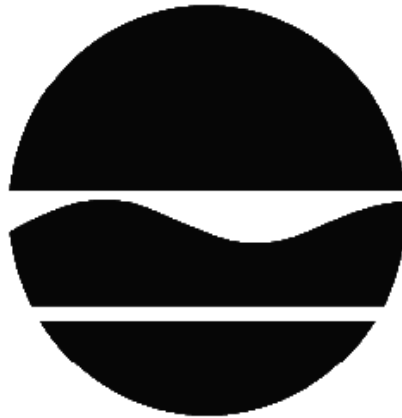


DECISION DOCUMENT

Dennison Monarch Systems Facility
Operable Unit Number 01: Remedial Program, On-Site
Voluntary Cleanup Program
New Windsor, Orange County
Site No. V00135
March 2014



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

DECLARATION STATEMENT - DECISION DOCUMENT

Dennison Monarch Systems Facility
Operable Unit Number: 01
Voluntary Cleanup Program
New Windsor, Orange County
Site No. V00135
March 2014

Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 01: Remedial Program, On-Site of the Dennison Monarch Systems 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: 01 of the Dennison Monarch Systems 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. 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. A vertical, fully enclosing containment wall enclosing approximately 2.6 acres will be constructed. The wall will be constructed of steel sheetpile with sealable joints and keyed a minimum of five feet into the low-permeability till unit. The design will determine the final wall depth but the anticipated depth is estimated to range from 35 to 55 feet below the existing grade.

3. An engineered cap will be installed over the containment area. The cap will consist of a low-permeability layer to minimize infiltration into the containment area and prevent exposure to contaminants. The engineered cap will include protective layers of sufficient thickness to protect the low-permeability layer and provide a base for vegetation or pavement. In addition, the cap will include a drainage layer or be properly contoured to further minimize infiltration into the containment area.

4. A groundwater extraction system will be installed to maintain an inward hydraulic gradient within the enclosure. Extracted groundwater will be treated and discharged in accordance with applicable requirements.

5. Imposition of an institutional control in the form of a deed restriction for the controlled property that:

- 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);
- allows the use and development of the controlled property for commercial and 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 County DOH; and,
- requires compliance with the Department approved Site Management Plan.

6. 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 engineering controls remain in place and effective:

- i. Institutional Controls: the deed restriction discussed above;
- ii.Engineering Controls: the containment wall, engineered cap and groundwater extraction system discussed in Paragraphs 2, 3 and 4.

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 evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provisions 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 engineering controls.

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

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency for submittals to the Department;
- monitoring for vapor intrusion for any 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:

- 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.

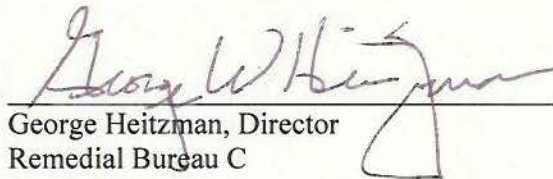
Declaration

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 protective of public health and the environment.

Date

3/24/2014

George Heitzman, Director
Remedial Bureau C



DECISION DOCUMENT

Dennison Monarch Systems Facility
New Windsor, Orange County
Site No. V00135
March 2014

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 repositories:

Newburgh Free Library
124 Grand St
Newburgh, NY 12550
Phone: (845) 563-3600

NYSDEC
Attn: John Spellman
625 Broadway
Albany, NY 12233
Phone: (518) 402-9662

NYSDEC
Attn: Michael Knipfing
Region 3 Headquarters
21 South Putt Corners Rd
New Paltz, NY 12561
Phone: (845) 256-3000

Town of New Windsor
Attn: Town Clerk
555 Union Ave
New Windsor, NY 12553
Phone: (845) 563-4611

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 Dennison Monarch Systems Site is located at 15-21 Ruscutti Road in the Town of New Windsor near the City of Newburgh. The site is situated along a commercial and industrial corridor in a suburban area. The site is about one mile south of the intersection of State Routes 32 and 17K.

