PROPOSED REMEDIAL ACTION PLAN

Admiral Cleaners
Operable Unit Number 01: On-Site
State Superfund Project
Watervliet, Albany County
Site No. 401075
April 2025

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

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), is proposing 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 proposed by this Proposed Remedial Action Plan (PRAP). The disposal of hazardous wastes at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. The proposed remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the preferred remedy.

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

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repositories identified below.

SECTION 2: CITIZEN PARTICIPATION

The NYSDEC seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repositories:

Watervliet City Clerk
Attn: Dave Wheatley
City Hall
2 Fifteenth Street, Suite B
Watervliet, NY 12189
Phone: 518-270-3800 extension 115

NYSDEC
1130 North Westcott Road
Schenectady, NY 12306
Phone: 518-357-2045

A public comment period has been set as:

04/02/2025 to 05/02/2025

A public meeting is scheduled for the following date:

04/21/2025 at 6:30pm

Public meeting location:

Watervliet Senior Center
1501 Broadway
Watervliet NY, 12189

At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 05/02/2025 to:

Matthew Dunham
NYSDEC
Division of Environmental Remediation, Region 4
1130 North Westcott Rd
Schenectady, NY 12306
matthew.dunham@dec.ny.gov

The NYSDEC may modify the proposed remedy or select another of the alternatives presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the NYSDEC's final selection of the remedy for this site.

Receive Site Citizen Participation Information by Email

Please note that the NYSDEC'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

Site Location: The Admiral Cleaners site is located in an urban area in the City of Watervliet. The 0.17-acre parcel is on the north side of 19th Street (NYS Route 2), immediately west of the alley between 6th and 7th Avenues.

Site Features: The site is a rectangular parcel with approximately 45 feet of frontage on 19th Street and a depth of about 100 feet. The site formerly contained a single-story brick/concrete block commercial building, which was demolished in 2020. The remaining slab occupies most of the parcel except for a small grassy area on the north side of the property. A fence surrounds the vacant site.

Current Zoning and Land Use: The site is zoned for a mixed use of residential and commercial. The surrounding parcels on 19th Street are also zoned for residential and/or commercial use. The area immediately north of the site is zoned residential and, accordingly, consists of mostly residential properties.

Past Use of the Site: The site was utilized as a dry cleaner from 1950 to 2013. The site was then operated as a dry-cleaning drop shop (where garments are brought in and sent to be dry cleaned at another local facility) until 2017.

Operable Units: The site was divided into two operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate, or mitigate a release, threat of release or exposure pathway resulting from the site contamination. Operable Unit 1 (OU1) is the on-site source area and surrounding impacted soil and groundwater, as well as off-site soil vapor. Operable Unit 2 (OU2) is off-site soil and groundwater.

Site Geology and Hydrogeology: Surficial geology in the vicinity of the site is mapped as either lacustrine silt and clay or alluvial sand and gravel. Soil borings installed at the site revealed fine to coarse grained alluvium overlying fine grained silt and clay with occasional sandy or gravelly seams. The silt and clay unit is underlain by up to two feet of silty sand and gravel, which may represent glacial till or weathered bedrock. Bedrock was typically encountered at depths of eight to 12 feet below ground surface and consists of highly fractured hard shale. Groundwater, which occurs in overburden (soil) and bedrock, was typically observed at four to six feet below ground surface and flows east-southeast toward the Hudson River (See Figures 3 and 4).

Operable Unit (OU) Number 01 is the subject of this document.

A Record of Decision will be issued for OU 02 in the future.

Site location maps are attached as Figures 1 and 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The NYSDEC 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 that restrict the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) are being 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 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:

Admiral Cleaners

Admiral Cleaners & Dyers, Inc.

Nelley M. Mardersosian

William Mardersosian

William Mardersosian, Jr.

The identified PRPs for the site declined to implement a remedial program when requested by the NYSDEC. The NYSDEC will contact the PRPs to request that they implement the selected remedy. If an agreement cannot be reached with the PRPs, the Department will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the state for recovery of all response costs the state has incurred.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

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

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- air
- groundwater
- soil
- 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 NYSDEC 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 for this Operable Unit at this site are:

trichloroethene (TCE)	1,2,4-trimethylbenzene
tetrachloroethene (PCE)	1,3,5-trimethylbenzene
cis-1,2-dichloroethene	trans-1,2-dichloroethene

vinyl chloride

As illustrated in Exhibit A, the contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor

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.

The following IRMs have been completed at this site based on conditions observed during the RI.

IRM No. 1 - Building Demolition

The Admiral Cleaners building demolition was completed, as an IRM, between May 4 and May 11, 2020. A Construction Completion Report (CCR), which summarizes the remedial work conducted at the property was prepared at the completion of the IRM. The CCR was approved on January 11, 2021.

IRM No. 2 - UST Removal

A focused IRM was completed in February and March 2021 to identify whether underground storage tanks (USTs) existed on the site. Three USTs and approximately 90 cubic yards of soil were removed from the site. A recovery well and two biodiffusers were installed in the excavation before being backfilled. The excavation was backfilled with No. 1 stone to within three inches of the surrounding grade. The area was then brought up to grade with approximately three inches of asphalt. At the completion of the IRM, a Construction Completion Report (CCR) was prepared. The CCR was approved on June 29, 2022.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

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

Nature and Extent of Contamination:

For OU1: On-Site Areas

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides, per- and polyfluoroalkyl substances (PFAS), and 1,4-dioxane. In addition, soil vapor and indoor air were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern for OU1 are VOCs in subsurface soil, groundwater, and soil vapor. The VOCs primarily include (1) chlorinated VOCs including tetrachloroethene (PCE), and its associated degradation products, and (2) petroleum-related VOCs including 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.

Soil: PCE was found in on-site soils up to 330 parts per million (ppm) at 15 feet below ground surface (bgs) exceeding the protection of groundwater soil cleanup objectives (PGWSCOs) of 1.3 ppm. TCE was detected up to 35 ppm, (PGWSCOs of 0.47 ppm), cis-1,2-dichloroethene was detected up to 110 ppm (PGWSCO of 0.25 ppm) and trans-1,2-dichloroethene was detected up to 280 ppm (PGWSCO of 0.19 ppm). In addition, 1,2,4-trimethylbenzene was detected up to 210 ppm (PGWSCO of 3.6 ppm), and 1,3,5-trimethylbenzene was detected up to 86 ppm (unrestricted use SCO; UUSCO of 8.4 ppm). The highest concentrations of VOCs were detected under the northwest portion of the former building, where the dry-cleaning equipment and underground storage tanks were, and immediately north of the former building's back door. One off-site sample detected PCE (100 ppm), at a depth of five feet bgs above the residential soil cleanup objective of 5.5 ppm (See Figure 5).

Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were detected in subsurface soil at concentrations below their unrestricted use guidance values of 0.66 parts per billion (ppb) and 0.88 ppb, respectively.

Groundwater: PCE and its associated degradation products are found in overburden groundwater on-site, exceeding groundwater standards, as follows: maximum concentrations of PCE, TCE, cis-1,2 DCE, and trans-1,2 DCE of 17,000 parts per billion (ppb), 1,600 ppb, 40,000 ppb and 120 ppb respectively, compared to their groundwater standard of 5 ppb. Vinyl chloride was detected at 230 ppb compared to the groundwater standard of 2 ppb. PCE was found in overburden groundwater off-site, exceeding groundwater standards at one location. (See Figures 6 and 7).

PCE was also detected in on-site bedrock (see Figure 8) groundwater up to 360 ppb, exceeding the groundwater standard of 5 ppb. The off-site extent of impacts to groundwater in bedrock is being investigated under Operable Unit 02 (OU2).

Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were reported in groundwater at concentrations of up to 180 parts per trillion (ppt) and 130 ppt, respectively. These levels exceed their respective groundwater guidance values of 6.7 ppt of PFOA and 2.7 ppt of PFOS; however, concentrations of PFOA and PFOS levels vary depending on the season. Overall, on-site concentrations of PFOA and PFOS are consistent with off-site, upgradient concentrations. 1,4-Dioxane was detected at concentrations of up to 28 ppb, which exceeds its groundwater standard of 0.35 ppb; however, bedrock groundwater on-site does not appear to be significantly impacted by 1,4-dioxane. Groundwater at the site is not used as a source of drinking water.

Soil Vapor and Indoor Air: To determine whether actions are needed to address exposure related to soil vapor intrusion, sub-slab vapor, indoor air, and outdoor air samples were collected at 14 off-site buildings from 2017-2019 (see Figure 9). Collocated indoor air and sub-slab vapor concentrations were compared to the NYSDOH Soil Vapor Intrusion Matrices. Based on the sampling results, no further action was recommended for all 14 structures. Soil vapor intrusion sampling was offered to four additional properties, but access was not granted. The maximum concentrations of PCE and TCE in sub-slab vapor samples off-site were as follows: 320 micrograms per cubic meter (ug/m3) and 11 ug/m3, respectively. Similarly, PCE and TCE were found in indoor air samples at maximum levels of 30 ug/m3 and 8.3 ug/m3, respectively.

Additionally, one indoor air sample and two sub-slab soil vapor samples were collected from the former on-site building before demolition. The maximum concentrations of PCE and TCE in sub-slab vapor samples on-site were as follows: 5,900 ug/m3 and 72 ug/m3, respectively. Similarly, PCE and TCE were found in indoor air samples at maximum levels of 85 ug/m3 and 0.36 ug/m3, respectively.

For OU2: Off-Site Areas

The remedial investigation for OU2 is underway. Based on OU1, the primary contaminants of concern and media affected are chlorinated VOCs in bedrock groundwater.

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 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 and 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. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any on-site occupancy or redevelopment. Environmental sampling indicates soil vapor intrusion is not a concern for off-site buildings.

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: SUMMARY OF THE PROPOSED 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 FS report.

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

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

The proposed remedy is referred to as Excavation and Enhanced Biodegradation with Site Management.

The estimated present worth cost to implement the remedy is $3,323,000. The cost to construct the remedy is estimated to be $2,703,000 and the estimated average annual cost is $15,900.

The elements of the proposed remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER's guidance document 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 gas 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise(TM) (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked

during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (*e.g.*, hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The remaining building slab will be removed and materials which cannot be beneficially reused on-site will be taken off-site for proper disposal to implement the remedy. Excavation and off-site disposal of contaminant source areas, including grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u) and 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. Approximately 1,680 cubic yards of contaminated soil and shallow weathered bedrock will be removed from the site to depths of approximately eight to 15 feet below grade. Final excavation limits and dewatering requirements will be determined during the remedial design. Collection and analysis of confirmation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state, and local laws, rules, and regulations and facility-specific permits. Dust and storm water run-off control measures will be employed to minimize any short-term impacts associated with the excavation.

