PROPOSED REMEDIAL ACTION PLAN

Farmingdale Plaza Cleaners
Operable Unit Number: 01
State Superfund Project
Farmingdale, Nassau County
Site No. 130107
February 2012

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

PROPOSED REMEDIAL ACTION PLAN

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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; therefore No Further Action is the remedy proposed 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.

The IRM(s) conducted at the site attained the remediation objectives identified for this site, which are presented in the attached exhibits, for the protection of public health and the environment. This PRAP identifies the IRM(s) conducted 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:

Farmingdale Public Library
Attn: Mr. Steuart Schaeffer
116 Merritts Road
Farmingdale, NY 11735
Phone: (516) 249-9090

A public comment period has been set from:

2/24/2012 to 3/24/2012

A public meeting is scheduled for the following date:

3/8/2012 at 7:00 PM

Public meeting location:

Farmingdale Public Library

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 3/24/2012 to:

Chek Ng
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
cbng@gw.dec.state.ny.us

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 Farmingdale Plaza Cleaners (Site) is a dry cleaner located in the Waldbaum's Shopping Plaza on 450 Main Street in Farmingdale, NY. The site is located in a suburban area and lies between the intersection of Main Street and Fulton Street. This site is upgradient of the Liberty Industrial Finishing site which is a National Priority List (NPL) site.

Site Features: The site is located in a commercial plaza that formerly housed the Farmingdale Plaza Cleaners. The shopping plaza consists of a single building and a paved parking lot, surrounded by apartment buildings and other commercial structures.

Current Zoning/Use(s): The dry cleaner and the adjacent Waldbaum Supermarket are currently vacant. Two businesses in the plaza are occupied. The shopping plaza is zoned for commercial use. The surrounding parcels are zoned residential or commercial.

Historic Use(s): Waldbaum Shopping Plaza was reportedly constructed in 1983, at which time the Farmingdale Plaza Cleaners began operation. Investigations conducted by the United States Environmental Protection Agency (USEPA) at the Liberty Industrial Finishing site indicated that there was a significant source of tetrachloroethene (PCE) upgradient. Additional investigation by the USEPA around the shopping plaza in 2000 through 2003 identified that the source is associated with the dry cleaner due to detections of PCE in a groundwater well south of the site and soil gas survey results from USEPA suggest the probability of a source contributing to the groundwater plume in shallow subsurface soils in the vicinity of the site. As a result of data collected during the USEPA investigation, the Site was listed as a Class 2 on the New York State Registry of Inactive Hazardous Waste Site in December 2002. The PRPs failed to sign an Order on Consent and in January 2005, the Site was referred to the State Superfund for a Remedial Investigation (RI).

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 a release or exposure pathway resulting from the site contamination. Operable Unit 1 (OU1) consists of contaminated soil and soil vapor and includes the plaza property and portions of adjacent properties. Operable Unit 2 (OU2) deals with the groundwater issues both on-site and off-site.

Site Geology and Hydrogeology: The on-site soil consists of mostly sand. The depth of groundwater is about 15 feet below ground surface. The groundwater flow direction is predominantly to the south. A confining layer is encountered at a depth of around 90 feet below ground surface at some locations on-site.

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

A Record of Decision has yet to be issued for OU 02.

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) 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:

The Great Atlantic & Pacific Tea Company

Farmingdale Plaza Cleaners

Sacco of Farmingdale, LLC

Farmingdale Grocery, LLC

The PRPs for the site declined to implement a remedial program when requested by the Department. The PRPs were again contacted to assume responsibility for the IRM but declined to do so. As such, the Department used the State Superfund to implement both the RI and IRM work for this site. 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.

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 Information

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor
- indoor air

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 for this Operable Unit at this site is/are:

TETRACHLOROETHYLENE (PCE) 1,1,2-TRICHLORETHYLENE

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.