Site Features: The site consists of a 5.8 acre parcel. In 2010 a 97,000 square-foot building positioned in the northwest corner of the parcel was demolished; there are currently no structures on the site. The concrete slab-on-grade foundation was left in place following the demolition. The site slopes gently to the east and southeast.

Current Zoning and Land Use: The site is currently vacant. The site parcel is currently zoned Planned Industrial. The surrounding land use currently consists of commercial and industrial uses and includes a rail line, a precast concrete supplier and a construction contractor storage yard. Three former municipal supply wells, which have been out of service for more than 30 years, are located approximately 1,000 feet northeast of the site. The nearest residential area is located about 700 feet to the east.

Past Uses of the Site: For at least 38 years metal furniture was manufactured at the site by Birium Corp. or Avery Dennison Corporation and its predecessor. The operation included cutting, shaping, welding, deburring, degreasing, and painting of metal components. Degreasing was

performed using chlorinated solvents in two vapor-phase degreaser pits in the central portion of the plant. Avery Dennison terminated operations in 1994. A cardboard box manufacturer occupied the site from about 1997 to 2009.

Operable Units: The site is divided into two operable units (OUs). An OU 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) Number 01 is the on-site area that is the subject of the remedy detailed in this decision document. Operable Unit 02 is comprised of the down-gradient and off-site portion of the facility groundwater plume.

Site Geology and Hydrogeology: The geology at the site consists of glacial till and fluvial outwash overlying shale bedrock. The bedrock surface is approximately 40 to 60 feet below ground surface. The till is present on top of the bedrock with an approximate average thickness of 20 feet. A sand and gravel outwash unit is typically present on top of the till; however, this sand and gravel unit is generally less than five feet thick and is discontinuous. In some places lacustrine fine-grained deposits are present directly over the till. Laterally extensive lacustrine fine grained deposits are present above the sand and gravel. Additional sands and gravels, both natural and fill, comprise the top of the overburden.

The water table is approximately seven feet below ground. Local groundwater flows from the back (west) of the site in a northeasterly direction toward the Little Falls Ponds approximately 1,000 feet from the site. The Little Falls Ponds property is a former streambed that was modified in the early 20th century by the installation of dams to create three ponds. The outlet stream of these ponds discharges to the Quassaick Creek. The groundwater converges on the Little Falls Ponds property downgradient of the site from separate directions including the site, the residential area to the east, and the industrial area to the west.

A Decision Document will be issued for OU 02 in the future.

A site location map is attached (see Figure 1 and Figure 2).

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 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. Additional characterization activities subsequent to the RI Report are described in the Pre-Design Investigation Report and the draft

SECTION 5: ENFORCEMENT STATUS

The Department and Dennison Monarch Systems, Inc. entered into a Voluntary Cleanup Agreement on September 23, 1999 for the investigation and remediation of contamination associated with its former operations.

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 for this Operable Unit at this site is/are:

1,1,1 TCA

TRICHLOROETHENE (TCE)

1,1-DICHLOROETHANE

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.

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

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: The primary site contaminants of concern are 1,1,1-trichloroethane (TCA) and trichloroethene (TCE) and their associated breakdown products.

OU-1 On-Site Area

Soil - OU1

No areas of soil contamination meeting the definition of a source material under Part 375 were found on site. Also, contamination in soil did not exceed the soil cleanup objectives (SCOs) for

protection of public health for commercial use anywhere on the site. However, contaminants of concern were found in the subsurface soil exceeding the more conservative protection of groundwater SCO. TCA was found in concentrations ranging from not-detected to 180 mg/kg, as compared to the protection of groundwater standard of 0.68 mg/kg. The higher concentrations of TCA were found under the foundation slab in the vicinity of a former floor drain. TCE was found in concentrations ranging from not-detected to 4.5 mg/kg, as compared to the protection of groundwater SCO of 0.47 mg/kg. The higher concentrations of TCE were found under the foundation slab near the former vapor degreaser pits and also within the eastern lawn area. The higher concentrations of TCA were found under the foundation slab in the vicinity of a former floor drain. The higher concentrations of TCA and TCE in soil were located deeper than 15 feet, generally in the outwash sand and gravel.

