DECISION DOCUMENT

Spic & Span Cleaners
Brownfield Cleanup Program
Bronxville, Westchester County
Site No. C360130
December 2018

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

DECLARATION STATEMENT - DECISION DOCUMENT

Spic & Span Cleaners
Brownfield Cleanup Program
Bronxville, Westchester County
Site No. C360130
December 2018

Statement of Purpose and Basis

This document presents the remedy for the Spic & Span Cleaners site, a brownfield cleanup 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.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Spic & Span Cleaners site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

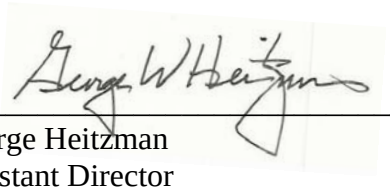
During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the above referenced site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternatives analysis (AA). The IRM(s) undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore No Further Action is the selected remedy. The remedy may include continued operation of a remedial system if one was installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

December 6, 2018



Date

George Heitzman
Assistant Director
Division of Environmental Remediation

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SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternative analysis (AA). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment. The IRM(s) conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the selected remedy. A No Further Action remedy may include continued operation of any remedial system installed during the IRM and the implementation of any prescribed controls that have been identified as being part of the remedy for the site. This DD identifies the IRM(s) conducted and discusses the basis for No Further Action.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

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:

Bronxville Public Library
201 Pondfield Road
Bronxville, NY 10708
Phone: 914-337-7680

Receive Site Citizen Participation Information By Email

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

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site is located at 79-81 Pondfield Road in Bronxville, Westchester County and is approximately 0.29 acres in size. The site is bounded to the north/south by commercial properties, to the west by Pondfield Road and to the east by a parking lot.

Site Features: The site consists of a 2-story commercial building with a full basement. The building contains several occupied tenant spaces. The area behind the building is entirely paved with asphalt and is utilized as a parking lot. The basement can be accessed at ground-level from the rear of the on-site building.

Current Zoning and Land Use: The site is currently zoned for commercial use. Various storefronts occupy the building, including a laundry business that operates in the former dry cleaning space. The building is also used for office space.

Past Use of the Site: The site has a history of commercial use. Since the building was constructed in the 1930s, the site has been used for dry-cleaning operations until they ceased in 2012.

Site Geology and Hydrogeology: The site is underlain by orange to brown silty sand with some gravel to a depth of at least 17 feet below ground surface. Bedrock was encountered at approximately 47 feet in the rear parking area. Groundwater varies across the site and is located at a depth ranging from between 10 feet and 17 feet below ground surface (bgs). Groundwater flows to the south/south-west.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use

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

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the Remedial Investigation (RI) Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Participant. The Applicant has an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary. A positive significant threat determination was made in February 2018 due to the off-site exposures related to the site (i.e., the site has been deemed to pose a significant threat to public health or the environment).

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- 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. 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 contaminant 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 below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

tetrachloroethene (PCE)
trichloroethene (TCE)
dichloroethene (cis-1,2-)

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRM(s) described in Section 6.2. More complete information can be found in the RI Report and the IRM Construction Completion Report.

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 Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Air Sparge/Soil Vapor Extraction (AS/SVE) IRM

In October of 2013 sub-slab and indoor air samples were collected from the on-site building. Sampling consisted of three sub-slab vapor samples and eight indoor air samples. Three of the indoor air samples were collected from the first floor and five were collected from the second floor. PCE was detected in the sub-slab soil vapor at levels up to 68,000 micrograms/meter cubed (ug/m^3). TCE and DCE were also detected at concentrations up to 13,000 and 4,000 ug/m^3 in the sub-slab vapor. The highest detections of PCE and TCE were observed in one indoor air sample, collected on the first floor of the building, at concentrations of 20.5 and 2.6 ug/m^3, respectively. The remaining first-floor indoor air samples had PCE at concentrations below what is

