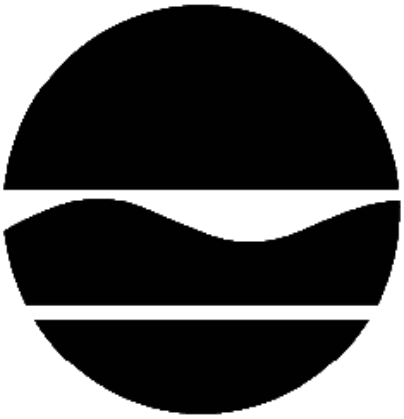
DECISION DOCUMENT

Minute Man Cleaners
Brownfield Cleanup Program
East Rockaway, Nassau County
Site No. C130157
January 2015



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

DECLARATION STATEMENT - DECISION DOCUMENT

Minute Man Cleaners
Brownfield Cleanup Program
East Rockaway, Nassau County
Site No. C130157
January 2015

Statement of Purpose and Basis

This document presents the remedy for the Minute Man Cleaners 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 Minute Man Cleaners 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. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and 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 gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development;

2. In-situ chemical oxidation (ISCO) of residual contaminated soil and groundwater to restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable. ISCO is a

technology used to treat volatile organic compounds in the soil and groundwater. The process injects a chemical oxidant into the subsurface. As the chemical oxidant comes into contact with the contaminant, an oxidation reaction occurs that breaks down the contaminant into relatively benign compounds such as carbon dioxide and water. Several chemical oxidants will be evaluated during the design. The chemical oxidant will be applied onsite through multiple injection points (with multiple injections as needed to achieve the goal) at approximately 22 and 28 feet below grade surface to target the VOCs, primarily PCE and its degradation products TCE and VC;

3. Performance groundwater sampling after 6 and 12 weeks after the subsurface injections are completed to evaluate the effectiveness of the injections in achieving the remedial action objectives for this site and to determine the need for further injections. Further monitoring may be required pursuant to paragraph 7 below;

4. Continued operation of the soil vapor extraction system;

5. A site cover currently exists consisting of the existing buildings and pavement at the site, there is currently only limited exposed surface soil. A site cover will be maintained as a component of any future site development, to allow for the commercial use of the site, which will consist either of the structures such as buildings, pavement, sidewalks comprising the site development 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 two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

6. 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; and

d. requires compliance with the Department-approved Site Management Plan.

7. 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 controls remain in place and effective:

Institutional Controls: Imposition of an institutional control in the form of an Environmental Easement that restricts land use and groundwater use as discussed above.

Engineering Controls: Soil Vapor Extraction System and In-Situ Chemical Oxidation will be utilized to remediate the Site. The site cover system will act as an engineering control. The selected remedy will treat impacted groundwater on-site and will achieve mass reduction of volatile organic compounds in on-site groundwater to the extent practicable as discussed above.

This plan includes, but may not be limited to:
• descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;

•a provision for the consideration of sampling upon request from the property owner in offsite locations where access was previously refused. If appropriate, soil vapor intrusion sampling will be completed and actions recommended to address exposures related to soil vapor intrusion will be implemented.

• a provision for evaluation of the potential for on-site soil vapor intrusion if use of PCE in the onsite building is discontinued and for any buildings developed on the site, including a provision for implementing actions recommended to address exposures related to soil vapor intrusion;

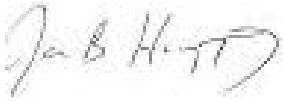
• provisions for the management and inspection of the identified engineering controls;
• maintaining site access controls and Department notification;
• the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and
• an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination.

b. a monitoring plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the 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 above; and

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.

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 protected of public health and the environment.



January 9, 2015

Date	James B. Harrington, PE Director, Remedial Bureau A

DECISION DOCUMENT

Minute Man Cleaners
East Rockaway, Nassau County
Site No. C130157
January 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 repository:

East Rockaway Library
Attn: Reference Section
477 Atlantic Avenue
East Rockaway, NY 11518
Phone: 516-599-1664

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

Site Location: The Minute Man Cleaners Site is located on the southeast corner of the intersection of Atlantic Avenue and Ocean Avenue in the Village of East Rockaway, Town of Hempstead, Nassau County. The site is bordered to the south by a restaurant, and to the east by a bulkhead portion of the Mill River, a tidal creek. An automobile repair shop (formerly a gasoline filling station) is located to the north across Atlantic Avenue. A restaurant is located west of (across Ocean Avenue) the site and an apartment building is located northwest of the site on Ocean Avenue.

