RECORD OF DECISION

Batavia Former MGP
State Superfund Project
Batavia, Genesee County
Site No. 819019
March 2020

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

DECLARATION STATEMENT - RECORD OF DECISION

Batavia Former MGP
State Superfund Project
Batavia, Genesee County
Site No. 819019
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Statement of Purpose and Basis

This document presents the remedy for the Batavia Former 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 the Batavia Former 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. Remedial Design

A remedial design program, which includes a pre-design investigation (PDI) to investigate the subsurface soil adjacent to the gas holder office building, 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

In-situ solidification (ISS) will be implemented in the northeast portion of the site, in an area of approximately 1,200 square-feet, in the vicinity of the former tar tank/tar house (Figure 4). The treatment zone will extend vertically from the limits of the removal conducted under remedial element 3, approximately 4 feet below grade, to where the soils transition from sand and gravel to sandy silt/clayey silt, approximately 15 feet below grade, addressing contaminant sources. The treatment criteria are soil contaminated with non-aqueous phase liquid (NAPL), soil containing total PAHs exceeding 500 ppm, and grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u).

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 solidified mass will then be covered with a cover system as described in remedial element 5 to protect the solidified soil and prevent direct exposure to the solidified mass. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination.

3. Excavation

Excavation and off-site disposal of contaminant source areas, including:
- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- non-aqueous phase liquids;
- soil with visual waste material or non-aqueous phase liquid;
- soil containing total PAHs exceeding 500 ppm;
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Existing pavement and soil will be removed in the area identified for ISS, to a minimum depth of four feet. Soil that satisfies the soil cover requirements of remedy element 5 may be stockpiled and used as cover material.

Soils in the area of TKMW-7, at the southern border of the site, will be excavated to a depth of approximately five feet below grade and disposed of off-site (Figure 4). Confirmatory side-wall and bottom soil samples will be collected to determine the final extent of this excavation.

Soils in the area of the former oil UST, at the southeast corner of the site (Figure 4), will be excavated to an approximate depth of 10 feet and disposed of off-site.

Approximately 660 cubic yards of contaminated soil will be removed from the site.

4. Backfill

On-site soil which does not exceed the above excavation and treatment criteria may be used below the cover system described in remedy element 5 and above the water table to backfill the excavation to the extent that a sufficient volume of on-site soil is available and establish the designed grades at the site.

On-site soil which does not exceed the above excavation and treatment criteria and the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, including below the water table, to backfill the excavation or re-grade the site.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

The site will be re-graded to accommodate installation of a cover system as described in remedy element 5.

5. Cover System

A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

Where the soil cover is required over the ISS treatment area, it will consist of a minimum of four feet of soil meeting the SCOs for commercial use. For areas where solidified material underlies the cover, the solidified material itself will serve as the demarcation layer due to the nature of the material.

6. Monitored Natural Attenuation

Groundwater contamination (remaining after soil remediation) will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the (biological activity) breaking down the contamination. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of time (5 years). Reports of the attenuation will be provided

annually, and active remediation will be proposed if it appears that natural processes alone will not address the groundwater contamination. The contingency remedial action will depend on the information collected, but it is currently anticipated that In-Situ Chemical Oxidation (ISCO) or an equivalent in-situ treatment would be proposed as the contingency remedial action.

7. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve commercial cleanup at a minimum and will include engineering controls, an environmental easement, and site management plan as described below.

8. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property will:

- require 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);
- allow the use and development of the controlled property for commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict 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
- require compliance with the Department approved Site Management Plan.

9. Site Management Plan

A Site Management Plan is required, which includes the following:

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

Institutional Controls: The Environmental Easement discussed in remedy element 8 above, and an agreement with the off-site property owner to implement any necessary site management on the off-site property.

Engineering Controls: The ISS area discussed in remedy element 2 and the cover system discussed in remedy element 5 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;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- a provision that should a building foundation or building slab be removed in the future, a

cover system consistent with that described in remedy element 5 above will be placed in any areas where the upper one foot of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- a provision for subsurface soil investigation beneath the on-site office building when or if the building becomes vacant, or is demolished;
- a provision for removal or treatment of the source material located under the existing on-site building if the building is ever demolished or becomes vacant;
- a provision for evaluation of the potential for soil vapor intrusion for any future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision should redevelopment occur to ensure no soil exceeding protection of groundwater concentrations will remain below storm water retention basin or infiltration structures;
- 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;
- monitoring for vapor intrusion for any future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above; and
- a schedule of monitoring and frequency of 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 23, 2020

Date

Michael J. Ryan, P.E., Director
Division of Environmental Remediation

RECORD OF DECISION

Batavia Former MGP
Batavia, Genesee County
Site No. 819019
March 2020

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. Contaminants include hazardous waste and/or petroleum.

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 repository:

Richmond Memorial Library
Attn: Robert Conrad
19 Ross Street
Batavia, NY 14020
Phone: (585) 343-9550

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 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 Batavia Former MGP site is located at 7 Evans Street (formerly known as 11 Evans Street), in Batavia, Genesee County, New York. The 1.16-acre site is bordered to the south by railroad tracks that run east-west and various professional retail and commercial establishments to the north and east. Immediately beyond the commercial zone to the north and east, and adjacent to the site south and west, are residential neighborhoods.

Site Features: The site is currently in active use, with one of the former gasholder structures being occupied by a doctor's office. The majority of the site consists of a parking lot.

Current Zoning and Land Use: The site is zoned for commercial use. It is located in an urban area and immediately surrounded by other commercial properties, community services, and storage warehouse facilities. The Ellicott Station Brownfield Cleanup site (#C819021) borders the site to the east. Beyond the commercial zone to the south and west are residential neighborhoods.

Past Uses of the Site: The Batavia Gas Light Company, which eventually became the Batavia Gas and Electric Company, operated the original gasholder which was built in 1855 and held 13,500 cubic feet of gas.

In 1878, the Batavia Gas and Electric Company built a new gasholder with a capacity of 35,000 cubic feet.

In 1885, the Batavia Gas and Electric Company constructed a new gas works to manufacture gas from crude petroleum.

Sometime after 1909, when MGP operations ceased, Roberts Brothers Flouring Mills took over operation of the buildings and property making up the site, followed by Granger and Company by 1931.

In 2001, R&J Enterprises of Batavia, LLC acquired the property.

Site Geology and Hydrogeology: The site geology consists of fill, varying in thickness from 4-10 feet, overlaying native soil, which generally consists of a sandy silt, silty sand, or sand with silt and gravel. The deeper fill materials were present in the northeastern portion of the site in the vicinity of the former tar house. No fill appeared to be present along the western portion of the site. The fill consists of intermixed sand, silt, clay, and gravel, with varying amounts of brick, coal fragments, wood, concrete, cinders, and other debris. Bedrock depth and type was not investigated as part of the RI, but regional geology indicates that bedrock is present at a depth of approximately 30 feet bgs. One soil boring (SB-5) encountered fractured shale at 30.2 feet bgs. Groundwater was observed between approximately 7-8 feet below ground surface (bgs) and flows to the south-southeast. Public water is supplied to the site by the City of Batavia.

A site location map is attached as Figure 1. Figure 2 shows the former MGP structures. Figure 3 presents the groundwater flow direction.

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, an alternative that restricts the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the remedial investigation (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:

R&J Enterprises of Batavia, LLC

The Department and R&J Enterprises of Batavia, LLC entered into a Consent Order on March 05, 2014. The Order obligates the responsible party to implement a full remedial program.

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-FFS 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
- indoor air
- sub-slab 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 contaminants of concern identified at this site are:

coal tar
naphthalene
benzene
ethylbenzene
xylene (mixed)
benzo(a)pyrene
benzo(a)anthracene
benzo(b)fluoranthene
dibenz[a,h]anthracene
polycyclic aromatic hydrocarbons (PAHS), total

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 the Site.

Nature and Extent of Contamination:

Based upon investigations conducted to date, the primary contaminant of concern is coal tar.

Soil- Coal tar was observed in a soil boring adjacent to the former tar tank structures. Elevated levels of MGP constituents, including benzene, naphthalene and polycyclic aromatic hydrocarbons (PAHs) were detected in on-site soil. Contaminated soils were found at 10-14 ft below ground surface (bgs) with concentrations of naphthalene and benzene as high as 3,800 parts per million (ppm) and 150 ppm, respectively. Elevated levels of PAHs were found in the shallow sub-surface soils at 2-5 ft bgs (TKMW-7) at the southern border of the site, with five PAH compounds exceeding commercial soil cleanup objectives (SCOs) and a total PAH concentration of 637.5 ppm. During the investigation of the MGP site, monitoring well MW-1, located at the former tar house, near the property boundary contained evidence of the presence of non-aqueous phase liquid (NAPL) in the form of mobile coal tar. Soil data from the adjacent

brownfield cleanup program (BCP) investigation at Ellicott Station, site no. C819021, indicates there is no site-related coal tar or NAPL on the adjacent BCP property.

