DECISION DOCUMENT

Bayville Village Cleaners
Voluntary Cleanup Program
Bayville, Nassau County
Site No. V00220
August 2011

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

DECLARATION STATEMENT - DECISION DOCUMENT

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Voluntary Cleanup Program
Bayville, Nassau County
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Statement of Purpose and Basis

This document presents the remedy for the Bayville Village Cleaners site, a voluntary cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and applicable guidance.

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

Description of Selected Remedy

The elements of the remedy are as follows:

1) Installation of a sub-slab depressurization system within the facility building. A fan will be connected to one extraction point within the building. Four vacuum test points will be installed within the facility to ensure negative pressure is attained beneath the entire building slab. Additional extraction points can be added, if necessary. Five permanent exterior soil vapor points will be constructed outside the building to monitor the system's effectiveness in capturing/containing soil gas. Although no permit is required, a DAR-1 (Air Guide 1) analysis will be performed. Process exhaust will be routed through a vessel filled with granular activated carbon to remove contaminants prior to discharge to the atmosphere.

2) Imposition of an institutional control in the form of a deed restriction 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 Nassau County DOH;

d. prohibits agriculture or vegetable gardens on the controlled property; and

e. requires compliance with the Department approved Site Management Plan;

3) 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 Deed Restriction discussed in Paragraph 2 above.

Engineering Controls: The sub-slab depressurization system discussed in Paragraph 1 above.

This plan includes, but may not be limited to:

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

ii. descriptions of the provisions of the deed restrictions including any land use, and/or groundwater and/or surface water use restrictions;

iii. 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.

iv. provisions for the management and inspection of the identified engineering controls;

v. maintaining site access controls and Department notification; and

vi. 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:

i. monitoring of the subslab depressurization system to assess the performance and effectiveness of the remedy;

ii. a schedule of monitoring and frequency of submittals to the Department;

iii. monitoring for vapor intrusion for any additional buildings developed on the site, as may be required pursuant to item 1 above.

4) 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;

i. Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;

ii. Reducing direct and indirect greenhouse gas and other emissions;

iii. Increasing energy efficiency and minimizing use of non-renewable energy;

iv. Conserving and efficiently managing resources and materials;

v. Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste.

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.

August 11, 2011

Date

James B. Harrington, P.E., Director
Remedial Bureau A

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Bayville, Nassau County
Site No. V00220
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SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site 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 Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: SITE DESCRIPTION AND HISTORY

Site Location: Bayville Village Dry Cleaners is located at the southeast corner of Bayville Avenue and 17th Street in the Village of Bayville, Town of Oyster Bay, Nassau County.

Site Features: The site is approximately 0.25 acres in size and consists of a single story masonry building that is 1,440 sq/ft in size. The facility is still being utilized as a commercial dry cleaner although it no longer uses tetrachloroethylene (PCE) as part of its dry cleaning process.

Current Zoning/Use(s): The parcel is zoned for commercial use. Surrounding land uses include mixed commercial and residential.

Historical Use(s) and Source(s) of Contamination: It is believed that repeated discharges of PCE contaminated condensate to the ground surface on the west side of the building led to the contamination of subsurface soil and groundwater. Prior to entering the Voluntary Cleanup Program, the affected area was excavated and 67.76 tons of contaminated soil was removed and disposed of off-site at a permitted disposal facility.

Site Geology/Hydrogeology: Subsurface soil is composed mainly of fine/silty sand transitioning to coarse sand 6' below grade. The water table is encountered approximately 8' to 10' below land surface, depending on seasonal fluctuation. The site specific groundwater flow direction is to the

north.

A site location map is attached as Figure 1.

SECTION 3: 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, at a minimum, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in DER-10, Technical Guidance for Site Investigation and Remediation were/was evaluated.

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 4: ENFORCEMENT STATUS

The voluntary cleanup agreement is with a responsible party. The agreement requires the party to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 5: SITE CONTAMINATION

5.1: 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 5.4.

