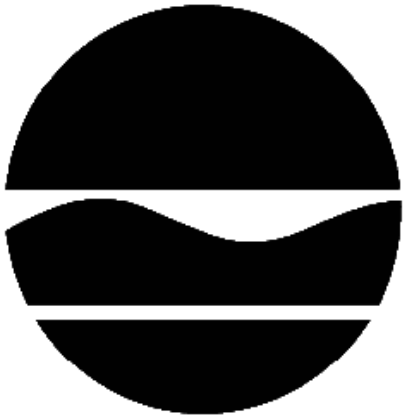
DECISION DOCUMENT

Sid Harvey Industries Facility
Operable Unit Number 02: Saturated Soil and Groundwater
Voluntary Cleanup Program
Valley Stream, Nassau County
Site No. V00145
April 2016



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

DECLARATION STATEMENT - DECISION DOCUMENT

Sid Harvey Industries Facility
Operable Unit Number: 02
Voluntary Cleanup Program
Valley Stream, Nassau County
Site No. V00145
April 2016

Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 02: Saturated Soil and Groundwater of the Sid Harvey Industries Facility 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 Operable Unit Number: 02 of the Sid Harvey Industries Facility 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. 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. Air Sparge with Soil Vapor Extraction (AS/SVE)

Continue operation of the air sparge system installed as an IRM for this operable unit and the OU1 soil vapor extraction system to address the contaminated soils and groundwater to a depth of about 60 feet below ground surface (bgs).

3. Enhanced Bioremediation

In-situ enhanced biodegradation will be employed to treat VOCs in the areas below 60 feet bgs beyond the influence of the AS/SVE system. The biological breakdown of contaminants through anaerobic reductive dechlorination will be enhanced by multiple and mixed injections of electron donor products and other amendments. These materials will be injected into the subsurface to promote microbe growth via injection wells screened at multiple locations and depths to be determined during the remedial design.

4. Cover System

A site cover currently exists and will be maintained to allow for industrial use of the site. Any site redevelopment will maintain the existing site cover, which consists either of the structures such as buildings, pavement, sidewalks or soil where the upper one foot of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for industrial use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

5. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property which will:

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

•allows the use and development of the controlled property for industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;

•restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or Nassau County DOH; and

•requires compliance with the Department approved Site Management Plan.

6. Site Management Plan

A Site Management Plan for both OU1 and OU2 is required, which includes the following:

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

Institutional Controls: The Deed Restriction discussed in Paragraph 5 above.

Engineering Controls: The AS/SVE system, Enhanced Bioremediation and Cover System discussed in Paragraphs 2,3 and 4 above, and the OU1 remedy including the existing off-site sub-slab depressurization system.

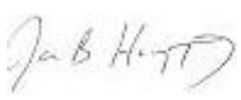
This plan includes, but may not be limited to:
•an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
•a provision for removal or treatment of the source area located under eastern portions of the building if and when the building is demolished;
•descriptions of the provisions of the deed restriction including any land use and groundwater use restrictions;
•a provision for evaluation of the potential for soil vapor intrusion 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 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 to assess the performance and effectiveness of the remedy;
•a schedule of monitoring and frequency of submittals to the Department; and
•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, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
•procedures for operating and maintaining the remedy;
•compliance monitoring of treatment and mitigation 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 to 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.



April 14, 2016

_____ _____

Date

James B. Harrington, PE Director
Remedial Bureau A

DECISION DOCUMENT

Sid Harvey Industries Facility
Valley Stream, Nassau County
Site No. V00145
April 2016

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: 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:

Henry Waldinger Memorial Library
60 Verona Place
Valley Stream, NY 11582
Phone: (516)-852-6422

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 Sid Harvey Industries Facility site is located in a suburban area in Valley Stream, Nassau County. The site is located between Merrick Road and Sunrise Highway, about 1500 feet west of Greis Park and adjacent to the elevated railroad tracks.

Site Features: The site is currently occupied. The main site features includes one large, extended building surrounded by paved parking and driveway.

Current Zoning and Land Use: The site is currently zoned commercial and is being used as a floral and event decorator's showroom. The surrounding parcels are currently used for a combination of residential and commercial use. The nearest residential property is adjacent to the site.

