PROPOSED REMEDIAL ACTION PLAN

Bestway Cleaners
State Superfund Project
Buffalo, Erie County
Site No. 915219
February 2020

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 (the Department), 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 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 feasibility study (FS). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the RI 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 with Site Management and Institutional Controls is the proposed remedy by this Proposed Remedial Action Plan (PRAP). A No Further Action remedy may include site management, which will include continued operation of any remedial system 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. This PRAP identifies the IRM(s) conducted, the proposed engineering control to be implemented, and discusses the basis for No Further Action.

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 repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department 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 repository:

Dudley Branch Library
2010 South Park Avenue
Buffalo, NY 14220

A public comment period has been set from:

02/26/2020 to 03/25/2020

A public meeting is scheduled for the following date:

03/04/2020 6:30 PM

Public meeting location:

Lackawanna Senior Center,
230 Martin Road, Lackawanna, NY 14218

At the meeting, the findings of the remedial investigation (RI) 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 03/25/2020 to:

Brianna Scharf
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
brianna.scharf@dec.ny.gov

The Department may modify the proposed remedy 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 Department's final selection of the remedy for this site.

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 Bestway Cleaners site is a 0.2-acre site located in a mixed commercial and residential area. The site is located at 2075 Seneca Street on the south corner of the intersection of Seneca Street and Yale Street in the City of Buffalo.

Site Features: This site consists of a former dry-cleaning facility located in a densely populated commercial and residential area on the southeast side of the City of Buffalo. The mostly paved 0.2-acre site includes a retail building, containing a pizzeria and a recycling facility, with a paved parking area in the front and rear of the building. The site is bordered to the northeast by Seneca Street, to the northwest by Yale Place, to the southeast by commercial properties and to the southwest by residential properties. Cazenovia Creek lies approximately 800 feet to the southwest of the site. Approximately 500 feet to the west of the site is the Former Pizza Hut site (Site ID No. V00370), which was remediated under the Department's Voluntary Cleanup Program (VCP).

Current Zoning and Land Use: The site parcel is currently zoned N-3E mixed use and is currently occupied by a pizzeria and a recycling facility.

Past Use of Site: Historical city directories and Sanborn maps indicated that the property was originally developed with a dwelling in 1900, which remained unchanged until 1917. The 1940 Sanborn map indicated that the property was improved with a store/dwelling and the city directory shows that in 1946 a retail/commercial building was developed at the site. In 1950 the site was improved with a residential/retail building and remained unchanged until 1960. According to the city directory, Bestway Dry Cleaners was established in 1965 and recently shut down operations at this location.

The Department became aware of the Bestway Cleaners site after the initial investigation of the nearby Former Pizza Hut site (Site ID No. V00370), which concluded that potential sources of chlorinated solvents were present off-site. One of these potential sources was determined to be Bestway Cleaners, which led to the installation of monitoring wells on the Bestway Cleaners property. The analysis of samples from those wells indicated the presence of tetrachloroethene (PCE) in groundwater and the Bestway property was subsequently listed on the State's Registry of Inactive Hazardous Waste Disposal sites.

Site Geology and Hydrogeology: Subsurface materials encountered within the study area can generally be divided into the following units with increasing depth from grade: fill materials, a sand unit, a silt and clay unit, a till unit, and bedrock. The fill material consists mainly of reworked silt and clay with some varying amounts of sand and gravel, brick, coal, wood, concrete and other debris. Fill materials ranged in thickness from 1.5 ft to 18 ft. The sand unit consists of fine to medium-grained sand with varying amounts of gravel. Where encountered, its thickness ranges from approximately 3 ft to 14 ft. Based on a review of historic investigations conducted in the

area, it appears that this sand unit is continuous across the study area, except in areas where it was removed and replaced with fill materials. The silt and clay are also believed to be continuous throughout the study area and has a thickness of 6 ft and 14 ft. The till thickness ranged between approximately 1 ft and 7 ft and is composed of a heterogeneous mixture of silt, sand, and gravel. Bedrock was encountered at boring depths of approximately 30 ft below grade.

Groundwater is generally 6 to 12 feet below the ground surface. Groundwater flows to the west and southwest towards Cazenovia Creek.

A site location map is attached as Figure 1; a site boundary map is shown in Figure 2; groundwater plume maps are included as Figure 3; and a water table elevation and groundwater flow map in Figure 4.

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 commercial use and industrial use) as described in Part 375-1.8(g) is/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:

Bestway Cleaners, Inc.

The PRPs for the site declined to implement a remedial program when requested by the Department. After the remedy is selected, the PRPs will again be contacted to assume responsibility for the remedial program. 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:

- groundwater
- soil
- soil vapor
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

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

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 Record of Decision.

