DECISION DOCUMENT

New City Plaza f/k/a Newton Place Shopping Center
Brownfield Cleanup Program
New City, Rockland County
Site No. C344065
September 2015

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

DECLARATION STATEMENT - DECISION DOCUMENT

New City Plaza f/k/a Newton Place Shopping Center
Brownfield Cleanup Program
New City, Rockland County
Site No. C344065
September 2015

Statement of Purpose and Basis

This document presents the remedy for the New City Plaza f/k/a Newton Place Shopping Center site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the New City Plaza f/k/a Newton Place Shopping Center site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected 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-31. The major green remediation components are as follows;
•Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
•Reducing direct and indirect greenhouse gases and other emissions;
•Increasing energy efficiency and minimizing use of non-renewable energy;
•Conserving and efficiently managing resources and materials;
•Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
•Maximizing habitat value and creating habitat when possible;
•Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
•Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Cover System

A site cover will be required to allow for commercial use of the site. The cover will consist either of the existing structures such as buildings, pavement, sidewalks or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d).

3. In-Situ Chemical Treatment

In-situ chemical oxidation (ISCO) or reduction (ISCR) will be implemented to treat chlorinated volatile organic compounds in groundwater. A chemical oxidant or a chemical reducing agent will be injected into the subsurface to destroy the contaminants in an approximately 2000 square foot area located just east of the former Robbie J Cleaners via injection wells screened from 6 to 15 feet below grade. The chemical method and depth of injection will be determined during the remedial design.

4. Institutional Control

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

5. 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: Example language: The Environmental Easement discussed in Paragraph 5 above.

Engineering Controls: The soil cover discussed in Paragraph 2, and the six sub-slab depressurization systems and off-site residential sealed basement sump installed during the Interim Remedial Measure.

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 in any occupied existing or future buildings developed 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 Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

- monitoring of groundwater for site-related contamination and performance indicators to assess the effectiveness of remedy with provisions to evaluate and implement additional injections if necessary or to evaluate alternative remedies should the injections be ineffective or unsatisfactory to the Department; evaluation of monitoring will be performed as part of the periodic review;
- long-term monitoring of groundwater to assess the performance and effectiveness of the natural attenuation with provisions to evaluate and implement contingency remedial action should the natural attenuation not be effective; groundwater will be monitored for site-related contamination and continue until tetrachloroethylene and its degradation products achieve either ambient water quality standards or asymptotic levels acceptable to the Department; a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any occupied existing or future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

C. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:

- procedures for operating and maintaining the system(s); and
- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

Declaration

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

September 18, 2015
Date

George Heitzman, Director
Remedial Bureau C

DECISION DOCUMENT

New City Plaza f/k/a Newton Place Shopping Center
New City, Rockland County
Site No. C344065
September 2015

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

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

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

New City Library
220 North Main Street
New City, NY 10956
Phone: 845-634-4997

NYSDEC, Region 3 Office
21 South Putt Corners Road
New Paltz, NY 12561
Phone: 845-256-3154

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: This site, formerly known as Newton Place Shopping Center, occupies a 1.14 acre portion of 2-88 North Main Street within the New City Plaza shopping plaza in New City, Town of Clarkstown, Rockland County. North Main Street runs along the western border of the site while East Evergreen Road and Route 304 are to the east of the site.

Site Features: The site encompasses five occupied retail businesses, areas of the parking lot west and north of the structure, and a section of West Evergreen Road east of the structure. Areas north and south of the project site include the remainder of the shopping plaza, a parking lot, and a gasoline station. The northernmost portion of the site includes a small area of landscaped soil. Properties east of the site are single family residential. The site is centered on a former dry cleaner.

The Demerest Kill Creek runs from the southwest to the northeast, underneath the plaza and parking lot just north of the site. An unnamed tributary which serves as a drainage ditch runs along the eastern side of the site and joins the Demerest Kill northeast of the site.

Current Zoning/Use(s): The site is located within a shopping plaza and is zoned for commercial use. Immediately to the east of the site (East Evergreen Street) are several private residential properties.

Past Use(s) of the Site: Prior to construction of the shopping plaza, the land was primarily undeveloped with some commercial and residential structures in the southern and northern portions. The existing shopping plaza was constructed in phases beginning in 1970 and ending by around 1980. A gasoline station was constructed west-adjacent to the site sometime between 1940 and 1958. A dry cleaning operation, the former Robbie J Cleaners, operated from 1991 to 1996 in the plaza in a location which currently houses a Dunkin Donuts.

A 2005 Phase II Site Assessment and a 2006 Phase II subsurface investigation were conducted before the site entered into a Brownfield Cleanup Agreement (BCA) with the Department in late 2006. The Phase II Site Assessment indicated soil and groundwater impacts near the back door of the former Robbie J Cleaners.

Site Geology and Hydrogeology: The overburden material beneath the site is a dense red/brown till consisting of find sand and silt and varying amounts of fine gravel and clay. The till is noted to be extremely dense below eight to twenty feet below grade. Bedrock at the site is greater than 150 feet below grade.

Groundwater at the site is present at depths ranging between six and ten feet below grade. On-site water level measurements indicate that groundwater flows in a radial pattern from the plaza building to the north-northwest toward Demerest Kill Creek, and to the east-northeast toward Route 304.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

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

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

SECTION 5: ENFORCEMENT STATUS

One or more of the Applicants under the Brownfield Cleanup Agreement is a Participant. The Participant(s) has/have an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

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

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

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and

sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- air
- groundwater
- surface water
- soil
- sediment
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

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

6.1.2: RI Results

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

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

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- surface water
- soil
- soil vapor intrusion
- indoor air

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

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

Source Removal and SVI Mitigation

An IRM to remove source soils and to mitigate soil vapor intrusion in the onsite retail plaza and one off-site residence was completed. In 2010, 55 tons of source soils exceeding the soil cleanup objective (SCO) for the protection of groundwater for PCE were excavated from the back door area of the former dry cleaners and properly disposed. Endpoint confirmation samples for PCE met the unrestricted/protection of groundwater SCOs. From 2011 - 2014 six sub-slab depressurization systems (SSDSs) were installed, adjusted, and optimized in retail units of the strip mall in order to mitigate vapor intrusion of PCE and TCE in indoor air. In 2014 an indoor source of TCE in the indoor air was located and eliminated. Removal of this product was successful, as confirmed by ongoing indoor air monitoring demonstrating that PCE and TCE concentrations were reduced to within typical background ranges. An off-site residence in which TCE was present above air guidance values in the indoor air was mitigated in January 2015 by the installation of a permanently sealed basement sump. Follow-up indoor air sampling confirmed that the sealed sump effectively reduced TCE concentrations to within typical background ranges.