Groundwater- Coal tar has entered a monitoring well installed adjacent to the former tar house/tar tank, indicating the likely presence of mobile coal tar in the subsurface, east of the on-site office building (former gasholder). Elevated levels of MGP constituents were detected elsewhere in on-site groundwater. Groundwater samples collected from MW-2, located near the historic oil underground storage tank (UST), showed elevated detections of volatile organic compounds (VOCs). Concentrations of 1,2,4-trimethylbenzene (25 parts per billion (ppb)), 1,3,5-trimethylbenzene (9 ppb), and m,p-xylene (5.4 ppb), all of which exceed New York State Water Quality Standards. Groundwater samples collected from a monitoring well located adjacent to the eastern border of the site, about 20 feet north of the historic UST also contained elevated levels of VOCs. Concentrations of benzene (25 ppb), ethylbenzene (11 ppb), isopropylbenzene (8.9 ppb), total xylene (21 ppb), and naphthalene (320 ppb) in this well also exceed NYS Water Quality Standards. Concentrations of benzene (2.6 ppb) in a well located in the center of the site slightly exceed standards. The monitoring well adjacent to the former tar tank structures was not sampled due to coal tar infiltrating the well, as noted above. While there is evidence of VOC contamination migrating off-site in the groundwater to the east onto the adjacent BCP site, NAPL has not been found to be migrating off-site. Groundwater samples from wells on the BCP site, near the border between the BCP site and the MGP site, near the former UST in the southeast corner of the site, contained 92 ppb naphthalene, 5.5 ppb benzene, and 8.2 ppb isopropylbenzene, which are compounds that were also found in on-site groundwater exceeding standards.

Soil Vapor and Indoor Air- Sub-slab vapor and indoor air sampling in the operating office building was conducted on March 18-19, 2015. The indoor air sample for the office lobby reported exceedances of the NYSDOH 90th percentile comparison values for indoor air for 1,1-Dichloroethene at 0.52 $\mu g/m^3$, 1,2-Dichlorobenzene at 1.2 $\mu g/m^3$, 1,2-Dichloroethene, Total at 1.6 $\mu g/m^3$, chloroethane at 2.6 $\mu g/m^3$, and cis-1,2-Dichloroethene at 1.6 $\mu g/m^3$. The indoor air sample for the office utility room reported exceedances of the NYSDOH 90th percentile comparison values for indoor air for chloroethane at 1.9 $\mu g/m^3$. None of these exceedances are MGP-related. Based upon review of the sampling data, no further actions are necessary to address the potential for exposure associated with soil vapor intrusion.

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.*

Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Access to the site is not restricted and people may contact contaminants in the soil by touching exposed soil, digging, or otherwise disturbing the soil. 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. Environmental sampling indicates soil vapor intrusion is not a concern for the on-site building or 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.
- Prevent the discharge of contaminants to surface water.
- 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.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

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 RI-FFS 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 (ISS) and Excavation of Source Areas remedy.

The estimated present worth cost to implement the remedy is $363,000. The cost to construct the remedy is estimated to be $323,000 and the estimated average annual cost is $8,000.

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program, which includes a pre-design investigation (PDI) to investigate the subsurface soil adjacent to the gas holder office building, 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

In-situ solidification (ISS) will be implemented in the northeast portion of the site, in an area of approximately 1,200 square-feet, in the vicinity of the former tar tank/tar house (Figure 4). The treatment zone will extend vertically from the limits of the removal conducted under remedial element 3, approximately 4 feet below grade, to where the soils transition from sand and gravel to sandy silt/clayey silt, approximately 15 feet below grade, addressing contaminant sources. The treatment criteria are soil contaminated with non-aqueous phase liquid (NAPL), soil containing total PAHs exceeding 500 ppm, and grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u).

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 solidified mass will then be covered with a cover system as described in remedial element 5 to protect the solidified soil and prevent direct exposure to the solidified mass. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination.

3. Excavation

Excavation and off-site disposal of contaminant source areas, including:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- non-aqueous phase liquids;
- soil with visual waste material or non-aqueous phase liquid;
- soil containing total PAHs exceeding 500 ppm;
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Existing pavement and soil will be removed in the area identified for ISS, to a minimum depth of four feet. Soil that satisfies the soil cover requirements of remedy element 5 may be stockpiled and used as cover material.

Soils in the area of TKMW-7, at the southern border of the site, will be excavated to a depth of approximately five feet below grade and disposed of off-site (Figure 4). Confirmatory side-wall and bottom soil samples will be collected to determine the final extent of this excavation.

Soils in the area of the former oil UST, at the southeast corner of the site (Figure 4), will be excavated to an approximate depth of 10 feet and disposed of off-site.

Approximately 660 cubic yards of contaminated soil will be removed from the site.

4. Backfill

On-site soil which does not exceed the above excavation and treatment criteria may be used below the cover system described in remedy element 5 and above the water table to backfill the excavation to the extent that a sufficient volume of on-site soil is available and establish the designed grades at the site.

On-site soil which does not exceed the above excavation and treatment criteria and the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, including below the water table, to backfill the excavation or re-grade the site.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

The site will be re-graded to accommodate installation of a cover system as described in remedy element 5.

5. Cover System

A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

Where the soil cover is required over the ISS treatment area, it will consist of a minimum of four feet of soil meeting the SCOs for commercial use. For areas where solidified material underlies the cover, the solidified material itself will serve as the demarcation layer due to the nature of the material.

6. Monitored Natural Attenuation

Groundwater contamination (remaining after soil remediation) will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the (biological activity) breaking down the contamination. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of time (5 years). Reports of the attenuation will be provided annually, and active remediation will be proposed if it appears that natural processes alone will not address the groundwater contamination. The contingency remedial action will depend on the

information collected, but it is currently anticipated that In-Situ Chemical Oxidation (ISCO) or an equivalent in-situ treatment would be proposed as the contingency remedial action.

7. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve commercial cleanup at a minimum and will include engineering controls, an environmental easement, and site management plan as described below.

8. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property will:

- require 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);
- allow the use and development of the controlled property for commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict 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
- require compliance with the Department approved Site Management Plan.

9. Site Management Plan

A Site Management Plan is required, which includes the following:

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

Institutional Controls: The Environmental Easement discussed in remedy element 8 above, and an agreement with the off-site property owner to implement any necessary site management on the off-site property.

Engineering Controls: The ISS area discussed in remedy element 2 and the cover system discussed in remedy element 5 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;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in remedy element 5 above will be placed in

any areas where the upper one foot of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);

- a provision for subsurface soil investigation beneath the on-site office building when or if the building becomes vacant, or is demolished;
- a provision for removal or treatment of the source material located under the existing on-site building if the building is ever demolished or becomes vacant;
- a provision for evaluation of the potential for soil vapor intrusion for any future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision should redevelopment occur to ensure no soil exceeding protection of groundwater concentrations will remain below storm water retention basin or infiltration structures;
- 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;
- monitoring for vapor intrusion for any future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above; and
- a schedule of monitoring and frequency of 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 Standards, Criteria or Guidance (SCGs) for the site. The contaminants are arranged into three categories: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and inorganics (metals). 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.

Source Areas

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

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. Source areas were identified at the site to include the area of the former tar tank/tar house, and the area of the former oil underground storage tank (UST); see Figure 4.

The primary source material found at the site is coal tar: a heavy, oily liquid that was formed as a byproduct of the gas manufacturing process at the former Batavia Manufactured Gas Plant (MGP). Materials such as this are commonly referred to as non-aqueous phase liquids, or NAPLs. 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.

Although coal tar does not readily dissolve in water, certain classes of chemical compounds found in tar will dissolve to some extent. These dissolved constituents are considered groundwater contaminants, and can migrate though the subsurface, following ordinary patterns of groundwater flow.

Visible coal tar was found in the subsurface soils in the area of the former tar tank/tar house. The most heavily impacted interval was from 5 and 15 feet below ground surface. No coal tar or NAPL on the MGP site has migrated off-site; soil samples from the adjacent brownfield cleanup program (BCP) site, Ellicott Station (site # C819021) contained no site-related coal tar or NAPL.

The secondary source material found at the site is petroleum, a feedstock that was consumed by the historic site processes. Strong petroleum-like odors and a sheen on water were found in the area of the former UST. Petroleum-related VOCs have been found in the soil from this area at a concentration that contributes to VOC contamination in groundwater.

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

Groundwater

Groundwater samples were collected from overburden monitoring wells. The samples were collected to assess groundwater conditions on and off-site. The results indicate that some components of the tar have dissolved into the groundwater beneath the site, contaminating the groundwater with volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Groundwater samples from monitoring wells at the site confirm that VOC and PAH contamination is present, as shown in Table 1. One well at the former tar house/tar tank area was not sampled due to NAPL observed during well development.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
1,2,4-Trimethylbenzene	ND – 25	5	1/8
1,3,5-Trimethylbenzene	ND – 9	5	1/8
Benzene	ND – 25	1	3/8
Ethylbenzene	ND – 11	5	1/8
Isopropylbenzene	ND – 8.9	5	1/8
Total Xylenes	ND – 21	5	2/8
SVOCs (PAHs)			
Naphthalene	ND – 320	10	1/8

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).
ND - Not Detected

The primary groundwater contaminants are VOCs and PAHs associated with coal tar source material in the subsurface. The major contributors to VOC and PAH contamination in groundwater are benzene and naphthalene, respectively. As noted in Figure 3, the groundwater contamination is most severe in the immediate vicinity of the former tar house (where NAPL is present) and in the area of the former UST (southeast corner of the site).