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

IRM-Soil Vapor Mitigation

During the 2014 Remedial Investigation (RI), indoor air and sub-slab vapor samples were collected from within and beneath the Bestway Cleaners building. The initial results found PCE at up to 20,000 micrograms per cubic meter (ug/m3) beneath the building slab and up to 8,300 ug/m3 in Bestway Cleaners indoor air. The indoor air of the adjoining pizzeria was sampled in February 2015. PCE was detected in the pizza shop at concentrations up to 19,000 ug/m3. Sub-slab soil vapor samples collected from beneath the pizzeria were lower in concentration than the indoor air, indicating that the largest source of indoor air contamination in the pizzeria was from fugitive emissions from the drycleaners. Bestway Cleaners was served with a Public Health Nuisance Order by the local health authority, requiring immediate suspension of on-site dry-cleaning activities. Following suspension of on-site dry-cleaning activities, indoor air samples were again collected from the pizzeria. Indoor air concentrations in the pizzeria decreased by a magnitude of 10 but were still above the NYS immediate action level and NYSDOH recommended that additional corrective actions be taken to reduce exposures. These actions were also necessary to bring the drycleaners into compliance with State air regulations and included machine repairs/upgrades, sealing of building wall penetrations, correct installation and operation of ventilation fans, and a vapor barrier enhancement. Following implementation of these actions, the drycleaner resumed on-site dry-cleaning operations. Indoor air samples were again collected to determine the effectiveness of the actions taken on reducing exposures in the pizzeria. These results showed PCE in the indoor air at 93 ug/m3. The results indicated that the actions taken achieved a substantial reduction in the concentrations of PCE in the indoor air. While indoor air concentrations had been dramatically reduced, concentrations of PCE in the pizzeria indoor air remain in exceedance of the NYSDOH Air Guidance value of 30 ug/m3 for PCE.

Additional soil vapor intrusion (SVI) sampling was conducted at three residences in the vicinity of the Bestway Cleaners during the 2014 RI. PCE in the indoor air ranged from 2.5 ug/m3 to 4.5 ug/m3 and PCE in the sub-slab ranged from 33 ug/m3 to 1,500 ug/m3. Based on these results, it was determined that mitigation measures were needed at one residence to address current and potential indoor air contamination of volatile organic compounds associated with SVI. The Department installed one off-site sub-slab depressurization system (SSDS). The SSDS consists of vapor extraction points installed beneath the basement floor, which is depressurized with a low volume blower. The effluent soil gas is vented through a pipe that extends above the roof. These actions were documented in the SSDS installation summary report dated June 1, 2015. The other two residences required no further action.

In 2016, in order to further evaluate SVI at off-site properties, NYSDOH and the Department collected SVI samples at an additional six residential properties in close proximity to the site. One sub-slab, one indoor air, and one ambient air sample were collected at each property. Sub slab results for TCE ranged from 0.47 ug/m3 to 9.2 ug/m3 and PCE ranged from 1.9 ug/m3 to 310 ug/m3. While there were no indoor air exceedances of PCE or TCE at these properties above the NYSDOH air guidelines of 30 ug/m3 for PCE and 2.0 ug/m3 for TCE, one property sampled during the 2016 sampling event did require actions to address the potential for soil vapor intrusion and a sub-slab depressurization system was installed. The five other properties sampled in 2016, required no further action.

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.

Soil, groundwater, soil vapor and indoor air were analyzed for volatile organic compounds (VOCs). Groundwater was additionally sampled for semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and metals including cyanide. Based upon investigations conducted to date, the primary contaminants of concern include tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichlorethlyene (cis-1,2-DCE), and vinyl chloride (VC).

Nature and Extent of Contamination:
Soil: Surface and subsurface soils were collected at the site and analyzed for VOCs. Results indicated that PCE was detected in surface soil at a concentration of 0.011 parts per million (ppm), below the unrestricted use SCO of 1.3 ppm. No other VOCs were detected. Subsurface analytical data results indicated that no VOCs were detected above the unrestricted use Soil Cleanup Objectives (SCOs). PCE was detected at a maximum concentration of 0.22 ppm, TCE was detected at a maximum concentration of 0.0019 ppm, methylene chloride was detected at a maximum concentration of 0.00026 ppm; below their respective unrestricted use SCOs of 1.30 ppm, 0.47 ppm, and 0.05 ppm. Cyclohexane, isopropylbenzene, and methylcyclohexane were identified; however, these compounds do not have defined SCOs.

Groundwater: During the Remedial Investigation a total of 36 groundwater samples were collected and analyzed. Groundwater concentrations were found to exceed Class GA standards for four chlorinated VOCs: PCE at a maximum level of 120 parts per billion (ppb), TCE at a maximum level of 44 ppb, cis-1,2-dichloroethylene (1,2-DCE) at a maximum level of 280 ppb, VC at a maximum level of 4.2 ppb. Acetone was found in exceedance of Class GA standards in one on-site well. Additionally, two non-chlorinated VOCs were found to exceed Class GA standards: isopropylbenzene at a maximum concentration of 31 ppb, and toluene at a maximum concentration of 12 ppb, above their respective Class GA standards of 5 ppb, in groundwater wells located on

and downgradient of the Bestway Cleaners site. Attenuation of these compounds is indicated based on decreasing concentrations moving downgradient from the site. Additionally, chlorinated ethene concentrations in 2013 and 2016 were lower than concentrations measured in 2008, supporting the pattern of decreasing concentrations. The presence of 1,2-DCE and VC at significant concentrations also indicates that degradation of PCE and TCE is occurring.

In October 2019, additional off-site groundwater samples were collected and analyzed for VOCs, SVOCs and inorganics (metals and cyanide perfluoroalkyl substances (PFAS) compounds. Three VOCs were detected at concentrations greater than Class GA standards of 5 ppb: 1,2-DCE at a maximum concentration of 36 ppb, PCE at a concentration of 91 ppb, and TCE at a maximum concentration of 14 ppb. Cadmium was detected at a maximum concentration of 16 ppb, greater than the Class GA standard of 5 ppb. For PFAS, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were reported at concentrations of up to 5.3 and 12 parts per trillion (ppt), respectively, with PFOS detected slightly above the 10 ppt screening levels for groundwater. No individual PFAS compound exceeded the 100 ppt screening level. The total concentration of PFAS, including PFOA and PFOS, were reported at concentrations up to 36.4 ppt, below the 500 ppt screening level for groundwater. 1,4-Dioxane was reported at a concentration of up to 0.15 ppb, below the 1 ppb screening level for groundwater. The groundwater is not used as a source of drinking water. There are no known wells used as sources of drinking water within at least one-half mile of the site. The City of Buffalo provides drinking water to the site vicinity from a separate source that is not affected by this contamination.