6.3: Summary of Environmental Assessment

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

Based upon all investigations conducted to date, the primary contaminants of concern at the site are tetrachloroethene (PCE) and its breakdown products trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE). As a result, samples collected during the RI were analyzed for VOCs in subsurface soils, groundwater, surface water, sediment, soil vapor, and indoor air. These contaminants are present in groundwater and sub-slab soil vapor. Before the 2010-2015 interim remedial measure (IRM), these contaminants were also present in indoor air and source area soils. Surficial soils collected from the green space on the northern portion of the site were analyzed for VOCs, SVOCs, metals, PCBs, and pesticides. These samples contained silver and selenium at levels slightly exceeding unrestricted soil cleanup objectives (SCOs), but all compounds were well below the SCOs for commercial use.

Groundwater: Results of groundwater sampling indicate the presence of PCE, TCE, and cis-1,2-DCE above NYS Class GA groundwater standards in both shallow and deep groundwater. The maximum concentrations detected to date are PCE at 1,200 parts per billion (ppb), TCE at 110 ppb, and cis-1,2-DCE at 260 ppb (compared to the groundwater standard of 5 ppb) in shallow overburden wells close to or in the suspected source area. The contaminant plume extends off-site to the north to the edge of the New City Plaza property, west toward Main Street, and east to a point just across Route 304. The plume extends approximately 700 feet north and east, and approximately 200 feet west of the source area. Maximum off-site contaminant concentrations, detected in a monitoring well approximately 220 feet north of the source area, indicated PCE at 230 ppb, TCE at 23 ppb, and cis-1,2 DCE at 60 ppb. Concentrations of PCE, TCE, and cis-1,2-DCE were also detected in monitoring wells to the south, upgradient of the former dry cleaners source area, indicating that there may be some influence from a source off-site as well.

Soil: Subsurface soil analytical results from the suspected source area behind the former dry cleaners contained PCE, TCE, and cis-1,2-DCE. Only PCE exceeded SCOs with a maximum concentration of 100 parts per million (ppm). These soils were removed by a 2010 IRM. On-site confirmation soils samples indicated only minor detections of PCE, TCE, and cis-1,2-DCE, below the protection of groundwater SCOs. Soil samples collected off-site indicate only the presence of PCE, the maximum of which was located approximately 250 feet northeast of the source area and at a concentration below 0.01 ppm; this is well below the protection of groundwater SCO of 1.3 ppm. There is the potential for soil under the former dry cleaner to be impacted by PCE.

Soil vapor and indoor air: A total of five retail spaces were sampled on site, and a total of nine retail spaces and five single family residences were sampled off site. Prior to installation of sub-slab depressurization systems in six retail units of the site shopping plaza, actionable concentrations of PCE and TCE existed in the sub-slab vapor and indoor air. PCE concentrations were found as high as 8.1 micrograms per cubic meter (ug/m3) in the indoor air on-site, which combined with the maximum PCE sub-slab vapor detection of 9,500 ug/m3, required mitigation. Indoor air in the retail units was also affected by the use of a TCE-containing product, with a maximum detected concentration of 1,000 ug/m3. This product was eliminated during the IRM, effectively reducing TCE indoor air concentrations to within typical background ranges. Soil vapor intrusion sampling indicated that the sub-slab vapor and indoor air concentrations of TCE at one off-site residence were also actionable. Maximum concentrations were 9.7 ug/m3 in the sub-slab vapor, and 21 ug/m3 in indoor air. Actions taken during the IRM included filling an open sump and installing a sealed sump which reduced TCE concentrations to within typical background ranges, effectively eliminating the vapor intrusion pathway.

Special Resources: The Demerest Kill Creek runs from the southwest to the northeast, underneath the plaza and parking lot just north of the site. An unnamed tributary (drainage ditch) runs east of the site and joins the Demerest Kill northeast of the site. The small unnamed tributary contains low levels of site contaminants in both surface water and sediments. However, out of a total of five downgradient sediment and surface water sample locations, sediment samples did not exceed SCGs, and only one surface water sample slightly exceeded the SCG of 5 ppb for PCE, with a concentration of 5.9 ppb.

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.*

Since the site is mostly covered by asphalt and buildings, people will not come into contact with contaminated groundwater or soil unless they dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a municipal water supply that is not affected by this contamination. Volatile organic compounds (VOCs) in contaminated groundwater or soils may move into the soil vapor (air spaces within the soils), which in turn, may move into overlying buildings and affect 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. Sub-slab depressurization systems (SSDS) have been installed and are operating in the on-site building to prevent the indoor air quality from being affected by the soil vapor contamination underneath the building. A basement sump cover has been installed and sealed at one off-site structure to prevent vapors associated with contaminated groundwater from impacting the indoor air quality. Sampling indicates soil vapor intrusion is not a concern at remaining off-site buildings.

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

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

contaminants in soil.

RAOs for Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Soil Cover, In-situ Groundwater Treatment, and Institutional Controls remedy.

The elements of the selected remedy, as shown in Figure 2, 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-31. The major green remediation components are as follows;

•Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
•Reducing direct and indirect greenhouse gases and other emissions;
•Increasing energy efficiency and minimizing use of non-renewable energy;
•Conserving and efficiently managing resources and materials;
•Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
•Maximizing habitat value and creating habitat when possible;
•Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
•Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Cover System

A site cover will be required to allow for commercial use of the site. The cover will consist either of the existing structures such as buildings, pavement, sidewalks or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d).

3. In-Situ Chemical Treatment

In-situ chemical oxidation (ISCO) or reduction (ISCR) will be implemented to treat chlorinated volatile organic compounds in groundwater. A chemical oxidant or a chemical reducing agent will be injected into the subsurface to destroy the contaminants in an approximately 2000 square foot area located just east of the former Robbie J Cleaners via injection wells screened from 6 to 15 feet below grade. The chemical method and depth of injection will be determined during the remedial design.

4. Institutional Control

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

5. 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: Example language: The Environmental Easement discussed in Paragraph 5 above.

