DECISION DOCUMENT

Broadway Complex
Voluntary Cleanup Program
Owego, Tioga County
Site No. V00290
October 2014

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

DECLARATION STATEMENT - DECISION DOCUMENT

Broadway Complex
Voluntary Cleanup Program
Owego, Tioga County
Site No. V00290
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Statement of Purpose and Basis

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

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

Description of Selected Remedy

Based on the findings of the investigation of the site, the past disposal of contaminants at the site does not pose a threat to public health and the environment. Therefore, the selected remedy is No Action. Contaminants include hazardous wastes and/or petroleum.

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.

10/21/14
Date

William Daigle, Director
Remedial Bureau D

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. Based on the findings of the investigation of the site the past disposal of contaminants at the site does not pose a threat to public health and the environment. Therefore, the selected remedy is No Action. Contaminants include hazardous wastes 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:

NYSDEC Region 7
Attn: Kirkwood Office
1679 Route 11
Kirkwood, NY 13795
Phone: 607-775-2545
Please call for appointment

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 Broadway Complex Site is located at 1200 Taylor Road (County Route 606) within a suburban area of the Town of Owego, Tioga County. The site consists of a four-acre portion of the property currently owned and occupied by Sanmina-SCI Corporation.

Site Features: The main site features include an approximately 60,000 square foot building with adjacent lawn and asphalt-paved portions to the east and west, and a roughly two-acre asphalt-paved parking lot to the south. The site is bounded on the west and north by other portions of the Sanmina-SCI property, on the east by Broadway Avenue, Barnes Creek, and the Lockheed Martin manufacturing facility, and on the south by wooded undeveloped property.

The adjacent properties owned by Sanmina-SCI and Lockheed Martin are also remedial program sites identified as Robintech/Compudyne, Inc., Site No. 754007, and IBM, Site No. 754006, respectively.

Current Zoning/Use: The site is zoned for industrial use. Currently the site is used by Sanmina-SCI to manufacture printed circuit boards and related operation. The surrounding parcels are also zoned for industrial use. The nearest residential area is approximately 0.2 miles to the north.

Historic Use: IBM began leasing the Broadway Complex Site in 1956 for engineering and manufacturing purposes. During the initial year of occupancy sanitary wastes were reportedly directed to a septic tank located near the southeast corner of the Broadway Building (connection to the municipal sanitary sewer reportedly occurred in June 1957). The former septic tank was discovered by IBM in 1988 during utility construction activities. Sampling of tank bottom sludge and surrounding soil materials indicated presence of trichloroethene and other volatile organic compounds. The former septic tank was removed in 1989. IBM ceased leasing this property in 1994.

Site Geology and Hydrogeology: The soil profile at the site consists of a downward sequence of soil fill, a complex assemblage of interbedded fine- and coarse-textured sediments, and glacial till. The interbedded fine- and coarse-textured sediments (alluvium) include silt and clay, fine sand and silt, and sand or sand and gravel soils. The glacial till underlying the interbedded sediments is generally encountered at a depth of 39 to 49 feet below ground surface (bgs).

In general, the depth to groundwater is about 10 to 11 feet bgs. The general direction of groundwater flow in the shallow alluvium is to the southwest. The general direction of groundwater flow in the deeper alluvium is to the south showing less apparent hydraulic effect due to the exfiltration from Barnes Creek.

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 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 investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the Remedial Investigation (RI) Report.

SECTION 5: ENFORCEMENT STATUS

The Department and IBM Corporation entered into a Voluntary Cleanup Agreement for the Broadway Complex site on September 19, 2002 (Index No. A7-0407-0001). The agreement governs the submission and implementation of work plans for the site investigation, remediation and operation, maintenance and monitoring.

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

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:

TRICHLOROETHENE (TCE)	1,1-DICHLOROETHENE
cis-1,2-DICHLOROETHENE	1,1-DICHLOROETHANE
1,1,1-TRICHOLOROETHANE	

Based on the investigation results, comparison to the SCGs, and an evaluation of potential public health and environmental exposure routes, no remediation is required for this site. More complete information can be found in the RI Report.