typically found in indoor air. The second-floor indoor air samples had PCE ranging in concentrations from below to slightly above what is typically found in indoor air. The remaining first-floor indoor air samples had TCE at concentrations slightly above what is typically found in indoor air. The second-floor indoor air samples had TCE ranging in concentrations from below to slightly above what is typically found in indoor air. The highest concentration of PCE detected in the first-floor air sample is below the NYSDOH air guidance value of 30 ug.m3 for PCE, but is above what is typically found in indoor air. The level of TCE detected in indoor air exceeds the NYSDOH indoor air guidance value for TCE, which is 2 ug/m^3. Based on the data, an air sparge and soil vapor extraction system has been installed as an IRM to mitigate any indoor air impacts in the on-site building that are the result of soil vapor intrusion and to prevent further vapors beneath the slab from entering the building. Vacuum monitoring points were installed in 2014 along the radius of influence of the treatment zone. Pressure field testing performed from 2014 through 2016 verified an adequate vacuum is present to prevent contaminated vapors from entering the on-site building. However, indoor air samples will be collected to verify the effectiveness of the remedy to mitigate soil vapor intrusion.

The air sparge and soil vapor extraction system installed as an IRM has been operating since May of 2015 to also treat the source of contamination in the soil and soil vapor. The source area is located in the parking area behind the former dry cleaning tenant space. Pre-IRM, the highest level of contamination observed in soil was 300 parts per million (ppm) detected at the 14 to 15 foot sample interval, which is below the groundwater table. Based upon the soil sampling completed during the RI, the source area was localized and only approximately 150 cubic yards in volume. The IRM was designed so that its radius of influence would address the source area. Based on an analysis of data from the IRM's influent and effluent treatment streams, contamination has been consistently removed from the source area during its operation. This has likely reduced the size of the source area significantly. Recent groundwater monitoring data also supports that conclusion.

The air sparge system consists of two one-inch diameter air sparge wells that are screened in the source area, beneath the water table, to inject air and volatilize contaminants. Each air sparge well is fitted with components to monitor and adjust the pressure in each well.

The contaminated vapors are collected in a network of depressurization wells. The system contains four interior wells in the former dry cleaner space and two exterior wells in the rear parking lot. The contaminated vapors are then passed through two vapor phase granular activated carbon adsorbers operating in parallel. The treated air is monitored and discharged to ambient air at the building's roof line. The air monitoring results have indicated that the contaminants were often reduced to non-detect (ND) levels before discharge. TCE concentrations in the effluent have always been ND, whereas any detections of PCE in the effluent air were well below the air guideline value of 30 ug/m^3.

The installation of the AS/SVE as an IRM is summarized in the June 2018 Construction Completion Report.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: Soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs); and soil vapor samples were analyzed for VOCs. Based upon data collected at the site, the primary contaminant of concern is tetrachloroethene (PCE). Trichloroethene (TCE) and cis-1,2 dichloroethene (DCE) have also been present at lower concentrations. Impacted media include shallow groundwater, soil, indoor air and sub-slab soil vapor.

Soil - During the RI, PCE contamination was observed in sub-surface soil samples collected from the parking lot in the rear of the on-site building. These samples were collected in an area behind the historic dry cleaning tenant space. The highest concentration, 300 ppm, was detected in the 14 to 15-foot interval of a soil boring (pre-IRM). This level exceeded SCOs for the protection of groundwater for PCE which is 1.4 ppm. Soil borings in this area showed that the heaviest contamination was localized. It is estimated that the initial volume of the source area was approximately 150 cubic yards. An AS/SVE IRM is currently operating in the soil source area. Based upon monitoring data from the IRM treatment stream, a significant amount of contamination has been removed from the soil source area.

Groundwater - PCE was originally detected in groundwater of on-site wells at concentrations up to 5,800 parts per billion (ppb), prior to the implementation of the on-site IRM. In the most recent round of sampling (May 2017), the maximum on-site detection in groundwater had fallen to 65 ppb. In off-site wells, the maximum PCE concentration in groundwater has fallen from 2,400 ppb to 420 ppb over the same time interval. Based on these results, the on-site IRM has been highly effective at reducing concentration of contaminants in groundwater, but has not yet achieved remedial goals.

TCE and DCE concentrations have also fallen sharply, and now meet water ambient water quality standards.

Soil Vapor - The currently-operating IRM is helping to address vapor intrusion concerns on-site by reducing contaminant concentrations in the source area and maintaining a pressure vacuum beneath the building. Upon attainment of remedial objectives, the IRM will be converted into a sub slab depressurization system (SSDS) in the future, pending confirmation sampling.