Engineering Controls: The soil cover discussed in Paragraph 2, and the six sub-slab depressurization systems and off-site residential sealed basement sump installed during the Interim Remedial Measure.

This plan includes, but may not be limited to:

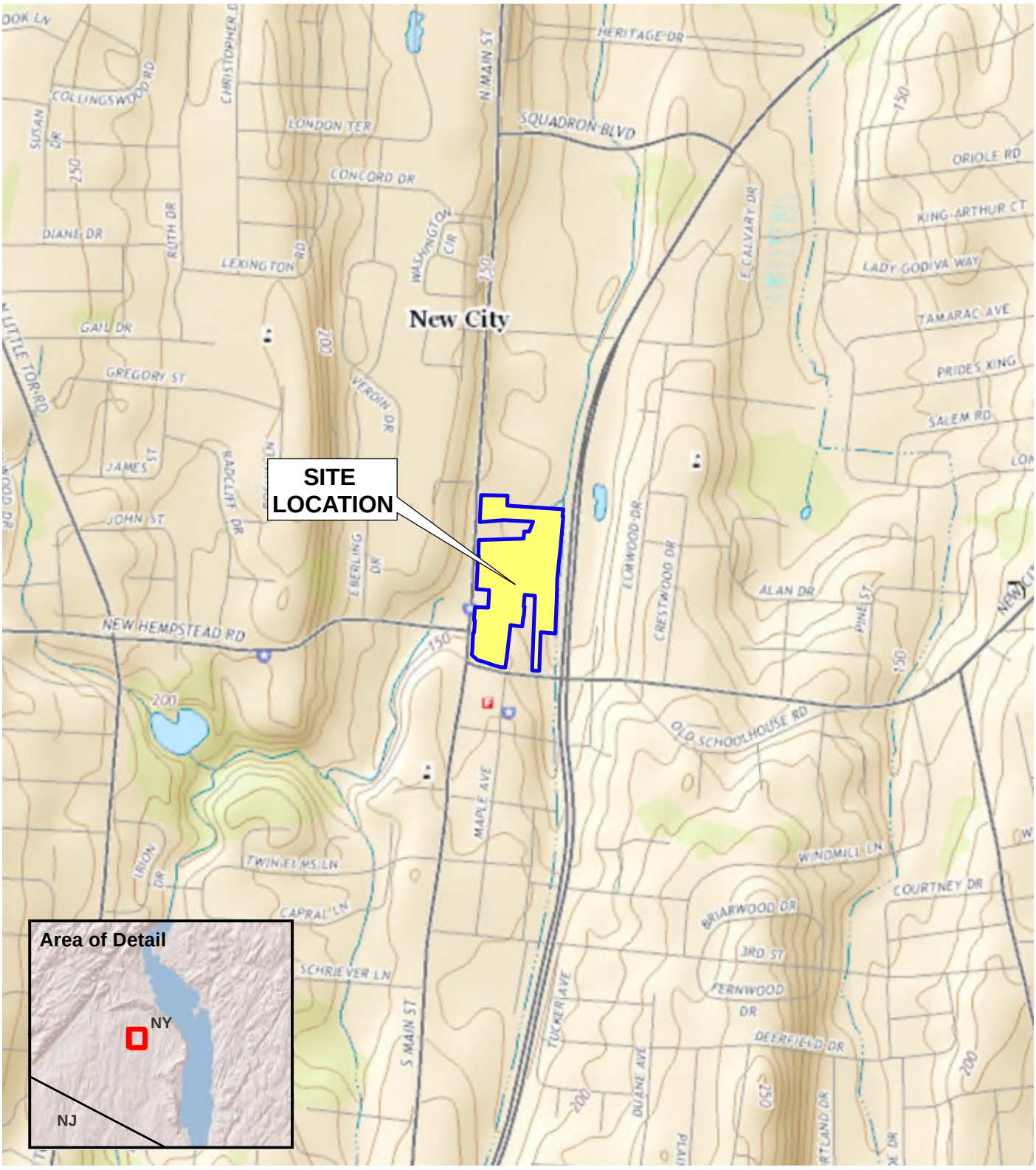
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion in any occupied existing or future buildings developed 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 Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

- monitoring of groundwater for site-related contamination and performance indicators to assess the effectiveness of remedy with provisions to evaluate and implement additional injections if necessary or to evaluate alternative remedies should the injections be ineffective or unsatisfactory to the Department; evaluation of monitoring will be performed as part of the periodic review;
- long-term monitoring of groundwater to assess the performance and effectiveness of the natural attenuation with provisions to evaluate and implement contingency remedial action should the natural attenuation not be effective; groundwater will be monitored for site-related contamination and continue until tetrachloroethylene and its degradation products achieve either ambient water quality standards or asymptotic levels acceptable to the Department; a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any occupied existing or future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

C. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:

- procedures for operating and maintaining the system(s); and
- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.