No surface soil samples exceeded the unrestricted use SCOs.

Groundwater - Overview

A monitoring well network has provided evidence of two distinct areas of groundwater contamination, which are identified as the Facility and South Plume. The Facility Plume originates on site and extends offsite in a northeasterly direction. The South Plume originates near the southeast corner of the site and cross gradient of the Facility Plume. The South Plume also moves in a northeasterly direction but with a greater northerly component, causing the two plumes to merge near the eastern site boundary. Operable Unit 1 includes the source of the Facility Plume. Operable Unit 02 is comprised of the down-gradient and off-site portion of the Facility Plume (see figure 3).

Groundwater - OU1

On-site groundwater contamination is associated with the Facility Plume. This plume consists of both TCA and TCE. TCA in on-site groundwater was found as high as 190,000 micrograms per liter (ug/l), exceeding the groundwater standard of 5 ug/l. TCE in on-site groundwater was found as high as 71,000 ug/l, exceeding the groundwater standard of 5 ug/l. The highest concentrations of TCA and TCE in groundwater were found under the foundation slab.

Tetrachloroethene (PCE) was found as high as 14 ug/l on-site. Although exceeding the groundwater standard of 5 ug/l, this compound is not a significant contaminant of concern in OU-1. PCE was observed in slightly higher concentrations off-site.

The highest concentrations of TCA and TCE were found at depths of approximately 10 to 40 feet. TCA and TCE are not significantly present in the till or bedrock.

Soil Vapor - OU1

Sub-slab and indoor air samples were collected and analyzed in 2006. However, because the only on-site structure was demolished in 2010, the indoor air data is no longer relevant to current conditions.

OU-2 Offsite Impacts

Groundwater - OU2

Downgradient of the site the Facility Plume and the South Plume combine and flow to the northeast for approximately 1500 feet following a local surface drainage route. The plume lies under commercial properties, undeveloped land and a portion of the Little Falls Ponds. Groundwater contaminants of concern are limited to the overburden aquifer.

TCA in off-site groundwater was found as high as 1,680 ug/l. TCE in off-site groundwater was found as high as 1,190 ug/l. TCA and TCE were found in the highest concentrations at 10 to 30 feet below ground surface.

In 2008 the former water supply wells were sampled by the Town of New Windsor, distinct from the Dennison Monarch Systems Facility Voluntary Cleanup Program. TCA was detected in two wells, but at concentrations below the New York State Department of Health drinking water standard of 5 ug/l. The former supply wells have not been in use for over 30 years and there are no plans to reactivate the wells.

Sediment - OU2

Sediment samples were collected in the First and Second Little Falls Ponds as well as in the drainage tributaries overlying the plume. No guidance values for the protection of benthic aquatic life have been established for TCA and TCE, although the samples did not exceed the Protection of Ecological Resources Soil Cleanup Objectives for the contaminants of concern. Porewater samples collected from the tributaries detected TCA and TCE.

Surface Water - OU2

TCA and TCE were detected in the surface water of the First and Second Little Falls Ponds as well as in tributary surface water. However, none of the detections exceeded the Class C surface water standard.

Soil Vapor - OU2

Soil vapor investigation points were installed along the perimeter of the satellite building on the A and R Concrete Products property. Constituents of the underlying groundwater plume were not detected in the soil vapor samples. Soil vapor samples were also collected in the Little Falls Ponds (LFP) Area. TCA and TCE were found in certain LFP samples; TCA was found in the soil vapor as high as 1.5 micrograms per cubic meter. There are no occupied structures in the Little Falls Ponds 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 who enter the site will not come into contact with site-related soil and groundwater contamination unless they dig below the surface. Site related contaminants have been detected in three nearby public water supply wells at levels below drinking water standards. Those public water supply wells are currently not in use and therefore the contaminated groundwater is not used for drinking or other purposes. The area is served by a public water supply that obtains water from a different source 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. Because there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Sampling indicates soil vapor intrusion is not a concern for existing off-site residential buildings in the area near the Facility groundwater plume northeast of the site. The potential exists for the inhalation of site related contaminants due to soil vapor intrusion for any future development off-site directly over the Facility groundwater plume. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for current off-site commercial or future buildings near the South groundwater plume directly south of the site.