However off-site sampling indicates the potential for exposure due to soil vapor intrusion. To date, soil vapor intrusion sampling has been completed at five off-site properties. Requests for sampling were made for two additional properties but access was not granted. The results indicated that no further action was needed at three of the properties (Gramatan Building,

Emigrant Savings Bank and Village Market). However, it is recommended that mitigation be completed at the other two properties (Pharmacy and Trustco Bank), where access was previously denied. The data indicates that the potential exists for other buildings, where access was also denied, to be impacted, and continuing efforts should be made to investigate as necessary.

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.*

Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with buildings and pavement. 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. Volatile organic compounds in the soil 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. A soil vapor extraction (SVE) system was installed on-site to reduce indoor air impacts from soil vapor intrusion and to prevent further vapors beneath the slab from entering the building. Additional air monitoring is needed, however, to verify further actions are not required. Sampling indicates soil vapor intrusion is a concern for off-site buildings and needs further evaluation.

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: ELEMENTS OF THE SELECTED REMEDY

Based on the results of the site investigation, installation and initial operation of the IRM, and the evaluation presented here the Department is proposing No Further Action with continued operation of the on-site air sparge/soil vapor extraction (AS/SVE) system, mitigation of soil vapor intrusion impacts at off-site properties, and imposition of Institutional and Engineering Controls as the proposed remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5. The elements of the IRM already completed and the institutional and engineering controls are listed below:

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

2. Any on-site building and the two off-site buildings where sampling has indicated mitigation is recommended will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from groundwater. The air sparge and soil vapor extraction (AS/SVE) system installed as an IRM is currently mitigating soil vapor intrusion for the on-site building and will eventually be converted into a sub-slab depressurization system (SSDS).

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

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);

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

- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;

- requires compliance with the Department approved Site Management Plan.

4. 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 Paragraph 3 above.

Engineering Controls: The AS/SVE system discussed in Section 6.2 above and the soil cover discussed in Paragraph 1 above.

This Institutional and Engineering Control Plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

- a provision for evaluation of the potential for soil vapor intrusion for off-site buildings, , including those buildings whose owners previously declined testing, as sampling indicates a need, including a provision for implementing actions recommended to address exposures related to soil vapor intrusion;

- 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 Paragraph 1 above will be placed in any areas where the upper one foot of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);

- 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/or 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, indoor air and sub-slab soil vapor to assess the performance and effectiveness of the remedy;

- a provision for additional groundwater treatment if determined necessary by the Department;

- a schedule of monitoring and frequency of submittals to the Department; and

- monitoring for vapor intrusion for any additional off-site buildings in the area of site-related contamination, as may be required by the Institutional and Engineering Control Plan discussed in item a above.

