor samples collected at locations within OU2. Maximum concentrations of these compounds included TCE at 3,100 µg/m3, PCE at 6,500 µg/m3, and DCE at 5,300 µg/m3. The chlorinated compounds are not associated with the former MGP operations and appear to originate from the adjacent former Pappas Dry Cleaners property.

As part of the investigation activities related to the Pappas Dry Cleaners property, the Department collected sub-slab and indoor air samples at residential properties within OU2. Sub-slab and indoor air samples did not contain BTEX concentrations greater than the 90th Percentile (in fuel heated homes) for Volatile Organic Compounds as presented in Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York(NYSDOH 2006). Pappas Dry Cleaners property is not considered a source of BTEX compounds. The sub-slab and indoor air samples were collected in relation to the CVOCs detected at the Pappas property.

Individual BTEX compounds were detected in sub-slab and indoor air samples at maximum concentrations of 17, 230, 9.9 and 34 µg/m3, for benzene, toluene, ethylbenzene and xylenes, respectively. Individual CVOCS including tetrachloroethane, trichloroethane, and cis-1,2-

dichloroethane were detected at maximum concentrations of 1,800 µg/m3, 310 µg/m3, and 2,800 µg/m3, respectively.

6.4: Summary of Human Exposure Pathways

Within OU-1 and OU-2 people are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Within OU-1 measures are in place to control the potential for coming in contact with subsurface soil and groundwater contamination remaining on the site. Within OU-2 contact with contaminated soil or groundwater is unlikely because the contamination is at a depth of 12 to 15 feet below the ground surface; however, contact is possible if people dig to those depths. 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. Within OU-1 there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. The potential for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development will be evaluated. Within OU-2 actions were needed to address soil vapor intrusion at some locations as a result of contamination associated with the adjacent Pappa's Dry Cleaning site. Sub-slab depressurization systems (systems that ventilate/remove the air beneath the building) have been installed at eight properties.

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.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

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 Enhanced Natural Attenuation and Coal Tar Monitoring remedy.

The estimated present worth cost to implement the remedy is $1,100,000. The cost to construct the remedy is estimated to be $350,000 and the estimated average annual cost is $49,560.

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, 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. A site cover currently exists on the NYSEG-owned portion of OU2 in areas not occupied by buildings and will be maintained to allow for commercial use of the site. Any site redevelopment will maintain the existing site cover. The site cover may include paved surface parking areas, sidewalks or soil where the upper one foot of exposed surface soil meets the applicable SCOs for commercial use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

3. Installation and operation of coal tar recovery wells to manually remove mobile coal tar (if present) from the subsurface. The number, depth, type and spacing of the recovery wells will be determined during the design phase of the remedy. Coal tar will be collected periodically from each well (if present) and transported to an off-site disposal facility; however, if wells are determined by the Department to accumulate large quantities of coal tar over extended time periods, the wells will be converted to automated collection system.

4. In-situ enhanced biodegradation will be employed to treat BTEX and PAH compounds in groundwater via application wells installed within the roadways and right-of-ways, at [INVALID]locations on private property, and/or at the NYSEG-owned property. The biological breakdown of contaminants through aerobic respiration will be enhanced by the placement of an oxygen release compound (ORC), or similar material into the subsurface via application wells. The number and location of application wells will be evaluated as part of the remedial design. Other groundwater amendments may include nutrients such as a sulfate/nitrate product to enhance the already occurring aerobic degradation processes.

5. The site management plan (SMP) required for OU1 of the site will be revised to incorporate the OU2 remedy, and will include the following:

a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the OU2 area and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement for the NYSEG-owned portion of OU2.

Engineering Controls: The site cover discussed in paragraph 2, coal tar recovery wells discussed in paragraph 3 and the enhanced bioremediation addition discussed in paragraph 4 above.

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;
- a provision that should a building foundation or building slab be removed in the future on the NYSEG owned property, a cover system consistent with that described in Paragraph 2 above will be placed in any areas where the upper one foot of exposed surface soil exceed the applicable SCOs.
- an agreement with property owners to implement any necessary future site management plan on the off-site properties;
- a provision for further investigation and remediation should large scale redevelopment occur in OU2;
- descriptions of the provisions of the environmental easement placed on the NYSEG property, including any land use and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls.
- a provision for evaluation of the potential for soil vapor intrusion for future buildings developed within the area of site management, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.

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;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any new buildings developed in the area of site management, as may be required by the institutional and engineering control plan discussed above.

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 OU2 portion of the site and are impacting groundwater, soil, and soil vapor.

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. Wastes and Source areas were identified at the OU2 portion of the site in the form of sheens and small NAPL drops located immediately to the west and northwest of OU1 (NYSEG property). Locations of observed visual impacts in OU2 are shown on Figure 4. The sheens and NAPL drops most likely migrated from OU1, where tars generated at the former MGP site were disposed, spilled or leaked from one or more gas holders. Remedial activities completed at the OU1 portion of the site in 2014 to 2015 included the removal of the MGP-related source materials, which included soil that contained visible coal tar.

Coal tar was a byproduct of the manufactured gas-production process. Coal tar is a reddish brown to black oily liquid by-product which formed as a condensate as the gas cooled. Coal tar does not readily dissolve in water. Materials such as this are commonly referred to as non-aqueous phase liquid, or NAPL. The terms NAPL and coal tar are used interchangeably in this document. Although most coal tars are slightly denser than water, the difference in density is slight. Consequently, they can either float or sink when in contact with water.

Coal tar typically contains elevated levels of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Specific VOCs of concern include benzene, toluene, ethylbenzene, and xylenes. These are referred to collectively as BTEX in this document. Specific SVOCs of concern are the polycyclic aromatic hydrocarbons (PAHs):

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

Total PAH concentrations referred to in this plan are the sum of the individual PAHs listed above. The italicized PAHs are likely human carcinogens.

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

Groundwater

Groundwater samples were collected from monitoring wells and analyzed for volatile and semi-volatile compounds to assess the nature and extent of groundwater impacts at OU2 resulting from the operation of the former MGP. The primary contaminants of concern are BTEX and PAH compounds. The results indicate that groundwater contamination exceeds the SCGs for BTEX and PAH compounds. BTEX compounds were detected at concentrations ranging from non detect to 370 parts per billion (ppb) while PAHs were found at concentrations ranging from non detect to approximately 1,300 ppb. The extent of site related groundwater contamination is depicted on Figure 5. Groundwater is not used as a potable water supply locally as the surrounding area is served by public water.

Non-MGP related chlorinated volatile organic compounds (CVOCs) including 1,2-dichloroethene, tetrachloroethene, and trichloroethene were found to be comingled with MGP-related compounds detected in groundwater collected from OU-2. These contaminants were found to originate from the adjacent Pappas Dry Cleaners property and are not known to be associated with previous MGP operations at the site. While these contaminants are listed in the tables below, the source of the CVOCs are being addressed as part of a State-funded investigation of the Pappas Dry Cleaners property. Table 1 shows a summary of groundwater contamination for each class of compounds of concern.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Benzene	ND – 93	1	19 of 231
Toluene	ND – 20	5	10 of 231
Ethylbenzene	ND - 210	5	13 of 231
Xylenes	ND - 150	5	17 of 231
1,2-dichloroethene	ND – 1,640	5	33 of 231
Chloroform	ND - 11	7	9 of 231
Isopropylbenzene	ND - 19	5	7 of 231
Tetrachloroethene	ND – 4,800	5	75 of 231
Trichloroethene	ND – 3,200	5	41 of 231
SVOCs			
Acenaphthene	ND - 160	20	8 of 119
Benzo(a)anthracene	ND – 1.0 J	0.002	4 of 119

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
Benzo(a)pyrene	ND – 0.70 J	0.002	3 of 119
Benzo(b)fluoranthene	ND – 0.60 J	0.002	1 of 119
Bis(2-ethylhexyl)phthalate	ND - 12	5	1 of 83
Chrysene	ND – 0.80 J	0.002	3 of 119
Naphthalene	ND - 550	10	7 of 119
Phenanthrene	ND - 73	50	1 of 119

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).

Based on the findings of the RI, the past disposal of hazardous waste has resulted in the contamination of groundwater. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of groundwater to be addressed by the remedy selection process are: BTEX and PAHs related to MGP coal tar.