Soil Vapor & Indoor Air: Elevated levels of PCE and TCE were detected in the soil vapor samples collected at the on-site building during the 2008 site characterization investigation. PCE was detected in all ten of the samples collected ranging from 8.48 ug/m3 to 25,500 ug/m3. TCE was detected in five of the samples ranging from 13.5 ug/m3 to 5,970 ug/m3. Remedial actions were undertaken in 2014 to address air quality including sealing of building wall penetrations, installation and operation of a ventilation fans and vapor barrier enhancement. Following implementation of these actions, indoor air samples were again collected. Results showed PCE in the indoor air at 93 ug/m3 indicating that the actions taken achieved a substantial reduction in the concentrations of PCE in the indoor air though concentrations of PCE remained in exceedance of the NYSDOH Air Guidance value of 30 ug/m3 for PCE.

Additional SVI sampling was completed during the RI at nine off-site residences from 2014 to 2016. PCE in the sub-slab ranged from non-detect to 1,500 ug/m3 and PCE in the indoor air ranged from non-detect to 4.5 ug/m3. TCE in the sub-slab ranged from non-detect to 9.2 ug/m3. A sub-slab depressurization system was installed at two of the nine residences sampled to address the potential for exposure from soil vapor intrusion.

6.4: Summary of Human Exposure Pathways

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

People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. VOCs in the soil vapor (air spaces within the soil) 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. Indoor air quality has been impacted by fugitive air emissions of the dry-cleaning facility and possibly by soil vapor intrusion and people are breathing site-related contaminants in the indoor air of the on-site building. Actions to address exposures at the on-site building and any future onsite development are necessary. Actions have been taken to address exposures related to soil vapor intrusion where necessary and where access has been granted offsite. Additional investigation/evaluation is needed in the event that access is granted at other offsite structures.

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.

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 PROPOSED REMEDY

Based on the results of the investigations at the site, and the IRMs that have been performed the Department is proposing No Further Action with Site Management and Institutional Controls as the 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.

In addition to the elements of the IRM already completed (see Section 6.2), the following institutional controls and engineering controls are proposed:

1. Green remediation principals and techniques will be implemented to the extent feasible in the site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse 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; 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 will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Vapor Mitigation:

Any on-site building will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from soil and/or groundwater.

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 controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- requires compliance with the Department approved Site Management Plan.

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

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

-Institutional Controls:
The Environmental Easement discussed above.

-Engineering Controls:
The sub-slab depressurization systems discussed 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 groundwater use restrictions;

- a provision that should the owners of properties where sampling was previously declined request to have their properties sampled in the future, the NYSDEC, in consultation with the NYSDOH, shall assess the need for soil vapor intrusion sampling and take appropriate action;
- maintaining site access controls and Department notification;
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and
- Engineering controls in the form of a sub-slab depressurization system, as discussed above will be implemented in any on-site buildings.

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

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring and maintenance of all sub-slab depressurization systems installed on-site and off-site to address site-related contamination, as required by the Institutional and Control Plan discussed above.

Exhibit A

Nature and Extent of Contamination

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

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

Groundwater

Groundwater samples were collected from overburden monitoring wells. The samples were collected to assess groundwater conditions on and off-site. The results indicate that contamination in shallow groundwater at the site only slightly exceeds the SCGs for volatile organic compounds. Sampling results can be seen in Table 1.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Tetrachloroethylene (PCE)	ND - 120	5	17/37
CIS - 1,2 Dichloroethylene	ND - 280	5	12/37
Trichloroethylene	ND - 44	5	12/37
Vinyl Chloride	ND – 4.2	2	3/37
Isopropylbenzene (Cumene)	ND – 31	5	4/37
Acetone	ND-110	50	1/33
Metals			
Cadmium	ND-16	5	1/3

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).
Sample duplicates included in calculation of SCG exceedance frequencies.

Based on the findings of the RI, the past disposal of hazardous waste has resulted in the contamination of groundwater by TCE, DCE, and VC which are associated with dry cleaning activities. However, no remedial alternatives need to be evaluated for groundwater, since contamination in shallow groundwater at the site only slightly exceeds the SCGs for volatile organic compounds.

Soil

Surface and subsurface soil samples were collected at the site during the RI. Surface soil samples were from soil below roots of grass or concrete to depths of six inches to assess direct human exposure. In addition, one sub-slab sample was collected from beneath the Bestway Cleaners structure. Subsurface soil samples were collected from depths of 3.5 to 18 feet to assess soil contamination impacts to groundwater. VOCs were present in soil, but contaminant concentrations did not exceed unrestricted use SCOs. Soil sampling locations are presented in Figure 4 and a summary of the results in Table 2.

Table 2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[cd] (ppm)	Frequency Exceeding Restricted SCG
VOCs					
Tetrachloroethylene (PCE)	ND – 0.22	1.3	0/15	1.3	0/15
Trichloroethylene (TCE)	ND – 0.0019	0.47	0/12	0.47	0/12
cis-1,2-Dichloriethylene (DCE)	ND	0.25	0/12	0.25	0/12
Vinyl Chloride (VC)	ND	0.02	0/12	0.02	0/12
Isopropylbenzene (Cumene)	ND – 0.29 J	No Standard	0/14	No Standard	0/14

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Commercial Use, unless otherwise noted.
d - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.