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 Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

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

The selected remedy is referred to as the barrier wall with hydraulic control remedy.

The elements of the selected remedy, as shown in Figure 4, are as follows:

1. 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. A vertical, fully enclosing containment wall enclosing approximately 2.6 acres will be constructed. The wall will be constructed of steel sheetpile with sealable joints and keyed a minimum of five feet into the low-permeability till unit. The design will determine the final wall depth but the anticipated depth is estimated to range from 35 to 55 feet below the existing grade.

3. An engineered cap will be installed over the containment area. The cap will consist of a low-permeability layer to minimize infiltration into the containment area and prevent exposure to contaminants. The engineered cap will include protective layers of sufficient thickness to protect the low-permeability layer and provide a base for vegetation or pavement. In addition, the cap will include a drainage layer or be properly contoured to further minimize infiltration into the containment area.

4. A groundwater extraction system will be installed to maintain an inward hydraulic gradient within the enclosure. Extracted groundwater will be treated and discharged in accordance with applicable requirements.

5. Imposition of an institutional control in the form of a deed restriction for the controlled property that:

- 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);
- allows the use and development of the controlled property for commercial and 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 County DOH; and,
- requires compliance with the Department approved Site Management Plan.

6. 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 engineering controls remain in place and effective:

- i. Institutional Controls: the deed restriction discussed above;
- ii. Engineering Controls: the containment wall, engineered cap and groundwater extraction system discussed in Paragraphs 2, 3 and 4.

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 evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provisions 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 engineering controls.

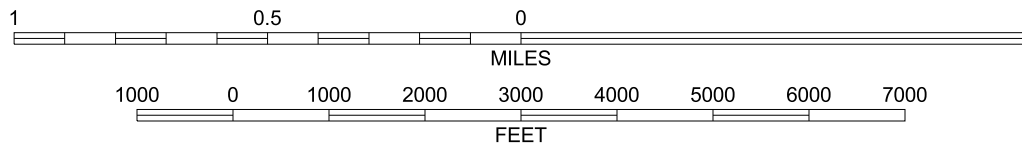
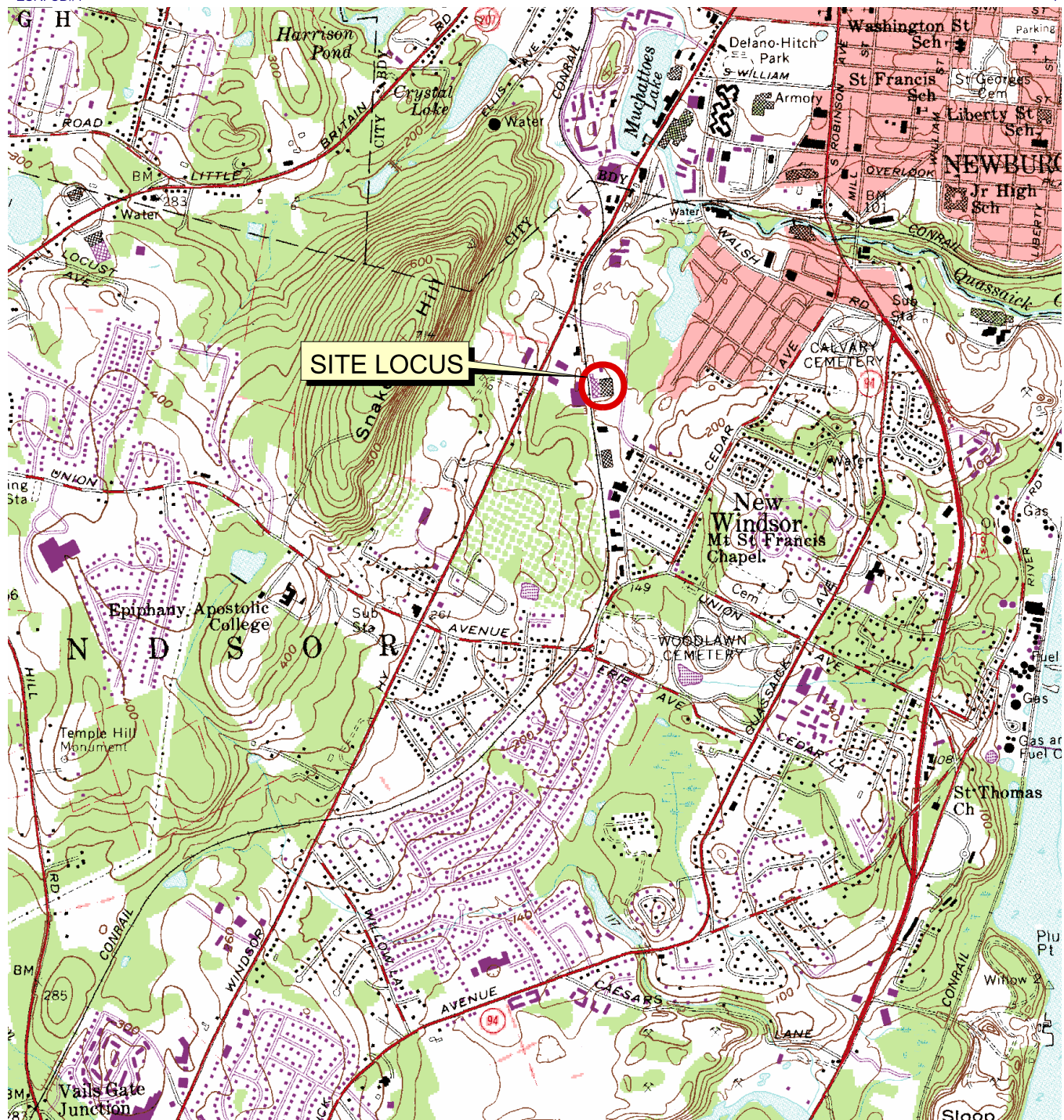
b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency for submittals to the Department;