Groundwater contamination appears to have migrated off-site to the east onto the adjacent BCP site. However, NAPL has not been found to be migrating off-site. Groundwater samples from wells on the BCP site, near the border between the BCP site and the MGP site, near the site's former UST, at the southeast corner of the site, contained 92 parts per billion (ppb) naphthalene, 5.5 ppb benzene, and 8.2 ppb isopropylbenzene, which were also found in on-site groundwater at levels exceeding NYS Water Quality Standards.

Based on the findings of the RI, the presence of petroleum and coal tar 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: VOCs and SVOCs (PAHs).

Soil

Subsurface soil samples were collected at the site and off-site during the RI. Subsurface soil samples were collected from depths up to 26 feet below ground surface (bgs) to assess the extent of coal tar migration in the subsurface. Figure 4 shows the subsurface soil analytical results. The results confirm that soil is contaminated at levels exceeding the SCOs for commercial use for both individual and total PAHs.

Table 2 – Soil

Detected Constituents	Concentra-tion Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Commercial SCG[c] (ppm)	Frequency Exceeding Commercial SCG	Groundwater SCG[d] (ppm)	Frequency Exceeding Groundwater SCG[d]
VOCs							
1,2,4-Trimethylbenzene	ND – 140	3.6	1/16	190	0/16	3.6	1/16
1,3,5-Trimethylbenzene	ND – 72	8.4	1/16	190	0/16	8.4	1/16
Acetone	ND – 0.11	0.05	2/16	500	0/16	NA	NA
Benzene	ND – 150	0.06	1/16	44	1/16	0.06	1/16
Ethylbenzene	ND – 20	1	2/16	390	0/16	1	2/16
n-Propylbenzene	ND – 5.2	3.9	1/16	500	0/16	NA	NA
Toluene	ND – 140	0.7	1/16	500	0/16	NA	NA
Total Xylenes	ND – 220	0.26	2/16	500	0/16	1.6	2/16
SVOCs (PAHs)							
Acenaphthene	ND – 450	20	1/16	500	0/16	NA	NA
Acenaphthylene	ND – 630	100	1/16	500	1/16	NA	NA
Anthracene	ND – 820	100	1/16	500	1/16	NA	NA
Benzo[g,h,i]perylene	ND – 200	100	1/16	500	0/16	NA	NA
Fluoranthene	ND – 1,400	100	1/16	500	1/16	NA	NA
Fluorene	ND – 780	30	1/16	500	1/16	NA	NA
Naphthalene	ND – 3,800	12	2/16	500	1/16	12	2/16
Phenanthrene	ND – 2,400	100	1/16	500	1/16	NA	NA
Pyrene	ND – 1,200	100	1/16	500	1/16	NA	NA
Benz[a]anthracene	ND – 640	1	5/16	5.6	3/16	NA	NA
Benzo[a]pyrene	ND – 450	1	5/16	1	5/16	NA	NA
Benzo[b]fluoranthene	ND – 530	1	5/16	5.6	3/16	NA	NA
Benzo[k]fluoranthene	ND – 190	0.8	5/16	56	1/16	NA	NA
Chrysene	ND – 520	1	5/16	56	1/16	NA	NA
Dibenz[a,h]anthracene	ND – 69	0.33	4/16	0.56	3/16	NA	NA
Indeno[1,2,3-cd]pyrene	ND – 190	0.5	5/16	5.6	2/16	NA	NA
Total PAHs	ND – 15,270	NA	NA	500	2/16	NA	NA
Inorganics							
Arsenic	2.6 – 16.9	13	2/16	16	2/16	NA	NA
Lead	3.9 – 86.9	63	1/16	1,000	0/16	NA	NA

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 Commercial Use, unless otherwise noted.
d - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
ND - Not Detected
NA - Not applicable

The primary soil contaminants are PAHs and VOCs associated with coal tar and petroleum from the operation of the former MGP. The highest total PAHs concentration was 15,270 parts per million (ppm) in a sample of tar-impacted soils from soil boring SB-8, in the area of the former tar house/tar tank. VOCs were also present in soil.

The highest concentration of benzene was 150 ppm, also at soil boring SB-8, in the area of the former tar house/tar tank. 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, benzene, ethylbenzene, and total xylenes exceeded protection of groundwater SCGs in SB-8, in the area of the former tar house/tar tank, where these VOCs have also exceeded SCGs for groundwater at the site. Ethylbenzene and total xylenes in TKMW-6, in the area of the former UST, exceeded protection of groundwater SCGs, where these VOCs have also exceeded SCGs for groundwater at the site.

Arsenic was detected at concentrations greater than the unrestricted and commercial use SCO in two of the 16 subsurface soil samples. The highest concentration of arsenic was detected at 16.9 ppm.

Based on the findings of the Remedial Investigation, the presence of coal tar 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 and VOCs.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil or groundwater VOC contamination was evaluated by the sampling of soil vapor, sub-slab soil vapor under the on-site structure, and indoor air inside the on-site structure.

Soil vapor and outdoor ambient air samples were collected during the site characterization for field screening in potential source areas. Sub-slab soil vapor under the one-story office building, indoor air, and ambient outdoor air samples were collected during the RI to assess the potential for soil vapor intrusion. Samples were analyzed for VOC analysis by EPA Method TO-15. Soil vapor results from the site characterization indicated that VOCs were present in the subsurface. Soil vapor point SVP-1, in the area of the former tar house/tar tank, contained 25 micrograms per cubic meter ($\mu g/m^3$),of isopropyl alcohol, 4.1 $\mu g/m^3$ 2-butanone, 3 $\mu g/m^3$ toluene, 1.8 $\mu g/m^3$ tetrachloroethylene (PCE), 12.1 $\mu g/m^3$ total xylenes, 4.2 $\mu g/m^3$ n-nonane, 3.1 $\mu g/m^3$ 1,3,5-trimethylbenzene, 11 $\mu g/m^3$ 1,2,4-trimethylbenzene, and 41 $\mu g/m^3$ naphthalene. Soil vapor point SVP-2 at the southeast side of the one-story circular office building, next to soil boring SB-7 reported 4.4 $\mu g/m^3$ propene, 7.4 $\mu g/m^3$ acetonitrile, 3.8 $\mu g/m^3$ 2-butanone, 15 $\mu g/m^3$ benzene, 8.9 $\mu g/m^3$ toluene, 1.5 $\mu g/m^3$ ethylbenzene, 12.8 $\mu g/m^3$ total xylenes, 3.9 $\mu g/m^3$ 1,3,5-trimethylbenzene, 5.7 $\mu g/m^3$ 1,2,4-trimethylbenzene, and 100 $\mu g/m^3$ naphthalene.

The indoor air sample for the office lobby contained exceedances of the NYSDOH Indoor 90th Percentile comparison values for 1,1-Dichloroethene at 0.52 $\mu g/m^3$, 1,2-Dichlorobenzene at 1.2 $\mu g/m^3$, 1,2-Dichloroethene, Total at 1.6 $\mu g/m^3$, chloroethane at 2.6 $\mu g/m^3$, and cis-1,2-Dichloroethene at 1.6 $\mu g/m^3$. The indoor air sample for the office utility room contained exceedances of the NYSDOH Indoor 90th Percentile comparison values for chloroethane at 1.9 $\mu g/m^3$. These chlorinated VOCs are not related to former MGP operations at the site.

In consultation with the NYSDOH May 2017 SVI Decision Matrix A, the detection of 1.6 $\mu g/m^3$ of cis-1,2-Dichloroethene (c12-DCE) in the indoor air sample from the office lobby (and non-detect for the sub-slab vapor) falls under the category of "Identify source(s) and resample or mitigate."

Based on the concentration detected, and 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: In-situ solidification (ISS) and Excavation of Source Areas

This alternative will include in-situ solidification (ISS) to immobilize subsurface coal tar contamination. The ISS process involves mixing of the soil with Portland cement and other bonding agents. When the resulting mixture solidifies, the contaminants contained in the soil are tightly held in a solid, impermeable mass, The ISS process also greatly diminishes soil permeability, effectively isolating the contaminants from contact with groundwater and thus greatly diminishing groundwater contamination. ISS will be implemented to a depth of approximately 15 feet below grade, where the soils transition from sand and gravel to sandy silt/clayey silt, addressing contaminant sources in the northeast area of the site in the area of the former tar tank/tar house.

This alternative will also include the excavation and off-site disposal of other, isolated contaminated areas. Soils in the area of TKMW-7, at the southern border of the site, will be excavated to a depth of approximately 5 feet bgs. Soils in the area of the former oil UST, a contaminant source area, at the southeast corner of the site, as indicated on Figure 4 will be excavated to an approximate depth of 10 feet. Confirmatory side-wall and bottom soil samples will be collected to determine the final extent of the excavation areas.

A site cover will be placed over on-site soils to meet the requirements for commercial use. Where the soil cover is required over the ISS treatment area, it will consist of a minimum of four feet of soil meeting the appropriate SCOs for the site. Existing pavement and soil will be removed in the ISS treatment area, to a minimum depth of four feet to create sufficient space such that soils that undergo ISS are below the frost line.

Monitored natural attenuation (MNA) will be implemented to document the effects of the source removal on levels of contaminants in groundwater. This alternative also includes the implementation of institutional and engineering controls (IC/ECs), including the development and implementation of a Site Management Plan (SMP), and site and groundwater use restrictions pursuant to an environmental easement to prevent human contact with media containing contaminants of concern (COCs) above relevant SCOs. The SMP will include a provision for active in-situ groundwater treatment if it appears natural processes alone will not sufficiently address groundwater concentrations in a reasonable timeframe. The SMP will include a provision for subsurface soil investigation beneath the on-site office building, and, if found, removal or treatment of source material only when the building becomes vacant or is demolished. The SMP will also include an agreement with the off-site property owner to implement any necessary site management on the off-site property.