Soil

Seventy subsurface soil samples were collected and analyzed for volatile and semi-volatile organic compounds at the OU2 study area during the RI to determine the nature and extent of impacts to soil. Additionally, six subsurface soil samples were analyzed for Target Analyte List (TAL) metals, and 10 samples were analyzed for total cyanide. The primary soil contaminants are BTEX and PAHs, associated with residues from the operation of the former MGP. The primary contaminants were detected primarily in the vicinity of the former MGP structures including gas holders and tar tanks. Subsurface soil impacts exceeding SCOs were detected at thicknesses of generally two feet or less, at depths ranging from 11 to 17 feet below ground surface (bgs) and generally corresponded to locations containing NAPL impacted materials. Total BTEX and PAHs contamination was detected at concentrations ranging from non-detect to approximately 7.8 and 300 ppm, respectively. The extent of soil contamination at OU2 is depicted in Figure 6. Table 2 shows a summary of soil contamination for each class of compounds of concern. Soil samples were not collected within the on-site portion of OU2; therefore, concentrations in Table 2 are compared to Restricted Use – Residential SCGs.

Although metals were detected in the soil samples collected, the concentrations were determined to be within the range of concentration in background soils in the eastern United States and do not represent impacts from the historical operation of the MGP. Total cyanide was not detected in the subsurface soil samples collected from OU2.

Non-MGP related CVOCs, tetrachloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (DCE) were found to be comingled with MGP-related contamination detected in soil. These contaminants were found to originate from the adjacent Pappas Dry Cleaners property and are not known to be associated with previous MGP operations at the site. While these contaminants are listed in the tables below, the source of the CVOCs are being addressed as part of a State-funded investigation of the Pappas Dry Cleaners property.

Table 2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use - Residential SCG[c] or Protection of Groundwater SCG[c] (ppm)	Frequency Exceeding Restricted Residential Use SCG or Protection of Groundwater SCG
VOCs					
Benzene	ND – 0.64	0.06	2 of 70	0.06[d]	2 of 70
Ethylbenzene	ND – 3.6	1	2 of 70	1[d]	2 of 70
Xylenes, Total	ND – 4.2	0.26	4 of 70	1.6[d]	1 of 70
Tetrachlorethene	ND – 92	1.3	2 of 70	1.3[d]	2 of 70
Trichloroethene	ND – 1.6	0.47	2 of 70	0.47[d]	2 of 70
SVOCs					
Acenaphthene	ND - 23	20	1 of 70	98[d]	0 of 70
Benzo(a)anthracene	ND - 14	1	8 of 70	1	8 of 70
Benzo(a)pyrene	ND – 9.8	1	8 of 70	1	8 of 70
Benzo(b)fluoranthene	ND – 4.4	1	6 of 70	1	6 of 70
Benzo(k)fluoranthene	ND – 5.6	0.8	7 of 70	1	6 of 70
Chrysene	ND - 13	1	8 of 70	1	8 of 70
Dibenzo(a,h)anthracene	ND – 0.68	0.33	4 of 70	0.33	4 of 70
Indeno(1,2,3-cd)pyrene	ND – 3.5	0.5	6 of 70	0.5	6 of 70
Naphthalene	ND - 16	12	3 of 70	12[d]	3 of 70
Phenanthrene	ND - 140	100	1 or 70	100	1 of 70

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 Residential Use Use, unless otherwise noted.
d - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Groundwater. {The GW SCO should be listed for the primary contaminants of concern listed in the Groundwater section above}

Based on the findings of the Remedial Investigation, the presence of MGP related contamination, including NAPL, has resulted in the contamination of subsurface 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 BTEX and PAH compounds associated with residues from the operation of the former MGP.
Five surface soil samples were collected from unpaved sections of the former NYSEG service center as well as one on an adjoining property during the OU-1 RI. There is no evidence of surficial soil impacts related to MGP activities based on the RI results.

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, sub-slab vapor, and indoor air. At this site, due to the presence of buildings in the impacted area, a full suite of samples were collected to evaluate whether actions are needed to address exposures related to soil vapor intrusion.

Soil vapor samples were collected at locations across OU2 in March 2006 by NYSEG to evaluate the presence and magnitude of VOCs in soil vapor and assess the potential for soil vapor intrusion from soil vapor into residences located on OU2. The results of the soil gas sampling indicate that SVOCs and BTEX compounds are present in the soil gas. Detected concentrations for benzene in soil gas samples ranged from 3.4 $\mu g/m^3$ to 28 $\mu g/m^3$. Toluene was detected in soil gas samples at concentrations ranging from 11 $\mu g/m^3$ to 69 $\mu g/m^3$ and samples from eight of the soil gas sample locations had detections of ethylbenzene, with concentrations ranging from 2.0 $\mu g/m^3$ to 8.2 $\mu g/m^3$.

Chlorinated compounds including trichloroethene (TCE), tetrachloroethene (PCE), and cis-1,2-dichloroethene (DCE) were detected in soil vapor samples collected at locations within OU2. The highest concentrations of chlorinated compounds included cis-1,2-DCE at 5,300 $\mu g/m^3$, PCE at 6,500 $\mu g/m^3$, and TCE at 3,100 $\mu g/m^3$. The chlorinated compounds are not associated with the former MGP operations and appear to originate from the adjacent former Pappas Dry Cleaners property. The Department, in consultation with the New York State Department of Health (DOH), as part of the State-funded investigation of the Pappas Dry Cleaners, took the lead for investigating the SVI pathway associated with OU2 and Pappas Dry Cleaners. No further site specific soil vapor investigation activities for OU2 is required other than the State-funded insvestigation.

Soil vapor intrusion investigation activities conducted by the Department, in consultation with NYSDOH, in response to the chlorinated compounds detected in soil vapor samples included sampling at 19 structures for which access was granted. For each structure sampled, sub-slab soil vapor and indoor air samples were collected. Outdoor air samples were collected concurrently with the sub-slab soil vapor and indoor air samples in order to evaluate outdoor air quality in the vicinity of the study area. The results of the soil vapor intrusion sampling primarily indicated the presence of PCE and TCE.

Sample results were evaluated in accordance with the New York State's Soil Vapor Intrusion Guidance in order to determine whether actions were needed to address exposure via soil vapor intrusion. Based on the sampling results, sub-slab depressurization systems were installed at seven off-site buildings and monitoring was recommended at another off-site structure.

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. The No Action alternative does not include long-term monitoring and therefore has no associated cost.

Alternative 2: Groundwater Monitoring

This alternative would include:

- Re-establish a monitoring well network and conduct periodic groundwater monitoring to confirm the extent of dissolved phase impacts and document contaminant trends;
- development of a site management plan to include controls to prevent exposure to impacted subsurface soil,groundwater, and soil vapor.

The cost to implement Alternative 2, based on an annual operation and maintenance (O&M), for a period of 30 years has been estimated as follows:

Present Worth:.....*$700,000*
Capital Cost:.....*$177,525*
Annual Costs:.....*$35,280*

Alternative 3: Enhance Natural Attenuation and Coal Tar Monitoring

This alternative would include:

- Groundwater monitoring as described in Alternative 2;
- Installation and operation of NAPL recovery wells to remove potentially mobile NAPL from the subsurface. The location, number, and depth of the recovery wells will be determined during the design phase of the remedy. The area the wells will be located is depicted on Figure 7;
- In-situ treatment such as the use of oxygen amendment and natural attenuation to address groundwater impacts. The groundwater amendment would be applied via application wells installed within roadways, right-of-ways, on the NYSEG-owned property, or at select locations on private property;
- Development of a site management plan to include controls to prevent exposure to impacted subsurface soil, groundwater, and soil vapor.

The cost to implement Alternative 3, based on an annual operation and maintenance (O&M), for a period of 30 years has been estimated as follows:

Present Worth: *$1,100,000*
Capital Cost: *$347,625*
Annual Costs: *$49,560*

Alternative 4: 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 cleanup objectives listed in Park 375-6.8 (a). This alternative would include: excavation and off-site disposal of nearly all waste and soil contamination above the unrestricted soil cleanup objectives. The remedy will not rely on institutional or engineering controls to prevent future exposure. There is no Site Management, no restrictions, and no periodic review. This remedy will have no annual cost, only the capital cost.

This alternative will include excavation of soil exceeding the Part 375 Unrestricted SCOs or background levels in the OU2 area to predisposal condition and will require the demolition of approximately 14 private residential properties located along Franklin and Battle Street, as depicted in Figure 8. The components of this alternative will include the following:

- Acquisition and demolition of approximately 14 private residential buildings located within OU2 along Franklin and Battle Street;
- Excavation of contaminated soil exceeding Part 375 Unrestricted SCOs or background levels to a depth of approximately 17 feet bgs, as shown in Figure 6. Approximately 102,000 cubic yards of impacted material will be removed for treatment and/or disposal at an off-site permitted facility;
- Excavation will be conducted within a temporary fabric structure (to the extent practicable) to control odor, vapor and dust; and
- Backfilling the excavated areas with certified clean soil from an off-site location. The site will be restored to a pre-disturbance grade.