The presence of the contaminants of concern at this site is also the result of disposals that occurred on the Robintech/Compudyne, Inc. site; therefore, contaminated groundwater and soil vapor have been addressed by remedies associated with that site and described in Section 6.3.

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:

Soil – Results of soil quality sampling indicate presence of trichloroethene (TCE) and cis-1,2-dichloroethene (cis12DCE) at concentrations greater than the Unrestricted Use Soil Cleanup Objectives (SCOs); however, the concentration of TCE does not exceed Commercial Use SCOs and the concentration of cis12DCE does not exceed Residential Use SCOs. The samples with detections above Unrestricted SCOs occurred in the vicinity of the former septic tank area and below a depth of 14 feet bgs. Soil sampling was conducted at borings completed at multiple locations over the site. Membrane interface probing was also conducted at the site to determine the distribution of VOCs. Some of the soil sampling locations were determined through evaluation of membrane interface probing results.

Groundwater - The primary contaminants of concern in site groundwater consist of TCE and its degradation products, and to a lesser extent trichloroethane (TCA) and its degradation products. The lateral and vertical distribution of VOCs in groundwater indicates the presence of a narrow groundwater plume extending to the west-southwest from the area of the former septic tank. Within approximately 60 feet this groundwater plume combines with a wider and deeper groundwater plume centered on the area of the Broadway Building loading dock. The larger groundwater VOC plume appears to be sourced from the former chemical storage area located on the Robintech/Compudyne, Inc. site and is currently being remediated by Sanmina-SCI. The groundwater plume location and general contaminant distribution laterally and vertically have been well defined through the use of membrane interface probing completed over the entire site, as well as through more typical groundwater sampling methods. Based on sampling for this investigation and groundwater monitoring performed by Sanmina-SCI, the combined groundwater plume appears to be stable without a discernible increasing or decreasing trend. The groundwater extraction wells used as a remedy at the Robintech/Compudyne, Inc. and the IBM sites hydraulically control and capture the combined groundwater plume thereby preventing migration of contaminants to areas further downgradient.

Soil Vapor and Indoor Air - A sub-slab depressurization (SSD) system installed in 2005 is present at the Broadway Building to mitigate the potential for current exposures via soil vapor intrusion. This SSD system was installed as an off-site remedial measure associated with the Robintech/Compudyne, Inc. site, and is operated and maintained by Sanmina-SCI.

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 contaminated by the site. Direct contact with contaminants in the soil is unlikely because the site is covered by clean soil, buildings and pavement. Volatile organic

compounds 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 or buildings, is referred to as soil vapor intrusion. A sub-slab depressurization system (system that ventilate/remove the air beneath the building) has been installed to prevent indoor air quality from being affected by the contamination in soil vapor beneath the on-site and Robintech/Compudyne buildings. Sampling indicates that there are no site related soil vapor intrusion concerns for other off-site 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.
- 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.

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

Based on the results of the investigations at the site, the prior removal and excavation of the former septic tank, the remedies completed for the adjacent remedial program sites (i.e., groundwater hydraulic control, extraction and treatment, and the SSD system installed on the Broadway building), and the evaluation presented here, the Department has selected No Action as the remedy for this site. This No Action remedy includes the implementation of an Institutional Control, in the form of a Deed Restriction or Environmental Easement, and a Site Management Plan as the proposed remedy. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The elements of the institutional controls are listed below:

1. Institutional Control

Imposition of an institutional control in the form of a Deed Restriction or Environmental Easement 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 uses as defined by Part 375-1.8(g), although land 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.

2. Site Management Plan

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

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

Institutional Controls: The Deed Restriction discussed in remedial element 1 above.

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;
• descriptions of the provisions of the deed restriction/environmental notice including any land use, and groundwater use restrictions;
• a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

• provisions for the management and inspection of the identified engineering controls;
• maintaining site access controls and Department notification; and
• the steps necessary for the periodic reviews and certification of the institutional and 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 of submittals to the Department; and
• monitoring of vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

3. Green remediation principals and techniques will be implemented to the extent feasible in the site management of the remedy as per DER-31. The major green remediation components are as follows:

• 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; and
• reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste.