3. Backfill

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

4. In-Situ Enhanced Bioremediation

In-situ enhanced biodegradation will be employed to treat contaminants in saturated soil and groundwater in an area to be determined following the removal of the source area as discussed in Remedy Element #2 above. The biological breakdown of contaminants through anaerobic reductive dechlorination will be enhanced by injecting nutrients, microbes, and/or electron acceptors into the subsurface to promote microbial growth. The nutrients and depth of injection will be determined during the remedial design.

5. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the

controlled property which will:

- require the remedial party or site owner to complete and submit to the NYSDEC 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 restricted-residential 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; and
- require compliance with the NYSDEC's approved Site Management Plan.

6. 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 #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 for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and NYSDEC 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 to assess the performance and effectiveness of the remedy;
   - a schedule of monitoring and frequency of submittals to the NYSDEC; and
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Exhibit A

Nature and Extent of Contamination

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

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

Waste/Source Areas

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

Wastes are defined in 6 NYCRR Part 375-1.2 (aw) and include solid, industrial and/or hazardous wastes. Source areas are defined in 6 NYCRR Part 375 (au). Source areas are areas of concern at a site where substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium.

As a result of past site use, dry cleaning chemicals were released, discharged and/or dumped to the ground surface and floor drains, where they flowed/leaked into the soil at the site. The source area is located beneath the slab of the former site building and to the rear of site.

Certain waste/source areas identified at the site were addressed by the IRMs described in Section 6.2. The remaining waste/source areas identified during the RI will be addressed in the remedy selection process.

Groundwater

Groundwater samples were collected from overburden monitoring wells (maximum screen depth of 14 feet below ground surface) and bedrock monitoring wells (maximum screen depth of 24.5 feet below ground surface). The samples were collected to assess groundwater conditions on-site and off-site. The results indicate that contamination in the overburden groundwater on-site and off-site exceeds the SCGs for volatile organic compounds. On-site bedrock groundwater also exceeds the SCGs for volatile organic compounds. Off-site bedrock groundwater is being investigated under Operable Unit 02 (OU2).

PCE was found in overburden and bedrock groundwater on-site at a maximum concentration of 17,000 ppb and 360 ppb, respectively, compared to the groundwater standard of 5 ppb. TCE had a maximum concentration of 1,600 ppb in groundwater, exceeding the groundwater standard of 5 ppb. Daughter products, cis-1,2 DCE, trans-1,2 DCE and vinyl chloride (VC), were present at maximum concentrations of 40,000 ppb, 120 ppb and 230 ppb respectively, exceeding the groundwater standard of 5 ppb, 5 ppb and 2 ppb. In addition, 1,2,4-trimethylbenzene was detected up to 82 ppb, and 1,3,5-trimethylbenzene was detected up to 86 ppm, exceeding the groundwater standard of 5 ppb.

Table #1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Tetrachloroethene (PCE)	ND[c] – 17,000	5	33/42
Trichloroethene (TCE)	ND – 1,600	5	24/39
cis-1,2-Dichloroethene	ND – 40,000	5	38/46
trans-1,2-Dichloroethene	ND – 120	5	5/24
Vinyl Chloride	ND – 230	2	9/12
1,2,4-Trimethylbenzene	ND - 82	5	3/8
1,3,5-Trimethylbenzene	ND - 43	5	3/7

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).
c – ND: Not Detected

Based on the findings of the RI, the past disposal of hazardous waste has resulted in the contamination of groundwater. The site contaminants identified in groundwater which are considered to be the primary contaminants of concern, to be addressed by the remedy selection process are tetrachloroethene (PCE) and its associated degradation products.

Soil

Soil samples were collected at the site during the RI, from on-site and off-site locations to further delineate the source area. Soil samples were collected in the vicinity of the source area, beneath the former on-site building for analysis primarily for VOCs.

The RI soil sampling results were compared to the applicable Soil Cleanup Objectives (SCOs) for unrestricted use and restricted residential use/protection of groundwater, as discussed in Section 3, and indicate that the primary contaminants of concern on-site are VOCs that contribute to the potential for soil vapor intrusion into buildings at the site and have also contaminated on-site and off-site groundwater. Based on the comparison of the soil sampling results to the restricted residential use SCOs, the protection of groundwater SCOs were selected for the evaluation of the data.

The soil VOC results indicate that a VOC contaminant source still exists on the site. The VOC contamination exceeding the protection of groundwater SCOs (which also coincide with the unrestricted use SCOs for the VOC contaminants of concern) was determined to emanate from the source area beneath the concrete slab of the former Admiral Cleaners building.

Table #2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Protection of Groundwater SCG[c] (ppm)	Frequency Exceeding Protection of Groundwater SCG
VOCs					
Tetrachloroethene (PCE)	ND - 330	1.3	17/48	1.3	17/48
Trichloroethene (TCE)	ND - 35	0.47	14/35	0.47	14/35
cis-1,2-Dichloroethene	ND - 86	0.25	29/45	0.25	29/45
trans-1,2-Dichloroethene	ND - 280	0.19	1/11	0.19	1/11
1,2,4-Trimethylbenzene	ND - 210	3.6	8/18	3.6	8/18
1,3,5-Trimethylbenzene	ND - 86	8.4	12/13	8.4	12/13

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), Protection of Groundwater Soil Cleanup Objectives.

Based on the findings of the Remedial Investigation, the past disposal of hazardous waste has resulted in the contamination of on-site 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 tetrachloroethene (PCE) and its associated degradation products.

Soil Vapor

To determine whether actions are needed to address exposure related to soil vapor intrusion, sub-slab vapor, indoor air, and outdoor air samples were collected at 14 off-site buildings from 2017-2019 (Figure 9). Co-located indoor air and sub-slab vapor concentrations were compared to the NYS Department of Health Soil Vapor Intrusion Matrices. Based on the sampling results, no further action was recommended for all 14 off-site buildings. Soil vapor intrusion sampling was offered to four additional properties, but access was not granted. The maximum concentrations of PCE and TCE in sub-slab vapor samples were as follows: 320 micrograms per cubic meter (ug/m3) and 11 ug/m3, respectively. Similarly, PCE and TCE were found in indoor air samples at maximum levels of 30 ug/m3 and 8.3 ug/m3, respectively. The concentrations of these VOCs in outdoor air samples were found to be consistent with background ranges.

Based on the findings of the Remedial Investigation, the disposal of hazardous waste has resulted in the contamination of soil vapor in on-site only. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of soil vapor to be addressed by the remedy selection process are tetrachloroethene (PCE) and its associated degradation products.

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 Further Action

The No Further Action Alternative recognizes the remediation of the site completed by the IRMs described in Section 6.2. This alternative leaves the site in its present condition and does not provide any additional protection of the environment.

Alternative 2: No Further Action with Site Management

The No Further Action with Site Management Alternative recognizes the remediation of the site completed by the IRMs described in Section 6.2 and Site Management and Institutional Controls and Engineering Controls are necessary to confirm the effectiveness of the IRMs. This alternative maintains engineering controls which were part of the IRMs and includes institutional controls, in the form of an environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site after the IRMs.

Present Worth: *$385,300*
Capital Cost: *$18,000*
Annual Costs: *$13,110*

Alternative #3: Restoration to Pre-Disposal or Unrestricted Use Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A and soil meets the unrestricted soil clean objectives listed in Part 375-6.8 (a). This alternative would include the removal and off-site disposal of the remaining building slab, on-site thermal remediation, and on-site bio-augmentation. Dual heater/soil vapor extraction wells will be spaced as needed and will heat soil and will heat soil (up to approximately 100 degrees Celsius) to a maximum depth of 15 feet below ground surface to treat soil and shallow weathered bedrock to unrestricted use criteria (See Figure 10). The biological breakdown of contaminants through anaerobic reductive dechlorination will be enhanced by injecting nutrients, in water-based solutions, into the subsurface to enhance existing microbial growth, thereby enhancing in-situ biodegradation of remaining VOCs in site groundwater. The nutrients, method and depth of injection will be determined during the remedial design. Injection wells and supporting monitoring points will be installed for use during amendment injection. Final decisions regarding well layout, use of permanent or temporary wells, and injection frequency will be made during remedy design.

This alternative maintains engineering controls which were part of the IRMs and includes institutional controls, in the form of an environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site.

Present Worth: *$4,265,000*
Capital Cost: *$3,646,000*
Annual Cost: *$15,900*

Alternative #4: Enhanced Bioremediation with Site Management

In-situ enhanced biodegradation will be employed to treat chlorinated VOCs in groundwater in the area depicted on Figure 11. The biological breakdown of contaminants through anaerobic reductive dechlorination will be enhanced by injecting nutrients, in water-based solutions, into the subsurface to enhance existing microbial growth. The nutrients, method and depth of injection will be determined during the remedial design. The existing concrete building slab and asphalt will remain in place. Limited soil removal and/or a soil cover will be required to allow for the restricted residential use of the site in areas where the upper two foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs).

This alternative maintains engineering controls which were part of the IRMs and includes institutional controls, in the form of an environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site.

Present Worth: *$1,338,000*
Capital Cost: *$718,000*
Annual Costs: *$15,900*

Alternative #5: Excavation and Enhanced Biodegradation with Site Management

The remaining building slab will be removed and materials which cannot be beneficially reused on-site will be taken off-site for proper disposal to implement the remedy. Contaminant source areas, including grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u) will be excavated and disposed of off-site. Approximately 1,680 cubic yards of contaminated soil and shallow weathered bedrock will be removed from the site. Final excavation limits and dewatering requirements will be determined during the remedial design. Confirmation sampling for VOCs would be conducted during excavation activities, with analytical results verifying attainment of remediation goals. Backfill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

In-situ enhanced biodegradation will be employed to treat chlorinated VOCs in groundwater in the area depicted on Figure12. The biological breakdown of contaminants through anaerobic reductive dichlorination will be enhanced by injecting nutrients, in water-based solutions, into the subsurface to enhance existing microbial growth. Injection piping will be installed across the bottom of the excavation (perforated pipe and a riser for future applications) before backfilling. The nutrients and depth of injections will be determined during the remedial design.

This alternative maintains engineering controls which were part of the IRMs and includes institutional controls, in the form of an environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site.

Present Worth: *$3,323,000*
Capital Cost: *$2,703,000*
Annual Costs: *$15,900*

Alternative #6: Low Temperature In-Situ Thermal Remediation with Enhanced Bioremediation with Site Management

To accelerate the biological breakdown of contaminants through anaerobic reductive dechlorination, subsurface soil will be gently heated to temperatures between 35°C to 40°C using low temperature thermal heating (See Figure 13). This thermal approach would not require a treatment system on-site and few, if any extraction wells. A small power control unit would be installed on-site. In addition to the soil heating, the biological breakdown of contaminants will be further enhanced by injecting nutrients, in water-based solutions, into the subsurface to enhance existing microbial growth to enhance breakdown of contaminants in site media. The nutrients, method and depth of injection will be determined during the remedial design. The existing concrete building slab and asphalt will remain in place. Limited soil removal and/or a soil cover will be required to allow for the restricted residential use of the site in areas where the upper two foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs).