5.1.1: 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

5.1.2: 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 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:

tetrachloroethylene (pce) trichloroethene (tce)

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

- groundwater
- soil
- soil vapor
- indoor air

5.2: 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.

There were no IRMs performed at this site during the RI.

5.3: 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.*

People are not drinking or coming into contact with the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Contact with residual soil contamination is not likely because the site is covered with pavement and a building. Volatile organic compounds in the soil may move into the soil vapor (air spaces within the soil) which in turn may move into overlying buildings and affect indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential for soil vapor intrusion to affect indoor air quality of the on-site building exists. A sub-slab depressurization system (SSDS) is being designed for installation in the on-site building. The SSDS will prevent indoor air quality from being affected by the contamination in soil vapor beneath the building. The potential exists for off-site soil vapor migration.

5.4: 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. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: The main contaminant of concern at the site is tetrachloroethylene (PCE). The impacted media are soil, groundwater, indoor air and soil gas. To a lesser extent, the degradation product trichloroethene has been detected in groundwater and soil gas.

SCG soil exceedances exists for PCE in multiple sample locations. In May 1995, soil sampling conducted under the oversight of the Nassau County Department of Health (NCDH) found PCE concentrations as high 36,000 ppm in surface soil (0-6 inches) collected by an evaporator pipe located outside the west side of the building. An additional 11 surface and subsurface soil samples were collected in 1996 under NCDH oversight which revealed PCE concentrations ranging from 0.130 ppm to 11,000 ppm. PCE concentrations generally diminished with depth. These sample results were compared to the recommended soil cleanup objective for PCE of 1.4 ppm in TAGM #4046.

In 1996, prior to entering the Voluntary Cleanup Program, the affected area was excavated and 67.76 tons of contaminated soil was disposed of at a permitted disposal facility. 17 post excavation confirmatory soil samples were collected with residual PCE concentrations ranging from non-detect (ND) to 0.620 ppm. In February 2008, under the VCP, eight supplemental soil samples were collected from the former source area with PCE concentrations in the range of ND to 0.016 ppm in the former source area. The Protection of Groundwater SCO for PCE is 1.3 ppm.

In 1996, groundwater samples were collected at the water table at eight on-site locations. PCE concentrations ranged from ND to 8,600 ppb. The NYS Groundwater Water Standard for PCE is 5 ppb. However, as a result of source removal, PCE levels in 2007 were found to have

diminished significantly (ND to 6.4 ppb). In 2008, groundwater samples were collected at four on-site locations via geoprobe at 25' and 50' below grade. PCE was ND in all samples.

In 2009, PCE was detected in indoor air sampling at 65 ug/m3. The NYSDOH action level for PCE in indoor air is 100 ug/m3. The dry cleaners no longer uses PCE in their dry cleaning process.

Sub-slab soil gas was sampled twice, in 2008 and 2009, and revealed PCE levels at 2,500 ug/m3 and 2,200 ug/m3, respectively. The NYSDOH action level for mitigation of PCE in sub-slab soil gas is 1,000 ug/m3. Exterior soil gas was sampled at five locations outside the building and revealed PCE in the range of 880 ug/m3 to 2,000 ug/m3. Exterior soil gas will be evaluated when the mitigation system is operational to determine if any off-site soil vapor sampling is warranted.

SECTION 6: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and evaluation of the remedial criteria are present 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.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1) Installation of a sub-slab depressurization system within the facility building. A fan will be connected to one extraction point within the building. Four vacuum test points will be installed within the facility to ensure negative pressure is attained beneath the entire building slab. Additional extraction points can be added, if necessary. Five permanent exterior soil vapor points will be constructed outside the building to monitor the system's effectiveness in capturing/containing soil gas. Although no permit is required, a DAR-1 (Air Guide 1) analysis will be performed. Process exhaust will be routed through a vessel filled with granular activated carbon to remove contaminants prior to discharge to the atmosphere.

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iv. provisions for the management and inspection of the identified engineering controls;

v. maintaining site access controls and Department notification; and

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