On-Site IRM Soil Vapor Extraction

Based on the results of the RI, an IRM workplan was approved by the Department in February 2009 which focused on the installation of a soil vapor extraction (SVE) system for the plaza and the nearby structures. The SVE system is designed to remediate soil and soil vapor contamination and mitigate potential exposures via soil vapor intrusion affecting the indoor air quality of the plaza and the surrounding areas.

SVE is an in-situ technology used to treat volatile organic compounds (VOCs) in soil and sub-slab vapor. The process physically removes contaminants from the soil and soil vapor by applying a vacuum to the SVE well that has been installed in a vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil and soil vapor to the SVE well. The air extracted from the SVE wells is then run through an activated carbon treatment canister (or other air treatment process as applicable) to remove the VOCs before the air is discharged to the atmosphere.

The SVE began operation in November 2011. Soil vapor intrusion monitoring is planned in Summer 2012 to assess the effectiveness of the SVE system. If needed, other active sub-slab depressurization systems and/or additional SVE extraction wells will also be used to mitigate the tetrachloroethene (PCE) soil vapors underneath the slab in the plaza and the adjacent properties.

Figure 2 shows the location of the SVE system and the associated extraction well points.

6.3: Summary of Human Exposure Pathways

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

Contaminated groundwater at the site is not used for drinking or other purposes and the site and surrounding area is served by a public water supply that obtains groundwater not affected by this contamination. Direct contact with contaminants in soil or groundwater is not likely because the majority of the site is covered by buildings or pavement. Volatile organic compounds in the

groundwater or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. A soil vapor extraction (SVE) system (a system that removes the air beneath the building) has been installed in the on-site building to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the buildings. Sampling indicates soil vapor intrusion is not a current concern for off-site buildings with the on-site SVE operational.

6.4: 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.

Based upon investigations conducted to date, the primary contaminants of concern for OU1 include tetrachloroethene (PCE) and its associated degradation products (i.e. trichloroethene, cis-dichloroethene). Tetrachloroethene was found in the soil beneath the slab in one location inside the dry cleaner at a concentration of 1.8 miligrams per kilogram (mg/kg), which slightly exceeds the Part 375 Unrestricted Soil Cleanup Objective (SCO) of 1.3 mg/kg.

In May 2004, PCE was detected at a maximum concentration of 264,000 micrograms per cubic meter (ug/m3) in the sub-slab soil vapor beneath the foundation at the dry cleaner. Sub-slab and soil vapor data collected at the dry cleaner and adjacent parking lot area demonstrated the highest concentration of PCE to be located beneath the dry cleaner, with a gradual decrease in concentration in areas south of the dry cleaner. Subsequent investigation by the Department in March 2006 confirmed the highest PCE soil vapor detection beneath the dry cleaner floor slab with a maximum concentration of 68,000 ug/m3. Additional sub-slab soil vapor and indoor air sampling performed in January 2007 by NYSDEC included the adjacent residential buildings. The levels detected at the plaza and a residential building warranted mitigation to prevent exposures via soil vapor intrusion. Indoor air levels have not exceeded the NYSDOH air guidelines. Additional SVI and soil vapor monitoring was conducted in 2011 and recently in 2012. Soil vapor data collected in 2011 indicate mitigation is still warranted at the former dry cleaner location.

A soil vapor extraction (SVE) system has been operating at the site since November 2011 as part of an interim remedial measure (IRM). The purpose of this IRM is to mitigate high soil vapor concentrations in and around the plaza, and to remove any residual subsurface PCE source. The SVE system also serves as a mitigation measure to prevent vapor intrusion into the buildings. The SVE system's initial operational monitoring data has demonstrated that it is effective at remediating the elevated PCE vapor levels at the site and at adjacent properties.

The OU2 deals with the on-site and off-site groundwater. The remedial investigation is currently on-going for OU2 to delineate the plume caused by PCE and associated breakdown products.

This site presents a significant human health and environmental threat due to the high PCE soil vapor concentrations.