Past Use of the Site: Historically, the site had been in use since the 1940s to remanufacture parts for oil-fired boilers. During these operations, disposal of waste solvents to a dry well and leaks associated with solvent recycling equipment, are considered to be the main sources of contamination. In 2006, following a Resource Conservation and Recovery Act (RCRA) investigation, contaminated soils were removed from within the building under remedial actions associated with the RCRA closure.

Operable Units: The site is 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 release or exposure pathway resulting from the site contamination. Operable Unit (OU) 1 consists of the on-site soils and soil vapor above the water table. OU2 consists of the saturated soils, below the water table, and groundwater.

Site Geology and Hydrogeology: The geology at the site generally consists of stratified sand and gravels with traces of clays at 80 feet and below. The depth to groundwater in the Upper Glacial Aquifer ranges from about 10 to 12 feet below the land surface. The groundwater generally flows in a southerly direction.

Operable Unit (OU) Number 02 is the subject of this document.

A Decision Document was issued previously for OU 01.

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, at a minimum, alternatives (or an alternative) that restrict(s) the use of the site to 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 5: ENFORCEMENT STATUS

The Department and Sid Harvey Industries, Inc. entered into a Voluntary Cleanup Agreement (VCA), Index No. W1-0809-98-03 on August 3, 1998. The VCA obligates the Sid Harvey Industries, Inc., a responsible party, to implement a full remedial program 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

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

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. 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 for this Operable Unit at this site is/are:

1,1,1-trichloroethane (TCA) tetrachloroethene (PCE)

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

- groundwater
- soil

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.

Air Sparge and In-situ Chemical Reduction

An Air Sparge (AS) system was installed in March 2006 as part of the Operable Unit 2 (OU2) IRM. This AS system was combined with the existing Soil Vapor Extraction (SVE) system previously installed as part of the Operable Unit 1 remedy. The combined Air Sparge/Soil Vapor Extraction system (AS/SVE) is operated to remediate groundwater from the water table to about 60 feet below grade.

Air sparging was implemented to address the groundwater plume contaminated by volatile organic compounds (VOCs) during the OU2 IRM. VOCs are physically removed from the groundwater and soil below the water table (saturated soil) by injecting air into the subsurface. The injected air rising through the groundwater volatilizes and transfers the VOCs from the groundwater and/or soil into the injected air. The VOCs are carried with the injected air into the vadose zone (the area below the ground surface but above the water table) where a soil vapor extraction (SVE) system designed to remove the VOCs has been installed as part of the previous OU1 remedy. The SVE system applies a vacuum to wells that have been installed into the vadose zone to remove the VOCs along with the air introduced by the sparging process. The air extracted from the SVE wells is treated using activated carbon which removes the VOCs from the air prior to being discharged to the atmosphere.

At this site, air injection wells have been installed in the area of the former underground concrete structure and along the eastern portion of the property to a depth of about 60 feet, which is 50 feet below the water table. To capture the volatilized contaminants, the SVE wells were previously installed in the vadose zone at a depth of about 10 feet below ground surface.

Treatment of deeper groundwater from about 60 feet to 85 feet below grade was evaluated using enhanced bioremediation to break down contaminants by in-situ chemical reduction during a pilot test. In-situ chemical reduction was implemented to test the treatment of VOC contaminants in groundwater. HRC, a chemical reducing agent, was injected via injection wells into the subsurface to destroy the contaminants in the area downgradient of the former concrete structure where VOC concentrations were elevated. The April 2007 on-site pilot study report showed the HRC injections to be unsuccessful at treating the groundwater contaminants using the quantities injected.

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:

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals. Based on investigations, the primary contaminants of concern are tetrachloroethene (PCE) and 1,1,1 trichloroethane (TCA).

For Operable Unit 1: On-Site Soil and Soil Vapor

Soil – VOCs, SVOCs and metals were found in soil on the eastern portions of the site, both inside and outside of the building. The maximum contaminant concentrations were found near the former underground structure and inside the building in the former cleaning department area. The highest soil contaminant concentration for PCE was reported at 520 ppm (parts per million) which exceeds the commercial use soil cleanup objective of 150 ppm and protection of groundwater level of 1.3 ppm. The maximum TCA in soil was reported at 18,000 ppm which exceeds the 500 ppm commercial use soil cleanup objective and protection of groundwater level of 0.68 ppm. TCE was reported at 1,100 ppm which exceeds the commercial soil cleanup objective of 200 ppm and the protection of groundwater level of 0.47 ppm. DCA was reported at 5.9 ppm which is below the commercial soil cleanup objective of 240 ppm but exceeds the protection of groundwater level of 0.27 ppm. Soil in this area was excavated to the water table and disposed off-site. Data does not indicate any off-site impacts in soil related to this site.