Site Features: It is 0.19 acres in size and occupied by an approximately 1,500 square foot one-story brick and wood framed building currently operating as a dry cleaning facility since 1982. The remainder of the site is occupied by asphalt paved parking areas and small landscaped areas. The site is bounded to the east by Mill River, a tidal creek. The facility building is less than ten feet from the bulkhead. The building has been connected to the sewer system since its construction in 1968. There is one interior floor drain in the building connected to a sanitary sewer line.

Current Zoning/Use(s): The property is zoned for commercial use and is currently occupied by a dry cleaning facility. The intended use of the site remains commercial.

Past Use of the Site: The site was developed in 1968 for a pizzeria and restaurant and later used as a retail-clothing store. The property was purchased by Ben Ley Enterprises in 1982 and has been used as a dry cleaning facility since.

According to the proprietor of Minute Man Cleaners, approximately half a dozen “acute” leaks of PCE occurred between 1983 and 1987 due to broken gaskets within the machine. At these times, spillage was observed underneath and behind the dry cleaning machine moving eastward towards the joint between the floor and the eastern wall of the facility, approximately three feet east of the dry cleaning machine. In 1987 all of the gaskets and cartridge tubes within the machine were replaced. In March 2000, the dry cleaning machine was replaced with a new state-of-the-art unit and placed in the same location as the previous machine.

Geology/Hydrogeology: The site soil is primarily fill material to a depth of approximately 13 feet below grade surface (bgs) underlain by sand and gravel. The water table is encountered approximately 3.5 feet to 5.5 feet bgs depending on the tidal stage. Groundwater flow direction changes through the complete tidal cycle, indicating significant tidal influence. During the low tide, groundwater flows east towards the Mill River. While during the high tide, groundwater flows in westerly direction (away from the Mill River).

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 that restrict the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) were 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

The Applicant under the Brownfield Cleanup Agreement is a Participant. The Applicant has 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:

- groundwater
- surface water
- soil
- sediment

- 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. 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:

TETRACHLOROETHYLENE (PCE)	CIS-1,2-DICHLOROETHENE
TRICHLOROETHENE (TCE)	VINYL CHLORIDE

The contaminant(s) of concern exceed the applicable SCGs for: soil, groundwater and soil vapor.

6.2: Interim Remedial Measures

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

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

IRM soil excavation, potassium permanganate injections and SVE system

An IRM was completed at the site in 2008 and consisted of removal of shallow soils (0 to 5 feet bgs) around the dry cleaning machine in accessible areas inside the building and outside the building; a single application consisting of the placing of potassium permanganate into excavation pits for In-Situ Chemical Oxidation (ISCO) treatment of impacted soil and groundwater; and installation of soil vapor extraction (SVE) system for the remaining impacted unsaturated soils and to provide soil

vapor mitigation. In total, approximately 56.5 tons of impacted soils were removed for off-site disposal from both the interior and exterior excavations and approximately 2,900 pounds of potassium permanganate was utilized for the ISCO application. The SVE system continues to operate at the site.

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.

Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminant of concern at the site is tetrachloroethylene (PCE), which is a compound used in dry cleaning operations. It is still used at the facility. PCE was detected in on-site soils, and on-site and off-site groundwater exceeded PCE standards, criteria and guidance (SCGs). Elevated levels of PCE were detected in the sediments of the adjacent river and in soil vapor.

Nature and Extent of Impacted Soils:

The RI delineated the contamination surrounding the dry cleaning machine. The maximum level found was 27 ppm. Accessible areas were addressed by the IRM discussed above.

Nature and Extent of Impacted Soil Vapor and Indoor Air:

Soil vapor concentrations of PCE were detected on-site at levels up to 54,000 micrograms per cubic meter (ug/m³). Elevated concentrations of acetone (11,000 ug/m³ and 2,2,4-trimethylpentane (25,000 ug/m³) were also detected in on-site soil vapor. These results led to a soil vapor intrusion evaluation of off-site structures.

During 2008, PCE was detected at 36 ug/m³ and toluene at 1,800 ug/m³ in a sub-slab soil vapor sample, respectively from an off-site structure located west of the site. PCE and toluene were also detected in the indoor air sample at 0.65 ug/m³ and 3.1 ug/m³ collected from this structure. , No further action was recommended for this off-site structure

During 2010, PCE was detected at 374 ug/m³ in a soil vapor sample collected from a temporary soil vapor probe north west of the site. The concentrations of petroleum constituents (benzene, hexane, cyclohexane) were also elevated in this soil vapor sample. Three separate offers of sub-slab vapor and indoor air sampling were made to a nearby apartment building, however, no response was received.