This alternative maintains engineering controls which were part of the IRMs and includes institutional controls, in the form of an environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site

Present Worth: *$3,619,000*
Capital Cost: *$3,000,000*
Annual Costs *$15,900*

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
1. No Further Action	$0	$0	$0
2. No Further Action with Site Management	$18,000	$13,110	$385,300
3. Restoration to Pre-Disposal or Unrestricted Conditions with Site Management	$3,645,000	$15,900	$4,265,000
4. Enhanced Biodegradation with Site Management	$718,000	$15,900	$1,338,000
5. Excavation and Enhanced Biodegradation with Site Management	$2,703,000	$15,900	$3,323,000
6. Low Temperature Thermal Heating and Enhanced Biodegradation with Site Management	$3,000,000	$15,900	$3,619,000

Exhibit D

SUMMARY OF THE PROPOSED REMEDY

The Department is proposing Alternative 5, Excavation and Enhanced Biodegradation as the remedy for this site. Alternative 5 would achieve the remediation goals for the site by excavation of soil and the treatment of groundwater using enhanced biodegradation. The elements of this remedy are described in Section 7. The proposed remedy is depicted in Figure 12.

Basis for Selection

The proposed 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.

The proposed remedy (Alternative 5) would satisfy this criterion by removing the source of groundwater contamination (i.e., contaminated soil), treating the groundwater, and addressing the potential for exposures related to soil vapor intrusion. Alternative 5 addresses the source of the groundwater contamination, which is the most significant threat to public health and the environment. Alternative 1 (No Action) does not provide any protection to public health and the environment and will not be evaluated further. Alternative 3, by treating all the soil and shallow weathered bedrock contaminated above the Unrestricted Use soil cleanup objective, meets the threshold criteria. Alternatives 2, 4, and 6 also satisfy this criterion but to a lesser degree or with lower certainty. Alternatives 2, 3, 4, 5 and 6 rely on a restriction of groundwater use at the site to protect human health. The potential for soil vapor intrusion will be significantly reduced by Alternative 3 and, to a somewhat lesser extent, under Alternative 5. The potential for soil vapor intrusion will remain high under Alternatives 2, 4 and 6.

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

Alternatives 3 and 5 comply with SCGs to the extent practicable. They address the source areas of contamination and comply with the restricted residential use, and protection of groundwater soil cleanup objectives through soil removal and in-situ treatment. They also create the conditions necessary to restore groundwater quality to the extent practicable. Alternatives 2, 4, and 6 also comply with this criterion but to a lesser degree or with lower certainty. Because Alternatives 2, 3, 4, 5, and 6 satisfy the threshold criteria, the remaining criteria are particularly important in selecting a final remedy for the site. It is expected Alternatives 3 and 5 will achieve groundwater SCGs sooner, while groundwater contamination above SCGs will remain on-site under Alternatives 2, 4 and 6 for many years.

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

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

Long-term effectiveness is best accomplished by those alternatives involving excavation of the contaminated overburden soils (Alternative 5). Alternative 3 results in removal of contamination to unrestricted use criteria at the site using in-situ treatment. Alternative 5 would result in the removal of most of the contaminated soil at the site, but also require an environmental easement and long-term monitoring. For Alternative 2, site management remains effective, but it will not be desirable in the long term.

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

Alternative 2 would control potential exposures with institutional controls only and will not reduce the toxicity, mobility or volume of contaminants remaining. Alternative 3 reduces the toxicity, mobility, and volume of on-site contaminated media by building and operating a treatment system for an unspecified period of time. Alternatives 4 and 6 reduce the toxicity, mobility, and volume of on-site contaminated media through enhanced biodegradation; however, the time frame will be much longer than Alternatives 3 and 5. Alternative 5 reduces the mobility and volume of on-site contaminated soil and bedrock by transferring the material to an approved off-site disposal location. However, depending on the disposal facility, the volume of the material would not be reduced. Alternatives 3, 4, 5 and 6 would permanently reduce the toxicity, mobility and volume of contaminants in groundwater by use of enhanced biodegradation.

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

Alternatives 2 through 6 all have short-term impacts which could easily be controlled, however, Alternatives 2, 4 and 6 would have the smallest impacts. Activities that could impact the local community for Alternatives 3 and 6 would be noise from constructing the treatment system and from drilling activities to install the heating/vacuum extraction wells (less for Alternative 6). Heating would need to be evaluated for short term impacts to sub-surface utilities or structures and the adjacent daycare because the temperatures will reach 35-40 degrees Celsius for Alternative 6 and 100 degrees Celsius for Alternative 3. Alternative 5 could impact the local community with noise from the excavation and increased truck traffic with the transportation and disposal of soil, and the delivery of backfill, as well as with the injection equipment; similarly, though more limited in scope and duration, noise-related impacts could occur from the limited excavation and off-site disposal and site cover construction for Alternatives 4 and 6. There is the potential for airborne exposure, however, mitigation measures can be taken to address this potential.

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

Alternatives 4 and 5 are favorable in that they are readily implementable. Alternative 3, and to a lesser degree Alternative 6, are also implementable, but the power requirement for the dual heater/soil vapor extraction wells may not be available and are inconsistent with green remediation goals.

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

The costs of the alternatives vary significantly. Alternative 2 has a low cost, but the contaminated soil would not be addressed other than by institutional controls. With its large volume of soil to be treated, Alternative 3 (dual heater/soil vapor extraction) would have the highest present worth cost. Alternative 4 has a lower cost, but some contaminated soil would remain on the property. Alternative 5 would be less expensive than Alternative 3, yet it would provide equal protection of the groundwater resource, and so is more cost-effective.

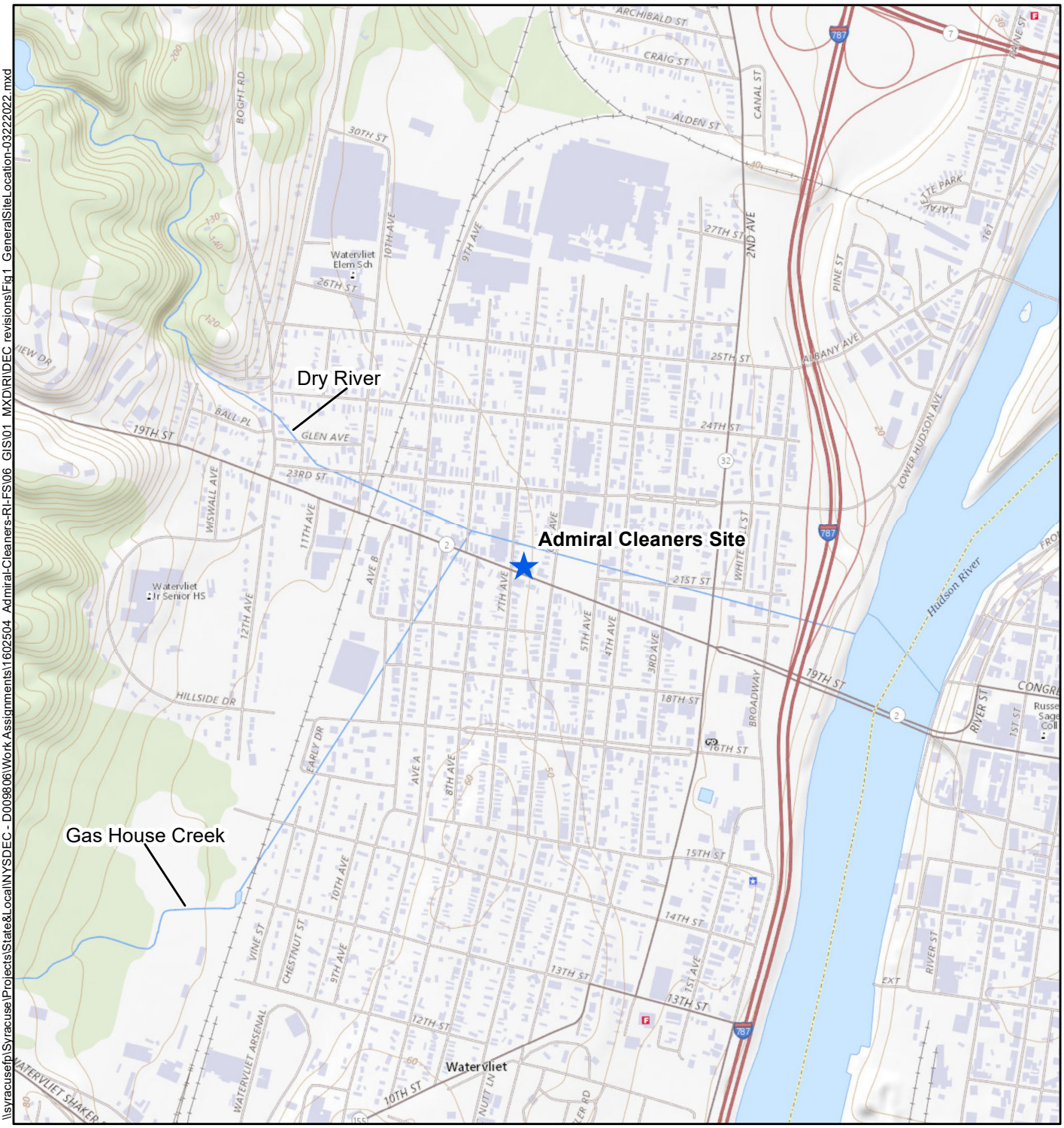
8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings in the selection of the soil remedy.

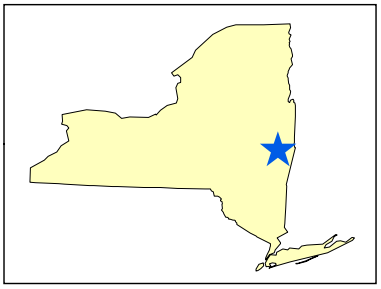
Since the anticipated use of the site is restricted-residential use, Alternatives 2, 4 and 6 would be less desirable because at least some contaminated soil would remain on the property whereas Alternatives 3 and 5 would remove or treat the contaminated soil and groundwater permanently. However, the residual contamination with Alternatives 4 and 6 would be controllable with implementation of institutional and engineering controls including an environmental easement and a Site Management Plan.

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

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the NYSDEC 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 5 is being proposed because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.