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:

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: SUMMARY OF PROPOSED REMEDY

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation presented here, the Department is proposing No Further Action with continued operation of the Soil Vapor Extraction (SVE) system and the implementation of institutional controls (ICs)/engineering controls (ECs) as the proposed remedy for the site, which includes the following:

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

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

b) allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
c) 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;
d) prohibits agriculture or vegetable gardens on the controlled property; and
e) requires compliance with the Department approved Site Management Plan.

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

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

Institutional Controls: The Environmental Easement discussed in Paragraph 2 above.

Engineering Controls: The soil vapor extraction system discussed in Paragraph 1 above.

This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use, groundwater and surface water use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any 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 soil vapor to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in item 1 above;

c) an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

3. 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:

a) Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
b) Reducing direct and indirect greenhouse gas and other emissions;
c) Increasing energy efficiency and minimizing use of non-renewable energy;
d) Conserving and efficiently managing resources and materials;
e) Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste.

The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

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, 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 four categories; volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/ polychlorinated biphenyls (PCBs), and inorganics (metals and cyanide). 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 6.1.1 are also presented.

Soil

Soil samples were collected at the site during the RI. For the VOCs, soil samples were collected from a depth of 2.5 feet to 3 feet below the slab inside the dry cleaner. Subsurface soil samples were collected from a depth of 4 feet to 8 feet along the utility lines and 15 feet to 25 feet around the dry cleaner property to assess if soil contamination could present an impact to groundwater. For inorganics, soil samples were collected from a depth of 25 feet below ground surface to 67 feet below ground surface during an earlier sampling event. Soil samples were also collected from locations beneath the asphalt surrounding the dry cleaner and analyzed for VOCs, SVOCs, PCBs, inorganics and pesticides. The results indicate that soils at the site slightly exceed the unrestricted SCG for tetrachloroethene, a volatile organics, at one location inside the dry cleaner.

Figure 2 shows the data values for detected compounds in the soil samples. None of the soils analyzed exceeded the Unrestricted SCG except for one location at 3 feet below the foundation inside the dry cleaner. Neither PCBs nor pesticides were detected at the site.

Table 1 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Commercial SCG
VOCs					
1,1-Dichloroethene	ND – 0.007	0.33	0 out of 17	500	0 out of 17
Acetone	ND – 0.039	0.05	0 out of 17	500	0 out of 17
1,1,1-Trichloroethane	ND – 0.091	0.68	0 out of 17	500	0 out of 17
Trichloroethene	ND – 0.001	0.47	0 out of 17	200	0 out of 17
Toluene	ND – 0.002	0.7	0 out of 17	500	0 out of 17
Tetrachloroethene	ND – 1.8	1.3	1 out of 17	150	0 out of 17
Xylenes (mixed)	ND – 0.001	0.26	0 out of 17	500	0 out of 17
SVOCs					

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Commercial SCG
Fluoranthene	ND – 0.39	100	0 out of 3	500	0 out of 3
Pyrene	ND – 0.21	100	0 out of 3	100	0 out of 3
Inorganics					
Arsenic	ND – 0.48	13	0 out of 10	16	0 out of 10
Barium	ND – 160	350	0 out of 10	400	0 out of 10
Beryllium	ND – 0.12	7.2	0 out of 10	590	0 out of 10
Cadmium	ND – 0.48	2.5	0 out of 10	9.3	0 out of 10
Chromium	ND – 7.3	30	0 out of 10	1500	0 out of 10
Copper	ND – 19	50	0 out of 10	270	0 out of 10
Lead	ND – 56	63	0 out of 10	1000	0 out of 10
Manganese	ND – 62	1600	0 out of 10	10,000	0 out of 10
Total Mercury	ND – 0.069	0.18	0 out of 10	2.8	0 out of 10
Nickel	ND – 4.8	30	0 out of 10	310	0 out of 10
Selenium	ND – 0.60	39	0 out of 10	1500	0 out of 10
Zinc	1.6 – 70	109	0 out of 10	10,000	0 out of 10

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. For Chromium, the Unrestricted Values are based on trivalent form.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Commercial Use, unless otherwise noted. For Chromium, the Unrestricted Values are based on trivalent form.