- monitoring for vapor intrusion for any 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:

- 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.



CONTOUR INTERVAL : 20 FEET

BASE MAP: USGS 7.5 Minute Topographic Quadrangle



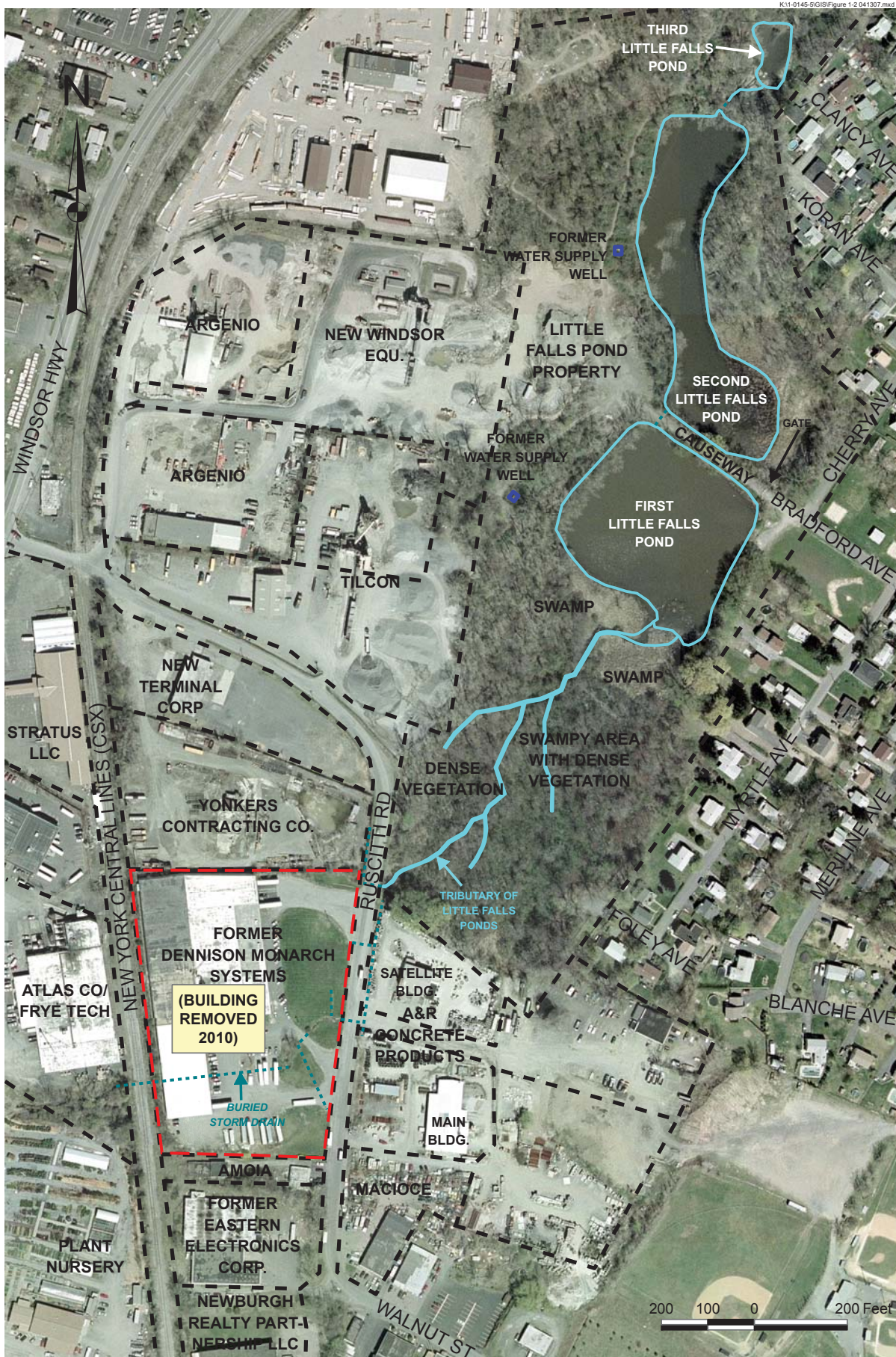
MAP
LOCATION

FIGURE 1 SITE LOCUS MAP
FORMER DENNISON / MONARCH SYSTEMS SITE
NEW WINDSOR, NEW YORK



100 State Street, Suite 600
 Montpelier, VT 05602

Drawn by: TJK Date: 04/10/13
 Chk'd by: GAK Date: 04/10/13
 Scale: As Shown Project: 1-0145-05



**FIGURE 2 AERIAL PHOTOGRAPH
IDENTIFYING MAIN FEATURES OF SURROUNDING AREA
FORMER DENNISON MONARCH SYSTEMS SITE
NEW WINDSOR, NEW YORK**