SOURCE
USGS 7.5 Minute Topographic Map
Haverstraw Quad 2011

0 1,000 2,000
Feet

New City Plaza
New City, New York

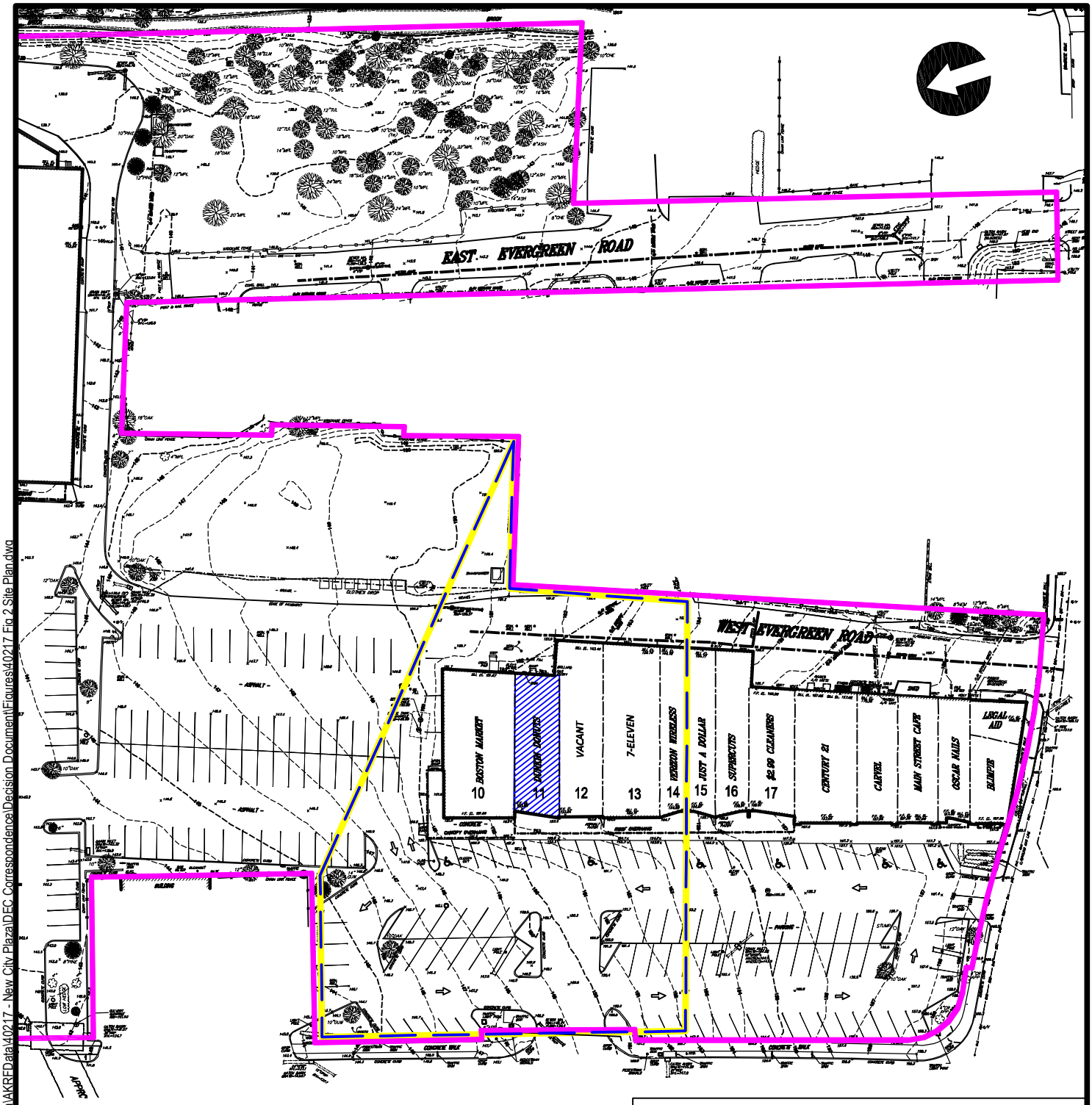
SITE LOCATION

AKRF
Environmental Consultants
34 South Broadway #401, White Plains, N.Y. 10601

DATE
7/14/2015

PROJECT No.
40217

FIGURE
1



NEW CITY PLAZA

New City, New York

SITE PLAN

AKRF

Environmental Consultants

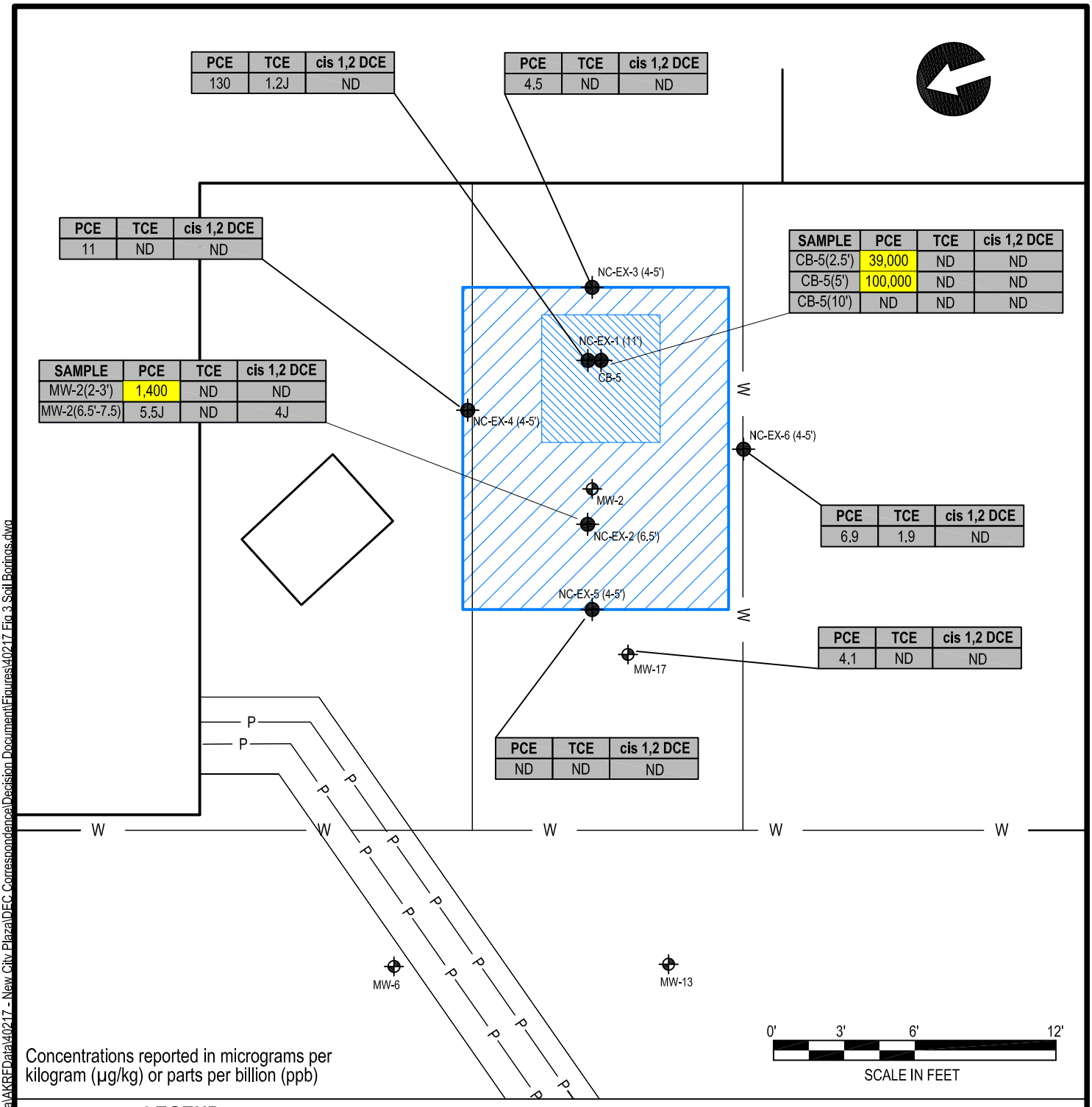
34 South Broadway #401, White Plains, N.Y. 10601