Soil contamination identified during the RI was addressed during the IRM described in Section 6.2.

Based on the findings of the Remedial Investigation, the presence of tetrachloroethene has resulted in the contamination of soil. The site contaminants identified in soil which are considered to be the primary contaminants of concern, to be addressed by the remedy selection process are, tetrachloroethene and the associated breakdown products (i.e. trichloroethene and cis-1,2-dichloroethene).

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. Due to the presence of buildings in the impacted area, a full suite of samples were collected to evaluate whether soil vapor intrusion was occurring.

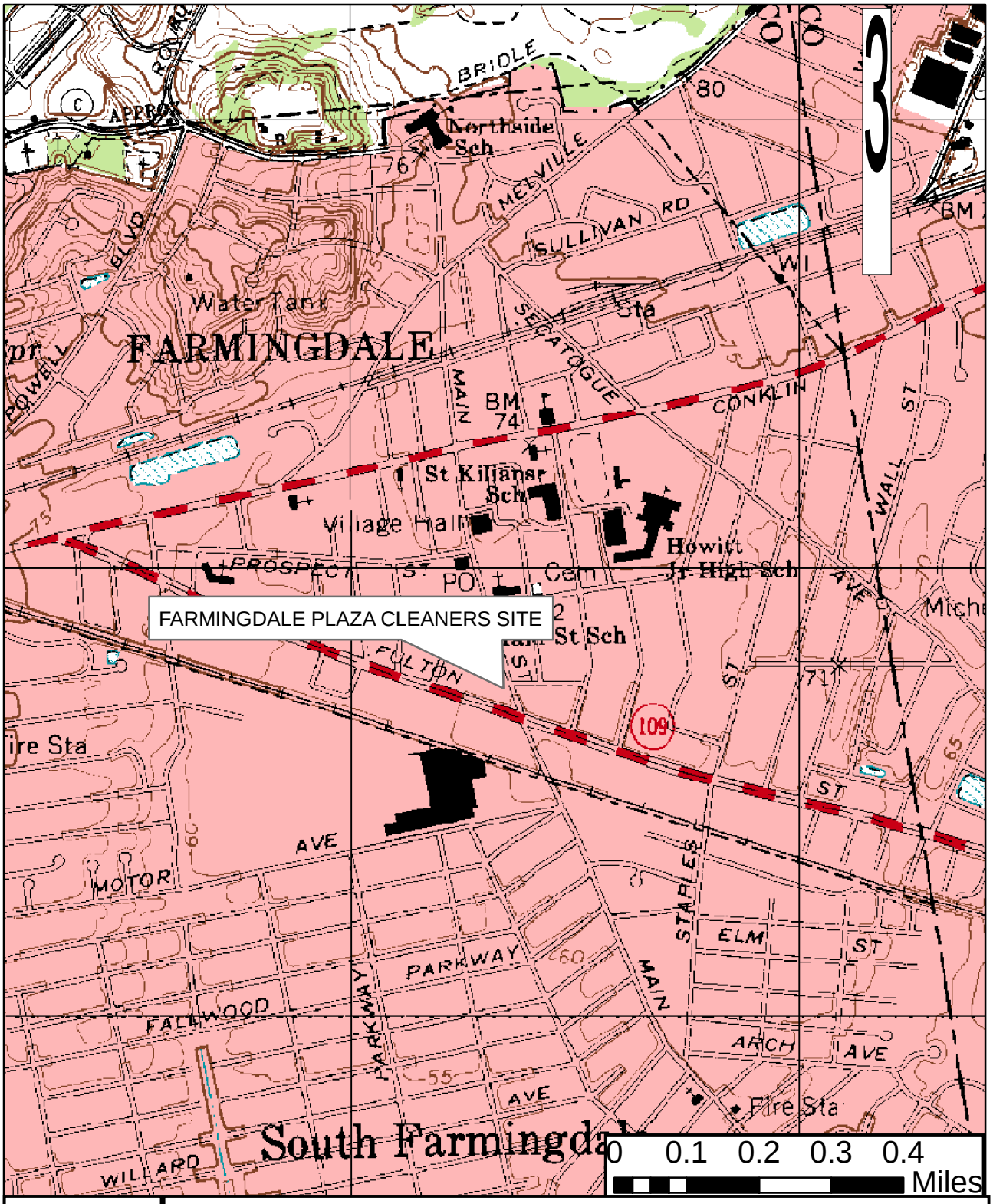
Sub-slab soil vapor samples were collected from below the slab inside the plaza, including the Farmingdale Plaza Cleaners, and in adjacent residential and commercial properties. Indoor air and outdoor air samples were also collected at this time. Soil vapor samples were collected outside of buildings when access was denied. The samples were collected to assess the potential for soil vapor intrusion. The results indicate tetrachloroethene (PCE) and the associated breakdown products were detected in soil vapor, sub-slab soil vapor and in the indoor air samples of several structures.