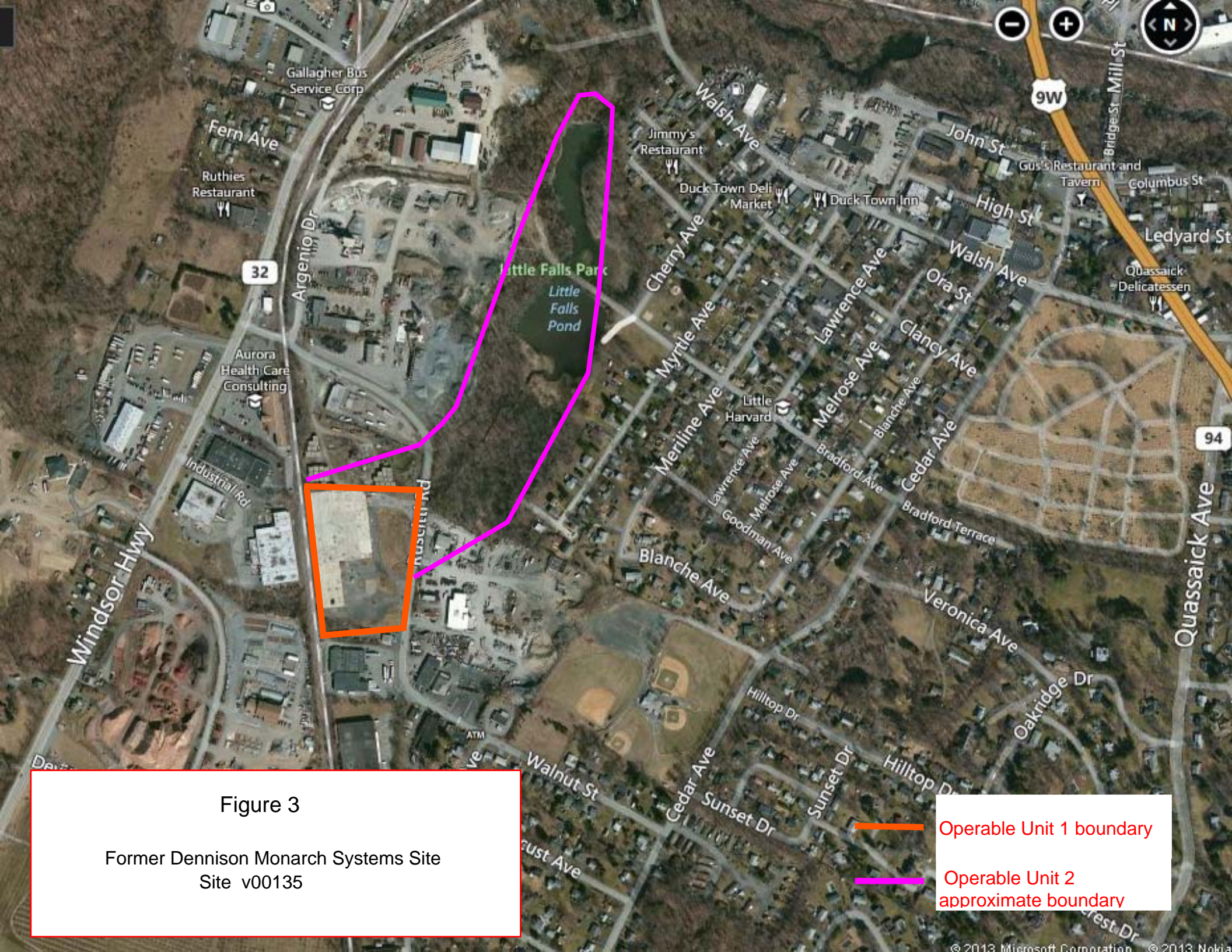