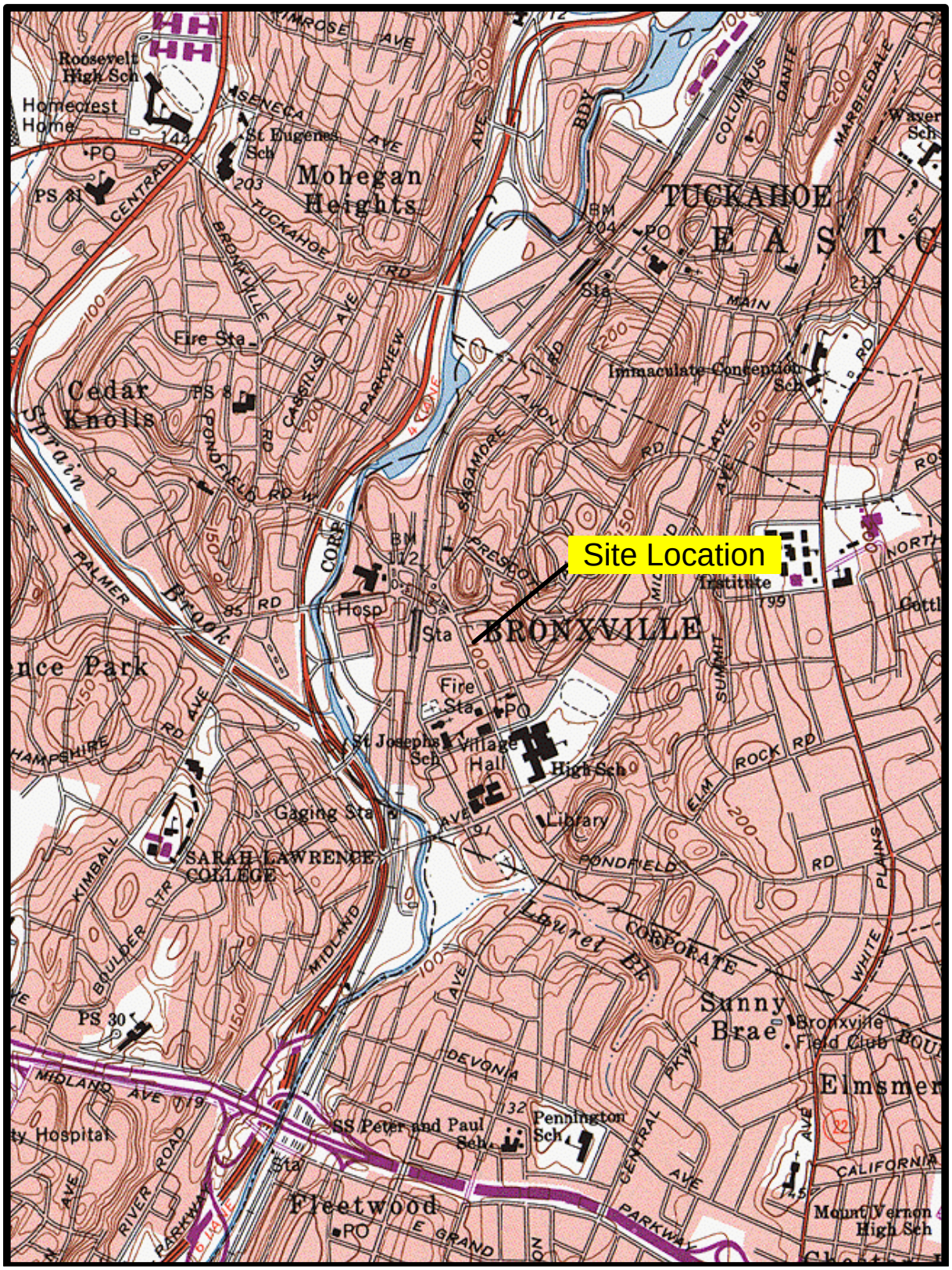
c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- procedures for operating and maintaining the remedy;

- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;

- maintaining site access controls and Department notification; and

- providing the Department access to the site and O&M records.