Subsurface soil data will be collected adjacent to the gas holder office building during the pre-design investigation (PDI) in remedial design to completely characterize the nature and extent of contamination on the site. The remedial alternative may be modified based upon the results of the PDI.

Present Worth: *$363,000*
Capital Cost: *$323,000*
Annual Costs: *$8,000*

Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A, and results in soil meeting the unrestricted soil cleanup objectives listed in Part 375-6.8 (a). This alternative would include excavation and off-site disposal of all soil contamination above the unrestricted soil cleanup objectives. Approximately 6,000 cubic yards (CY) of soil would be excavated to achieve unrestricted soil cleanup objectives. This alternative replaces the ISS treatment from Alternative 2 for the former tar house/tar tank area with excavation. This alternative also has additional excavation areas beyond Alternative 2 to achieve unrestricted use objectives, including the likelihood that demolition of the on-site building will be necessary to excavate beneath it. See Figure 5 for the unrestricted use cleanup excavation footprint.

Subsurface soil data will be collected underneath the gas holder office building during the pre-design investigation (PDI) in remedial design to completely characterize the nature and extent of contamination on the site. The remedial alternative may be modified based upon the results of the PDI.

Because of the completeness of the removal, monitored natural attenuation (MNA) for groundwater would not be part of this alternative. However, groundwater monitoring would be periodically performed for a short period of time (up to 5 years) to verify the effectiveness of the remedy, such as the removal off-site impacts to groundwater. Once all remedial action objectives have been achieved, there will be no institutional or engineering controls, no Site Management, no restrictions, and no periodic review. This remedy will have a minimal annual cost for the post-remedial groundwater monitoring, plus the capital cost.

Present Worth: ..... *$ 1,611,000*
Capital Cost: ..... *$ 1,571,000*
Annual Costs: *$8,000*

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
In-situ solidification (ISS) and Excavation of Source Areas	323,000	8,000	363,000
Restoration to Pre-Disposal or Unrestricted Conditions	1,571,000	8,000	1,611,000

Exhibit D

SUMMARY OF THE SELECTED REMEDY

The Department is selecting Alternative 2, In-situ solidification (ISS) and Excavation of Source Areas as the remedy for this site. Alternative 2 will achieve the remediation goals for the site by the use of ISS and excavation to address subsurface impacts. In addition, a cover system meeting commercial SCOs will be placed over the site. The elements of this remedy are described in Section 7. The selected remedy is depicted in Figure 4.

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 FS 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 does not provide any additional protection and is thus eliminated from further consideration. Alternatives 2 and 3 satisfy this criterion using different techniques. Alternatives 2 and 3 are all protective of public health either through restoration to pre-disposal conditions or through the implementation of protective engineering and institutional controls.

The selected remedy (Alternative 2) satisfies this criterion by solidifying contaminated soils in place (ISS) in the former tar tank/tar house area and excavates contaminated soils from the former UST area and the area of TKMW-7, disposing them off-site. The ISS in the former tar tank/tar house area results in a low permeability monolith that reduces or eliminates mobility of contamination and reduces or eliminates the source of groundwater contamination. Groundwater contamination is the most significant threat to the environment. The placement of a cover system over the site will also decrease the potential for accidental human exposure from uncontrolled future excavation activities.

Alternative 3 would also be protective, because it involves the complete removal of contaminants of concern to Unrestricted Use SCOs at all locations at all depths.

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 2 complies with SCGs to the extent practicable. It addresses source areas of contamination and complies with the restricted use soil cleanup objectives at the surface through construction of a cover system. It also creates the conditions necessary to restore groundwater quality to the extent practicable. Alternative 3 also complies with SCGs.

Because Alternatives 2 and 3 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 3 would rank the highest in terms of long-term effectiveness and permanence, because it would involve the cleanup of the site to unrestricted use SCOs. All sources of groundwater contamination would be removed.

Alternative 2 will rank slightly lower compared to Alternative 3, as one source of groundwater contamination, the former tar house/tar tank area will undergo ISS, not excavation. However, Alternative 2 will have institutional and engineering controls that will increase the long-term effectiveness and permanence, to the point it nearly equals that of Alternative 3.

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 3 would result in complete removal of all contaminants; therefore, it would have complete reduction of toxicity, mobility, and volume of contamination. Alternative 2 involves the solidification of soil into an impermeable mass, which offers a high degree of toxicity and mobility reduction. Alternative 2 will address source material under the existing on-site building, if any, through provisions in the Site Management Plan (SMP). These provisions state that this source material, if found during an SMP investigation, will be removed or treated when the existing on-site building is demolished or becomes vacant.

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 3 would involve the greatest excavation quantities, resulting in the greatest negative short-term impacts, and the largest truck traffic volume. Alternative 3 may also require the demolition of the on-site building to access contamination beneath or immediately adjacent to it, which would also require the relocation of the ongoing business. Alternative 2 will have the least short-term impacts as it requires the smallest amount of volume of soil to be removed from the site, and therefore, the least truck traffic.

In either alternative, the methods available to control the short-term impacts are reliable and effective. Such methods include an odor and dust control plan to prevent vapors, dust, and odors from escaping into the surrounding neighborhood. A community air monitoring plan (CAMP) will also be in place to conduct real-time monitoring for VOCs and particulates (i.e., dust) at the perimeter of the site during the clean-up. The CAMP is intended to provide a measure of protection for the surrounding community, with specific action levels requiring increased monitoring, corrective actions to abate emissions, and/or work shutdown.

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.

For Alternative 3, the excavation of impacted soil adjacent to the foundation of the existing occupied office building poses technical implementability concerns relating to building stability. Excavating to depths to 15 feet below grade in sandy soil poses several technical implementability concerns. Sloughing of excavation walls could occur and shoring/stabilizing excavation sidewalls may be necessary. Should the PDI indicate source material beneath the existing on-site building, this building may need to be demolished and the source removed. Alternative 2 avoids these technical concerns by performing ISS on these soils that are adjacent to the building foundation.

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, at an estimated $363,000, is the most cost-effective option, and also addresses source areas to reduce future groundwater impacts. The most expensive option is Alternative 3, the unrestricted use cleanup, at $1,611,000, more than a million dollars more compared to Alternative 2.

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 property is zoned for commercial use. Alternative 3 would allow for unrestricted land use. Alternative 2 will allow for commercial land use, and an SMP and environmental easement will be required on-site for management of residual contamination.

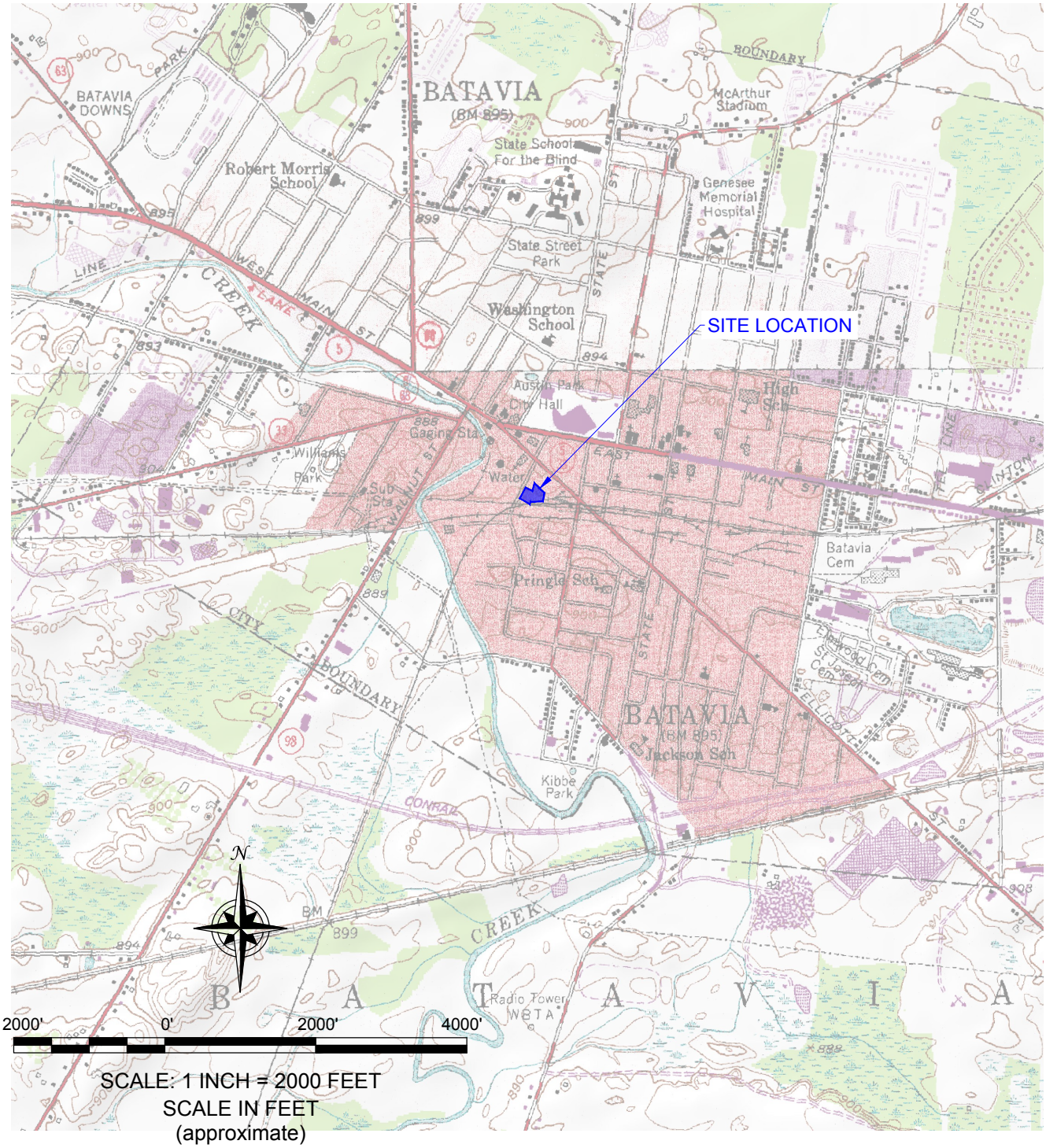
9. Community Acceptance. The final criterion, Community Acceptance, is considered a “modifying criterion” and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary has been prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Alternative 2 is being selected because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion. Alternative 2 was the proposed alternative.