DATE 7.14.2015

PROJECT No. 40217

SCALE as shown

FIGURE 2



Concentrations reported in micrograms per kilogram (µg/kg) or parts per billion (ppb)

LEGEND:

EXCAVATION TO 6.5 FEET BELOW GRADE	REMEDIAL EXCAVATION	J	INDICATES ESTIMATED VALUE
EXCAVATION TO 11.5 FEET BELOW GRADE	W — UNDERGROUND WATERLINE	PCE	Tetrachloroethene
MW-1 — MONITORING WELL	P — UNDERGROUND POWER LINE	TCE	Trichloroethene
NC-EX-6 (4-5) — POST-EXCAVATION ENDPOINT SAMPLE	ND Not Detected	DCE	cis-1,2-Dichloroethene

NEW CITY PLAZA

New City, New York

SOIL SUMMARY WITH POST EXCAVATION ENDPOINT SAMPLES

AKRF
Environmental Consultants
34 South Broadway #401, White Plains, N.Y. 10601

DATE 7.15.2015
PROJECT No. 40217
SCALE as shown
FIGURE 3

SG/IA-7	Jun-07	Jun-07	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14	Nov-14	Mar-15
	SG-7	IA-7	SG-7	IA-7	IA-7	IA-7	IA-7	IA-7	IA-7	IA-7	IA-7	IA-7
PCE	1400	2.8	2.8	2.4	0.75	0.27	ND	0.4	0.66	0.95	ND	ND
TCE	130	ND	ND	0.54	0.76	2.1	13	19	21	1	ND	ND
cis-1,2 DCE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SG/IA-9	Jun-07	Jun-07	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14	Nov-14	Mar-15
	SG-9	IA-9	SG-9	IA-9	IA-9	IA-9	IA-9	IA-9	IA-9	IA-9	IA-9	IA-9
PCE	460	1.4	130	1.3	1.2	ND	ND	ND	1.9	0.64	0.28	0.45
TCE	2.6	ND	3.8	5.4	10	120	330	320	58	4.9	0.78	0.74
cis-1,2 DCE	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND

SG/IA-9B	Aug-08	Apr-14	Nov-14
PCE	10	2.2	0.29
TCE	9.1	68	0.89
cis-1,2 DCE	3.4	ND	ND

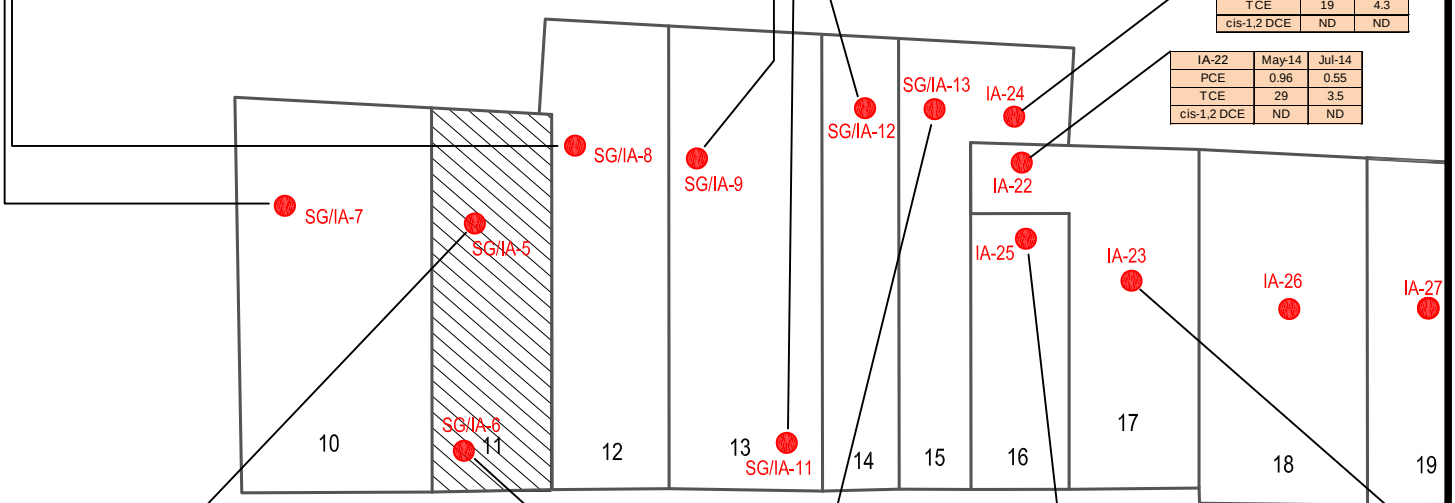
SG/IA-11	Jun-07	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14
	SG-11	IA-11	SG-11	IA-11	IA-11	IA-11	IA-11	IA-11	IA-11
PCE	NS	0.81	880	1.1	ND	ND	ND	1.3	0.59
TCE	NS	2.7	ND	8.2	110	370	480	34	4.4
cis-1,2 DCE	NS	ND	ND	ND	ND	ND	ND	ND	ND

SG/IA-12	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14	Nov-14	Mar-15
	SG-12	IA-12	IA-12	IA-12	IA-12	IA-12	IA-12	IA-12	IA-12	IA-12
PCE	20	0.57	1	ND	ND	ND	3.5	0.95	0.33	0.5
TCE	1.3	1.6	10	67	210	400	140	15	3.1	0.38
cis-1,2 DCE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SG/IA-8	Jun-07	Jun-07	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14	Nov-14	Mar-15
	SG-8	IA-8	SG-8	IA-8	IA-8	IA-8	IA-8	IA-8	IA-8	IA-8	IA-8	IA-8
PCE	8800	7.5	9500	8.1	2	1.8	ND	ND	3.6	1.0	ND	0.55
TCE	120	ND	120	5.4	4.7	43	270	280	65	6.4	0.28	ND
cis-1,2 DCE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