The cost to implement Alternative 4 has been estimated as follows:

Present Worth: *$50,300,000*
Capital Cost: *$50,300,000*
Annual Costs: *$0*

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	$0	$0	$0
Alternative 2: Groundwater Monitoring	$177,525	$35,280	$700,000
Alternative 3: Enhance Natural Attenuation and NAPL Recovery	$347,625	$49,560	$1,100,000
Alternative 4: Restoration to Unrestricted Conditions	$50,300,000	$0	$50,300,000

Exhibit D

SUMMARY OF THE SELECTED REMEDY

The Department has selected Alternative 3, Enhanced Natural Attenuation and passive NAPL Recovery as the remedy for this site. Alternative 3, when fully implemented, will achieve the remediation goals for the site by protecting human health and the environment. Alternative #3 will mitigate the potential for long-term exposures to residual MGP-related impacts by enhancing natural attenuation processes with a groundwater amendment, and removing recoverable NAPL in the subsurface. Although Alternative 3 does not include direct treatment or containment of impacts in OU2, reduction of toxicity, mobility, and volume of impacted materials will be achieved through NAPL recovery and active groundwater enhancement, creating the conditions necessary to restore groundwater quality to the extent practicable. The elements of this remedy are described in Section 7.

Basis for Selection

The selected remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which the remedial alternatives were 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.

The selected remedy (Alternative 3) satisfies this criterion by treatment of impacted groundwater through oxygen injection to enhanced natural attenuation processes. Alternative 3 will also include passive coal tar recovery and a restriction of groundwater use at the site to protect human health and the environment. Alternative 1 (No Action) will not provide any additional protection to public health and the environment and will not be evaluated further. Alternative 2 which only relies on groundwater use restriction and groundwater monitoring will not satisfy the criterion as impacted groundwater and NAPL impacted material will remain in place. Alternative 4, by removing all soil contaminated above the “Unrestricted” soil cleanup objective, meets the threshold criteria and provides permanent reduction of volume of impacted materials due to removal and off-site treatment and/or disposal but at 50 times the cost of the selected remedy while providing only marginal additional protection to the environment over the selected remedy.

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.

Alternative 3 complies with SCGs to the extent practicable. Source area material was addressed during remediation of OU-1, the on-site NYSEG property. Subsurface soil containing residual MGP-related impacts in OU-2 will remain at depth. Alternative 3 also creates the conditions necessary to restore groundwater quality to the extent practicable through active enhancement of natural degradation and NAPL removal activities. Alternative 2 may also restore groundwater quality through natural degradation processed, but to a lesser degree or with lower certainty. Alternative 4 achieves the SCGs by removal of soil containing MGP-related contaminants at concentrations greater than the unrestricted use SCOs. Following removal of MGP-related impacted material,

groundwater SCGs would likely be achieved under Alternative 4. Because Alternatives 2, 3, and 4 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.

Long-term effectiveness is best accomplished by Alternative 4, since nearly all contaminated material will be removed from the site to achieve the UUSCOs. Alternatives 2 and 3 provide some long-term effectiveness as the majority of the impacted material, which served as the source for contamination identified in OU-2, was removed during the OU-1 remedial action. Alternative 3 will provide greater long-term effectiveness over Alternative 2 through the addition of a groundwater amendment to enhance biodegradation of groundwater contamination and periodic NAPL recovery activities. Both Alternative 2 and Alternative 3 will require long-term monitoring and Site Management including institutional/engineering controls to reliably prevent future potential exposures.

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.

Alternative 2 would control potential exposures with institutional controls only and will not reduce the toxicity, mobility, or volume of contaminants remaining. However, a majority of the material that served as a source for dissolved phase impacts were removed during excavation activities completed for OU-1. Similar to Alternative 2, Alternative 3 does not include direct treatment or containment of impacts in OU-2. However, Alternative 3 does include NAPL monitoring and recovery of mobile NAPL (if any is identified) to reduce the volume of material that may serve as source to dissolved phase impacts. Alternative 3 additionally includes the addition of a groundwater amendment to enhance biodegradation naturally occurring at the site. Alternative 4 will permanently reduce the toxicity, mobility, and volume as nearly all contaminated material at the site will be removed for off-site disposal and/or treatment.

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.

Alternative 4, with near total removal, will result in the highest short-term impacts to the community since extensive excavation will result in a large amount of excavated material to be transported through the community for off-site treatment and/or disposal. Additionally, excavation activities would be conducted on an estimated 17 private properties and would require demolition and removal of an estimated 14 private homes resulting in significant disruption to the community. The incremental cost of over $50 million and a significantly increased community disruption associated with this alternative over the selected remedy are not justified by the marginal increase in protection. Alternatives 2 and 3 would pose minimal potential short-term risks to remedial workers and the surrounding community. The time needed to achieve the remediation goals is the shortest for Alternative 4. Alternative 2 and 3 will take the longest to achieve the remediation goals.

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.

Alternatives 2 and 3 are favorable in that they are readily implementable. Alternative 4 will require a significant amount of time to implement compared to Alternatives 2 and 3 and would require the demolition and removal of approximately 14 private homes from 17 affected properties. Administratively, Alternative 4 may not be feasible, given that the purchase of private properties are required where homes will be demolished.

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

The cost of the alternatives vary significantly. Alternatives 2 and 3 are lower cost alternatives. Alternative 3, the selected remedy will have a higher cost than Alternative 2, as Alternative 3 includes in-situ groundwater treatment and passive NAPL monitoring and removal, in addition to groundwater monitoring under Alternative 2. Alternative 4 will have the highest present worth cost at $50,000,000 and will only address residual impacts since the source material was removed during excavation activities conducted in OU-1. The incremental cost of $49,000,000 and significant increase in community disruption and loss of homes associated with Alternative 4 over Alternatives 3 are not justified by the marginal increase in protection.

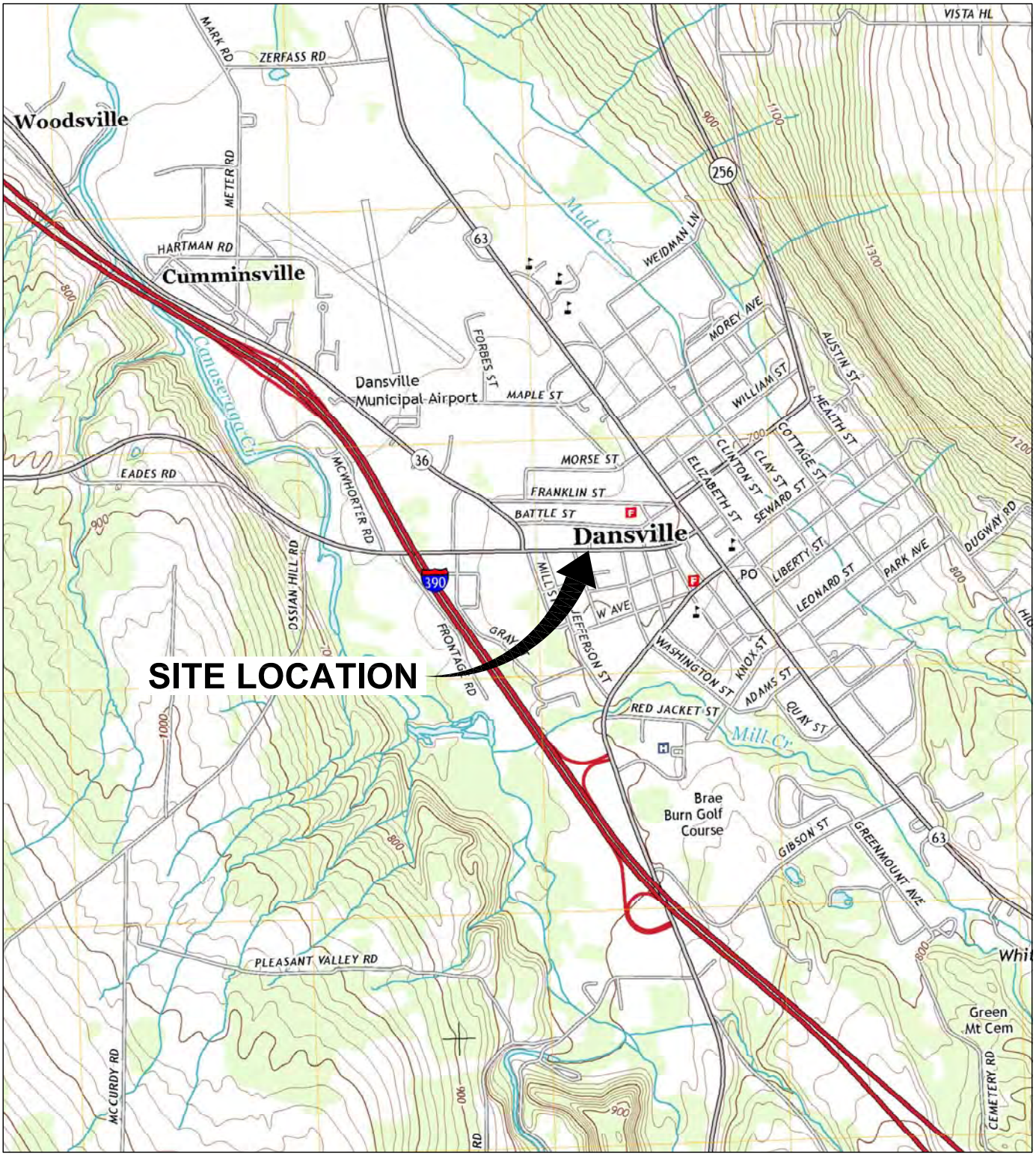
8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