Figure 3 shows the nature and extent of the soil vapor contamination for plaza and the surrounding structures.

Based on the concentration detected, and in comparison with the NYSDOH Soil Vapor Intrusion Guidance, soil vapor contamination identified during the RI was addressed during the IRM described in Section 6.2.

Based on the findings of the Remedial Investigation, the presence of tetrachloroethene (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 the associated breakdown products.

FIGURE 1 - SITE LOCATION MAP



New York State Department of Environmental Conservation
Site Location Map
Farmingdale Plaza Cleaners, Site No. 1-30-107
Farmingdale, Nassau County, New York

N

EPA-MW-7

MAIN STREET

B01-SS3

Waldbaums

B01-SS2

Plaza Cleaners

MP-1-2

MP-1-5

PCE: 1.8 mg/kg

B01-SS1

MP-1-1

SVE-5

SVE-1

EPA-MW-6

MP-1-4

MP-1-3

WMW-1

FENCE ENCLOSURE

MW-8A

MW-3A

SVE System

EPA-MW-1

EPA-MW-2

EPA-MW-3

B04-SV2

EPA-MW-5

EPA-MW-8

MILESTONE APTS

B04-SV1

EPA-MW-4

B03-SS1

GARDEN APTS

B03-SS3

FULTON STREET

0 60

SCALE IN FEET

Note:
The locations of B03-SS1 & B03-SS3 are approximated, as these points have not yet been surveyed