Legend

★ Site Location

0 500 1,000
Feet

N

Figure 1
General Site Location

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 3/23/2022
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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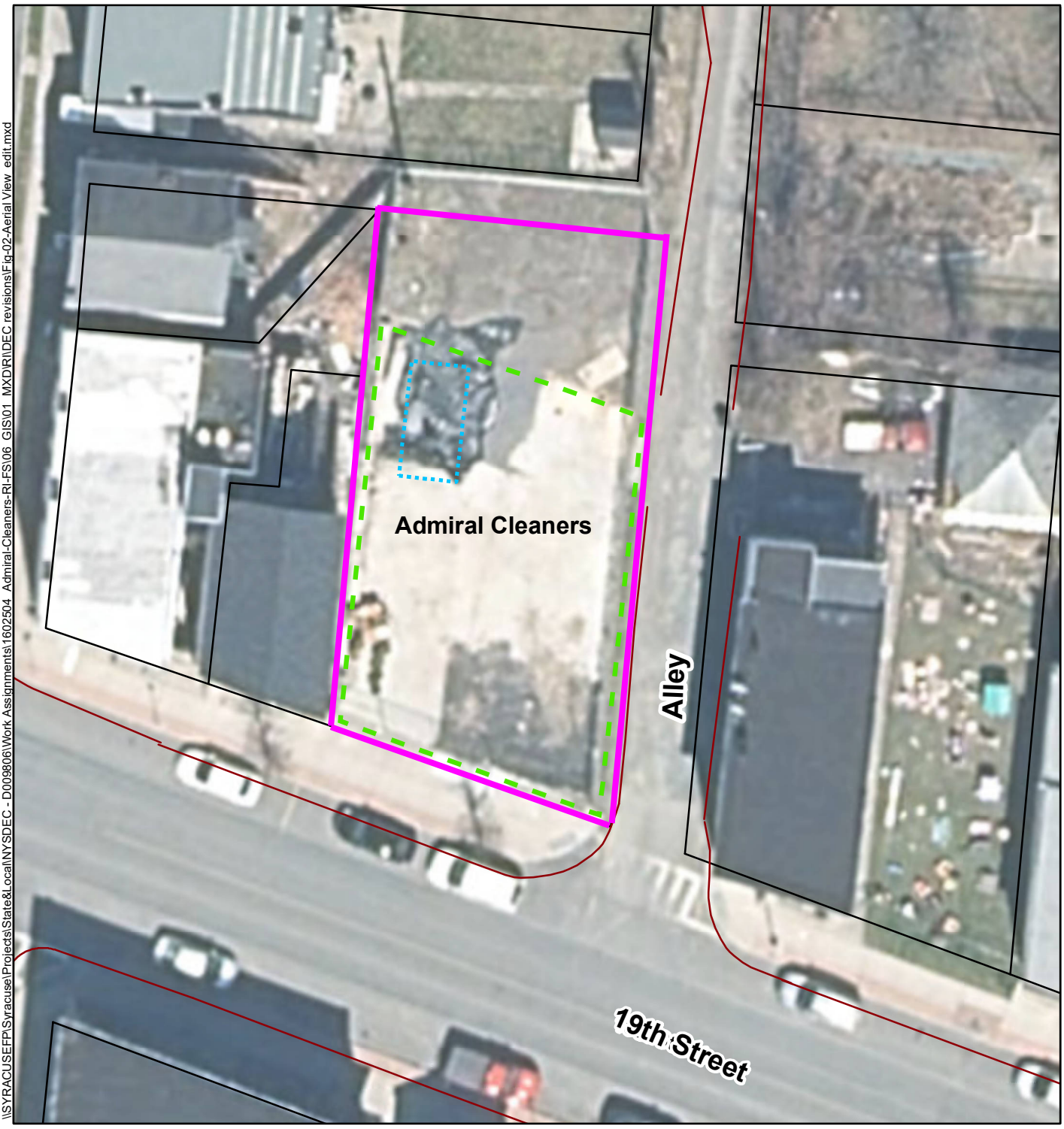
EA



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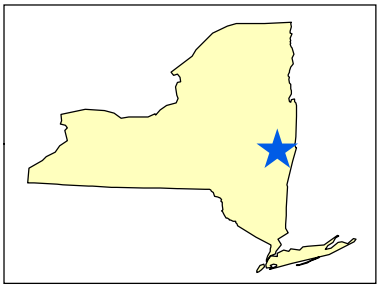


0 20 40
Feet

N

Legend

- IRM No. 2 Excavation Footprint
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Site Location
- Site Boundary

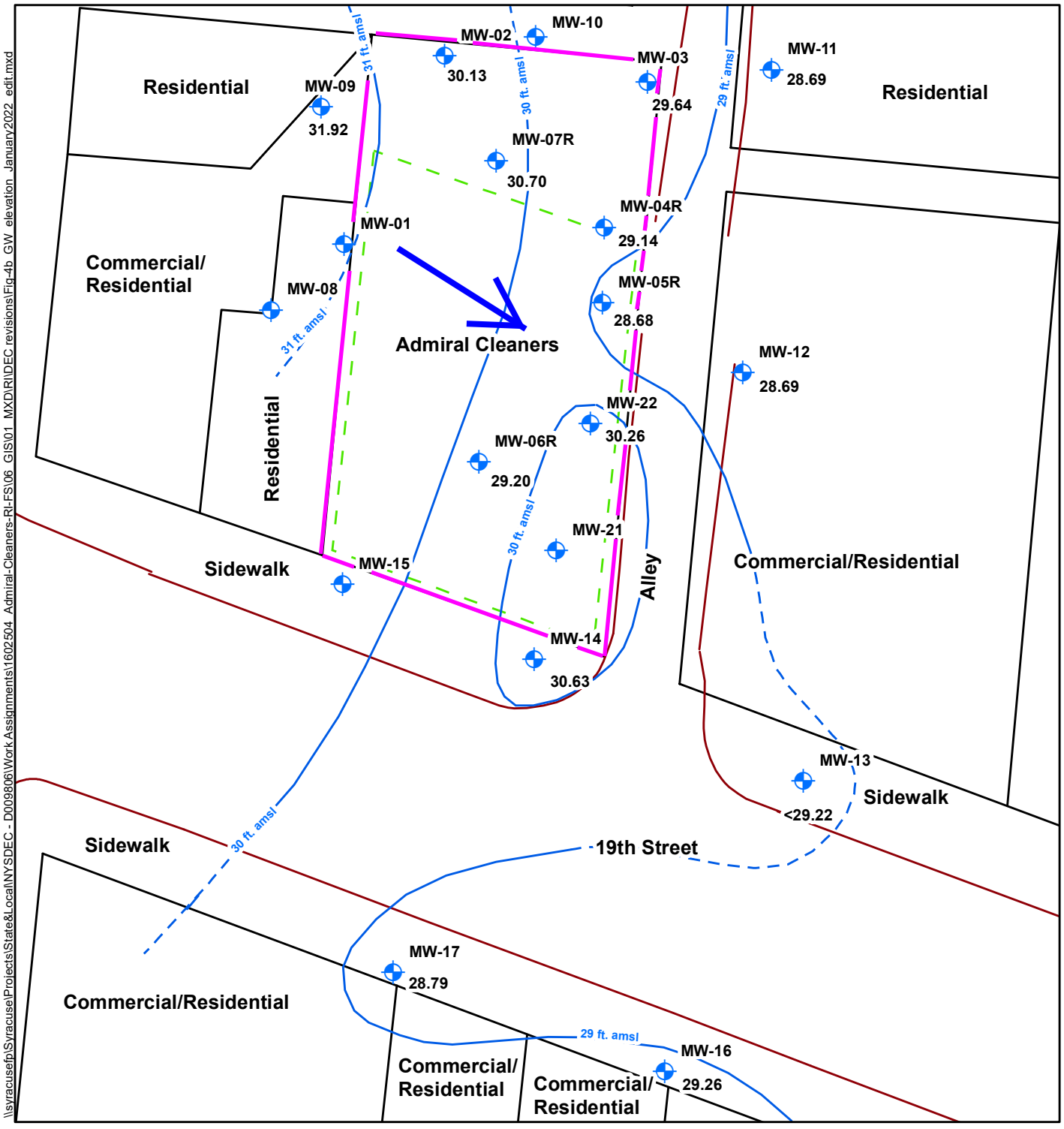
Figure 2

Aerial View
Admiral Cleaners (Site No.401075)
Watervliet, Albany County, NY

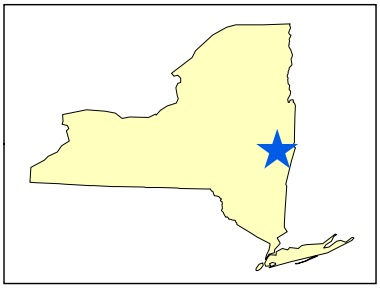
Map Date: 7/27/2022
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

EA



\\syracusefs\Syracuse\Projects\State&Local\NYSDEC - D009806\Work Assignments\1602504 Admiral-Cleaners-RI-FS\06 GIS\01 MXD\RI\DEC revisions\Fig-4b GW elevation January2022 edit.mxd



0 20 40
Feet

N

Legend

- Overburden Monitoring Well
- January 2022 Groundwater Contours
- Inferred Groundwater Contour
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Site Location
- Site Boundary

Groundwater Elevations shown in ft. amsl
ft. = feet
amsl = above mean sea level
MW-10 Could not be located; MW-15 and MW-21 could not be sampled as wells were frozen at time of gauging.
MW-13 was dry during gauging and GW elevation was estimated using bottom of screen

Figure 3
Overburden Groundwater Elevations
January 2022

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 7/6/2022
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