The current zoning of OU-2 consists of mixed industrial and residential use, with the majority of OU-2 used for residential purposes. Alternative 4 would achieve the unrestricted SCOs which would allow unrestricted land use of the property consistent with current zoning. The potential future use and current zoning requirements of single family properties will not be met under Alternatives 2 and 3; however, residual contamination is managed with the implementation of a Site Management Plan and agreements with property owners to implement any necessary future site management plan on the off-site properties.

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

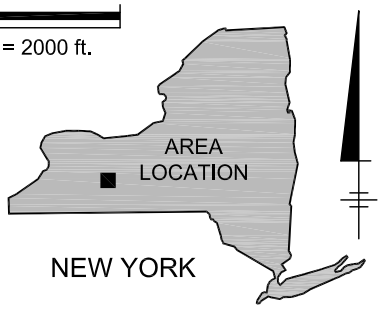
Alternative 3 was selected because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., DANSVILLE, NEW YORK, 2013.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



NYSEG
DANSVILLE FORMER MGP SITE
DANSVILLE, NEW YORK
FEASIBILTY STUDY REPORT

SITE LOCATION MAP

ARCADIS

FIGURE
1

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVE\B0013139\0000\00001\DWG\13139N01.dwg LAYOUT: 1 SAVED: 7/10/2015 10:18 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 7/10/2015 10:20 AM BY: HOWES, DAVID
XREFS: IMAGES: PROJECTNAME: ---
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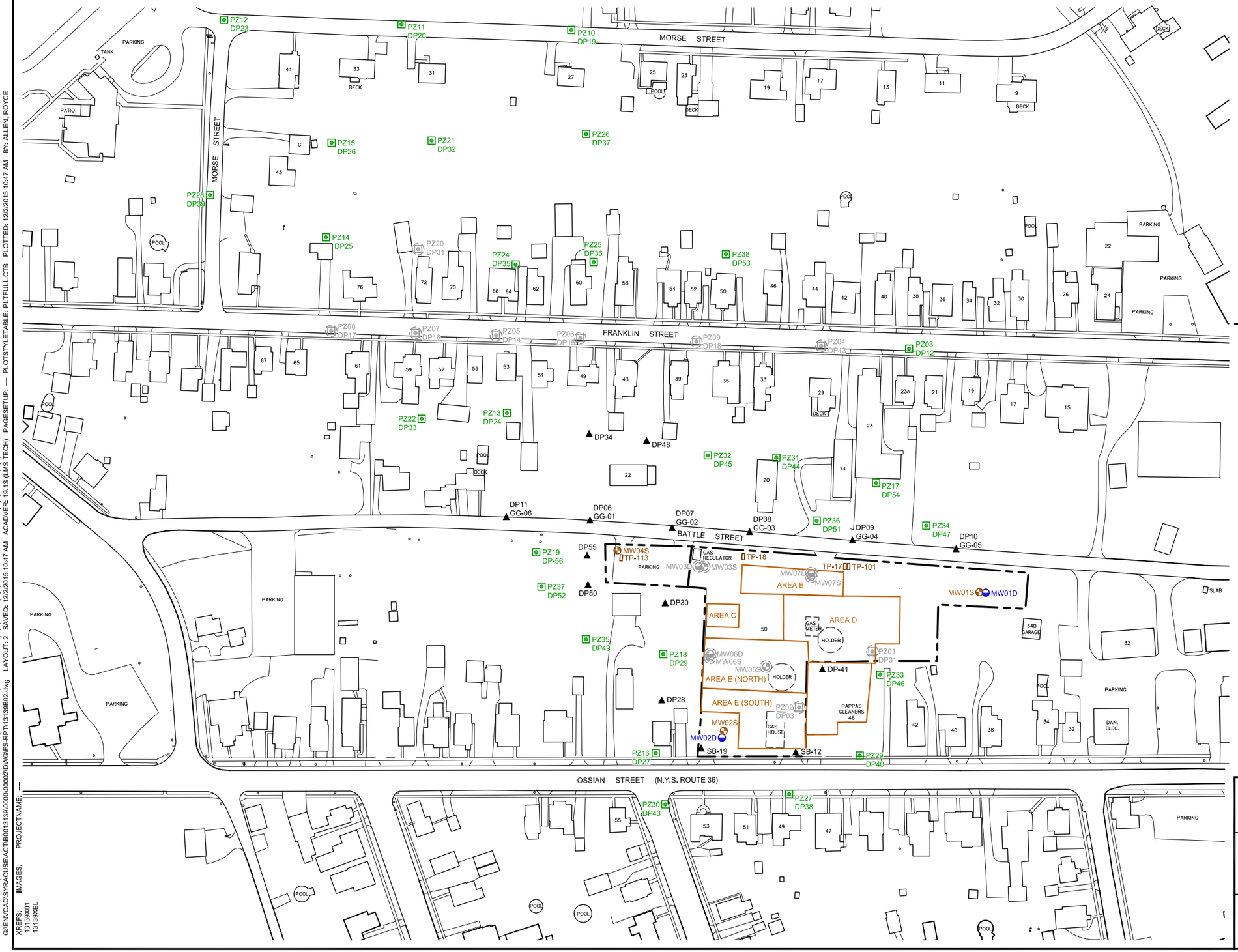

LEGEND:

- SOIL BORING LOCATION
- TEST PIT LOCATION
- DEEP MONITORING WELL LOCATION
- SHALLOW MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- ABANDONED OR DESTROYED WELL OR PIEZOMETER LOCATION
- NYSEG PROPERTY BOUNDARY / FORMER MGP SITE
- FORMER MGP STRUCTURE
- LIMITS OF PREVIOUSLY COMPLETED EXCAVATIONS

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG, DATED 10/2/2006, TITLED EXPANDED DANSVILLE MGP SITE, AT A SCALE OF 1"=100'.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ONLY SELECT MONITORING WELL, SOIL BORING, PIEZOMETER, AND TEST PIT LOCATIONS ARE SHOWN ON THE NYSEG PROPERTY AS A MAJORITY OF THE LOCATIONS WERE REMEDIATED IN 2014. SEE PREVIOUS SITE REPORTS FOR ADDITIONAL INVESTIGATION LOCATIONS.
4. ADDITIONAL WELLS OR PIEZOMETERS SHOWN MAY BE ABANDONED OR DESTROYED.