IA-24	May-14	Jul-14
PCE	0.59	0.63
TCE	19	4.3
cis-1,2 DCE	ND	ND

IA-22	May-14	Jul-14
PCE	0.96	0.55
TCE	29	3.5
cis-1,2 DCE	ND	ND



IA-25	Mar-15
PCE	0.33
TCE	ND
cis-1,2 DCE	ND

IA-23	May-14	Jul-14	Nov-14	Mar-15
PCE	1.5	1.2	3.4	4.5
TCE	1000	5.7	34	2.5
cis-1,2 DCE	ND	ND	ND	ND

SG/IA-13	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14	Nov-14	Mar-15
	SG-13	IA-13	IA-13	IA-13	IA-13	IA-13	IA-13	IA-13	IA-13	IA-13
PCE	6.8	1.9	0.71	ND	ND	ND	3.4	0.58	1.1	0.59
TCE	7	11	5	29	160	150	86	4	12	0.6
cis-1,2 DCE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SG-/IA-6	Jun-07	Jun-07	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14
	SG-6	IA-6	SG-6	IA-6	IA-6	IA-6	IA-6	IA-6	IA-6	IA-6
PCE	110	1.4	50	1.8	0.83	ND	ND	0.77	ND	1.2
TCE	ND	1.7	ND	0.75	1.9	0.62	77	14	27	3.6
cis-1,2 DCE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SG/IA-5	Jun-07	Jun-07	Aug-08	Aug-08	Jul-11	Mar-12	Nov-12	Jan-13	Apr-14	Jul-14	Nov-14	Mar-15
	SG-5	IA-5	SG-5	IA-5	IA-5	IA-5	IA-5	IA-5	IA-5	IA-5	IA-5	IA-5
PCE	2.8J	1.4	100	1.8	ND	ND	ND	ND	1.8	1.2	0.43	0.3
TCE	ND	1.1	14	1.5	0.95	0.86	64	45	56	4.2	ND	ND
cis-1,2 DCE	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND

SG/IA-5B	Jun-07	Jul-11	Mar-12	Nov-12	Jan-13
	SG-5B	IA-5B	IA-5B	IA-5B	IA-5B
PCE	40J	0.71	ND	ND	1.2
TCE	1.8	1.2	0.76	64	61
cis-1,2 DCE	ND	ND	ND	ND	ND

µg/m³:micrograms per cubic meter = parts per billion(ppb)

0' 20' 40" 80'

SCALE IN FEET

LEGEND:

IA-25	Mar-15
PCE	0.33
TCE	ND
cis-1,2 DCE	ND

Sample ID number

Sample Date

Compound in Soil Vapor

(µg/m³) - PCE Concentration in Soil Vapor

11 TENANT SPACE NUMBER

SG/IA-11 INDOOR AIR SAMPLING LOCATION

FORMER ROBBIE J CLEANERS

NEW CITY PLAZA

New City, New York

SUB-SLAB AND INDOOR AIR ANALYTICAL SUMMARY

AKRF

Environmental Consultants

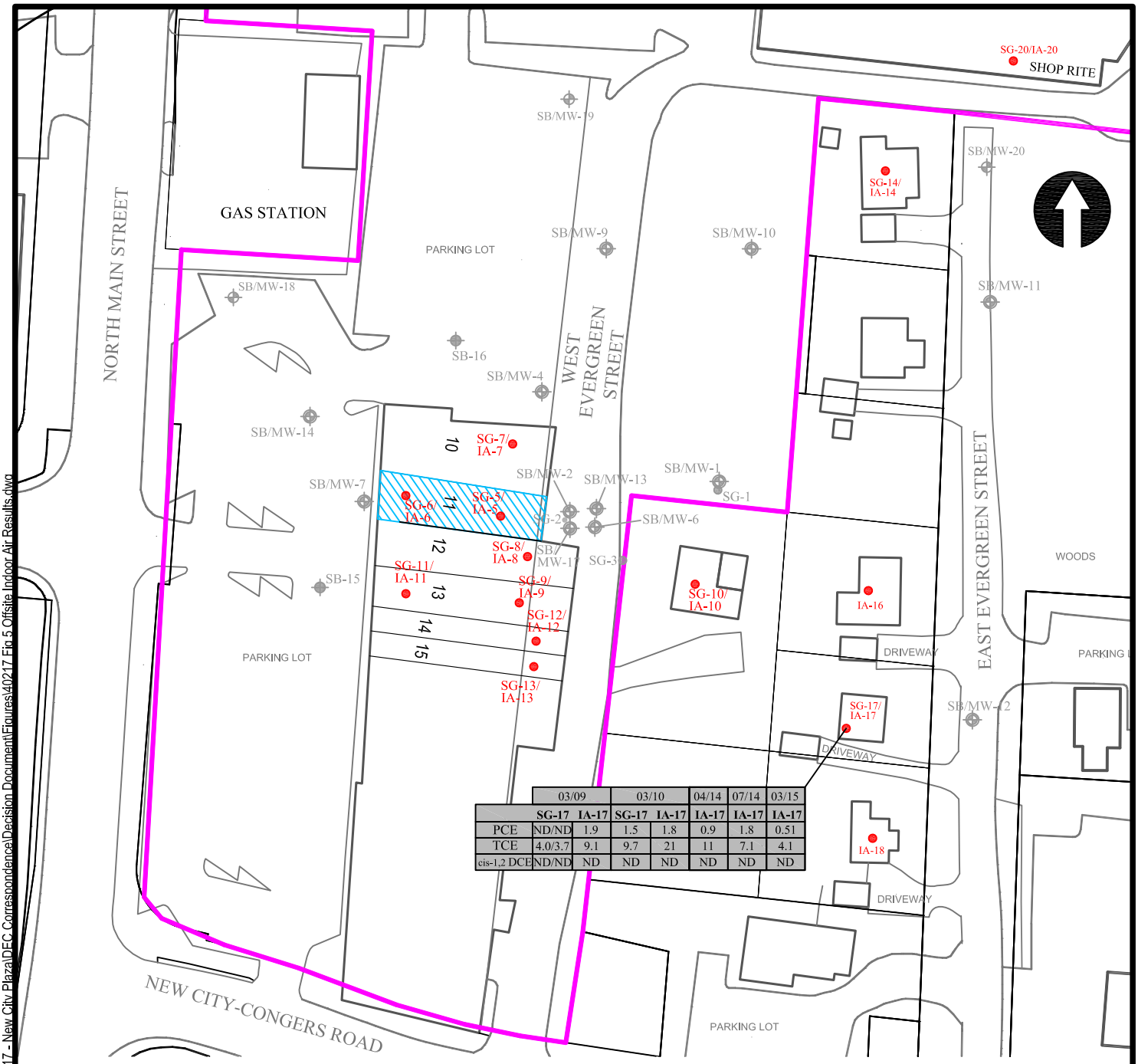
34 South Broadway #401, White Plains, N.Y. 10601