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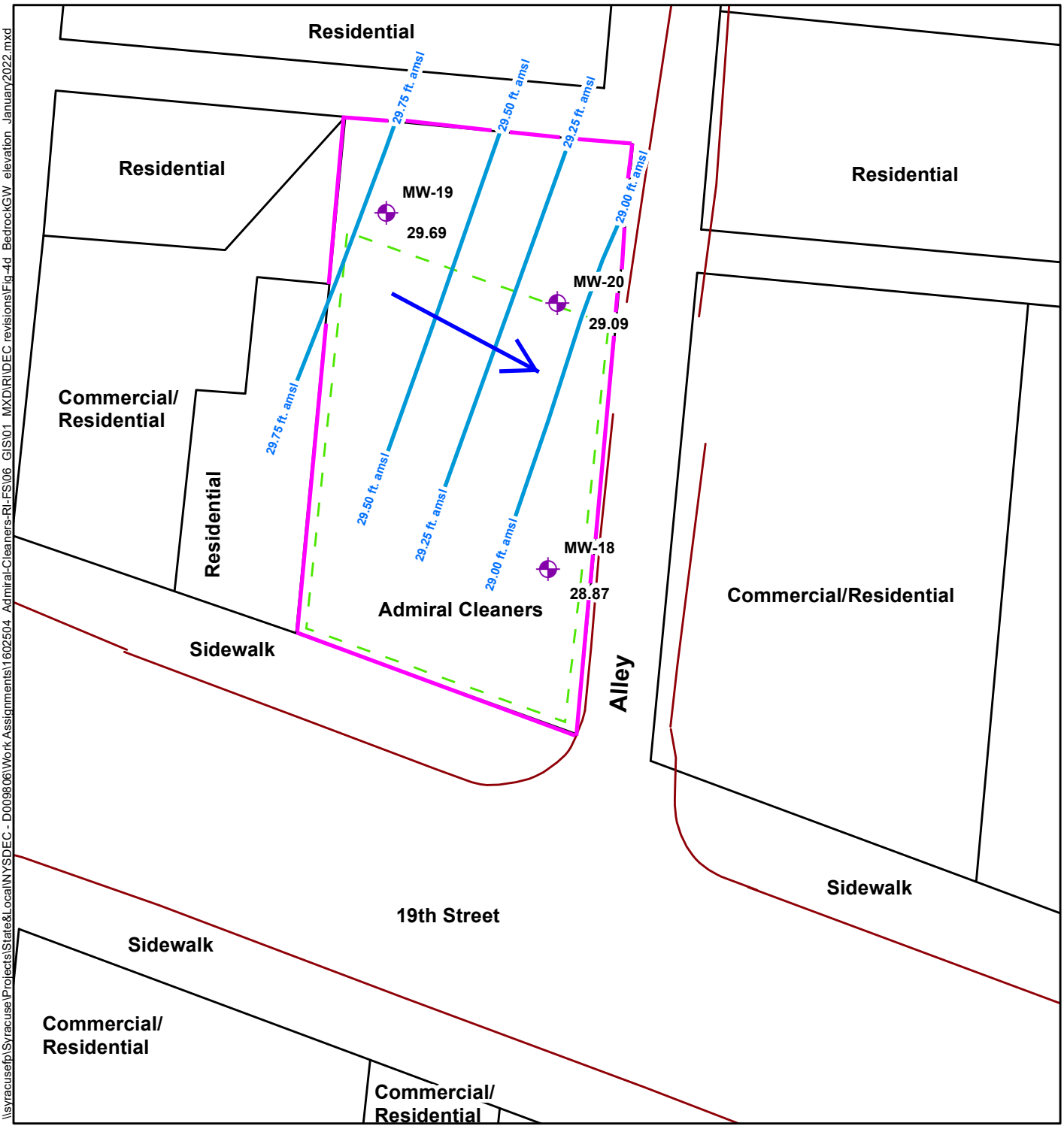
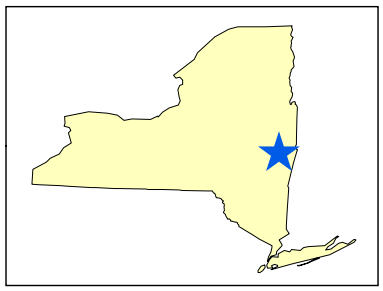


\\syracusefp\Syracuse\Projects\State&Local\NYSDEC - D009806\Work Assignments\1602504 Admiral-Cleaners-RI-FS\06 GIS\01 MXD\RI\DEC revisions\Fig-4d BedrockGW elevation January2022.mxd



0 20 40
Feet

Legend

- Bedrock Monitoring Well
- January 2022 Groundwater Contours
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Site Location
- Site Boundary

Groundwater Elevations shown in ft. amsl
ft. = feet
amsl = above mean sea level

N

Figure 4
Bedrock Groundwater Elevations
January 2022

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 3/23/2022
Projection: NAD 1983 State Plane New York
East FIPS 3101 Feet

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PDI-SB-21	
5-6 ft. bgs	
Analyte	Results (mg/kg)
PCE	***11***

PDI-SB-13	
4-5ft. Bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**8.2**
PCE	**2.9**
Ethylbenzene	**4.3**
Xylene	**12**

PDI-SB-26	
5-6 ft. bgs	
Analyte	Result (mg/kg)
PCE	**3.1**

SB-02	
3-6 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**0.75**

PDI-SB-07	
7-7.5 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**4.3**
TCE	**0.54**

SB-08	
5-5.5 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**2.2**
PCE	***100***
TCE	**1.4**
1,2,4-Trimethylbenzene	***87***
1,3,5-Trimethylbenzene	**33**
Ethylbenzene	**3.8**
Isopropylbenzene	**4.8**
m,p-Xylene	**6.6**
N-propylbenezene	**14**
O-Xylenes	**4.3**

SB-01	
9.5-10 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**9.3**
PCE	***240***
TCE	**8.3**

PDI-SB-05	
9.5-10 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**4**
PCE	***150***
TCE	**8.7**

SB-03	
5-10 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**21**
PCE	***170***
TCE	***35***

PDI-SB-04	
7-8 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**1.4**

PDI-SB-09	
7-8 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**2**

PDI-SB-16	
8-9 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**14**
PCE	***150***
TCE	**6.6**
Ethylbenzene	**4.1**
Xylene	**12**

SB-04	
10-12 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**0.63**
PCE	***19***
TCE	**0.54**

MW-07/SB-05	
5-10 ft. bgs	
Analyte	Result (mg/kg)
PCE	***16 L-06***

SB-08	
5-9.5 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**2.2 MS-12**
PCE	***23 L-06***
TCE	**4.3 MS-12**

PDI-SB-18	
7-8 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**0.75**

SB-07R	
8.5-9 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**1.1**
PCE	***9.6***
1,2,4-Trimethylbenzene	**9.4**
m,p-Xylenes	**0.69**
O-Xylenes	**0.46**
14.5-15 ft. bgs	
PCE	***330***
TCE	**0.87 J**

PDI-SB-17	
7-8 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**1.9**
PCE	***32***
TCE	**0.53**

PDI-SB-14	
4-5 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**1**

PDI-SB-15	
7-8 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**2.7**

SB-06	
6-9 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**29**
PCE	***120***
TCE	**8.3**

PDI-SB-01	
7.5-8 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**0.27**

PDI-SB-02	
7-8 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**5.2**
Xylene	**0.69**

PDI-SB-11	
7-8 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**8.6**
Xylene	**2.1**

PDI-SB-03	
9.5-10 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**11**
Xylene	**0.44**

PDI-SB-10	
8-9 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	***86***
PCE	***80***
TCE	**7.4**
Ethylbenzene	**19**
Toluene	***1.7***
Xylene	**57**

MW-06	
7 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**1.3**

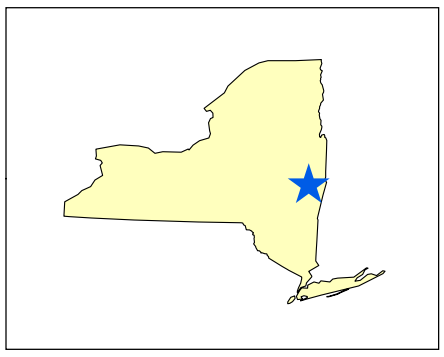
SB-12	
0.2-1 ft. bgs	
Analyte	Result (mg/kg)
Acetone	**2.9**
5-9 ft. bgs	
Cis-1,2-DCE	**0.32**

MW-06/SB-14	
9-11 ft. bgs	
Analyte	Result (mg/kg)
Cis-1,2-DCE	**7.6**

PDI-SB-12	
6-7 ft. bgs	
Analyte	Results (mg/kg)
Cis-1,2-DCE	**5.4**

Soil Cleanup Objectives (mg/kg)				
Analyte	Unrestricted Use	Residential Use	Commerical Use	Protection of Groundwater
Acetone	0.05	100	500	0.05
Cis-1,2-DCE	0.25	59	100	0.25
Ethylbenzene	1	30	390	1
N-propylbenzene	3.9	100	500	3.9
Tetrachloroethene (PCE)	1.3	5.5	150	1.3
Toluene	0.7	100	500	0.7
Trichloroethene (TCE)	0.4	10	200	0.47
1,2,4-Trimethylbenzene	3.6	47	190	3.6
1,3,5-Trimethylbenzene	8.4	47	190	8.4
Xylene (mixed)	0.26	100	500	1.6

NOTES
J = Estimated Value
L-06 = Laboratory control is outside of control limits.
MS-12 = MS/MSD recovery outside of control limits
Bolded values exceed unrestricted use SCO and/or Protection of Groundwater SCO
Bold Italized exceeds residential use SCO
Bold Shaded exceeds commerical use SCO
ft. bgs = Feet below ground surface
mg/kg = miligram(s) per kilogram
PDI = Pre-design investigation
SCO = Soil cleanup objective



Legend

- Soil Boring Locations
- Concrete Slab Outline
- Total CVOC Contours
- Edge of Pavement
- Property Boundaries
- Site Location
- Site Boundary