0 150' 300'

GRAPHIC SCALE

NYSEG
DANSVILLE FORMER MGP SITE (OU-2)
DANSVILLE, NEW YORK
FEASIBILITY STUDY REPORT

SITE PLAN

ARCADIS

FIGURE
2

CITY:SYRACUSE, NY DIV/GROUP:ENV/IM-DV DB:R. ALLEN, R. BASSETT, R. ALLEN LD:(Opt) PIC:(Opt) PM:B. AHRENS TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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13139XBL

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XREFS: 131398X00 IMAGES: 13139X01.tif PROJECTNAME: ---
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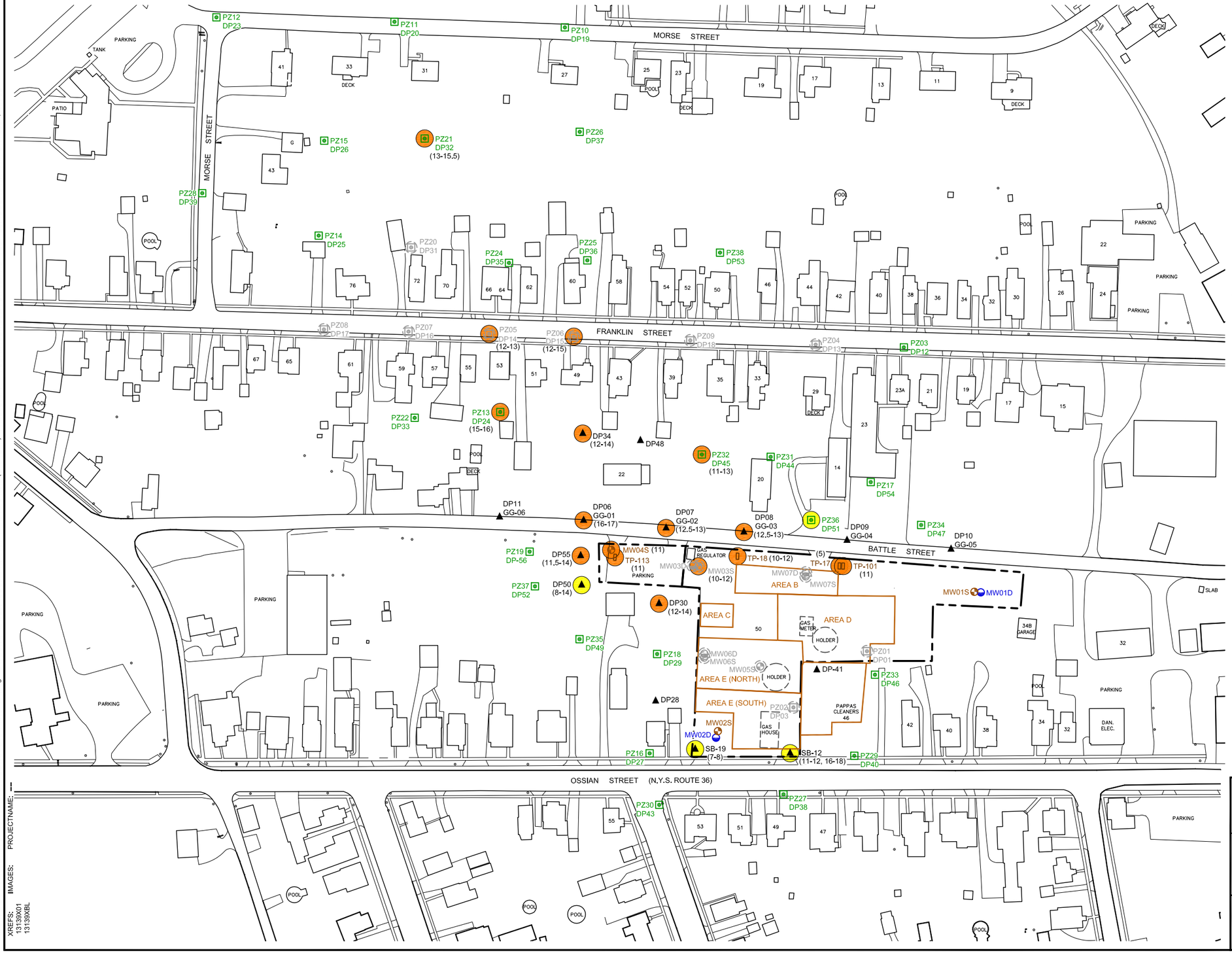
NYSEG
DANSVILLE FORMER MGP SITE
DANSVILLE, NEW YORK

OPERABLE UNIT BOUNDARIES

ARCADIS Design & Consultancy for natural and built assets

FIGURE
3



LEGEND:

- ▲ SOIL BORING LOCATION
- TEST PIT LOCATION
- DEEP MONITORING WELL LOCATION
- SHALLOW MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- ABANDONED OR DESTROYED WELL OR PIEZOMETER LOCATION
- NYSEG PROPERTY BOUNDARY /FORMER MGP SITE
- FORMER MGP STRUCTURE
- LIMITS OF PREVIOUSLY COMPLETED EXCAVATIONS
- SHEENS
- NAPL GLOBULES
- (10-12) DEPTH OF IMPACT (FEET BELOW GRADE)

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG, DATED 10/2/2006, TITLED EXPANDED DANSVILLE MGP SITE, AT A SCALE OF 1"=100'.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ONLY SELECT MONITORING WELL, SOIL BORING, PIEZOMETER, AND TEST PIT LOCATIONS ARE SHOWN ON THE NYSEG PROPERTY AS A MAJORITY OF THE LOCATIONS WERE REMEDIATED IN 2014. SEE PREVIOUS SITE REPORTS FOR ADDITIONAL INVESTIGATION LOCATIONS.
4. ADDITIONAL WELLS OR PIEZOMETERS SHOWN MAY BE ABANDONED OR DESTROYED.

0 150' 300'

GRAPHIC SCALE

NYSEG
DANSVILLE FORMER MGP SITE (OU-2)
DANSVILLE, NEW YORK
FEASIBILITY STUDY REPORT

EXTENT OF VISUAL IMPACTS

ARCADIS

FIGURE 4

CITY:SYRACUSE, NY DIV/GROUP:ENV/IM+DV DB:R. ALLEN LD:(Opt) PIC:(Opt) PM:B. AHRENS TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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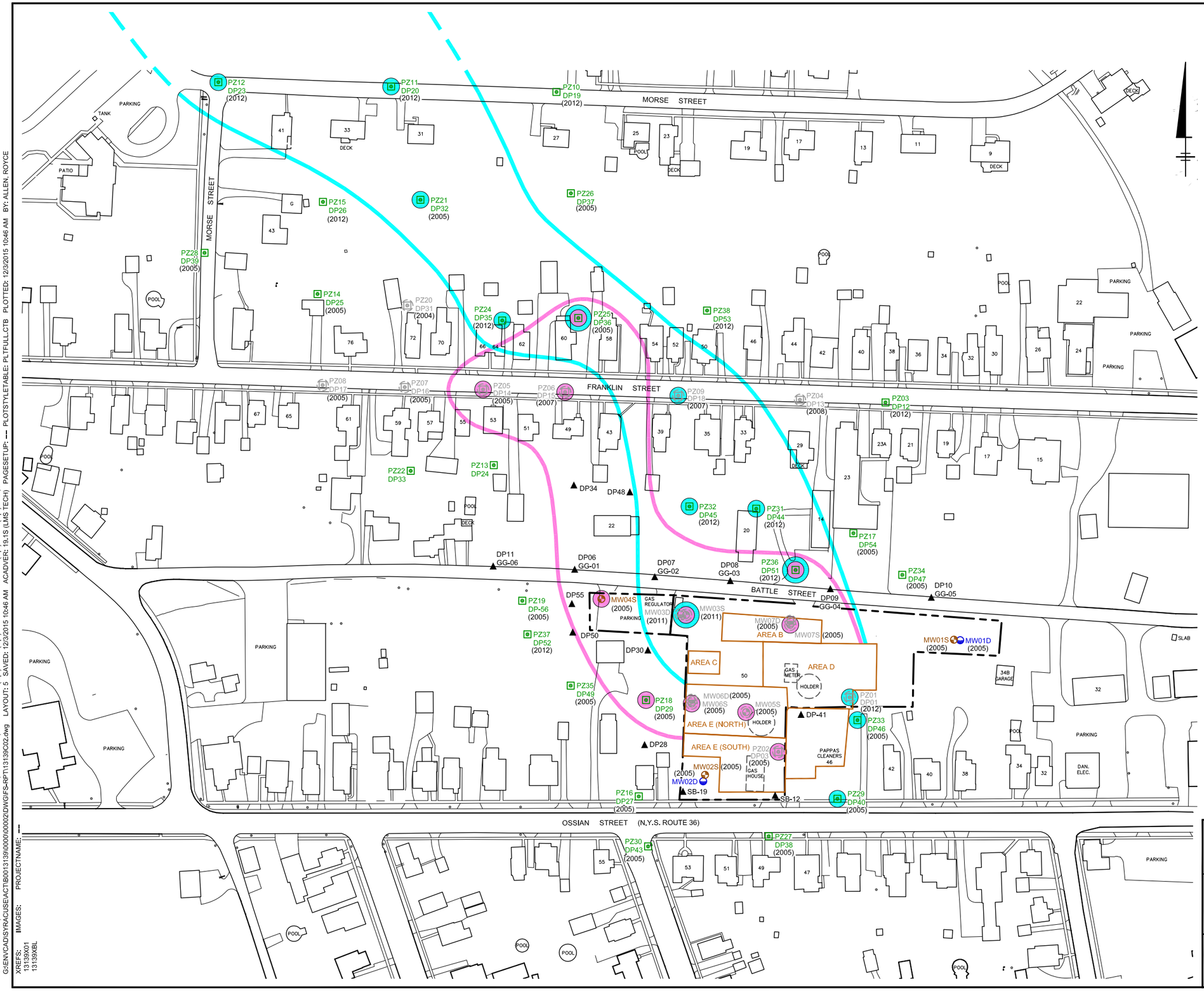
XREFS: 13139X01 13139XBL IMAGES: PROJECTNAME: ACADVER: 19.1S (LMS TECH)