From USGS 7.5 Minute Topographic Map Of
Mount Vernon, New York Quadrangle

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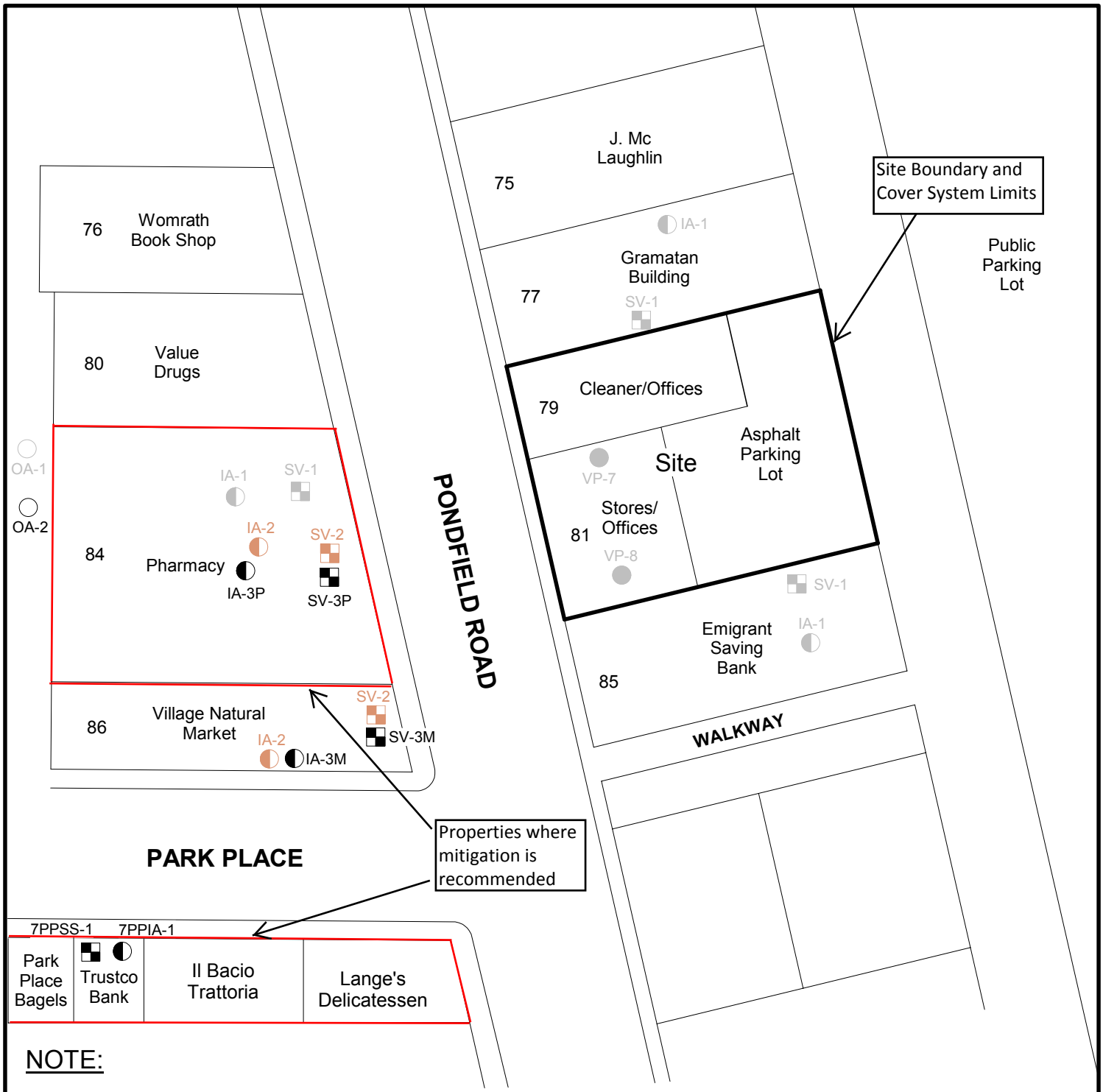
Locational Diagram

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
960 S. Broadway, Suite 100, Hicksville, New York 11801
Tel: 516-933-0655 Fax: 516-933-0659

Project No.: 6832-BVNY	Figure No.: 1
Date: 3/27/2012	Scale: 1 inch = 2000 feet



NOTE:

Grayed Sample Locations - Performed 10-21-13
Light Brown Sample Locations - Performed 3-12-14
Dark Sample Locations - Proposed

LEGEND

- OA-1 — Outside Air Sampling Location
- SV-1 — Sub-Slab Vapor Sampling Location
- IA-1 — Indoor Air Sampling Location
- VP-7 — Sub-Slab Vapor Point