LEGEND

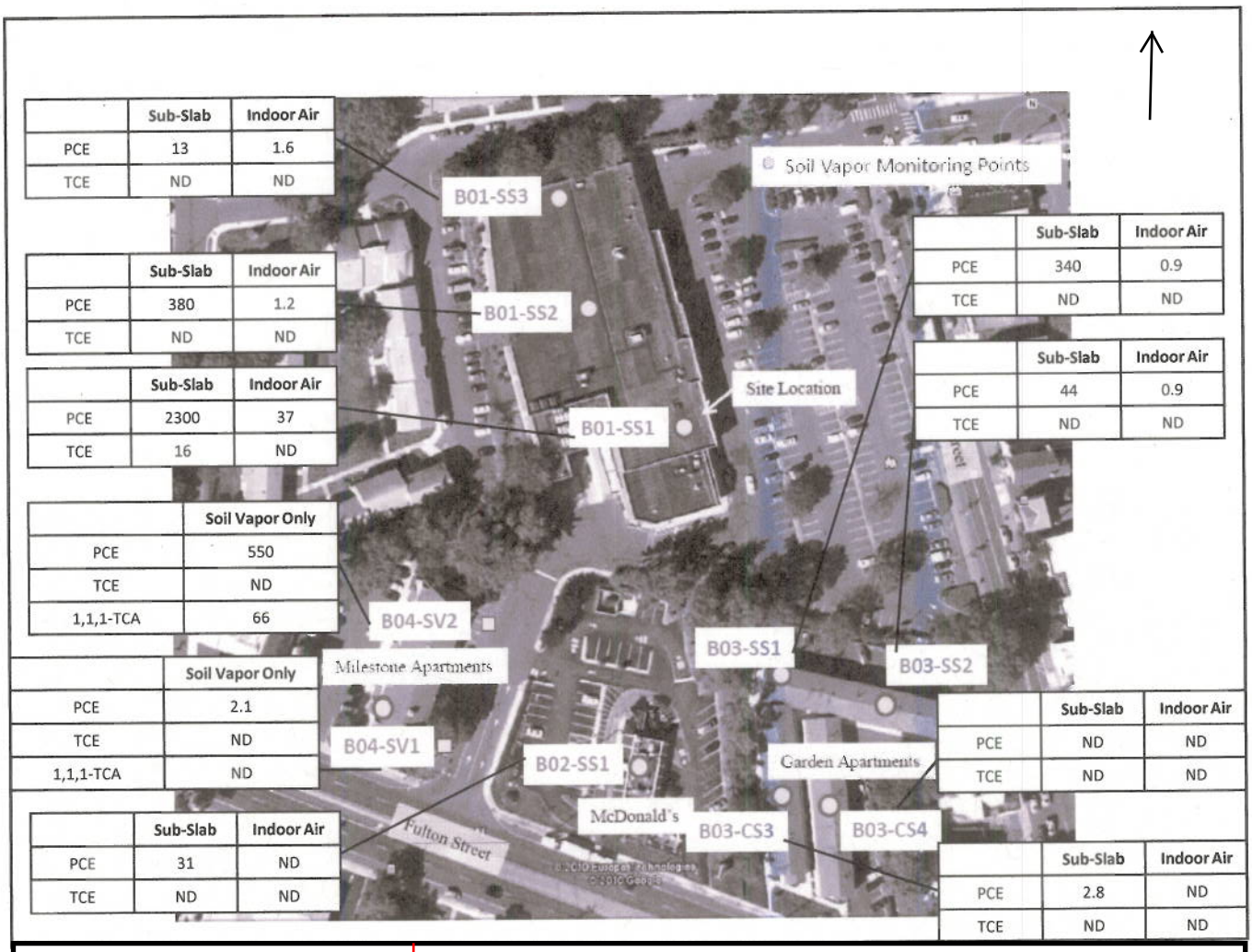
- Soil Exceedance Location
- Monitoring Well
- SVE Well
- Vacuum Monitoring Well
- Vapor Monitoring Point
- SVE Piping

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Figure 2

On-Site IRM Soil Vapor Extraction Map and Soil Exceedance

Farmingdale Plaza Cleaners
450-480 Main Street
Farmingdale, NY
Site No. 130107



	Sub-Slab	Indoor Air
PCE	13	1.6
TCE	ND	ND

	Sub-Slab	Indoor Air
PCE	380	1.2
TCE	ND	ND

	Sub-Slab	Indoor Air
PCE	2300	37
TCE	16	ND

	Soil Vapor Only
PCE	550
TCE	ND
1,1,1-TCA	66

	Soil Vapor Only
PCE	2.1
TCE	ND
1,1,1-TCA	ND

	Sub-Slab	Indoor Air
PCE	31	ND
TCE	ND	ND

	Sub-Slab	Indoor Air
PCE	340	0.9
TCE	ND	ND

	Sub-Slab	Indoor Air
PCE	44	0.9
TCE	ND	ND

	Sub-Slab	Indoor Air
PCE	ND	ND
TCE	ND	ND

	Sub-Slab	Indoor Air
PCE	2.8	ND
TCE	ND	ND

Figure 3

Soil Vapor Intrusion Data

Farmingdale Plaza Cleaners
Site ID: 1-30-107

November 2011