F:\CAD\TurnKey\R&J Enterprises of Batavia\11 Evans (Former Batavia MGP)\RIFS\Figure 1; Site Location & Vicinity Map.dwg, DWG To PDF.pc3

FIGURE 1



TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

PROJECT NO.: 0333-015-001

DATE: DECEMBER 2018

DRAFTED BY: RFL

SITE LOCATION AND VICINTY MAP

REMEDIAL INVESTIGATION / FOCUSED FEASIBILITY STUDY REPORT

FORMER BATAVIA MGP SITE
NYSDEC SITE No. 819019
11 EVANS STREET
BATAVIA, NEW YORK

PREPARED FOR

R&J ENTERPRISES OF BATAVIA, LLC

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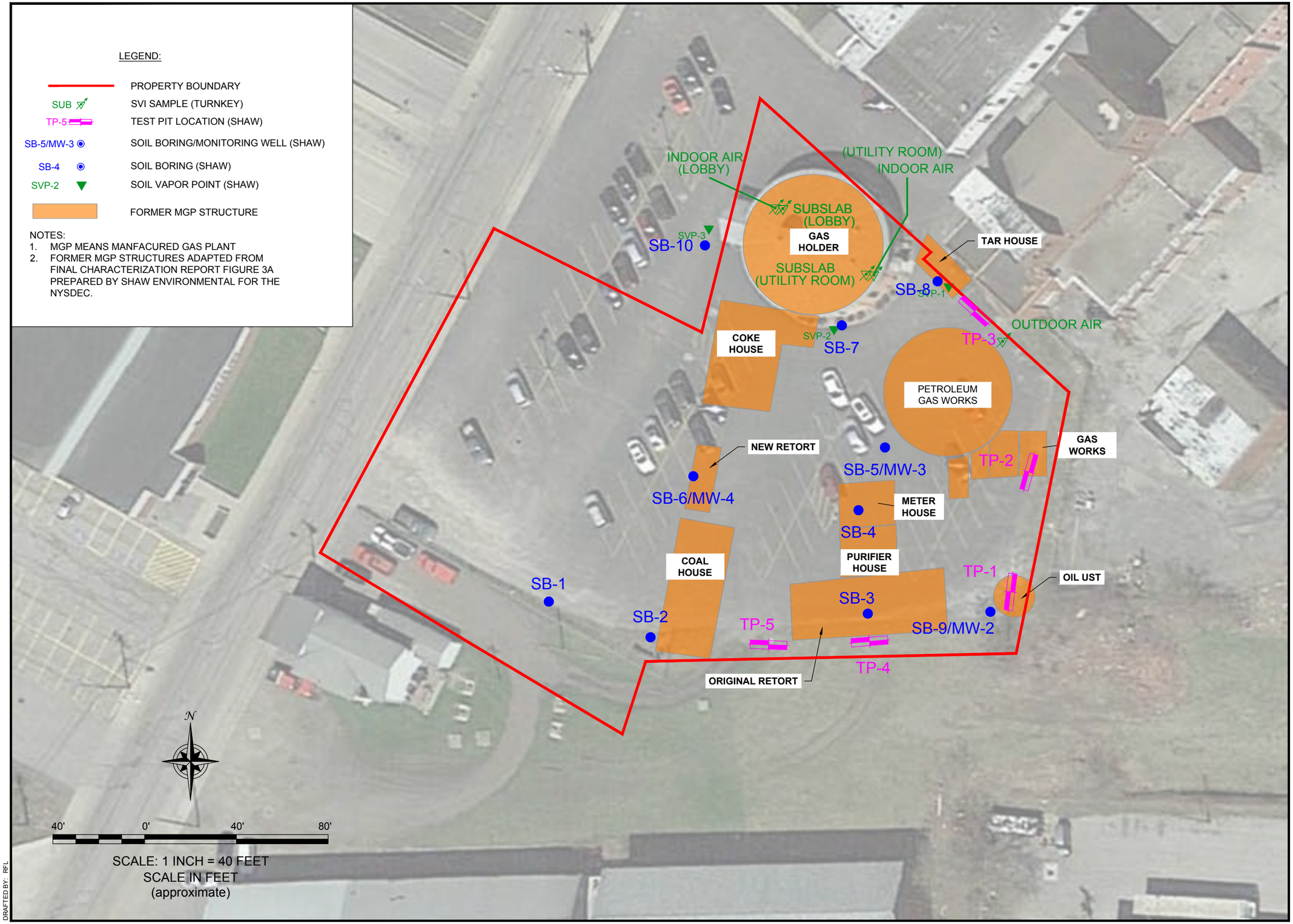
F:\CAD\TurnKey\R&J Enterprises of Batavia\11 Evans (Former Batavia MGP)\RIFS\Figure 3; Former MGP and Historic Sampling Locations.dwg, DWG To PDF.pc3

LEGEND:

- PROPERTY BOUNDARY
- SUB — SVI SAMPLE (TURNKEY)
- TP-5 — TEST PIT LOCATION (SHAW)
- SB-5/MW-3 — SOIL BORING/MONITORING WELL (SHAW)
- SB-4 — SOIL BORING (SHAW)
- SVP-2 — SOIL VAPOR POINT (SHAW)
- FORMER MGP STRUCTURE

NOTES:
1. MGP MEANS MANFACURED GAS PLANT
2. FORMER MGP STRUCTURES ADAPTED FROM FINAL CHARACTERIZATION REPORT FIGURE 3A PREPARED BY SHAW ENVIRONMENTAL FOR THE NYSDEC.



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SUITE 300
BUFFALO, NY 14218
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JOB NO.: 0333-015-001

FORMER MGP STRUCTURES AND PREVIOUS INVESTIGATION LOCATIONS

REMEDIAL INVESTIGATION AND FOCUSED FEASIBILITY STUDY REPORT
FORMER BATAVIA MGP SITE
NYSDEC SITE No. 819019
11 EVANS STREET
BATAVIA, NEW YORK
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FIGURE 2