Nature and Extent of Impacted Groundwater:

During the sampling conducted from 2007 to 2010 in shallow groundwater showed, maximum concentrations of PCE, TCE, cis 1, 2 DCE and VC detected at 5,300 ppb, 240 ppb. 1400 ppb and

340 ppb, (SCGs of 5 ppb for PCE, TCE and DCE and 2 ppb for Vinyl Chloride). Sampling which occurred in 2012 showed that levels had decreased to a maximum of 1,900 ppb of PCE.

In 2011, deeper groundwater was investigated. Maximum PCE levels were 75ppb. Other site contaminants did not significantly exceed SCGs. In September 2012, levels of PCE were 1900 ppb at 25 to 30 feet in well MW1D and 250 ppb at 55 – 65 feet in well DB1. Levels of TCE were 31 ppb in well DB1. Deeper samples (up to 90 feet) did not exceed SCGs.

Surface Water/Sediments in Mill River:

Surface water and sediments samples were collected from the adjacent Mill River. One surface water sample detected PCE at one ppb, which is equal to the guidance value for surface water. One sediment sample detected up to 9,000 ppb of PCE and TCE at 1,100 ppb, which are below the sediment screening levels of 16,000 ppb and 1,800 ppb respectively, identified in the June 2014 DEC Guidance Screening and Assessment of Contaminated Sediment.

Resources impacted/threatened:

The Long Island Sole Source aquifer has been impacted with site-related contamination. However, groundwater is not used as a potable source in the area.

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. Direct contact with contaminated soils or groundwater is not expected because the site is covered by asphalt or the building footprint. 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 system (a system that removes contaminated soil vapor) has been installed and operates to prevent the inhalation of site-related contaminants via soil vapor intrusion in indoor air in the current on-site building. In addition, sampling indicates soil vapor intrusion is not a concern for an adjacent off-site building. However, insufficient information exists to evaluate the potential for soil vapor intrusion into other structures due to denied access for sampling.

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.
- 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: 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 Operation of SVE system and In-situ chemical treatment of soil and groundwater remedy.

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

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and 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 gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development;

2. In-situ chemical oxidation (ISCO) of residual contaminated soil and groundwater to restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable. ISCO is a technology used to treat volatile organic compounds in the soil and groundwater. The process injects a chemical oxidant into the subsurface. As the chemical oxidant comes into contact with the contaminant, an oxidation reaction occurs that breaks down the contaminant into relatively benign compounds such as carbon dioxide and water. Several chemical oxidants will be evaluated during the design. The chemical oxidant will be applied onsite through multiple injection points (with multiple injections as needed to achieve the goal) at approximately 22 and 28 feet below grade surface to target the VOCs, primarily PCE and its degradation products TCE and VC;

3. Performance groundwater sampling after 6 and 12 weeks after the subsurface injections are completed to evaluate the effectiveness of the injections in achieving the remedial action objectives for this site and to determine the need for further injections. Further monitoring may be required pursuant to paragraph 7 below;

4. Continued operation of the soil vapor extraction system;

5. A site cover currently exists consisting of the existing buildings and pavement at the site, there is currently only limited exposed surface soil. A site cover will be maintained as a component of any future site development, to allow for the commercial use of the site, which will consist either of the structures such as buildings, pavement, sidewalks comprising the site development 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 two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill

material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

6. 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; and

d. requires compliance with the Department-approved Site Management Plan.

7. 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 controls remain in place and effective:

Institutional Controls: Imposition of an institutional control in the form of an Environmental Easement that restricts land use and groundwater use as discussed above.

Engineering Controls:,Soil Vapor Extraction System and In-Situ Chemical Oxidation will be utilized to remediate the Site. The site cover system will act as an engineering control. The selected remedy will treat impacted groundwater on-site and will achieve mass reduction of volatile organic compounds in on-site groundwater to the extent practicable as discussed above.