LEGEND:

- SOIL BORING LOCATION
- DEEP MONITORING WELL LOCATION
- SHALLOW MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- ABANDONED OR DESTROYED WELL OR PIEZOMETER LOCATION
- NYSEG PROPERTY BOUNDARY / FORMER MGP SITE
- FORMER MGP STRUCTURE
- LIMITS OF PREVIOUSLY COMPLETED EXCAVATIONS
- LOCATION CONTAINING ONE OR MORE BTEX/PAH COMPOUND GREATER THAN NYSDEC CLASS GA STANDARDS OR GUIDANCE VALUE
- APPROXIMATE EXTENT OF GROUNDWATER CONTAINING BTEX/PAH COMPOUNDS GREATER THAN NYSDEC CLASS GA STANDARDS AND GUIDANCE VALUES
- LOCATION CONTAINING ONE OR MORE CVOC COMPOUND GREATER THAN NYSDEC CLASS GA STANDARDS OR GUIDANCE VALUE
- APPROXIMATE EXTENT OF GROUNDWATER CONTAINING CVOC COMPOUNDS GREATER THAN NYSDEC CLASS GA STANDARDS AND GUIDANCE VALUES
- (2012) YEAR LAST SAMPLE COLLECTED

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG, DATED 10/2/2006, TITLED EXPANDED DANSVILLE MGP SITE, AT A SCALE OF 1"=100'.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ONLY SELECT MONITORING WELL, SOIL BORING, PIEZOMETER, AND TEST PIT LOCATIONS ARE SHOWN ON THE NYSEG PROPERTY AS A MAJORITY OF THE LOCATIONS WERE REMEDIATED IN 2014. SEE PREVIOUS SITE REPORTS FOR ADDITIONAL INVESTIGATION LOCATIONS.
4. ADDITIONAL WELLS OR PIEZOMETERS SHOWN MAY BE ABANDONED OR DESTROYED.

0 150' 300'

GRAPHIC SCALE

NYSEG
DANSVILLE FORMER MGP SITE (OU-2)
DANSVILLE, NEW YORK
FEASIBILITY STUDY REPORT

EXTENT OF GROUNDWATER IMPACTS

ARCADIS

FIGURE
5

CITY:SYRACUSE, NY DIV/GROUP:ENV/IM-DIV DB:R. ALLEN, R. BASSETT, R. ALLEN LD:(Opt) PIC:(Opt) PM:B. AHRENS TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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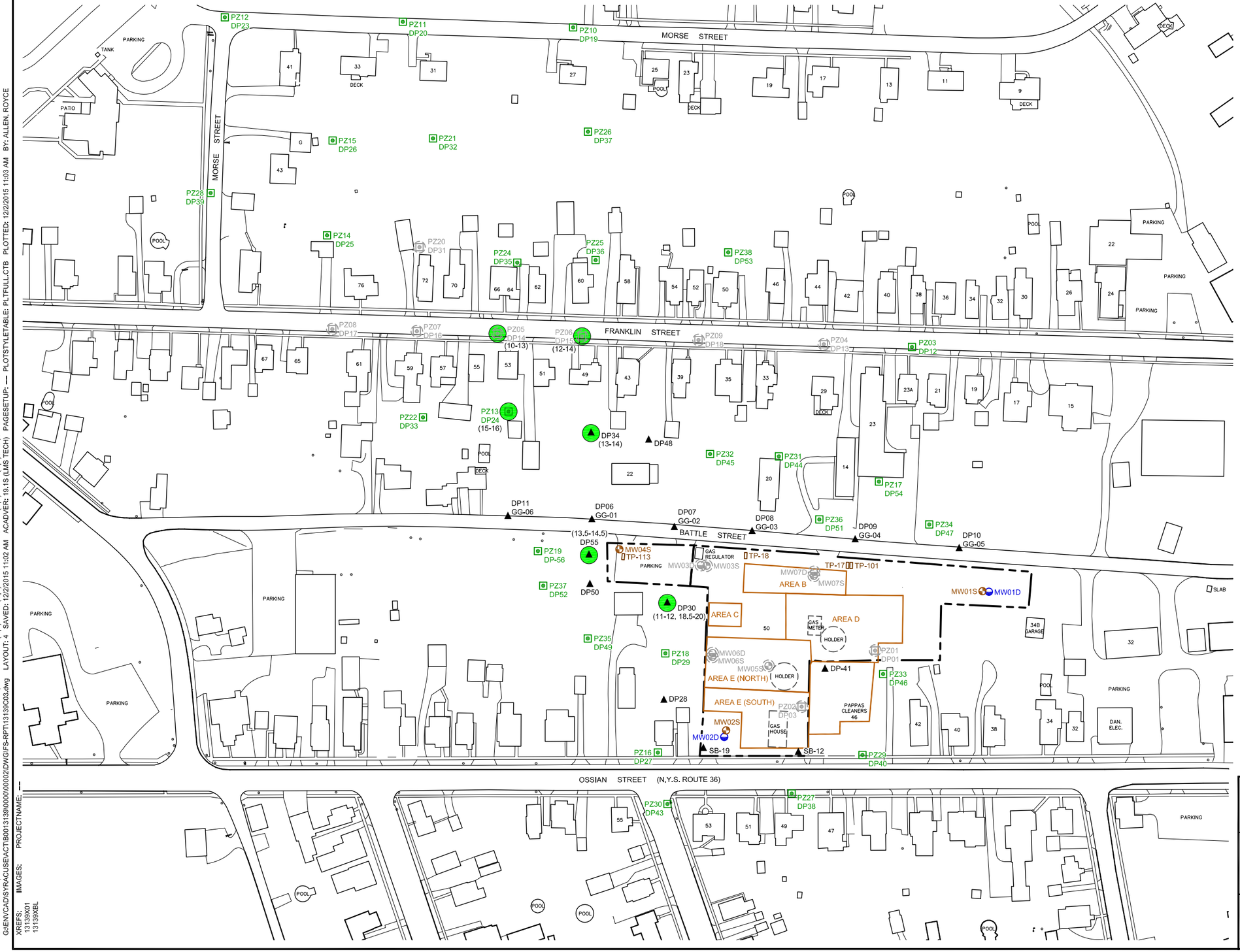

LEGEND:

- ▲ SOIL BORING LOCATION
- TEST PIT LOCATION
- DEEP MONITORING WELL LOCATION
- SHALLOW MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- ABANDONED OR DESTROYED WELL OR PIEZOMETER LOCATION
- NYSEG PROPERTY BOUNDARY / FORMER MGP SITE
- FORMER MGP STRUCTURE
- LIMITS OF PREVIOUSLY COMPLETED EXCAVATIONS
- LOCATION CONTAINING ONE OR MORE BTEX/PAH COMPOUND GREATER THAN 6NYCRR PART 375-6 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES
- (10-12) DEPTH OF EXCEEDANCE (FEET BELOW GRADE)

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG, DATED 10/2/2006, TITLED EXPANDED DANSVILLE MGP SITE, AT A SCALE OF 1"=100'.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ONLY SELECT MONITORING WELL, SOIL BORING, PIEZOMETER, AND TEST PIT LOCATIONS ARE SHOWN ON THE NYSEG PROPERTY AS A MAJORITY OF THE LOCATIONS WERE REMEDIATED IN 2014. SEE PREVIOUS SITE REPORTS FOR ADDITIONAL INVESTIGATION LOCATIONS.
4. ADDITIONAL WELLS OR PIEZOMETERS SHOWN MAY BE ABANDONED OR DESTROYED.