DATE 7.14.2015

PROJECT No. 40217

SCALE as shown

FIGURE 4



	03/09		03/10		04/14	07/14	03/15
	SG-17	IA-17	SG-17	IA-17	IA-17	IA-17	IA-17
PCE	ND/ND	1.9	1.5	1.8	0.9	1.8	0.51
TCE	4.0/3.7	9.1	9.7	21	11	7.1	4.1
cis-1,2 DCE	ND/ND	ND	ND	ND	ND	ND	ND

0' 40' 80" 160'

SCALE IN FEET

CONCENTRATIONS REPORTED IN
MICROGRAMS PER CUBIC METER (µg/m³)

LEGEND:

	03/09		03/10		04/14	07/14	03/15
	SG-17	IA-17	SG-17	IA-17	IA-17	IA-17	IA-17
PCE	ND/ND	1.9	1.5	1.8	0.9	1.8	0.51
TCE	4.0/3.7	9.1	9.7	21	11	7.1	4.1
cis-1,2 DCE	ND/ND	ND	ND	ND	ND	ND	ND

sample id number

SG/IA-14 — SOIL GAS/ INDOOR AIR OR CRAWL SPACE SAMPLING LOCATION

SG-9 — SOIL GAS LOCATION AIR SAMPLING LOCATION

SB/MW-7 — SOIL BORING/MONITORING WELL LOCATION

SB-15 — SOIL BORING LOCATION

PROPERTY BOUNDARY

FORMER ROBBIE J CLEANERS

NEW CITY PLAZA

New City, New York

OFFSITE SUB SLAB AND INDOOR AIR ANALYTICAL SUMMARY

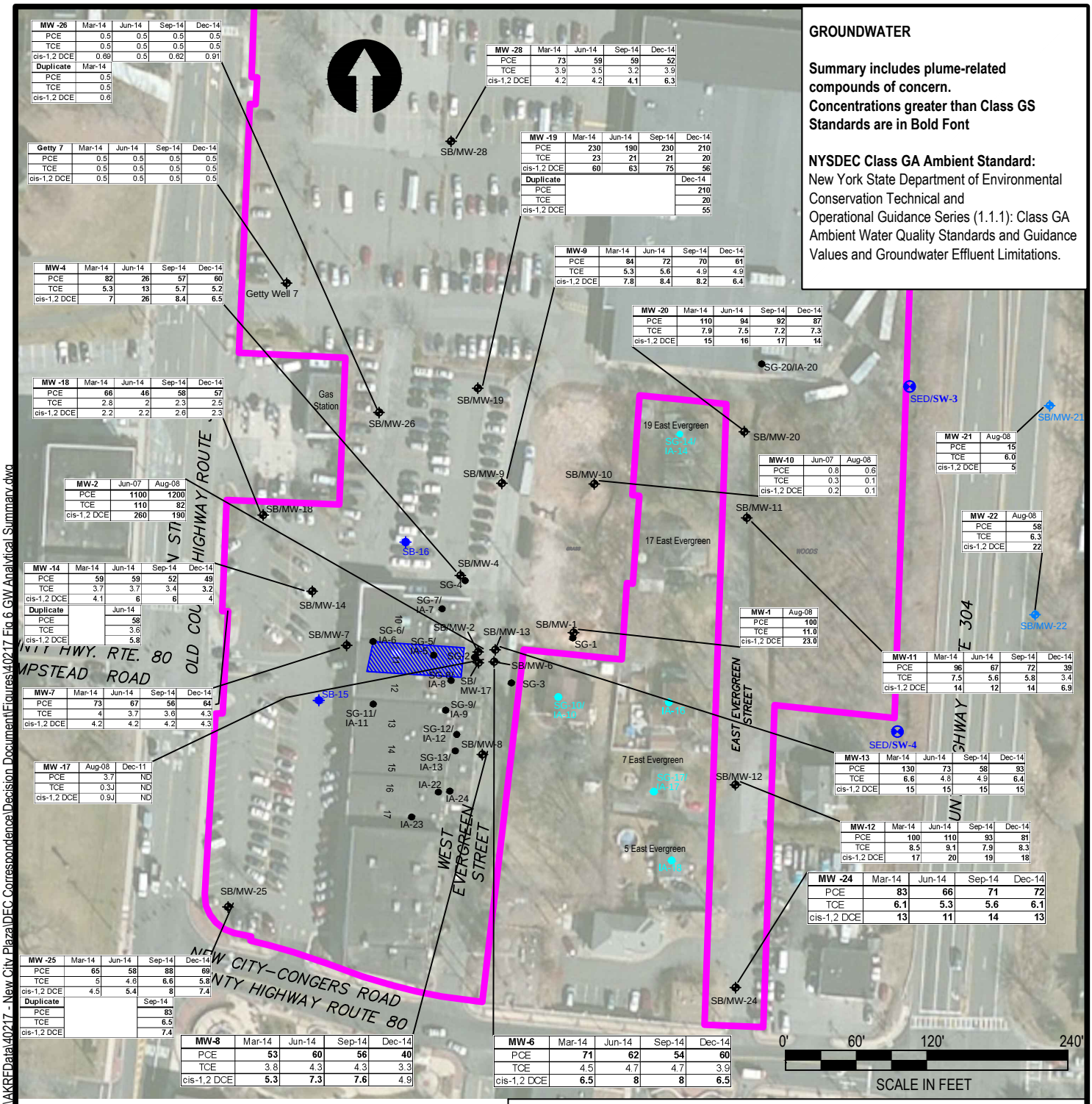
AKRF
Environmental Consultants
34 South Broadway #401, White Plains, N.Y. 10601