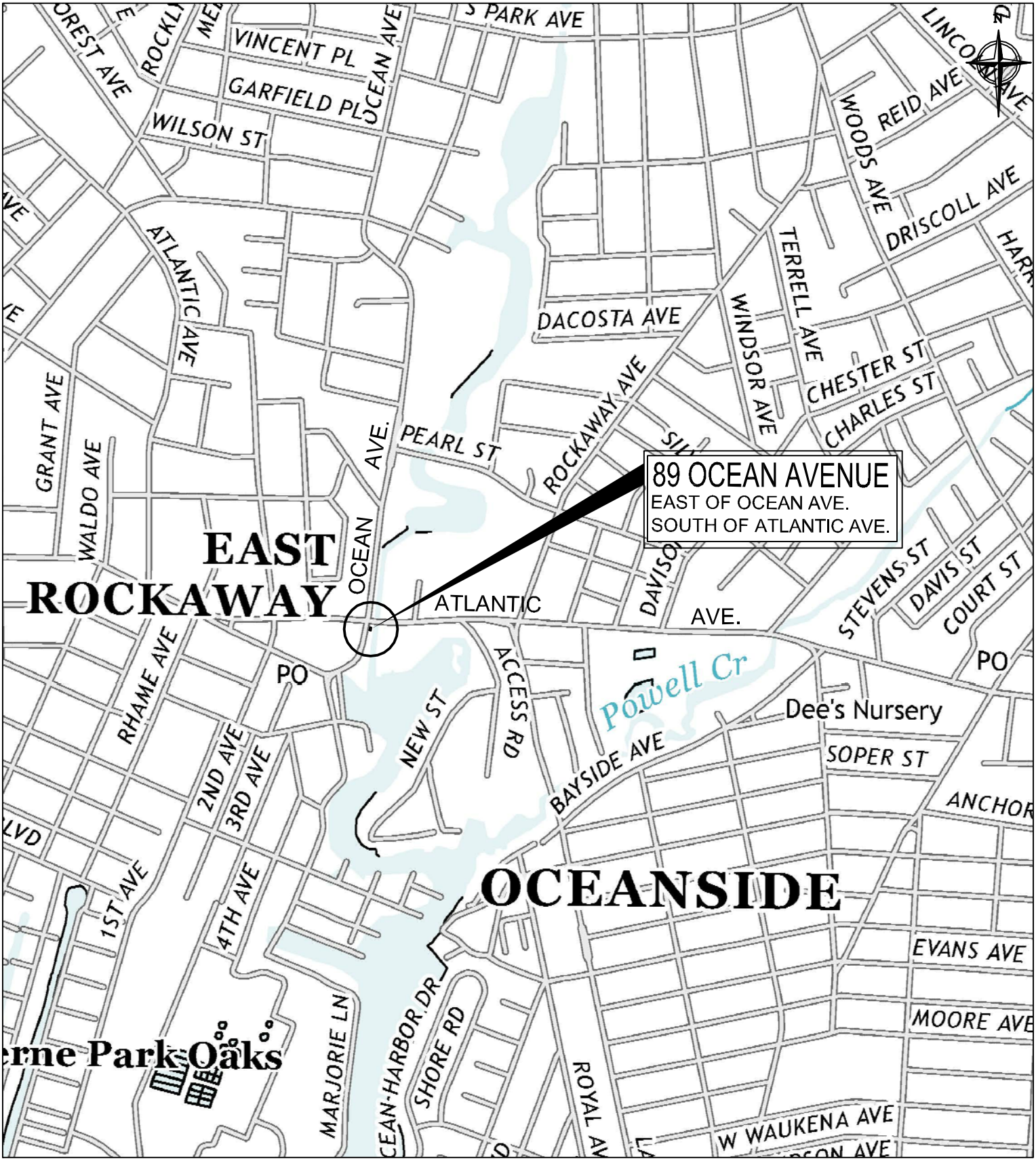
This plan includes, but may not be limited to:
• descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
• a provision for the consideration of sampling upon request from the property owner in offsite locations where access was previously refused. If appropriate, soil vapor intrusion sampling will be completed and actions recommended to address exposures related to soil vapor intrusion will be implemented.

• a provision for evaluation of the potential for on-site soil vapor intrusion if use of PCE in the onsite building is discontinued and for any buildings developed on the site, including a 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;
• the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and

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

b. a monitoring plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the 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 above; and

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.