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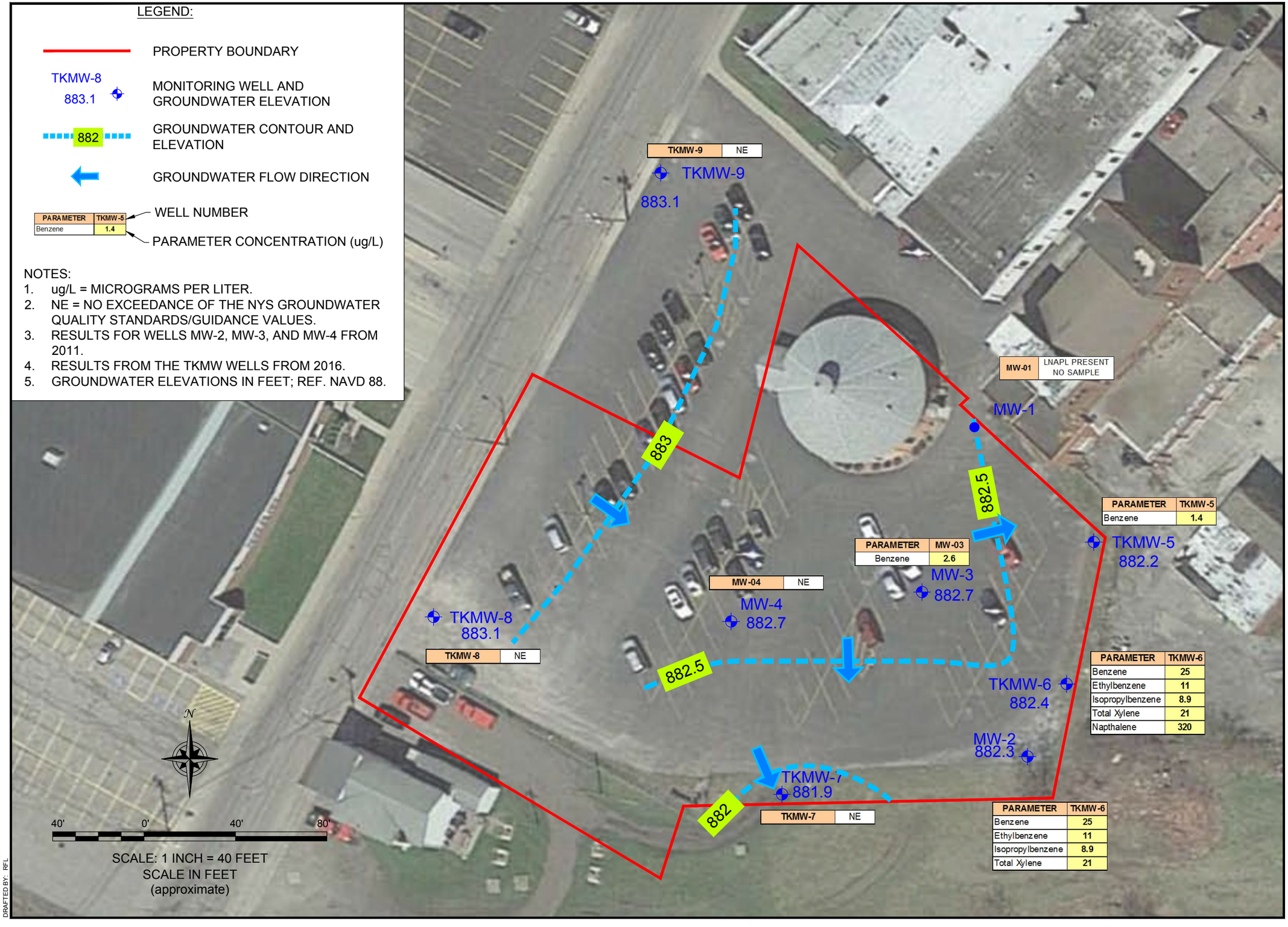
F:\CAD\TurnKey\R&J Enterprises of Batavia\11 Evans (Former Batavia MGP)\RIFS\Figure 5; GW Contours and Contamination.dwg, DWG To PDF.pc3

LEGEND:

- PROPERTY BOUNDARY
- TKMW-8 / 883.1 — MONITORING WELL AND GROUNDWATER ELEVATION
- 882 — GROUNDWATER CONTOUR AND ELEVATION
- GROUNDWATER FLOW DIRECTION
- PARAMETER | TKMW-5 / Benzene | 1.4 — WELL NUMBER / PARAMETER CONCENTRATION (ug/L)

NOTES:
1. ug/L = MICROGRAMS PER LITER.
2. NE = NO EXCEEDANCE OF THE NYS GROUNDWATER QUALITY STANDARDS/GUIDANCE VALUES.
3. RESULTS FOR WELLS MW-2, MW-3, AND MW-4 FROM 2011.
4. RESULTS FROM THE TKMW WELLS FROM 2016.
5. GROUNDWATER ELEVATIONS IN FEET; REF. NAVD 88.



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BUFFALO, NY 14218
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JOB NO.: 0333-015-001

GROUNDWATER ISOPOTENTIAL MAP (MAY 23, 2016)
AND GROUNDATER CONTAMINATION EXCEEDANCES

REMEDIAL INVESTIGATION AND FOCUSED FEASIBILITY STUDY REPORT
FORMER BATAVIA MGP SITE
NYSDEC SITE No. 819019
11 EVANS STREET
BATAVIA, NEW YORK
PREPARED FOR
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FIGURE 3

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F:\CAD\TurnKey\R&J Enterprises of Batavia\11 Evans (Former Batavia MGP)\RIFS\Figure 8; TRACK 4 RemediationRev.dwg, 1/24/2019 3:29:23 PM

LEGEND:

- PROPERTY BOUNDARY
- SB-2 ● SOIL BORING LOCATIONS
- TP-4 TEST PIT LOCATIONS
- TKMW-8 MONITORING WELL
- CSCO EXCEEDANCE

PARAMETER	SB-7 (9-12')
Benzo(a)pyrene	2.5

CONCENTRATION IN MILLIGRAMS PER KILOGRAM

NOTES:
1. CSCO MEANS COMMERCIAL SOIL CLEANUP OBJECTIVE

TKMW-9

AREA OF PRE-DESIGN INVESTIGATION

PARAMETER	SB-8 (10-14')
Benzene	150
Acenaphthylene	630
Anthracene	820
Benzo(a)anthracene	640
Benzo(a)pyrene	450
Benzo(b)fluoranthene	530
Benzo(k)fluoranthene	190
o-Cresol	450
p-Cresol	200
Dibenzo(a,h)anthracene	69
Dibenzofuran	650
Chrysene	520
Fluoranthene	1400
Fluorene	780
Indeno(1,2,3-cd)pyrene	190
Naphthalene	3800
Phenanthrene	2400
Pyrene	1200

SB-10 ●

MW-1

SB-8

IN-SITU SOURCE AREA TREATMENT

ISS to 15 ft, bgs

SB-7

PARAMETER	SB-7 (9-12')
Benzo(a)pyrene	2.5

TKMW-5

TKMW-8

SB-6/MW-4

SB-5/MW-3

PARAMETER	TKMW-6 (8-10')
Benzo(a)pyrene	3.2

SB-4

PARAMETER	SB-4 (25-26')
Arsenic	16.9

TKMW-6

SB-1

SB-3

SB-2

SB-9/MW-2

SOURCE AREA REMOVAL (25'x60')

source removal to 10 ft, bgs

TKMW-7

PARAMETER	TKMW-7 (2-5')
Benzo(a)anthracene	66
Benzo(a)pyrene	90
Benzo(b)fluoranthene	98
Dibenzo(a,h)anthracene	9.8
Indeno(1,2,3-cd)pyrene	60
Arsenic	16.1

PARAMETER	SB-9 (5-10')
Benzo(a)anthracene	8.4
Benzo(a)pyrene	8
Benzo(b)fluoranthene	9.7
Dibenzo(a,h)anthracene	1.6

SOIL/FILL EXCAVATION AREA (20'x20')

Excavation to 5 ft, bgs

N

40' 0' 40' 80'

SCALE: 1 INCH = 40 FEET
SCALE IN FEET
(approximate)

DATE: DECEMBER 2018
DRAFTED BY: RFL

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SUITE 300
BUFFALO, NY 14218
(716) 856-0635

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JOB NO.: 0333-015-001

COMMERCIAL SOIL CLEANUP OBJECTIVES

REMEDIAL INVESTIGATION AND FOCUSED FEASIBILITY STUDY REPORT

FORMER BATAVIA MGP SITE
NYSDEC SITE No. 819019
11 EVANS STREET
BATAVIA, NEW YORK

PREPARED FOR
R&J ENTERPRISES OF BATAVIA, LLC

FIGURE 4

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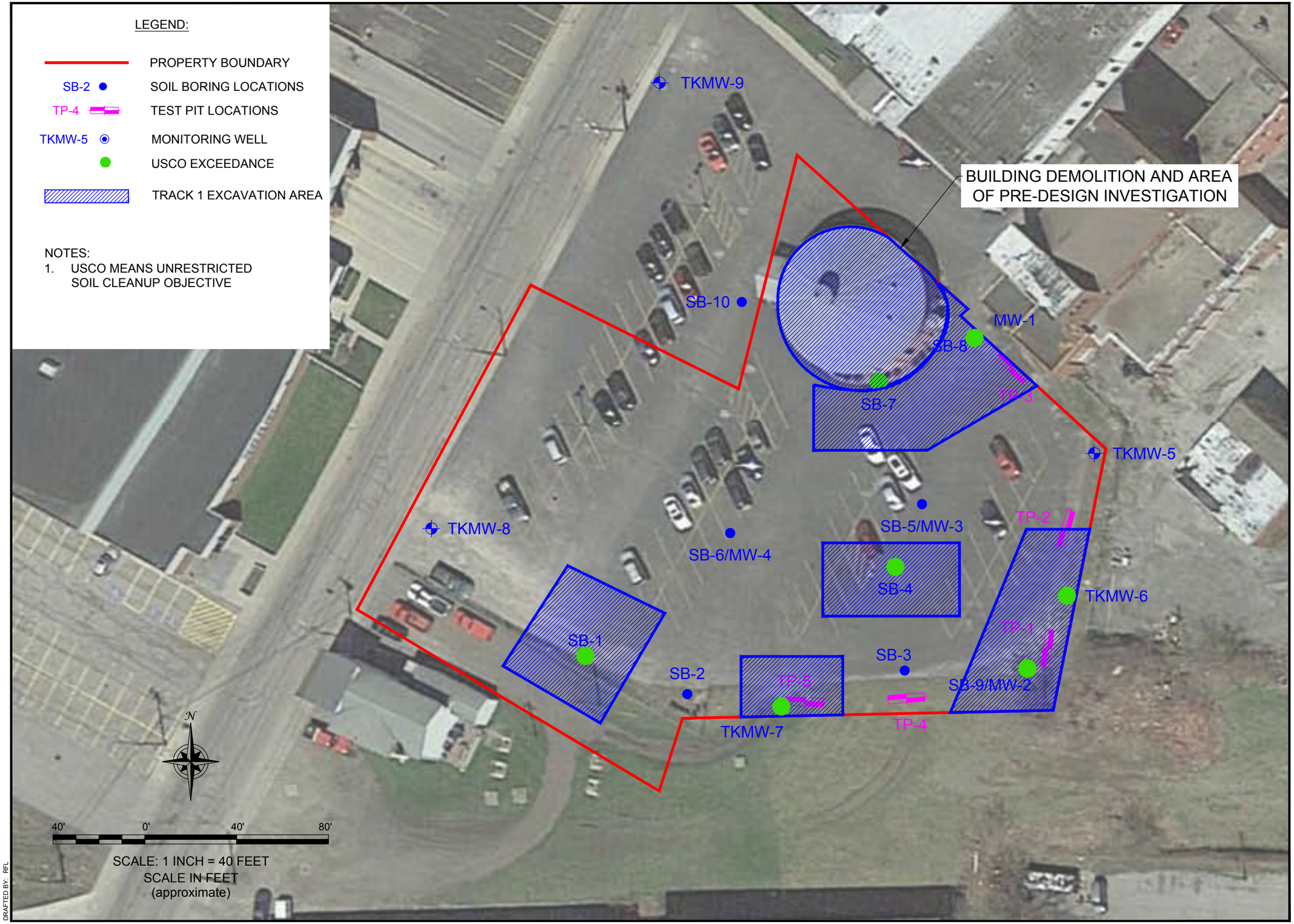
F:\CAD\TurnKey\R&J Enterprises of Batavia\11 Evans (Former Batavia MGP)\RIFS\Figure 7; Track 1 RemediationREV.dwg, 1/24/2019 2:40:51 PM