No site-related soil contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for soil.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by the sampling of soil vapor, sub-slab soil vapor under structures, and indoor air inside structures. At this site due to the presence of buildings in the impacted area a full suite of samples was collected to evaluate whether soil vapor intrusion was occurring.

Elevated levels of PCE and TCE were detected in the soil vapor samples collected at the site and throughout the surrounding neighborhood during the 2008 site characterization investigation. PCE was detected in all ten of the samples collected ranging from 8.48 micrograms per cubic meter (µg/m3) to 25,500 µg/m3. TCE was detected in five of the samples ranging from 13.5 µg/m3 to 5,970 µg/m3. No soil vapor mitigation occurred during the 2008 event.

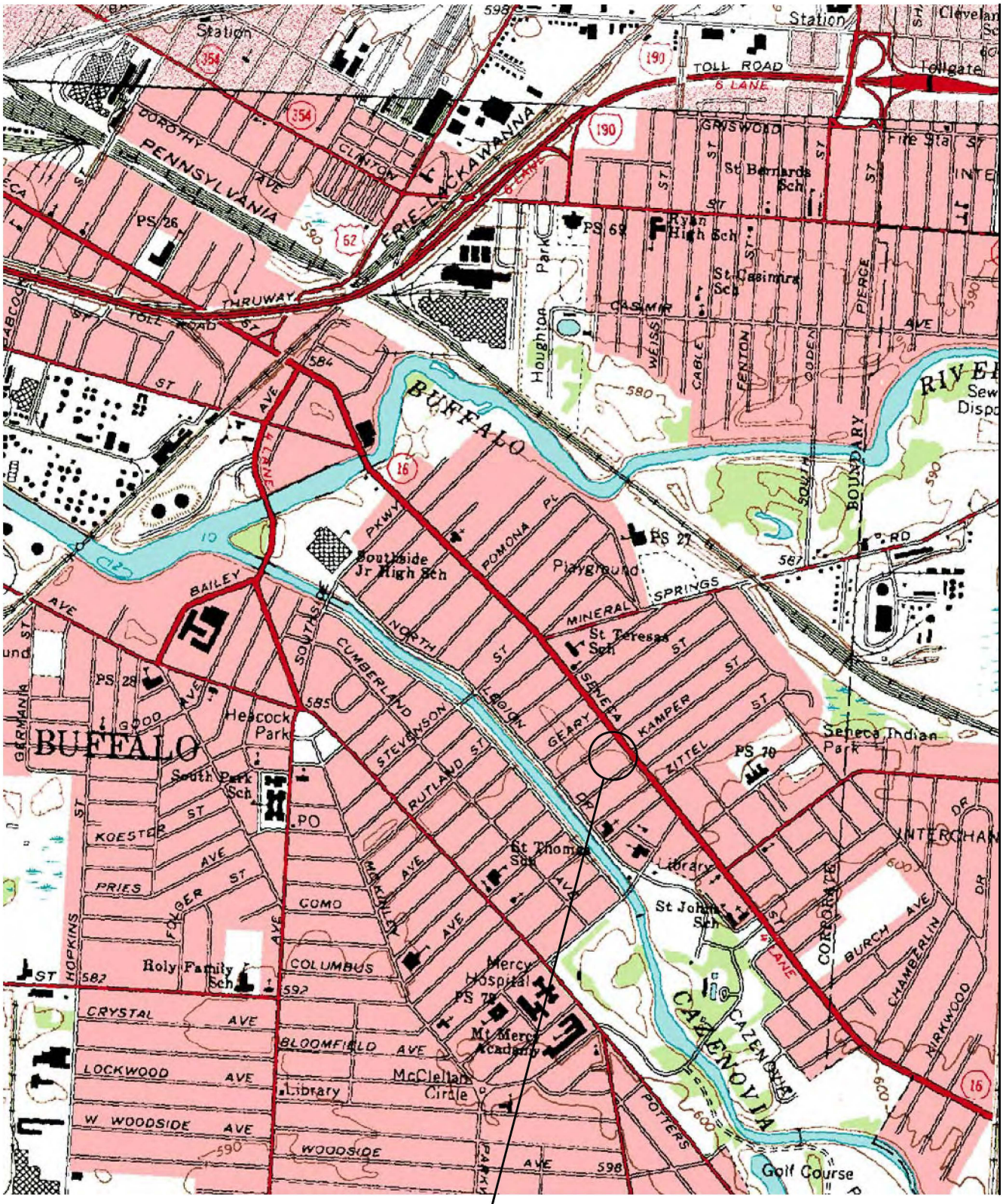
The initial Remedial Investigation was conducted in 2013-2014 with an additional investigation occurring in 2016 to assess the nature and extent of contamination at the site. During the RI, indoor air and sub-slab vapor samples were collected from within and beneath the Bestway Cleaners building. The initial results found PCE at up to 20,000 ug/m^3 beneath the building slab and up to 8,300 ug/m^3 in Bestway Cleaners indoor air. The adjoining pizzeria was sampled in February 2015. PCE was detected in the pizza shop at concentrations up to 19,000 ug/m^3. Sub-slab soil vapor samples collected from beneath the pizzeria were lower in concentration than the indoor air indicating that the largest source of indoor air contamination in the pizzeria was from fugitive emissions from the drycleaners. Bestway Cleaners was served with a Public Health Nuisance Order by the local health authority, requiring immediate suspension of on-site dry-cleaning activities. Following suspension of on-site dry-cleaning activities, indoor air samples were collected from the pizzeria. Indoor air concentrations in the pizzeria decreased by a magnitude of 10 but were still above the NYS immediate action level and NYSDOH recommended that additional corrective actions be taken to reduce exposures. These actions were also necessary to bring the drycleaners into compliance with State regulations and included machine repairs/upgrades, sealing of building wall penetrations, installation and operation of a ventilation fans and vapor barrier enhancement. Following implementation of these actions, the drycleaner was allowed to temporarily begin on-site dry-cleaning operations. Indoor air samples were again collected to determine the effectiveness of the actions taken on reducing exposures in the pizzeria. These results showed PCE in the indoor air at 93 ug/m3. The results indicated that the actions taken achieved a substantial reduction in the concentrations of PCE in the indoor air. While indoor air concentrations have been dramatically reduced, concentrations of PCE in the pizzeria indoor air remain in exceedance of the NYSDOH Air Guidance value of 30 ug/m3 for PCE. Based upon the most recent sampling event, the on-site building requires a sub-slab depressurization system (SSDS).