0 150' 300'

GRAPHIC SCALE

NYSEG
DANSVILLE FORMER MGP SITE (OU-2)
DANSVILLE, NEW YORK
FEASIBILITY STUDY REPORT

EXTENT OF BTEX AND PAHs > UNRESTRICTED USE SCOs

ARCADIS

FIGURE 6

CITY:SYRACUSE, NY DIV/GROUP:ENV/IM-DV DB:R. ALLEN R. BASSETT, R. ALLEN LD:(Opt) PIC:(Opt) PM:B. AHRENS TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIB\0013139\0000000002\DWG\FS-RPT\13139C03.dwg LAYOUT: 4 SAVED: 12/2/2015 11:02 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/2/2015 11:03 AM BY: ALLEN, ROYCE
XREFS:
13139X01
13139XBL
IMAGES:
PROJECTNAME:-

MORSE STREET

FRANKLIN STREET

BATTLE STREET

OSSIAN STREET (N.Y.S. ROUTE 36)

PZ12 DP23 | PZ11 DP20 | PZ10 DP19 | PZ15 DP26 | PZ21 DP32 | PZ26 DP37 | PZ28 DP39 | PZ14 DP25 | PZ20 DP31 | PZ24 DP35 | PZ27 DP36 | PZ38 DP53 | PZ08 DP17 | PZ07 DP16 | PZ05 DP14 | PZ06 DP15 | PZ09 DP18 | PZ04 DP13 | PZ03 DP12 | PZ22 DP33 | PZ13 DP24 | PZ32 DP45 | PZ31 DP44 | PZ17 DP54 | PZ36 DP51 | PZ34 DP47 | PZ19 DP-56 | PZ37 DP52 | PZ35 DP49 | PZ18 DP29 | PZ33 DP46 | PZ16 DP27 | PZ29 DP40 | PZ30 DP43 | PZ27 DP38

DP34 | DP48 | DP11 GG-06 | DP06 GG-01 | DP07 GG-02 | DP08 GG-03 | DP09 GG-04 | DP10 GG-05 | DP55 | DP30 | DP28 | DP-41

MW04S TP-113 | MW03D | MW03S | TP-18 | MW07D | MW07S | TP-17 | TP-10 | MW01S | MW01D | MW06D | MW06S | MW05S | MW02S | MW02D | SB-19 | SB-12

AREA B | AREA C | AREA D | AREA E (NORTH) | AREA E (SOUTH)

TANK | PARKING | PATIO | DECK | POOL | G | GAS REGULATOR | GAS METER | HOLDER | GAS HOUSE | PAPPAS CLEANERS 46 | 34B GARAGE | SLAB | DAN. ELEC.

LEGEND:

- SOIL BORING LOCATION
- TEST PIT LOCATION
- DEEP MONITORING WELL LOCATION
- SHALLOW MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- ABANDONED OR DESTROYED WELL OR PIEZOMETER LOCATION
- NYSEG PROPERTY BOUNDARY / FORMER MGP SITE
- FORMER MGP STRUCTURE
- LIMITS OF PREVIOUSLY COMPLETED EXCAVATIONS
- APPROXIMATE AREA OF MONIITORED NATURAL ATTENUATION AND COAL TAR MONITORING WELLS (MONITORING WELL LOCATIONS TO BE DECIDED DURING PRELIMINARY DESIGN INVESTIGATION)

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG, DATED 10/2/2006, TITLED EXPANDED DANSVILLE MGP SITE, AT A SCALE OF 1"=100'.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ONLY SELECT MONITORING WELL, SOIL BORING, PIEZOMETER, AND TEST PIT LOCATIONS ARE SHOWN ON THE NYSEG PROPERTY AS A MAJORITY OF THE LOCATIONS WERE REMEDIATED IN 2014. SEE PREVIOUS SITE REPORTS FOR ADDITIONAL INVESTIGATION LOCATIONS.
4. ADDITIONAL WELLS OR PIEZOMETERS SHOWN MAY BE ABANDONED OR DESTROYED.

0 150' 300'

GRAPHIC SCALE

NYSEG
DANSVILLE FORMER MGP SITE (OU-2)
DANSVILLE, NEW YORK
FEASIBILITY STUDY REPORT

Alternative 3 - Monitored Natural Attenuation and Coal Tar Monitoring

FIGURE 7

CITY:SYRACUSE, NY DIV/GROUP:ENV/IM-DV DB:R. ALLEN, R. BASSETT, R. ALLEN LD:(Opt) PIC:(Opt) PM:B. AHRENS TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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CITY:SYRACUSE, NY DIV/GROUP:ENV/IM-DV DB:R. ALLEN, R. BASSETT, R. ALLEN LD:(Opt) PIC:(Opt) PM:B. AHRENS TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENV\CAD\SYRACUSE\ACT\B0013139\0000000002\DWG\FS-RPT\13139C04.dwg LAYOUT: 6 SAVED: 12/2/2015 4:24 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/2/2015 4:24 PM BY: ALLEN, ROYCE
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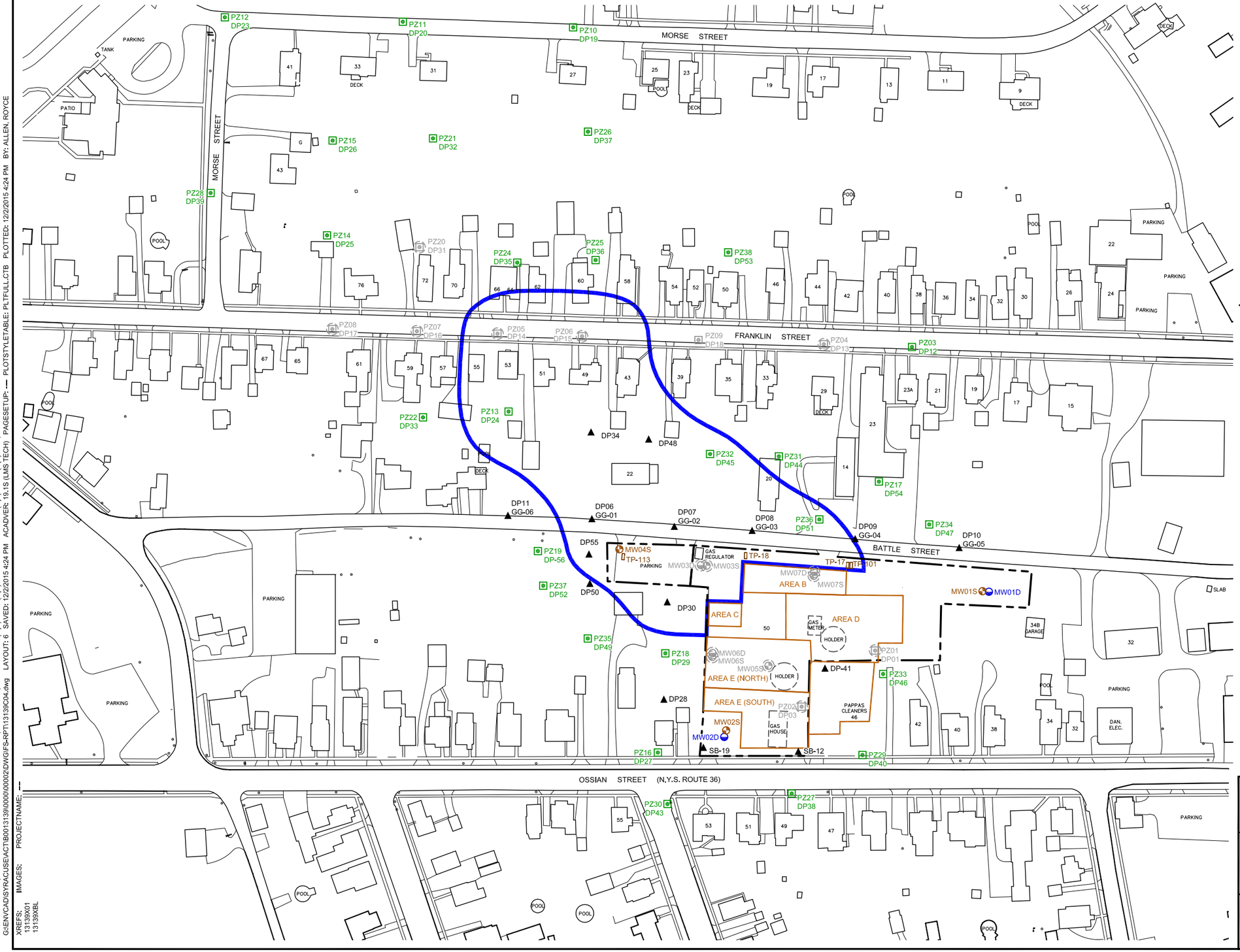

LEGEND:

- SOIL BORING LOCATION
- TEST PIT LOCATION
- DEEP MONITORING WELL LOCATION
- SHALLOW MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- ABANDONED OR DESTROYED WELL OR PIEZOMETER LOCATION
- NYSEG PROPERTY BOUNDARY / FORMER MGP SITE
- FORMER MGP STRUCTURE
- LIMITS OF PREVIOUSLY COMPLETED EXCAVATIONS
- APPROXIMATE EXCAVATION LIMITS

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG, DATED 10/2/2006, TITLED EXPANDED DANSVILLE MGP SITE, AT A SCALE OF 1"=100'.
2. ALL LOCATIONS ARE APPROXIMATE.
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4. ADDITIONAL WELLS OR PIEZOMETERS SHOWN MAY BE ABANDONED OR DESTROYED.