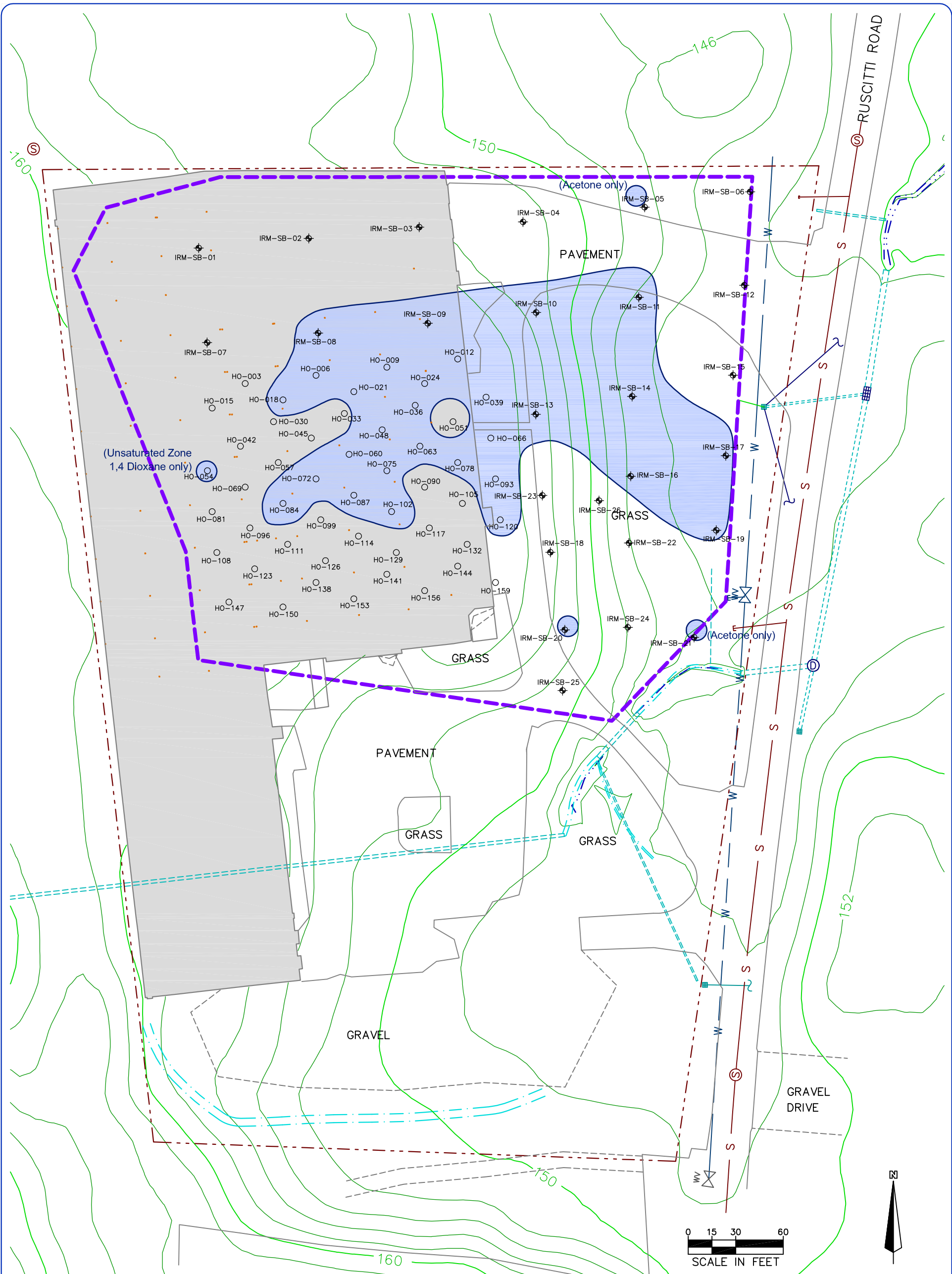