During the 2014 RI, SVI sampling was conducted at three residences in the vicinity of the Bestway Cleaners site. PCE in the indoor air ranged from 2.5 ug/m3 to 4.5 ug/m3 and PCE in the sub-slab ranged from 33 ug/m3 to 1500 ug/m3. Based on these results, it was determined that mitigation measures were needed at one residence to address current and potential indoor air contamination of volatile organic compounds associated with SVI. This was accomplished by installing a SSDS at one off-site property. The SSDS consists of a vapor extraction point installed beneath the basement floor which is depressurized with a low volume blower. The effluent soil gas is vented through a pile that extends above the roof.

The extent of PCE in indoor air and sub-slab vapor samples was not fully defined by the air sampling work that was conducted as part of the RI. Additional sampling at six residences was conducted by NYSDEC and NYSDOH in 2016, to further identify potential exposures via SVI. One sub-slab, one indoor air, and one ambient air sample were collected at the six off-site properties. Sub slab results for TCE ranged from 0.47 ug/m3 to 9.2 ug/m3 and

PCE ranged from 1.9 ug/m3 to 310 ug/m3. TCE. Based on these results, one property sampled during the 2016 sampling event required mitigation. The other five properties required no further action.

Based on the findings of the Remedial Investigation, the presence of PCE has resulted in the contamination of soil vapor. 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 PCE and TCE.