LEGEND:

- PROPERTY BOUNDARY
- SB-2 ● SOIL BORING LOCATIONS
- TP-4 TEST PIT LOCATIONS
- TKMW-5 MONITORING WELL
- USCO EXCEEDANCE
- TRACK 1 EXCAVATION AREA

NOTES:
1. USCO MEANS UNRESTRICTED SOIL CLEANUP OBJECTIVE



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SUITE 300
BUFFALO, NY 14218
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JOB NO.: 0333-015-001

UNRESTRICTED SOIL CLEANUP OBJECTIVES

REMEDIAL INVESTIGATION AND FOCUSED FEASIBILITY STUDY REPORT

FORMER BATAVIA MGP SITE
NYSDEC SITE No. 819019
11 EVANS STREET
BATAVIA, NEW YORK

PREPARED FOR

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FIGURE 5

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APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Batavia Former MGP
State Superfund Project
Batavia, Genesee County, New York
Site No. 819019

The Proposed Remedial Action Plan (PRAP) for the Batavia Former 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 April 22, 2019. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater at the Batavia Former 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 April 30, 2019, which included a presentation of the remedial investigation and feasibility study (RI/FS) for State Superfund (SSF) for the Batavia Former MGP 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 May 22, 2019.

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 April 30, 2019 public meeting:

COMMENT 1: What about the aquifer in Batavia?

RESPONSE 1: There is no evidence that separate phase coal tar is moving off-site. However, coal tar/ petroleum constituents dissolved in groundwater are moving off-site at low levels. In the Department's experience with MGP sites State-wide, these contaminants naturally degrade in the presence of dissolved oxygen within a short distance from the source area. The best way to protect Batavia's aquifer is to address the source material which remains on site. The selected remedy will remove or solidify in place the source materials contributing to this dissolved contamination, thereby mitigating potential threats to the aquifer.

COMMENT 2: What about the possibility of new construction? How much testing would be done to ensure that there are no exposures?

RESPONSE 2: Future new construction must be performed in compliance with the Site Management Plan (SMP) that specifies the procedures necessary to maintain the institutional and engineering controls placed on the site. The SMP will contain specific requirements for how excavations on the site will be conducted and what testing will be required. These controls will

ensure that the remedy continues to be protective of human health and the environment. Any future buildings developed on the site will also be evaluated for the potential for soil vapor intrusion (SVI), and actions to address exposures related to SVI will be implemented, such as installing a vapor barrier or sub-slab depressurization system (similar to a radon mitigation system), if necessary.

COMMENT 3: With new construction, what about soil vapor intrusion?

RESPONSE 3: See Response 2. The NYSDOH maintains guidance on soil vapor intrusion and would evaluate site conditions at that time.

COMMENT 4: What about Genesee County DOH? Are they involved? For this location, do they have any concerns?

RESPONSE 4:
The NYSDOH is directly involved in all site-related decision-making due to dedicated staff in the Bureau of Environmental Exposure Investigation in Albany. Pertinent information is shared by NYSDOH with the Genesee County DOH.

COMMENT 5: Where does the groundwater go? Where does it discharge?

RESPONSE 5: Results of the investigation indicate that groundwater flow is to the south-southeast. Tonawanda Creek is to the west of the site, however, in this case, groundwater flows away from Tonawanda Creek and toward a depression southeast of the site. Also see Response 1.

COMMENT 6: Why is this happening now? What happened in 2014 that made this site important?

RESPONSE 6: Generally, the Department has prioritized the approximately 250 MGP sites in the State for action based on potential risks to public health and the environment. The Department initially targeted sites where the seven utilities operating in New York State had a legal responsibility for contamination released by them and their predecessors. The Department recently began to address "orphan" sites such as this, where these utilities have no connection to prior owners or operators. In response, the owner of the Batavia MGP entered into a legal agreement with the Department in 2014 to investigate contamination at the site. The investigation has now progressed to the point where a remedy can be selected, which subsequently can be implemented by the property owner.

COMMENT 7: Where would the soil be taken to once excavated?

RESPONSE 7: The disposal facility will be determined during the remedial design phase. Typically, excavated MGP-impacted soils are transported to a thermal treatment facility where the contaminants in the soil are removed and the material returned to a condition where it may be reused.

COMMENT 8: During the vapor intrusion testing of the building, was it zero levels or acceptable levels? This is a community concern. But you only have one test. What about now?

RESPONSE 8: The SVI sampling results were within acceptable levels. The concentrations of compounds detected in the indoor air were generally consistent with those commonly found in the indoor air of buildings not affected by contamination. If soil vapor was affecting indoor air, then higher levels would have been detected during the sampling.

COMMENT 9: If there are 300 (sic) of these (MGP) sites, are there buildings on them?

RESPONSE 9: Yes, buildings have been developed on many of the MGP sites throughout the state.

COMMENT 10: What level of comments have to be received by the Department for the State to decide that the $1.6 million option is needed?

RESPONSE 10: There is no pre-determined level of public comment that would initiate a change to a proposed remedy. Changes to proposed remedies are determined on a case by case basis upon evaluation of the criteria specified in State law.

COMMENT 11: How long do we have to wait for all the sites in Batavia to get cleaned up?

RESPONSE 11: The cleanup of all sites in Batavia is not within the scope of the remedy for this site. For this site, we expect there will be a pre-design investigation to be followed by the design and construction of the remedy. Subsequent to the public meeting, the site owner expressed interest in the Brownfield Cleanup Program (BCP). If the owner applies and is admitted to the BCP, there are public notice requirements for key points in the project, inclusive of project schedules. For this site, a BCP applicant would enter the program at the remedial design and construction phase.

COMMENT 12: These CAMP monitors, when they go off, how do we know they will be protective?

RESPONSE 12: The monitors are set at both a warning level and an action level. When warning levels are reached, vapor and/or dust suppression techniques will be employed. If after suppression techniques are employed and action levels are exceeded, then work would be stopped, and work methods reevaluated.

COMMENT 13: Who does this CAMP monitoring?

RESPONSE 13: The project consultant (or a third-party contractor) usually implements the CAMP monitoring for the work being done by the remedial contractor. The Department is often on-site to verify that the monitoring is properly done, and that the required contingencies are implemented.

COMMENT 14: How frequently are these CAMP monitors checked, when does the Department see them? When can the public see them?

RESPONSE 14: The CAMP monitors are checked several times per day. In addition, they have alarms/lights that signal when a warning or action level is exceeded, so immediate action can be taken to identify and resolve the condition. The Department and DOH receive weekly reports that include a compilation of the CAMP data. These data may be requested from the Department and, they will be included in an Appendix to the Final Engineering Report. Also see Response 13.

COMMENT 15: How does this odor control foam work?

RESPONSE 15: The foam is sprayed directly onto the soil, thereby suppressing odors/preventing volatilization.

COMMENT 16: During your investigations, when selecting soil sample locations, do you work on a grid? Have you had problems where you missed stuff?

RESPONSE 16: Soil quality investigation is not necessarily based on a grid. Areas of suspected contamination are targeted and, when found, the investigation (i.e., sampling program) steps out in the appropriate directions from the locations of detected contamination vs. non-detects/clean locations. Also, when looking for MGP waste, contamination is often obvious by visual or olfactory means, or field instrumentation. We do, however, collect samples for laboratory analysis to quantify specific levels of contamination.

COMMENT 17: Can the public get copies of the Monitored Natural Attenuation (MNA) reports mentioned in the PRAP fact sheet?

RESPONSE 17: Yes. Periodic Review Report documents can be requested from the Department's project manager. Those reports will contain the MNA information.

COMMENT 18: What class site would this become?

RESPONSE 18: If the site remains in the State Superfund Program, when complete it would be reclassified to a class 4, which denotes remedial action completed and site management/monitoring is required. If the site transitions into the Brownfield Program, once the remediation is complete, it could be reclassified as class "C" for complete. The requirements for site management/monitoring the site would be generally the same under both programs and would include monitoring the groundwater to assess or verify the success of the remediation and monitoring for soil vapor intrusion should any future buildings be developed.