Soil Vapor and Indoor Air – PCE, TCE, 1,1-DCE, TCA, and DCA were detected in soil vapor, sub-slab vapor and in indoor air. Off-site impacts in soil vapor related to this site exist and a sub-slab depressurization system has been installed at a neighboring property to mitigate soil vapor intrusion during site management.

For Operable Unit 2: Saturated Soil and Groundwater (on-site and off-site)

Saturated Soil – Soils collected below surface of groundwater contained VOCs, SVOCs and metals. The maximum contaminant concentrations were found below the former underground structure in the northeastern portion of the site in an area that is currently being remediated by the existing AS/SVE system. Maximum concentrations in saturated soil were reported in soil at 820 ppm for PCE; 8,700 ppm for TCA; 45 ppm for TCE; 1 ppm for 1,1-DCE; and 0.45 ppm for DCA.

Groundwater - PCE and TCA, and their breakdown products, trichloroethene (TCE), dichloroethene (1,1-DCE), and dichloroethane (DCA) were found in both on-site and off-site groundwater at concentrations exceeding the groundwater standards (typically 5 parts per billion (ppb)). The maximum reported concentration of PCE was 1,200 ppb and the maximum concentration of TCA was 38,000 ppb. These maximums were detected near the eastern property boundary and downgradient of the former flammable storage shed area. Contamination in groundwater has migrated off-site.

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.*

Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with buildings and pavement. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater 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. Sub-slab depressurization systems (systems that ventilate/remove the air beneath the building) have been installed in the on-site building and one off-site building to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the 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.

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.

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.

The selected remedy is referred to as the Continued Operation of the Existing Air Sparge/Soil Vapor Extraction System and Enhanced Bioremediation 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. Air Sparge with Soil Vapor Extraction (AS/SVE)

Continue operation of the air sparge system installed as an IRM for this operable unit and the OU1 soil vapor extraction system to address the contaminated groundwater to a depth of about 60 feet below ground surface (bgs).

3. Enhanced Bioremediation

In-situ enhanced biodegradation will be employed to treat VOCs in the areas below 60 feet bgs beyond the influence of the AS/SVE system. The biological breakdown of

contaminants through anaerobic reductive dechlorination will be enhanced by multiple and mixed injections of electron donor products and other amendments. These materials will be injected into the subsurface to promote microbe growth via injection wells screened at multiple locations and depths to be determined during the remedial design.

4. Cover System

A site cover currently exists and will be maintained to allow for industrial use of the site. Any site redevelopment will maintain the existing site cover, which consists either of the structures such as buildings, pavement, sidewalks or soil where the upper one foot of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for industrial use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

5. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property which will:

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

•allows the use and development of the controlled property for industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;

•restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or Nassau County DOH; and

•requires compliance with the Department approved Site Management Plan.

6. Site Management Plan

A Site Management Plan for both OU1 and OU2 is required, which includes the following:

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

Institutional Controls: The Deed Restriction discussed in Paragraph 5 above.

Engineering Controls: The AS/SVE system, Enhanced Bioremediation and Cover System discussed in Paragraphs 2, 3 and 4 above, and the OU1 remedy including the existing off-site sub-slab depressurization system.

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;

•a provision for further investigation and remediation if the existing on-site structure is demolished, or if the subsurface is otherwise made accessible;

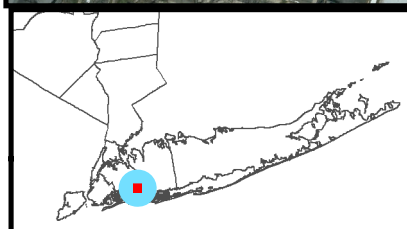
•descriptions of the provisions of the deed restriction including any land use and groundwater use restrictions;

•a provision for evaluation of the potential for soil vapor intrusion for future buildings developed on the site, and in the off-site area affected by site related contamination,

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 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, soil and soil vapor to assess the performance and effectiveness of the remedy;
•a schedule of monitoring and frequency of submittals to the Department; and
•monitoring for vapor intrusion for any occupied existing or future buildings required by the Institutional and Engineering Control Plan discussed above.

c) an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
•procedures for operating and maintaining the remedy;
•compliance monitoring of treatment and mitigation 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.