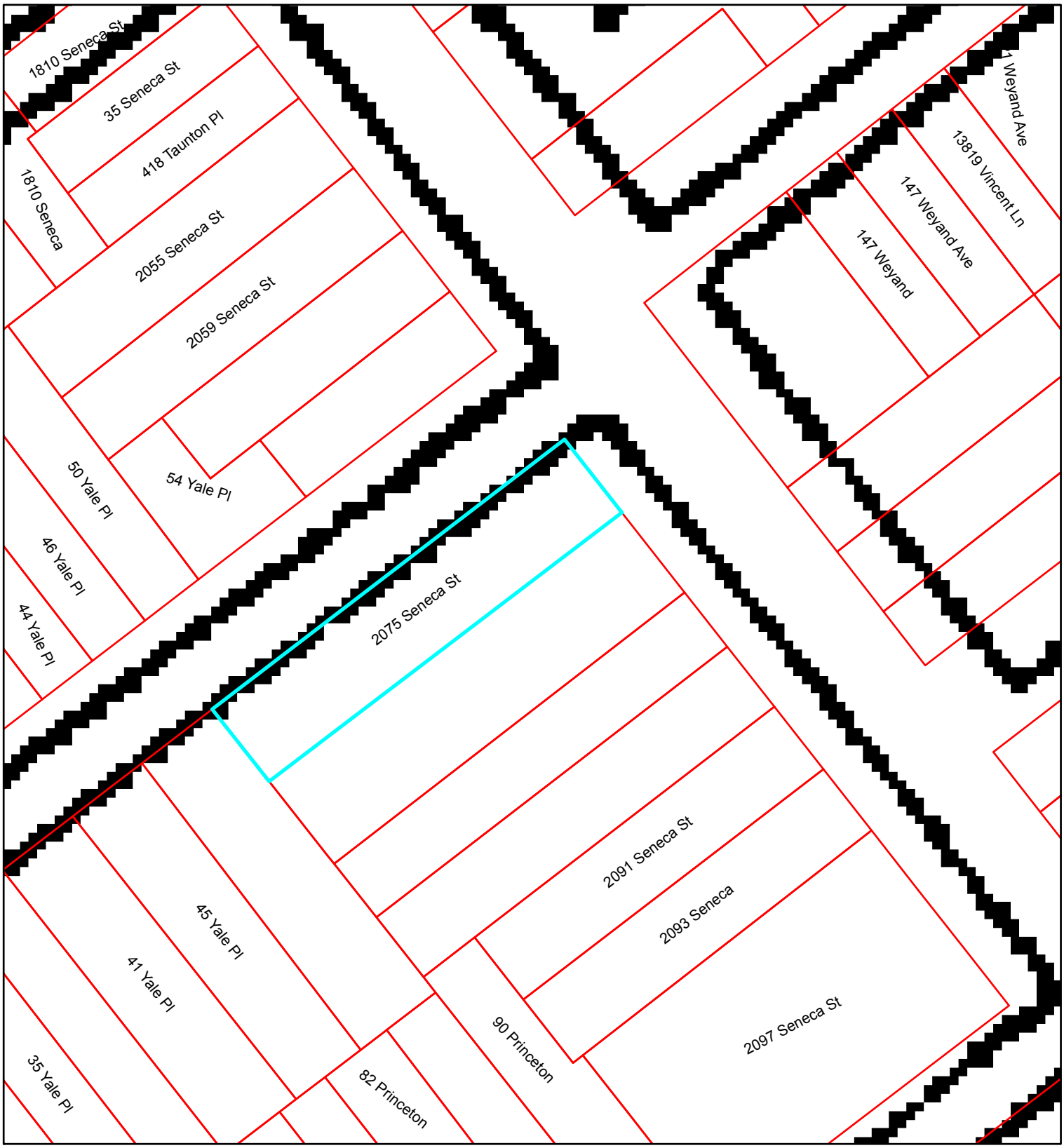
CDM Camp Dresser & McKee

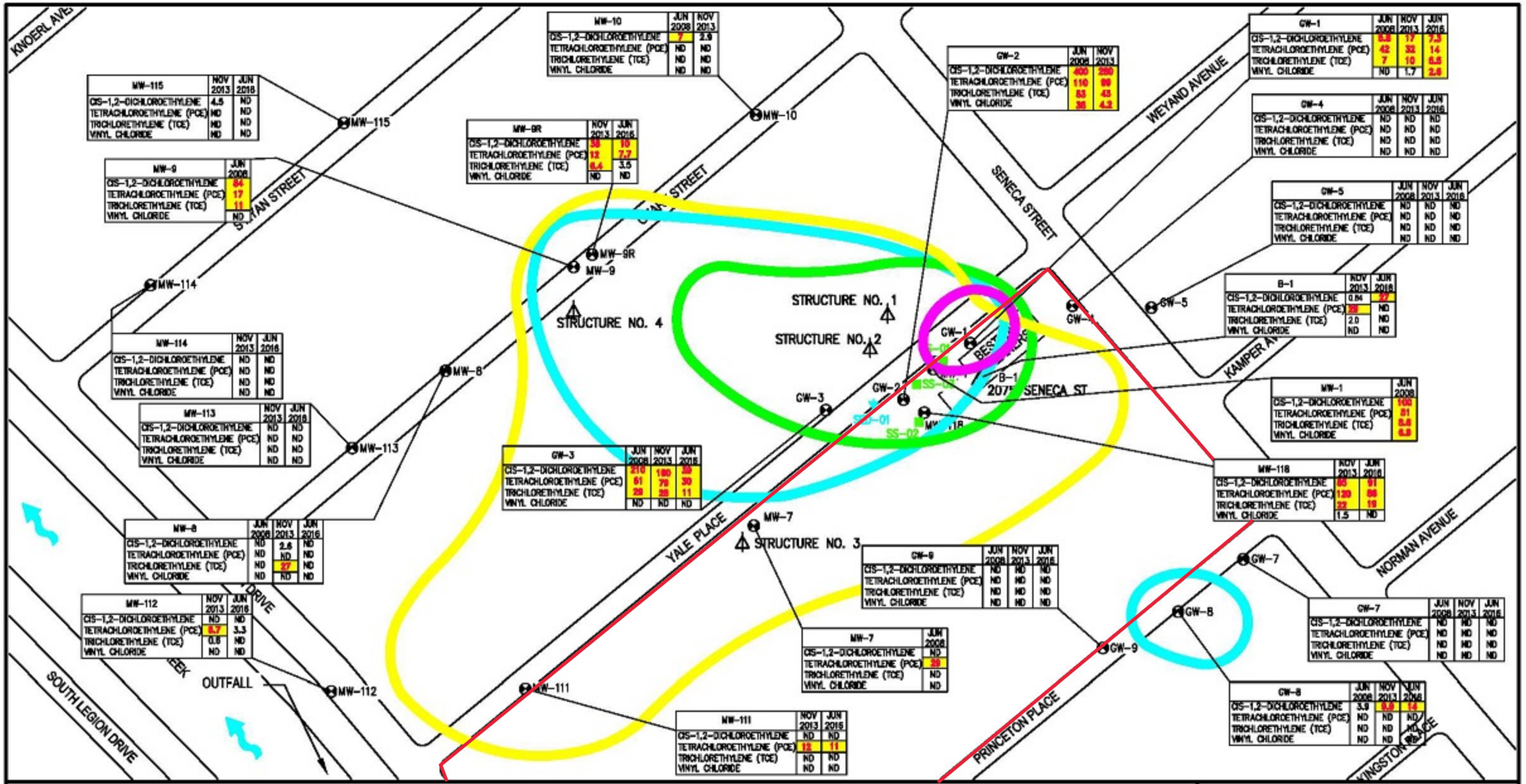
consulting engineering construction operations

15 BRITISH AMERICAN BOULEVARD
LATHAM, NY

FIGURE 1 – SITE LOCATION MAP
BESTWAY CLEANERS
NYSDEC WORK ASSIGNMENT #D004437-16
SITE NO. 9-15-219
JANUARY 2009

Figure 2 - Bestway Cleaners
2075 Seneca Street Buffalo, NY





MW-10	JUN 2008	NOV 2013
CIS-1,2-DICHLOROETHYLENE	7	2.9
TETRACHLOROETHYLENE (PCE)	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND
VINYL CHLORIDE	ND	ND