Figure 3

Former Dennison Monarch Systems Site
Site v00135

Operable Unit 1 boundary

Operable Unit 2
approximate boundary



LEGEND

- Drainage Swale
- Stream / Pond
- Site Boundary
- 2' Ground Surface Contour
- Former Building Column
- Catch Basin Location
- Drainage Manhole
- Sanitary Sewer Manhole
- Culvert
- Concrete Slab of Former Building
- Sanitary Sewer
- Water Main

- ISTD Heater Well Location/2010 IRMPC Soil Boring Location
- ⊕ 2011 IRMPC Soil Boring Location
- Industrial Soil-to-Groundwater SCO Exceedences in IRMPC Zone
- Proposed Barrier Location

SOURCES: 'BOUNDARY/TOPOGRAPHIC SURVEY' by Grevas & Hildreth, P.C. of New Windsor, N.Y. dated 13 Nov.1995; revised 4/20/01.

'INTERIOR BUILDING LOCATION SKETCH' by Tectonic Engineering & Surveying Consultants, P.C. dated 04/20/09.

'TOPOGRAPHIC SURVEY' by Tectonic Engineering & Surveying Consultants, P.C. dated 10/11/12.

'BOUNDARY/TOPOGRAPHIC SURVEY' by Tectonic Engineering & Surveying Consultants, P.C. dated 04/26/13.

FIGURE 4 WATERLOO BARRIER FOOTPRINT & APPROXIMATE ZONE OF SCO EXCEEDENCE - IRM PRE-CHARACTERIZATION FORMER DENNISON/MONARCH SYSTEMS SITE NEW WINDSOR, NEW YORK

The Johnson Company

100 State Street, Suite 600
Montpelier, VT 05602
(802) 229-4600
Drawn by: TJK Date: 05/13/13
Chk'd by: GAK Date: 05/13/13
Scale: As Shown Project: 1-0145-05