COMMENT 19: What is the difference between superfund and brownfield?

RESPONSE 19: There are several avenues through which the DEC can administer remedial activities, including the State Superfund (SSF) Program and the Brownfield Cleanup Program (BCP). MGP sites may fall under either of these programs, which derive their authority through different sections of the Environmental Conservation Law. Each section of the law provides for

different funding mechanisms, legal agreements and project processes, all with the end goal of protecting public health and the environment. If the site is under the SSF program with a responsible party (RP) lead, the RP enters into an Order on Consent with DEC to investigate and remediate the site. If there is no viable RP, the DEC will use SSF money to clean up the site. Alternatively, an entity may enter a Brownfield Cleanup Agreement to investigate and remediate an MGP site. Regardless of which program a site is addressed under, the technical requirements for remediation are generally the same.

COMMENT 20: I own the Holland Inn. What if they are excavating on my property?

RESPONSE 20: There are no plans to excavate on the Holland Inn property.

Martin Moore, Ph.D., City Manager of the City of Batavia submitted a letter (dated May 17, 2019) which included the following comments:

COMMENT 21: It is of high importance to the City that the Ellicott Trail project and the "Grand Canal" not be disturbed by this project.

RESPONSE 21: Comment noted. The Ellicott Trail is outside the footprint of the remedy and will not be impacted by the remedial activities. Care will be taken to avoid disturbance to the "Grand Canal" during remedial activities. The consulting engineering firm working for the remedial party will coordinate with City offices and comply with local permit requirements to ensure that structures associated with the Grand Canal will not be disturbed.

COMMENT 22: We also wish to remind you of the importance of timing for cleanup work and the need for coordination with the City so that trucks coming into and out of the site do not interfere with fire, rescue, and emergency medical call response.

RESPONSE 22: Comment noted, as is the location of the Fire Department across the street from the site. A traffic management plan will be included in the Remedial Design documents. As a matter of course on remedial construction projects, the RP's consultant/contractor consults and coordinates with local emergency response agencies to make them aware of site issues, contaminants of concern, as well as to ensure the remedial construction will not interfere with local emergency response activities.

COMMENT 23: From October through April each year, activity is high at the Falleti Ice Arena, which is across the street from the project site. Parents and children will be constantly driving in and out across the street from the cleanup site during these months. We ask that you ensure that contractors make allowance for this as the final project planning and cleanup activities are implemented.

RESPONSE 23: As noted above, operations at the site will be subject to a traffic management plan. The RP's consultant/contractor shall consult/coordinate with the appropriate City officials to minimize disruption of operations at the Falleti Ice Arena.

COMMENT 24: The circular building at 7 Evans Street is a historical structure in the City of Batavia, and we ask you to not disturb this building during the cleanup.

RESPONSE 24: Comment noted. The Department takes into consideration short-term impacts and community acceptance in the selection of the final remedy and the historic nature of this building is part of that. The remedy will not require demolition of the building and the ISS will be done in a manner the ensures the stability of the building.

Larry D. Barnes, Appointed City Historian, City of Batavia submitted an email (dated May 18, 2019) which included the following comments:

COMMENT 25: The former manufactured gasholder is an important historic structure, a landmark that represents a significant part of Batavia's development during the 19th century. Earlier in the 21st century, the building was repurposed as an office space for a local physician. This was done in a thoughtful manner that preserved the architectural features that distinguish and identify the building as a former gasholder. Today, it is one of few such structures still in existence. It helps to define Batavia as a unique community. To lose the former manufactured gasholder would be a travesty. I can support Alternative 2: In-situ solidification (ISS) and Excavation of Source Areas. I must strongly oppose Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions. In carrying out Alternative 2, I hope great care will be taken in addressing contamination from the tar house so that the remedial action will not put the manufactured gasholder at risk. I am especially concerned about the closeness of the treated area to the gasholder itself.

RESPONSE 25: The selected remedy does not require removal of this structure. Every effort to preserve the structure has been taken during the investigation stages and will be taken during remedial efforts. Excavation and ISS efforts will be conducted in a manner that ensures the stability of this structure.

Richard L. Beatty, President, Landmark Society of Genesee County submitted an email (dated May 19, 2019) which included the following comments:

COMMENT 26: My concern is that if contaminants are discovered under the building, can they be remediated in such a way that the building is protected? While the ISS alternative does not specifically call for the demolition of the structure, several passages in the Remedial Action Plan give me pause:

- From Exhibit B (Alternative 2 – ISS and Excavation of Source Areas), page 5: "The SMP will include a provision for subsurface soil investigation beneath the on-site office building, and if found, removal or treatment of source material when the building becomes vacant or is demolished."
- From Exhibit D, item 4 (Reduction of Toxicity, Mobility or Volume), page 9: "These provisions state that this source material, if found during an SMP investigation, will be removed or treated when the existing on-site building is demolished or becomes vacant."

- From Exhibit D, item 6 (Implementability), page 10: "Should be PDI indicate source material beneath the existing on-site building, this building may need to be demolished and the source removed."

I understand that from a strictly engineering viewpoint, the location of the "remedy" in such close proximity to the building is problematic and that demolition might be considered the "easiest" way to accomplish the task of remediation. I want to go on record as opposing any move to demolish the structure; it should not be an option to solving the problem of remediation.

RESPONSE 26: Comment noted. These provisions are typically included on any site where contamination is not accessible due to overlying structures, such that should the structures be removed sometime in the future, this contamination can be properly investigated and addressed. It is not the intent that the remedy for this site include demolition of the existing overlying historic structure, as noted in Responses 24 and 25.

Sharon Burkel, Chairperson, City of Batavia Historic Preservation Commission submitted an email (dated May 21, 2019) which included the following comments:

COMMENT 27: The gasholder building on Evans Street meets the criteria for local landmark status and was designated as such by the HPC on October 21, 1998. It is a rare surviving industrial structure and part of local history from the 1800s through the present. To our knowledge, this is one of only three existing gasholder buildings in New York, the other two being located in Troy and Saratoga Springs. Many residents here are passionate about saving the remaining historic architecture and would not want to see this historic structure damaged or destroyed. The HPC is concerned that excavation of 15 feet so close to the east side of the building would present a great risk to the foundation. Please be advised that, according to City Preservation Code, the property owner must apply for a Certificate of Appropriateness for any project which includes any exterior alteration, demolition, or new construction near a historic building to the HPC before any work can commence. If option 2 is chosen, the HPC would have to receive an Application for Certificate of Appropriateness and conduct a public hearing within 30 days of receipt of the application. The HPC does not support Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions. Demolition of this building would not be an acceptable option to the HPC or the citizens of Batavia. The HPC would like to be informed of any correspondence, reports, meetings or public hearings regarding this project.

RESPONSE 27: Comment noted. See Responses 24 and 25. The RP will be responsible for obtaining applicable local permits/certificates and approvals prior to the commencement of remedial work.

APPENDIX B

Administrative Record

Administrative Record

Batavia Former MGP
State Superfund Project
City of Batavia, Genesee County, New York
Site No. 819019

1. Proposed Remedial Action Plan for the Batavia Former MGP site, dated April 2019, prepared by the Department.

2. Order on Consent, Index No. A8-0812-13-09, between the Department and R&J Enterprises of Batavia, LLC, executed on March 05, 2014.

3. "Phase I Site Assessment", January 2001, prepared by Neeson-Clark Associates, Inc.

4. "Records Search Reports for Batavia (Site ID 8-19-019) and Hornell (Site ID 8-51-032)", April 2009, prepared by National Fuel Gas Distribution Corporation.

5. "Executive Summary for Work Authorization D006132-23, Batavia Former MGP Site Characterization", August 2011, prepared by Shaw Environmental & Infrastructure Engineering of NY, P.C.

6. "Final Site Characterization Report, Batavia Former MGP", November 2012, prepared by Shaw Environmental & Infrastructure Engineering of New York, P.C.

7. "Potential MGP Facilities in Batavia, Hoosick Falls, Clifton Springs, Queens – College Point, Medina, Albany, Syracuse, Staten Island, and LeRoy, New York", April 2014, prepared by National Grid.

8. "Citizen Participation Plan for Batavia Former MGP Site", April 2014, prepared by the Department.

9. "Interim Remedial Measure Work Plan", December 2014, prepared by Conestoga-Rovers & Associates.

10. "Former Batavia MGP Site (819019), Subslab/Indoor Air Sampling Results", May 2015, prepared by TurnKey Environmental Restoration, LLC.

11. "Remedial Investigation Work Plan to Fulfill Consent Order", March 2016, prepared by TurnKey Environmental Restoration, LLC.

12. "Remedial Investigation/ Focused Feasibility Study Report", July 2019, prepared by TurnKey Environmental Restoration, LLC.

13. Letter dated May 17, 2019 from Martin Moore, Ph.D., City Manager of the City of Batavia.

14. Email dated May 18, 2019 from Larry D. Barnes, Appointed City Historian, City of Batavia.

15. Email dated May 19, 2019 from Richard L. Beatty, President, Landmark Society of Genesee County.

16. Email dated May 21, 2019 from Sharon Burkel, Chairperson, City of Batavia Historic Preservation Commission.