MW-115	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	4.5	ND
TETRACHLOROETHYLENE (PCE)	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND
VINYL CHLORIDE	ND	ND

MW-9R	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	58	10
TETRACHLOROETHYLENE (PCE)	12	7.7
TRICHLOROETHYLENE (TCE)	8.4	3.5
VINYL CHLORIDE	ND	ND

MW-9	JUN 2008
CIS-1,2-DICHLOROETHYLENE	84
TETRACHLOROETHYLENE (PCE)	17
TRICHLOROETHYLENE (TCE)	11
VINYL CHLORIDE	ND

GW-2	JUN 2008	NOV 2013
CIS-1,2-DICHLOROETHYLENE	400	250
TETRACHLOROETHYLENE (PCE)	110	99
TRICHLOROETHYLENE (TCE)	83	43
VINYL CHLORIDE	36	4.3

GW-1	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	8.8	17	7.3
TETRACHLOROETHYLENE (PCE)	42	32	14
TRICHLOROETHYLENE (TCE)	7	10	6.8
VINYL CHLORIDE	ND	1.7	2.8

GW-4	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND	ND
TETRACHLOROETHYLENE (PCE)	ND	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND

GW-5	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND	ND
TETRACHLOROETHYLENE (PCE)	ND	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND

B-1	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	0.84	27
TETRACHLOROETHYLENE (PCE)	39	ND
TRICHLOROETHYLENE (TCE)	2.0	ND
VINYL CHLORIDE	ND	ND

MW-1	JUN 2008
CIS-1,2-DICHLOROETHYLENE	100
TETRACHLOROETHYLENE (PCE)	81
TRICHLOROETHYLENE (TCE)	8.8
VINYL CHLORIDE	6.9

MW-114	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND
TETRACHLOROETHYLENE (PCE)	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND
VINYL CHLORIDE	ND	ND

MW-113	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND
TETRACHLOROETHYLENE (PCE)	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND
VINYL CHLORIDE	ND	ND

GW-3	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	210	160	39
TETRACHLOROETHYLENE (PCE)	61	79	30
TRICHLOROETHYLENE (TCE)	29	28	11
VINYL CHLORIDE	ND	ND	ND

MW-118	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	85	91
TETRACHLOROETHYLENE (PCE)	120	66
TRICHLOROETHYLENE (TCE)	22	19
VINYL CHLORIDE	1.5	ND

MW-8	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	2.6	ND
TETRACHLOROETHYLENE (PCE)	ND	ND	ND
TRICHLOROETHYLENE (TCE)	ND	27	ND
VINYL CHLORIDE	ND	ND	ND

GW-9	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND	ND
TETRACHLOROETHYLENE (PCE)	ND	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND

GW-7	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND	ND
TETRACHLOROETHYLENE (PCE)	ND	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND

MW-112	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND
TETRACHLOROETHYLENE (PCE)	8.7	3.3
TRICHLOROETHYLENE (TCE)	0.8	ND
VINYL CHLORIDE	ND	ND

MW-7	JUN 2008
CIS-1,2-DICHLOROETHYLENE	ND
TETRACHLOROETHYLENE (PCE)	29
TRICHLOROETHYLENE (TCE)	ND
VINYL CHLORIDE	ND

GW-8	JUN 2008	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	3.9	9.9	14
TETRACHLOROETHYLENE (PCE)	ND	ND	ND
TRICHLOROETHYLENE (TCE)	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND

MW-111	NOV 2013	JUN 2016
CIS-1,2-DICHLOROETHYLENE	ND	ND
TETRACHLOROETHYLENE (PCE)	12	11
TRICHLOROETHYLENE (TCE)	ND	ND
VINYL CHLORIDE	ND	ND

LEGEND

VOLATILES	JUN 2008	NOV 2013	JUN 2016	UNITS	NYSDEC
CIS-1,2-DICHLOROETHYLENE	210	160	39	ug/L	5
TETRACHLOROETHYLENE (PCE)	61	79	30	ug/L	5
TRICHLOROETHYLENE (TCE)	29	28	11	ug/L	5
VINYL CHLORIDE	ND	ND	ND	ug/L	2

NYSDEC CLASS GA STANDARDS/GUIDANCE CRITERIA

SS-01 SOIL SAMPLE LOCATION

SED-01 SEDIMENT SAMPLE LOCATION

ND NOT DETECTED

79 HIGHLIGHTED CONCENTRATION EXCEEDS NYSDEC CLASS GA AMBIENT WATER QUALITY STANDARD/GUIDANCE CRITERIA

2.6 BOLD NUMBERS – DETECTED CONCENTRATION

CREEK FLOW DIRECTION

Approximate site boundary

100 50 0 100 200

SCALE: 1"=100'

NOTE:
1. B-1, MW-9R, MW-10, MW_111, MW-112, MW-113, MW-114, MW-115, AND MW-118 WERE NOT SAMPLED DURING THE JUNE 2008 SAMPLING EVENT BECAUSE THEY WERE NOT INSTALLED YET.
2. GW-2 AND MW-10 WERE NOT SAMPLED DURING JUNE 2016 SAMPLING EVENT, DUE TO DAMAGE.
3. MW-1, MW-7, AND MW-9 WERE TEMPORARY AND INSTALLED DURING THE 2008 SITE CHARACTERIZATION REPORT. WELLS WERE ABANDONED AFTER SAMPLING. LOCATIONS SHOWN ARE APPROXIMATE FOR THESE WELLS.
4. WHERE DUPLICATE SAMPLES WERE COLLECTED, HIGHEST CONCENTRATION SHOWN.