0 150’ 300’

GRAPHIC SCALE

NYSEG
DANSVILLE FORMER MGP SITE (OU-2)
DANSVILLE, NEW YORK
FEASIBILITY STUDY REPORT

ALTERNATIVE 4

ARCADIS

FIGURE 8

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

NYSEG - Dansville MGP Site
Operable Unit No. 2: Onsite and Offsite Soil and Groundwater
Dansville, Livingston County, New York
Site No. 826012

The Proposed Remedial Action Plan (PRAP) for the NYSEG Dansville 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 10, 2017. The PRAP outlined the remedial measure proposed for the contaminated off-site soil and groundwater at the NYSEG Dansville MGP site.

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

A public meeting was held on February 21, 2017, which included a presentation of the remedial investigation (RI) and feasibility study (FS) for the NYSEG Dansville MGP site as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 13, 2017.

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 March 13, 2017 public meeting:

COMMENT 1: Will you tear down all the properties? My parents live at 47 Ossian Street.

RESPONSE 1: The proposed remedy does not require demolition of surrounding properties.

COMMENT 2: Is the green area (on Figure 3) OU1? I heard incessant pounding for a year for the OU1 cleanup remedy activities.

RESPONSE 2: The green area on Figure 3 is the Operable Unit No. 1 (OU1) remediation area. The proposed remedy for Operable Unit No. 2 (OU2) does not require excavation work; therefore, it is anticipated that noise and duration of the OU2 remedy will be much less than that of OU1.

COMMENT 3: Is the blue line (on Figure 3) a property line?

RESPONSE 3: Yes, that is the NYSEG property line.

COMMENT 4: Will there always be residue at the site and will the groundwater plume eventually reach to the Dansville Municipal Airport?

RESPONSE 4: The proposed remedy includes in-situ enhanced biodegradation to treat benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbon (PAH) compounds in groundwater. It is anticipated that over time, the remaining contamination will degrade to non-toxic substances. A monitoring program will be implemented to ensure any remaining contamination remains stable and does not migrate beyond the present boundaries.

COMMENT 5: Will you inject the material for in-situ enhanced biodegradation?

RESPONSE 5: An oxygen release compound or similar material will be placed into the subsurface via application wells.

COMMENT 6: How many application wells will be installed? 5,000? 100? 10? Will they be installed over the whole area?

RESPONSE 6: The specific number and location of application wells will be evaluated as part of the remedial design. It is anticipated that approximately 20 wells will be installed over the entire OU2 area.

COMMENT 7: How big are the application wells?

RESPONSE 7: The diameter and depth of each well will be determined during the remedial design. Typical application wells are constructed of one to two inch diameter PVC piping. It is anticipated that the wells will be installed to a depth of between 15 and 20 feet below grade.

COMMENT 8: Where will the wells be installed?

RESPONSE 8: The application wells will be installed within roadways, right-of-ways, and select locations on private property over the entire OU2 area. The specific locations will be evaluated as part of the remedial design. An oxygen release compound will be applied manually into the wells for dispersion into the subsurface.

COMMENT 9: Will you inject oxygen into the application wells?

RESPONSE 9: An oxygen releasing compound will be placed in solid or liquid form into the application wells.

COMMENT 10: Are the bacteria already in the ground?

RESPONSE 10: Yes, the remedy will rely on naturally occurring bacteria to degrade the contaminants. The enhanced bioremediation process will help this process by stimulating the growth of rate of the naturally occurring microbial populations.

COMMENT 11: Will the compound being placed into the application wells quickly release oxygen to aid the bacteria in biodegradation?

RESPONSE 11: The oxygen releasing compound is typically designed to release dissolved oxygen slowly over an extended period of time.

COMMENT 12: Does the oxygen release compound spread well?

RESPONSE 12: The radius of influence of the oxygen release compound will be determined during the remedial design. Site geology and hydrogeology influence the distance that the oxygen release compound will travel.

COMMENT 13: When will the remedial activities begin? Will you initially install the wells and then come back six months later?

RESPONSE 13: The application wells are currently scheduled to be installed during the summer of 2017. Following installation of the wells, regular site visits will be performed to conduct recovery and monitoring activities until it is determined there is no remaining contamination or that the contamination remaining at the site has reached a stable state.

COMMENT 14: How long will the remedial activities take? Will it take an hour for each well?

RESPONSE 14: The length of time it takes to install an application well is dependent on the geology of the site and the depth to which the well will be installed. It is anticipated each well will take approximately one day to install. Following well installation, regular site visits will be conducted in which personnel will be at each application well for approximately one hour to conduct the monitoring and sampling activities.

COMMENT 15: How deep will each well be installed? Will they be installed in bedrock?

RESPONSE 15: The depth of each application well will be determined during the remedial design phase of this project and will be based on the depth where contamination found during the site investigation. It is anticipated the wells will be installed to a depth of between 15 and 20 feet below grade. Bedrock has not been encountered at the site.

COMMENT 16: What if someone is excavating their basement?

RESPONSE 16: Contamination in OU2 was observed in subsurface soil at depths from approximately 11 to 17 feet below ground surface. Due to the depth to contamination, it is not anticipated that someone excavating a basement will come into contact with contaminated soil. In any case, a Site Management Plan, which will include an Excavation Plan and an agreement with site impacted property owners, will be in place. The plan will provide guidelines for management of future excavations in the site affected areas.

Mr. Kevin McCarty, a student at the Rochester Institute of Technology, submitted an email dated February 26, 2017 which included the following comments:

COMMENT 17: 1,3-butadiene should be investigated for at the site. It is a carcinogenic volatile organic compound which has been correlated with the presence of benzene.

RESPONSE 17: 1,3-butadiene is correlated to benzene through its production by the cracking of petroleum and is not known to be associated with manufactured gas plant waste.

COMMENT 18: There is still a chance of non-dietary injection of polycyclic aromatic hydrocarbons from the environment, in particular from children in the area.

RESPONSE 18: Contamination in OU2 was observed in subsurface soil at depths from approximately 11 to 17 feet below ground surface. Due to the depth to contamination, it is unlikely children will come in contact with the contaminated soil.

COMMENT 19: The investigation for the site showed a concern for possible contamination of VOCs into soil vapor, causing an issue for indoor air quality. These contaminants need to be cleaned up before they make an impact on individuals on the site or in the area.

RESPONSE 19: The potential for soil vapor intrusion in homes found in OU2 has been addressed as part of the remediation of the Pappa's Dry Cleaners site (NYSDEC site #828018). For more information on the Pappa's Dry Cleaners site go to: http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3 and enter the site number. The site is currently vacant; however, soil vapor intrusion will be evaluated for any future buildings and appropriate actions will be taken as necessary.

Ms. Christine Schultz, a student at from State University of New York at Geneseo, submitted an email dated February 27, 2017 which included the following comments:

COMMENT 17: Where does the money for remediation come?

RESPONSE 17: As part of a Consent Order between the Department and New York State Electric & Gas (NYSEG) the property owner, NYSEG, will pay site cleanup including the State oversight costs.

APPENDIX B

Administrative Record

Administrative Record

NYSEG - Dansville MGP Site
Operable Unit No. 2: Onsite and Offsite Soil and Groundwater
Dansville, Livingston County, New York
Site No. 826012

1. Proposed Remedial Action Plan for the NYSEG – Dansville MGP site, Operable Unit No. 02, dated February 2017, prepared by the Department.

2. Order on Consent, Index No. DO-000209309, between the Department and NYSEG, executed on November 21, 1996.

3. "Supplemental Remedial Investigation of Operable Unit 1", May 2006, Ish Inc.

4. "Soil Gas Sampling at Operable Unit 2 (OU2)", October 2006, Ish Inc.

4. "Feasibility Study Report Operable Unit No. 2", September 2016, Arcadis.

5. Fact Sheet, February 2017, Announcing PRAP public comment period.

6. Email dated February 26, 2017 from Kevin McCarty of Rochester Institute of Technology.

7. Email dated February 27, 2017 from Christine Schultz of State University of New York at Geneseo.