FIGURE 1 – SITE MAP
Broadway Complex, V00290
Town of Owego, Tioga County

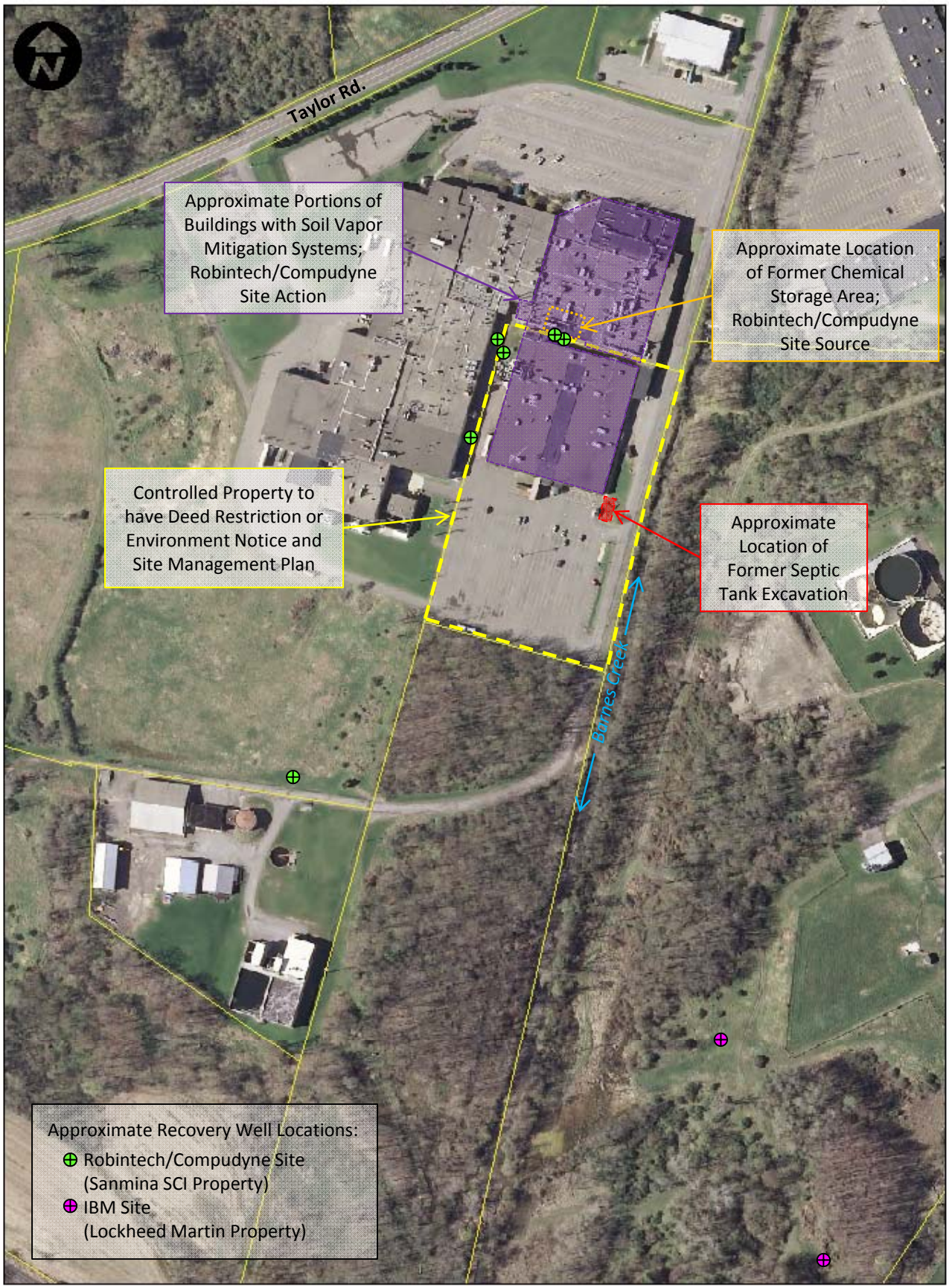

FIGURE 2 – REMEDIAL ACTIONS
Broadway Complex, V00290
Town of Owego, Tioga County