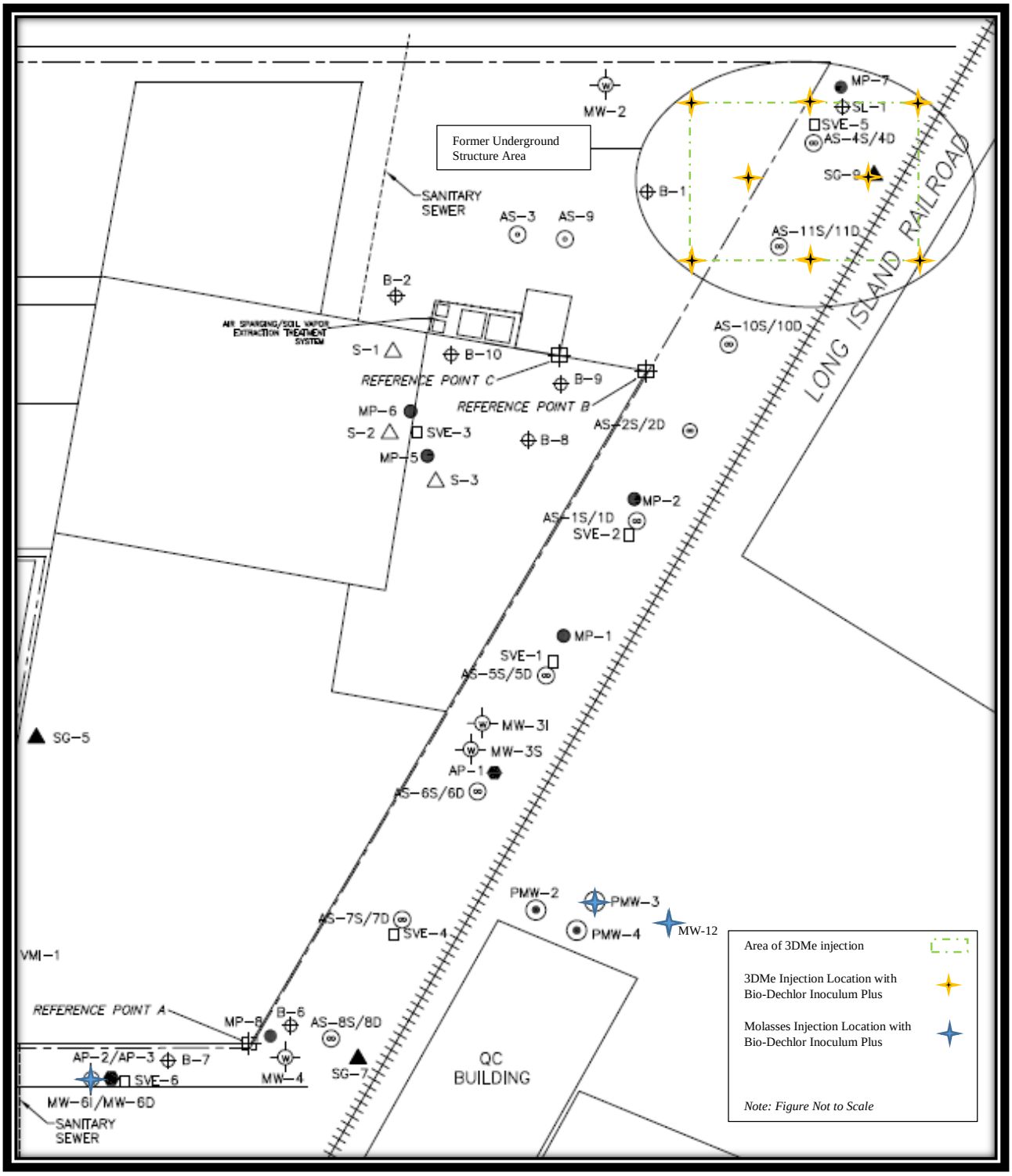


N
W E
S

NEW YORK STATE OF OPPORTUNITY
Department of Environmental Conservation

Figure1
Site Location Map

Sid Harvey
Site No. V00145



NAC CONSULTANTS INC. 28 Henry Street Kings Park New York 11754	Remedial Action Work Plan 100 East Mineola Avenue Valley Stream, New York	***Figure 2*** *Selected Remedy* Site Map with Injection Point Locations