Figure 3

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

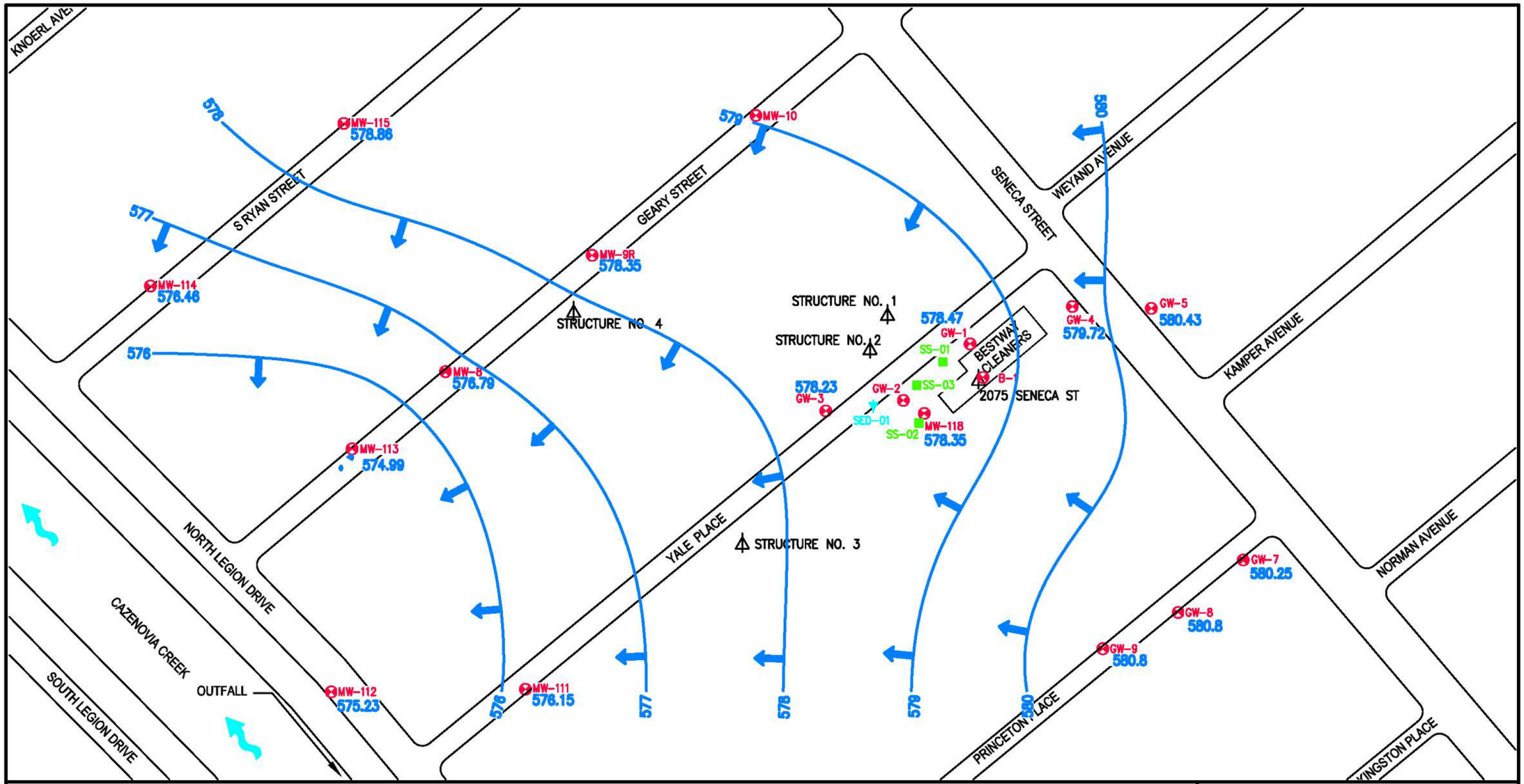
BESTWAY CLEANERS

COMPOUND PLUMES MAP JUNE 2016

PARSONS

301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\448324 WA #12 – BESTWAY CLEANERS\10.0 TECHNICAL CATEGORIES\CAD\448324-C-001.DWG
PLOT DATE: 12/21/2016 9:00 AM PLOTTED BY: RUSSO, III



NOTE:
B-1, GW-2 AND MW-10 WERE NOT SAMPLED DURING JUNE 2016 SAMPLING EVENT.

100 50 0 100 200

SCALE: 1"=100'

LEGEND

579 — GROUNDWATER ELEVATION CONTOUR (FEET, NAD83)

GROUNDWATER ELEVATION CONTOUR INFERRED (FEET, NAD83)

GROUNDWATER FLOW DIRECTION

MW-111 576.15 GROUNDWATER ELEVATION AT WELL MEASURED IN 06/16

CREEK FLOW DIRECTION

FIGURE 4

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

BESTWAY CLEANERS

WATER TABLE ELEVATIONS AND FLOW DIRECTION MAP JUNE 2016

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\448324 WA #12 - BESTWAY CLEANERS\10.0 TECHNICAL CATEOGORIES\CAD\448324-C-001.DWG
PLOT DATE: 8/17/2016 1:16 PM PLOTTED BY: GOLDTHWAIT, JAMES