Figure 5
Subsurface Soil Sample Exceedances

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 10/31/2024
Source: ESRI, 2011
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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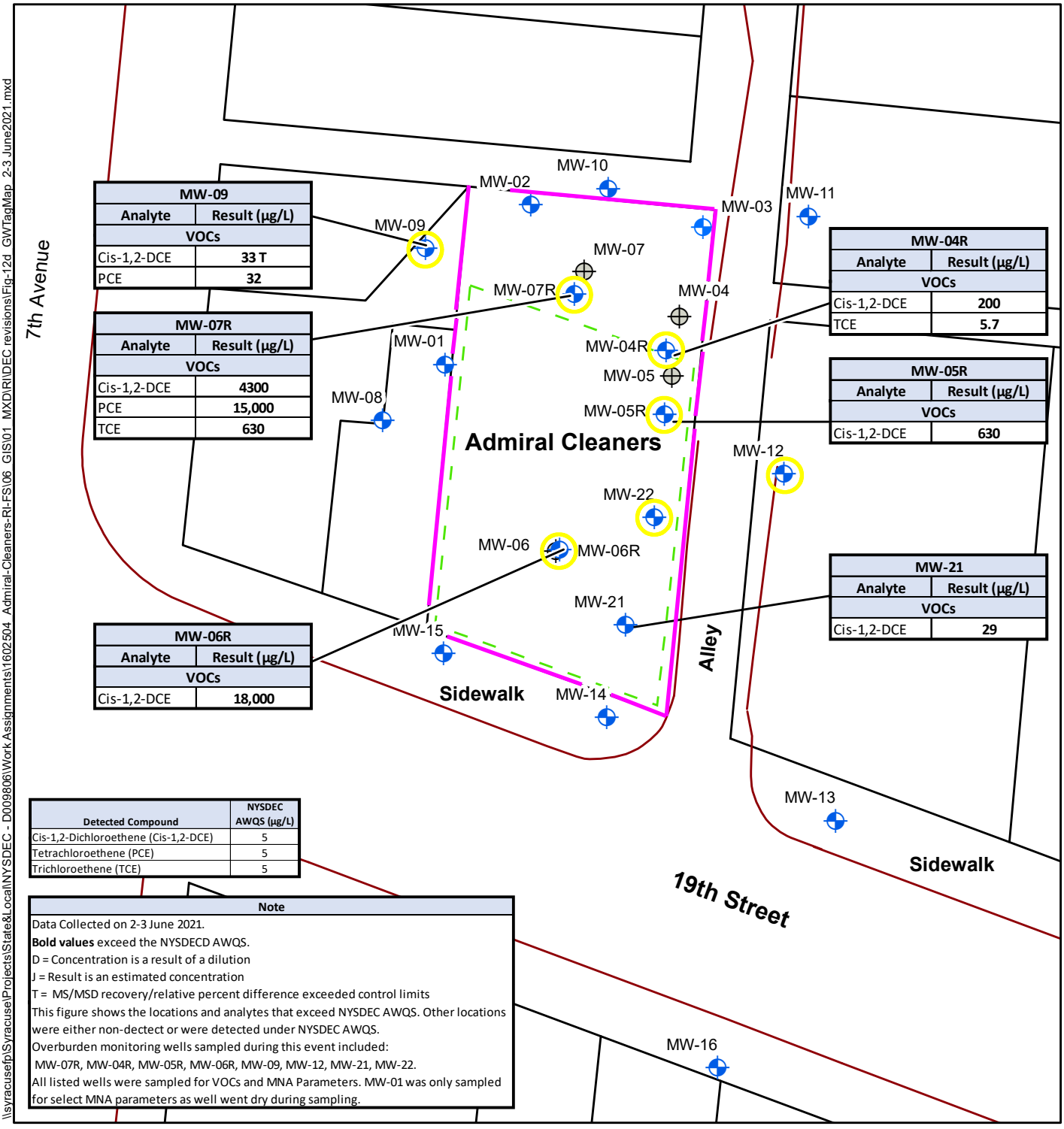
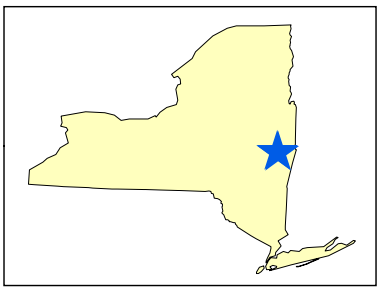


Detected Compound	NYSDEC AWQS (µg/L)
Cis-1,2-Dichloroethene (Cis-1,2-DCE)	5
Tetrachloroethene (PCE)	5
Trichloroethene (TCE)	5

Note

Data Collected on 2-3 June 2021.
Bold values exceed the NYSDECD AWQS.
D = Concentration is a result of a dilution
J = Result is an estimated concentration
T = MS/MSD recovery/relative percent difference exceeded control limits
This figure shows the locations and analytes that exceed NYSDEC AWQS. Other locations were either non-dectect or were detected under NYSDEC AWQS.
Overburden monitoring wells sampled during this event included:
MW-07R, MW-04R, MW-05R, MW-06R, MW-09, MW-12, MW-21, MW-22.
All listed wells were sampled for VOCs and MNA Parameters. MW-01 was only sampled for select MNA parameters as well went dry during sampling.



0 20 40
Feet

N

Legend

- Overburden Monitoring Well
- Abandoned Wells
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Site Location
- Sampled Wells
- Site Boundary

Figure 6
Overburden Groundwater Sample Exceedances 2-3 June 2021

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 7/7/2022
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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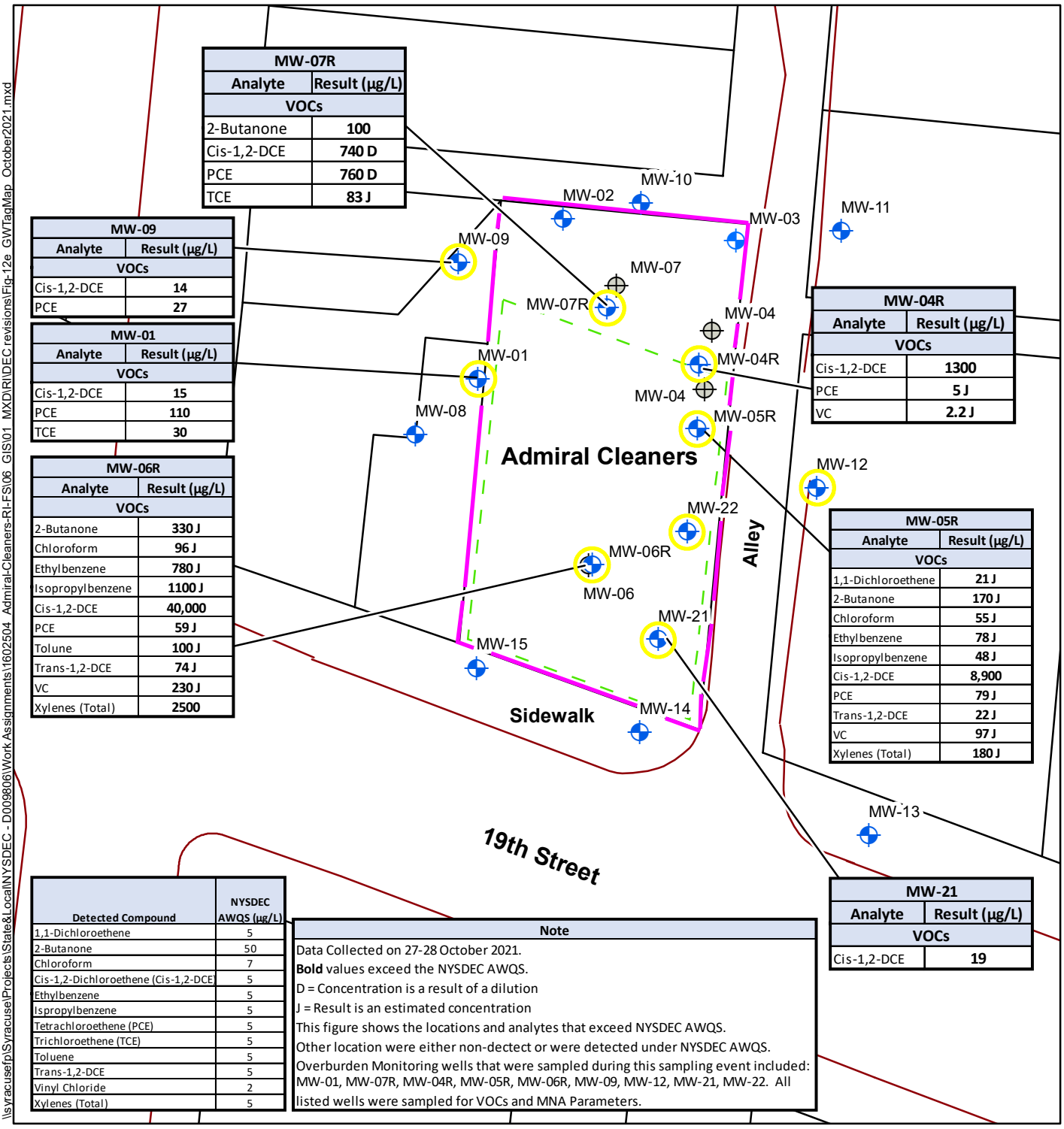

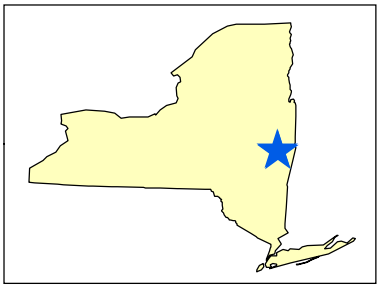

0 20 40
Feet

N

Legend

- Overburden Monitoring Well
- Abandoned Wells
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Site Location
- Sampled Wells
- Site Boundary

Figure 7
Overburden Groundwater Sample Exceedances 27-28 October 2021

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 6/2/2022
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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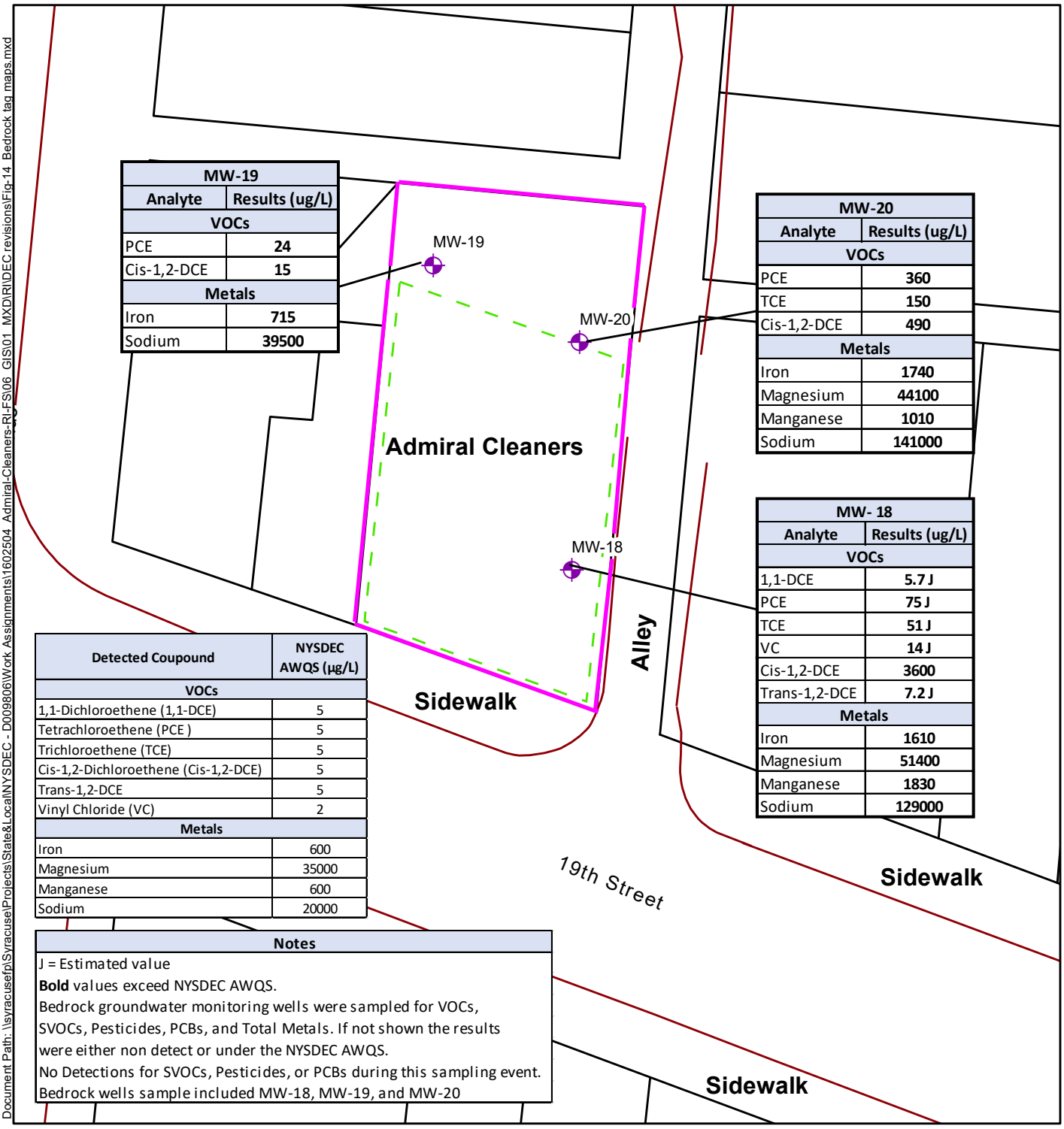