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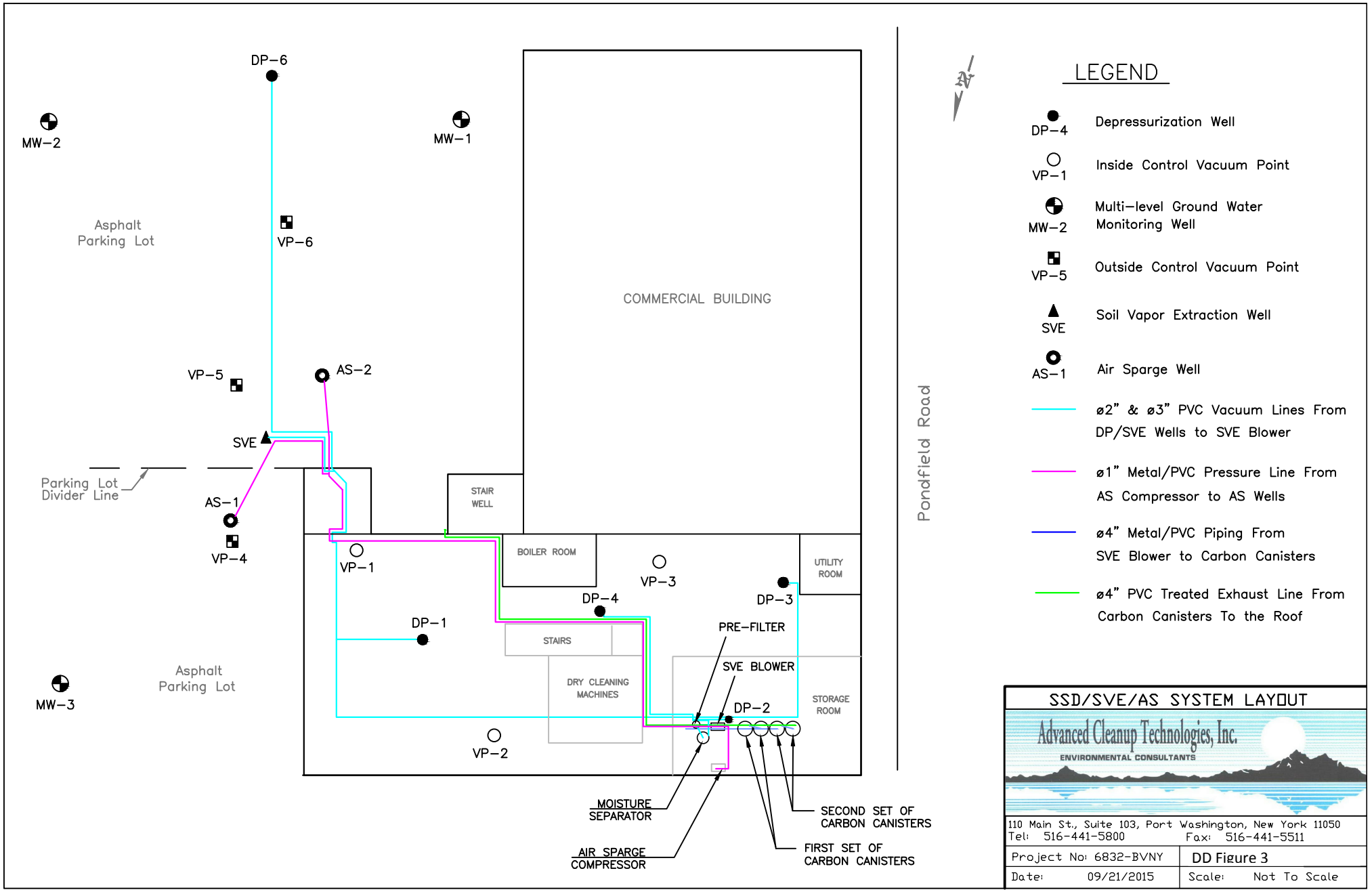
Cover System and Off-site Mitigation Locations

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
110 Main Street, Suite 103, Port Washington, New York 11050
Tel: 516-441-5800 Fax: 516-441-5511

Project No.:6832-BVNY	DD Figure 2
Date: 07/7/2017	Scale: 1" = 50' (Approx.)



LEGEND

- DP-4 — Depressurization Well
- VP-1 — Inside Control Vacuum Point
- MW-2 — Multi-level Ground Water Monitoring Well
- VP-5 — Outside Control Vacuum Point
- SVE — Soil Vapor Extraction Well
- AS-1 — Air Sparge Well
- ø2" & ø3" PVC Vacuum Lines From DP/SVE Wells to SVE Blower
- ø1" Metal/PVC Pressure Line From AS Compressor to AS Wells
- ø4" Metal/PVC Piping From SVE Blower to Carbon Canisters
- ø4" PVC Treated Exhaust Line From Carbon Canisters To the Roof

SSD/SVE/AS SYSTEM LAYOUT

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
110 Main St., Suite 103, Port Washington, New York 11050
Tel: 516-441-5800 Fax: 516-441-5511

Project No: 6832-BVNY	DD Figure 3
Date: 09/21/2015	Scale: Not To Scale