DATE 7.15.2015

PROJECT No. 40217

SCALE as shown

FIGURE 5



GROUNDWATER

Summary includes plume-related compounds of concern. Concentrations greater than Class GS Standards are in Bold Font

NYSDEC Class GA Ambient Standard:
New York State Department of Environmental Conservation Technical and Operational Guidance Series (1.1.1): Class GA Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

Sample ID number

MW-10	Jun-07	Aug-08
PCE	0.8	0.6
TCE	0.3	0.1
cis-1,2 DCE	0.2	0.1

Sample Date

Compound in Groundwater

Concentration in water (µg/L) - micrograms per Liter = parts per billion (ppb)

TENANT SPACE	ADDRESS	CURRENT TENANT
10	32 North Main St.	Boston Market
11	30 North Main St.	Dunkin Donuts
12	28 North Main St.	Vacant
13	26 North Main St.	7-Eleven
14	24 North Main St.	Wireless Depot
15	22 North Main St.	Dollar Store

LEGEND:

- PROPERTY BOUNDARY
- SG/IA-14 — SOIL GAS/INDOOR AIR OR CRAWL SPACE SAMPLING LOCATION
- SB/MW-7 — SOIL BORING/MONITORING WELL LOCATION
- SG-9 — SOIL GAS LOCATION
- SB-15 — SOIL BORING LOCATION
- FORMER ROBBIE J CLEANERS
- 10 — TENANT SPACE WITHIN NEW CITY PLAZA

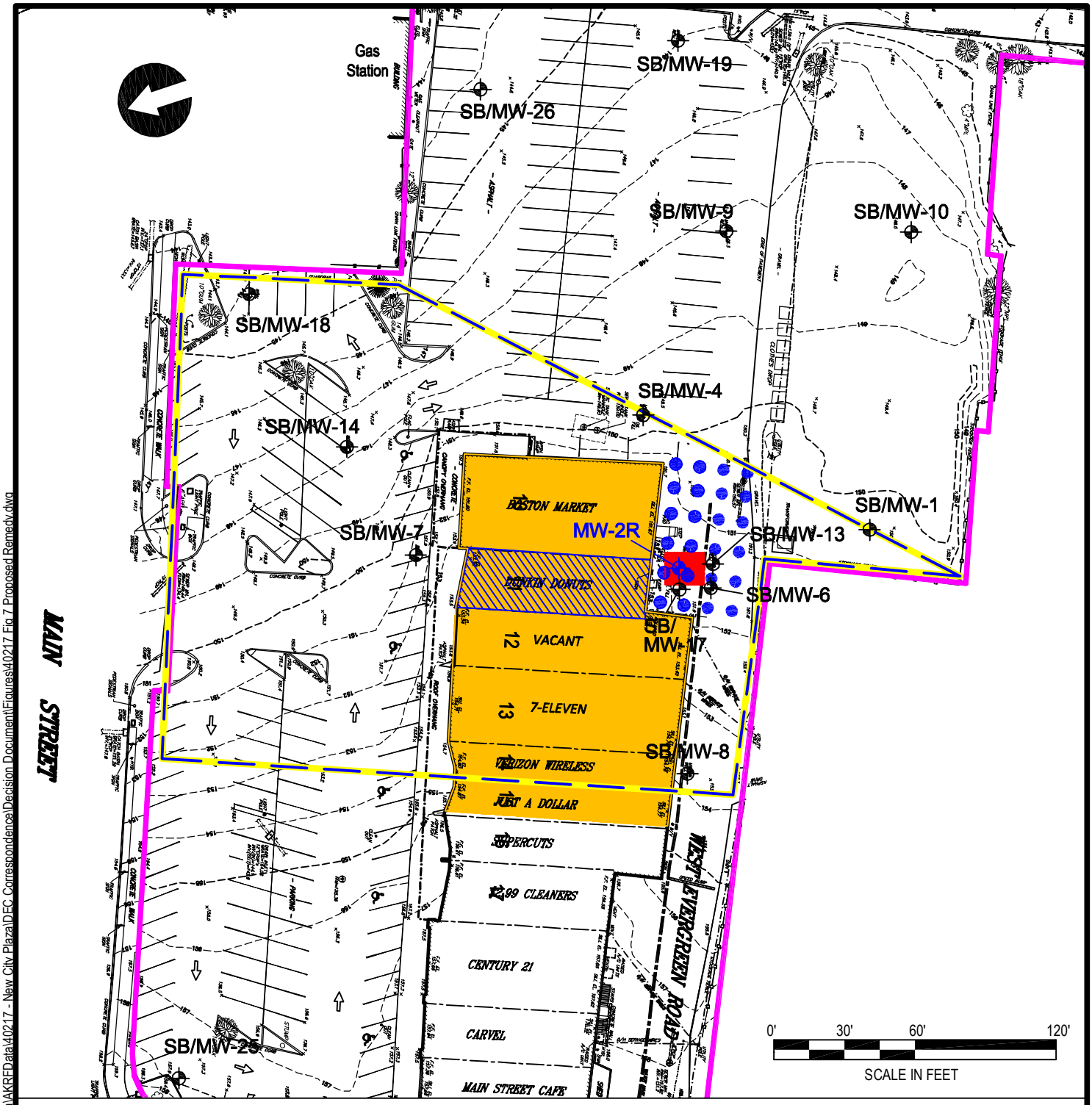
NEW CITY PLAZA

New City, New York

GROUNDWATER ANALYICAL SUMMARY

AKRF Environmental Consultants
34 South Broadway #401, White Plains, N.Y. 10601

DATE 7.14.2015
PROJECT No. 40217
SCALE as shown
FIGURE 6



LEGEND:

- TEMPORARY INJECTION WELL LOCATION
- MW-2R — PROPOSED REPLACEMENT MONITORING WELL LOCATION
- SB/MW-7 — SOIL BORING/MONITORING WELL LOCATION
- REMEDIAL EXCAVATION AREA
- TENANT SPACE CONTAINING SSDS
- PROPERTY BOUNDARY
- BCP SITE BOUNDARY
- FORMER ROBBIE J CLEANERS
- 10 — TENANT SPACE NUMBER

NEW CITY PLAZA

New City, New York

PROPOSED REMEDY

AKRF

Environmental Consultants

34 South Broadway #401, White Plains, N.Y. 10601

DATE	7.14.2015
PROJECT No.	40217
SCALE	as shown
FIGURE	7