MW-19	
Analyte	**Results (ug/L)**
VOCs	
PCE	**24**
Cis-1,2-DCE	**15**
Metals	
Iron	**715**
Sodium	**39500**

MW-20	
Analyte	**Results (ug/L)**
VOCs	
PCE	**360**
TCE	**150**
Cis-1,2-DCE	**490**
Metals	
Iron	**1740**
Magnesium	**44100**
Manganese	**1010**
Sodium	**141000**

MW- 18	
Analyte	**Results (ug/L)**
VOCs	
1,1-DCE	**5.7 J**
PCE	**75 J**
TCE	**51 J**
VC	**14 J**
Cis-1,2-DCE	**3600**
Trans-1,2-DCE	**7.2 J**
Metals	
Iron	**1610**
Magnesium	**51400**
Manganese	**1830**
Sodium	**129000**

Detected Coupound	NYSDEC AWQS (µg/L)
VOCs	
1,1-Dichloroethene (1,1-DCE)	5
Tetrachloroethene (PCE)	5
Trichloroethene (TCE)	5
Cis-1,2-Dichloroethene (Cis-1,2-DCE)	5
Trans-1,2-DCE	5
Vinyl Chloride (VC)	2
Metals	
Iron	600
Magnesium	35000
Manganese	600
Sodium	20000

Notes

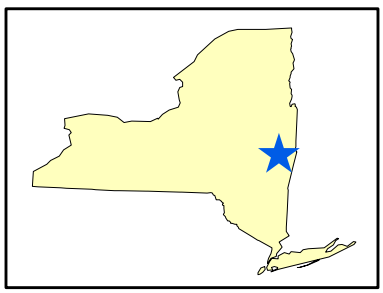
J = Estimated value

Bold values exceed NYSDEC AWQS.

Bedrock groundwater monitoring wells were sampled for VOCs, SVOCs, Pesticides, PCBs, and Total Metals. If not shown the results were either non detect or under the NYSDEC AWQS.

No Detections for SVOCs, Pesticides, or PCBs during this sampling event.

Bedrock wells sample included MW-18, MW-19, and MW-20



0 20 40
Feet

N

Legend

- Bedrock Monitoring Well
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Site Location
- Site Boundary

Figure 8
Bedrock Groundwater Sample Exceedances
6 January 2021

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 3/23/2022
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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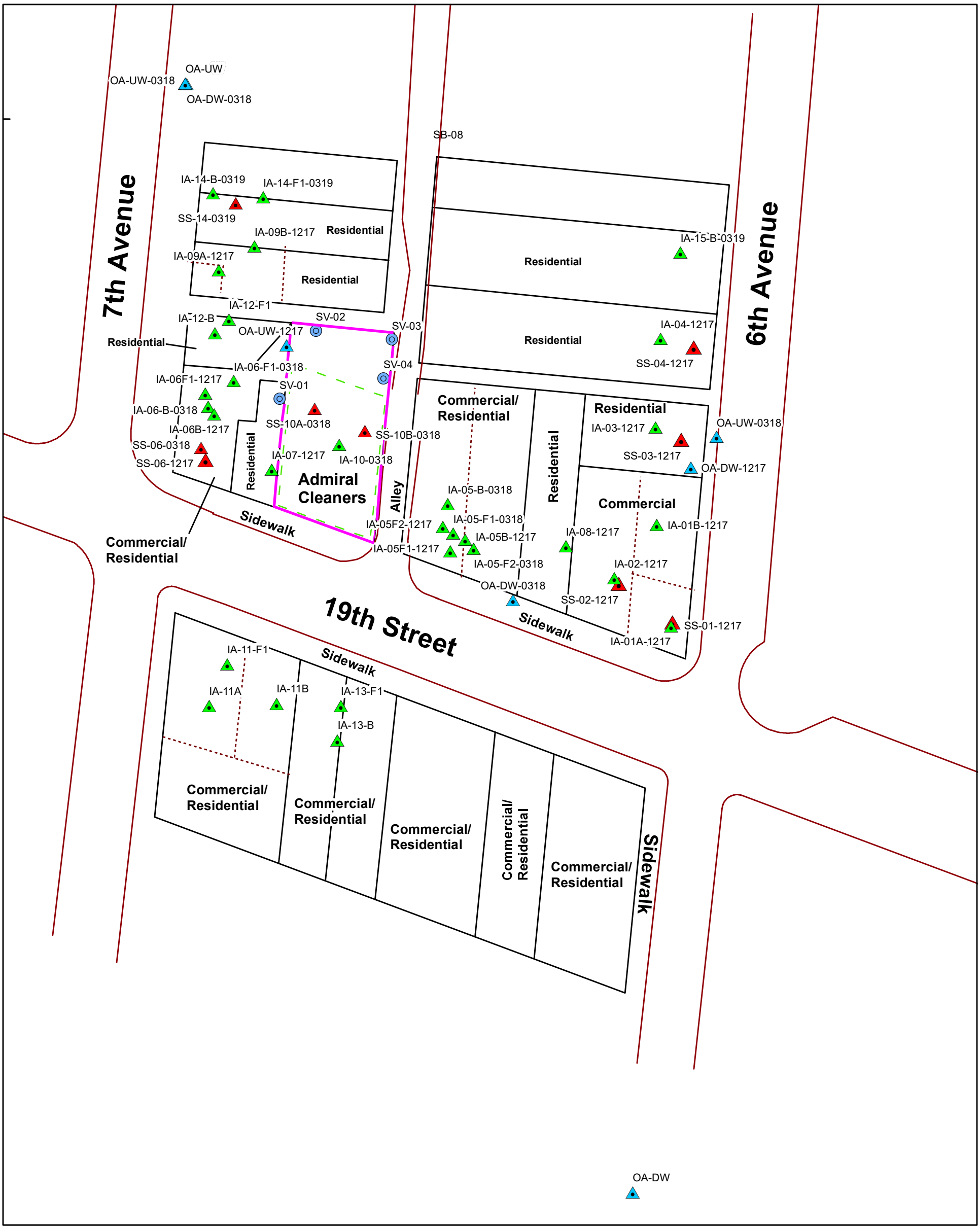

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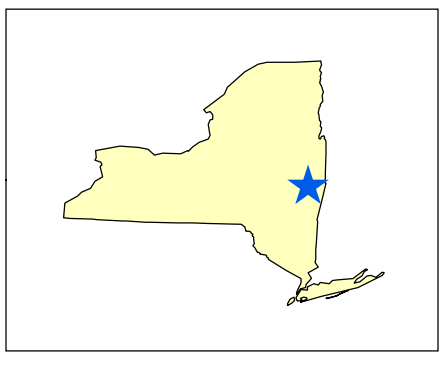

0 40 80
Feet

N

Legend

- Indoor Ambient Air Location
- Outdoor Ambient Air Location
- Sub-Slab Sample Location
- Soil Vapor Point Locations
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Multiple Basement Types Observed
- Site Boundary

Figure 9
Remedial Investigation
SVI Sample Locations

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 9/7/2022
Source: ESRI, 2011
Projection: NAD1983 State Plane New York East FIPS 3101 Feet

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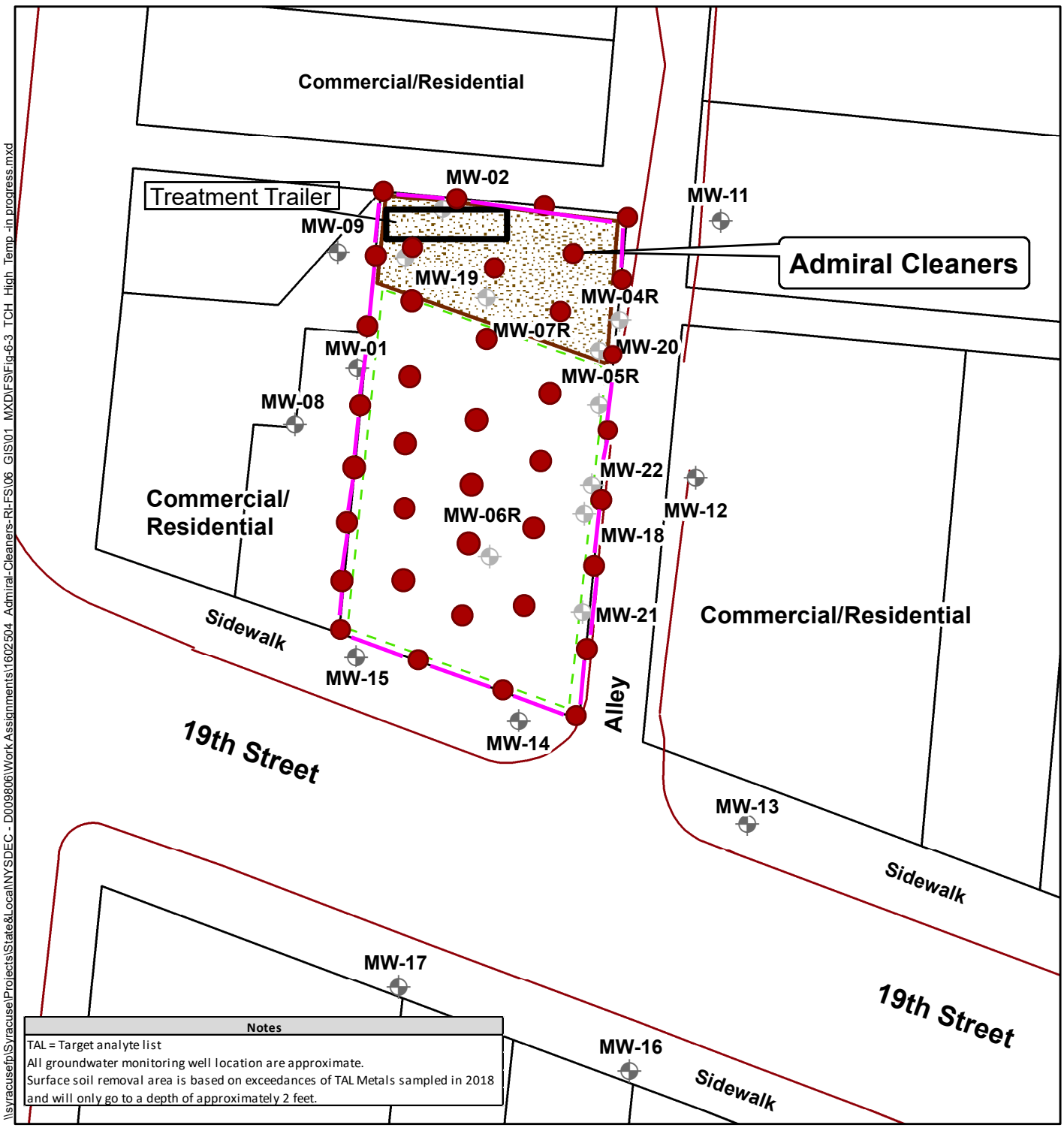