PREPARED BY:

J.R. HOLZMACHER P.E., LLC

The Third Generation of Excellence
In Water Supply, Water Resources,
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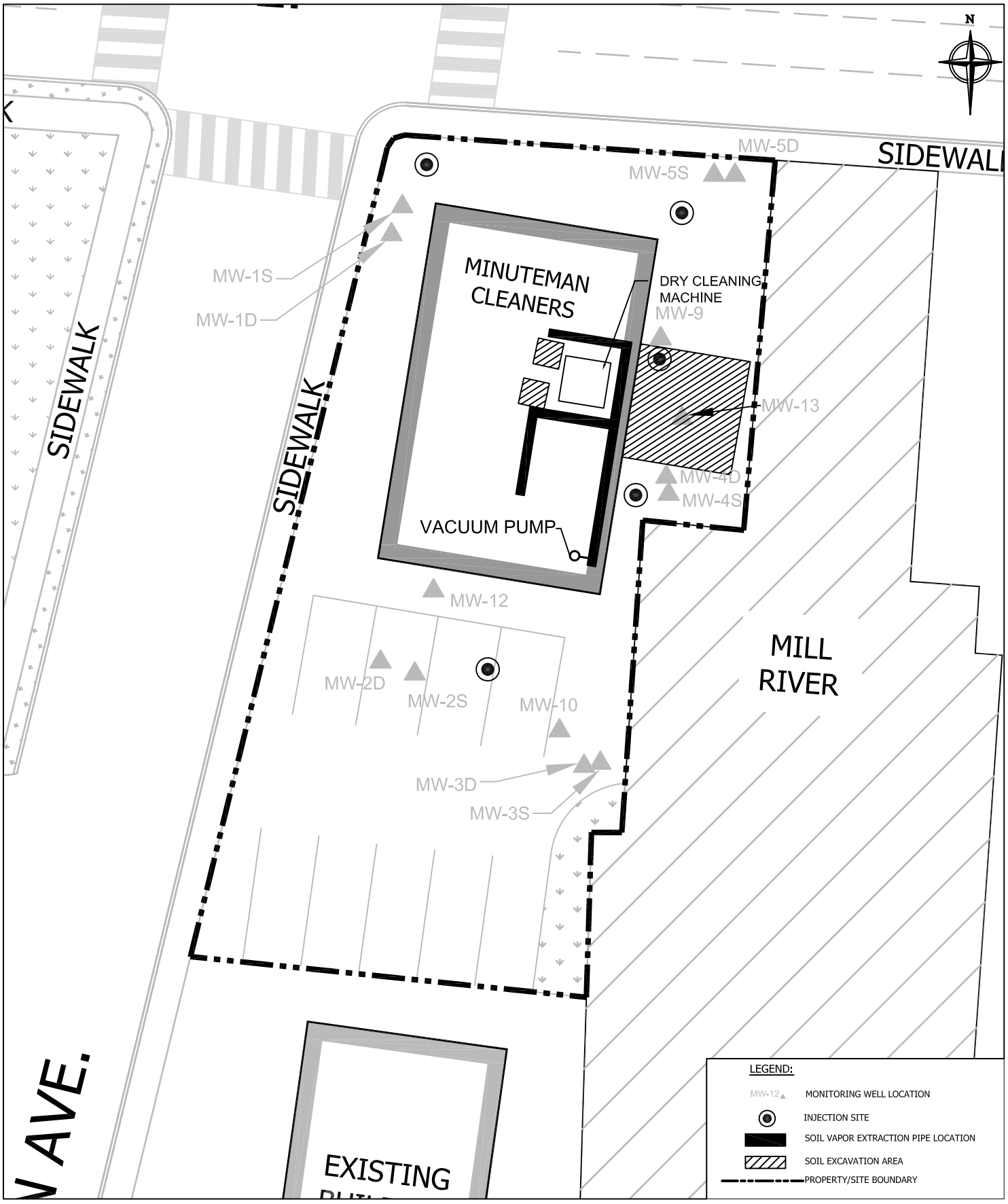
TITLE:

Site Location Map

89 Ocean Avenue
East Rockaway, New York 11518
SITE ID: C130157

DWN:	SCALE:	DATE:	PROJECT NO.:
KTO	1"=1000'	07/29/14	ManlD 13-01
CHKD:	APPD:	REV.:	NOTES:
PJH	PJH	-	-

FIGURE NO.: 1



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TITLE: **DECISION DOCUMENT**
MINUTEMAN CLEANERS
SITE #C 130157
89 OCEAN AVE
EAST ROCKAWAY, NEW YORK 11518

DWN:	SCALE:	DATE:	PROJECT NO.:
DAH	1:20	09-04-14	ManID1301
CHKD:	APPD:	REV.:	NOTES:
JRH	JRH	-	-

FIGURE NO.: 2