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Figure 10
Alternative 3
Remedial Layoutt
Admiral Cleaners (Site No.401075)
Watervliet, Albany County, NY

Map Date: 5/3/2023
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

NEW YORK STATE Department of Environmental Conservation

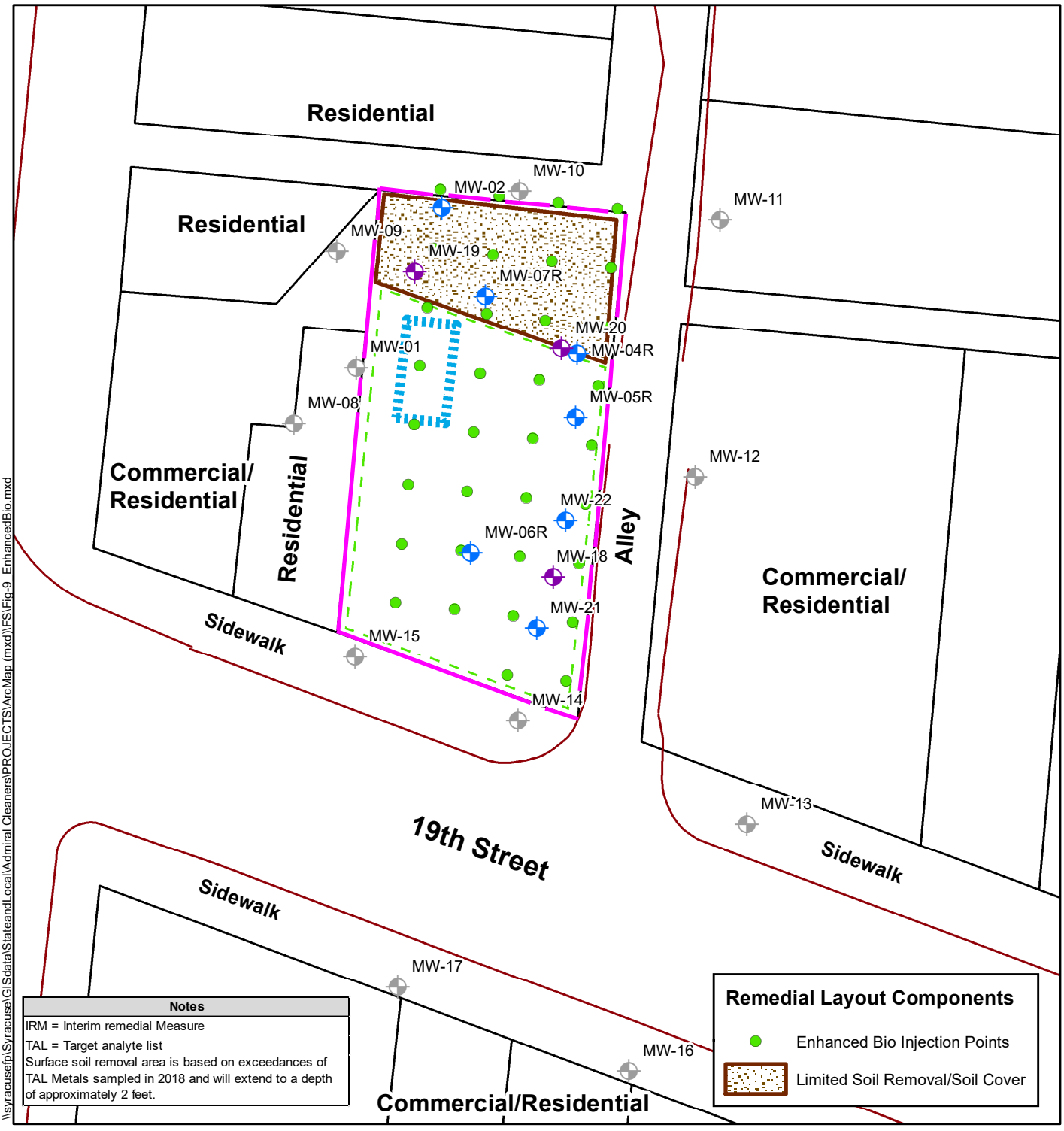

Figure 11
Alternative 4
Remedial Layout

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 10/31/2024
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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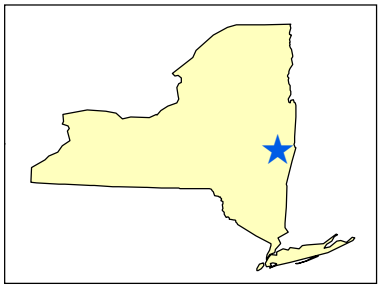

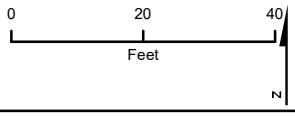

Legend

- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- Building Foundation Outline
- Proposed Biodiffusers
- Site Location
- Site Boundary

Figure 12
Alternative 5
Remedial Layout

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 2/27/2025
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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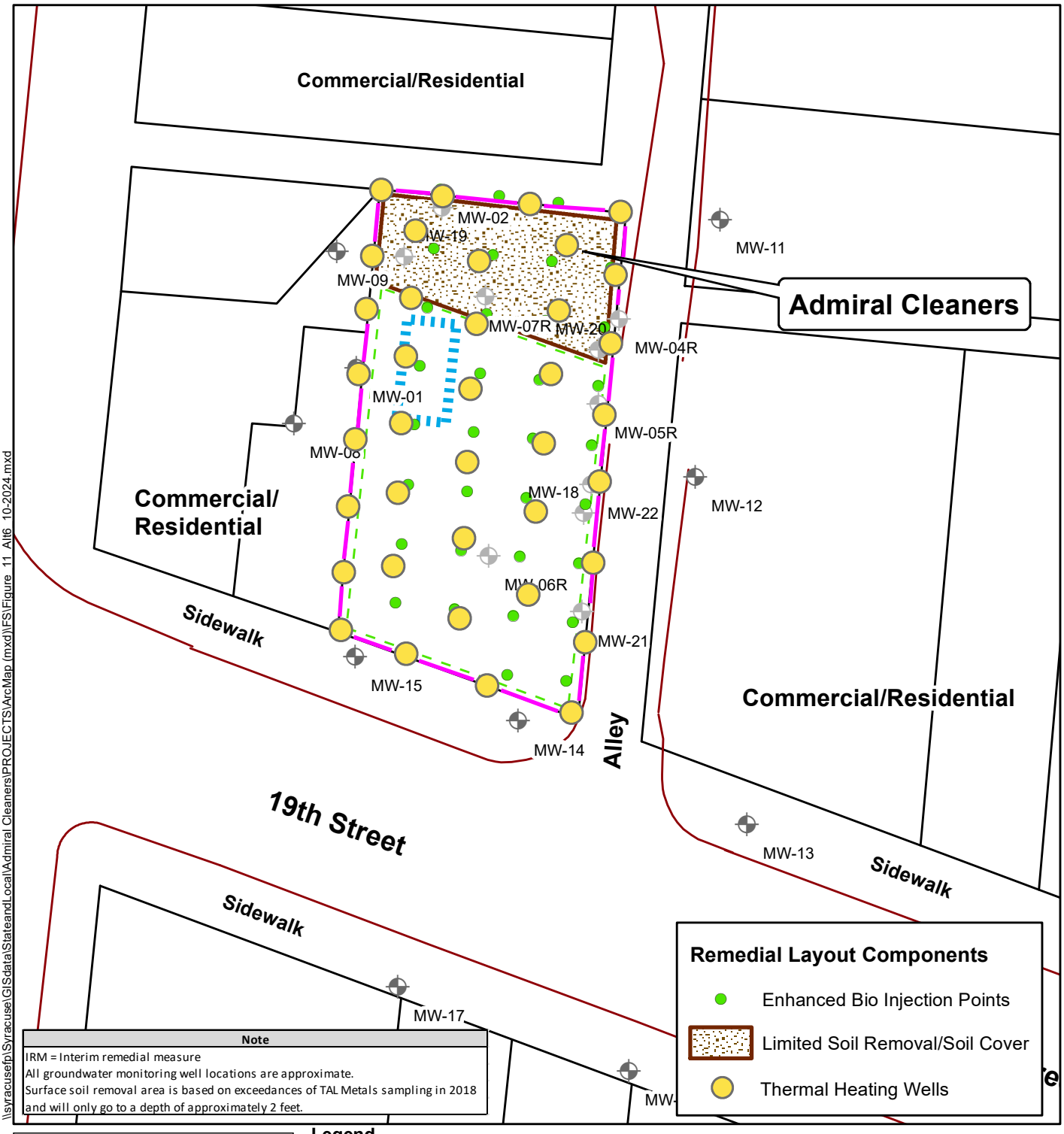

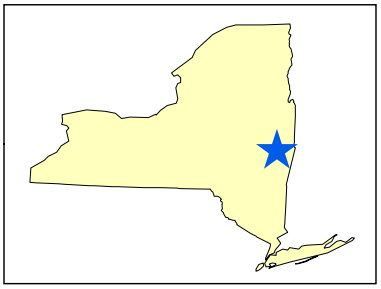

Legend

- OU-2 Overburden Monitoring Well
- OU-1 Proposed Decommissioned Well
- Concrete Slab Outline
- Edge of Pavement
- Property Boundaries
- IRM No. 2 Excavation
- Site Location
- Site Boundary

N

Figure 13
Alternative 6
Remedial Layout

Admiral Cleaners (Site No. 401075)
Watervliet, Albany County, NY

Map Date: 10/31/2024
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

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