EXPLANATION OF SIGNIFICANT DIFFERENCE
MORSE INDUSTRIAL CORPORATION SITE
OPERABLE UNIT NO. 3

City and Town of Ithaca / Tompkins County / Site No. 755010 / March 2023

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

1.0 INTRODUCTION

The purpose of this notice is to describe the progress of the cleanup at the Morse Industrial Corporation site ("site") and to inform you about a change in the site remedy, specific to Operable Unit No. 3 (OU3). The site consists of a 60-acre former manufacturing complex located at 620 South Aurora Street along the west side of South Aurora Street/Danby Road (Route 96B) in the South Hill portion of the City and Town of Ithaca, Tompkins County, NY. OU3 is an off-site area which includes a portion of the South Hill neighborhood located north and west of the site.

On October 15, 2010, the New York State Department of Environmental Conservation (DEC) issued a Record of Decision (ROD) which specified a remedy to address soil vapor intrusion (SVI) into residential homes in OU3. The ROD incorporated previously installed soil vapor mitigation systems, removal and replacement of approximately 300 linear feet of sanitary sewer line along East Spencer Street, and installation of a vapor venting system specifically designed with engineered elements to be integrated within the new sewer line trench and backfill. The sewer line replacement and vapor venting system required a Land Use Easement from the City of Ithaca prior to construction and a sewer bypass system to be operated by the City's Water & Sewer Division during construction, including temporary residential sanitary connections. The City of Ithaca did not approve the easement necessary for Emerson (the remedial party) to replace the sewer line and install the vapor venting system; therefore, this portion of the remedy was not implemented. The apparent infeasibility of implementing the vapor venting system is not expected to reduce the protectiveness of the remedy. Protectiveness of the remedy without this element was detailed previously in the evaluation of remedial alternatives in the October 2010 ROD and has also been demonstrated by evaluation of site management monitoring. Therefore, the DEC and the New York State Department of Health (DOH) have determined that continued operation of existing vapor mitigation systems installed in residential structures is sufficient to mitigate exposure to soil vapor and is protective of human health without implementing the vapor venting system remedial element.

This Explanation of Significant Difference (ESD) will become part of the Administrative Record for this Site. The information here is a summary of what can be found in greater detail in documents that can be accessed online through the DECinfo Locator:
https://www.dec.ny.gov/data/DecDocs/755010/

The documents are also available in person at these locations:

Tompkins County Public Library
101 East Green Street
Ithaca, NY 14850
(607) 272-4557
Call for appointment

NYSDEC Region 7
615 Erie Boulevard West
Syracuse, NY 13204
(315) 426-7519
Call for appointment

Although this is not a request for comments, interested persons are invited to contact the DEC Project Manager for this site to obtain more information or have questions answered.

Karen Cahill, Project Manager
NYSDEC Region 7
(315) 426-7432
karen.cahill@dec.ny.gov

2.0 SITE DESCRIPTION AND ORIGINAL REMEDY

2.1 Site History, Contamination, and Selected Remedy

The Morse Industrial Corporation site is located at 620 South Aurora Street along the west side of South Aurora Street/Danby Road (Route 96B) in the South Hill portion of the Town of Ithaca, Tompkins County, NY. The site, comprised of OU1 and OU2, is 60 acres in size and is comprised of two tax parcels. The northern parcel (31 acres) resides in the City of Ithaca, and the southern parcel (29 acres) resides in the Town of Ithaca. A former manufacturing plant complex and surrounding access road and parking lots encompass the majority of the site.

OU3, which is the subject of this document, is an off-site area comprised of the neighborhoods, sewer lines and residential structures to the north and west of the site (Figures 1 and 2). An operable unit represents a portion of a site or an area of concern that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. The remaining operable units for this site are on-site areas and are being addressed through separate RODs.

North of the former manufacturing plant, the topography drops off approximately 80 feet to the residential area. The residential structures are generally terraced into the steep hillside. Some basement floors are directly on bedrock, while other are built on fill material. The homes are serviced by municipal utilities. The residential neighborhood is bordered by Six Mile Creek to the west, which flows north along the base of South Hill and eventually discharges into Cayuga Lake, approximately two miles northwest of OU3.

The manufacturing facility was founded in 1906 by Morse Industrial Corporation, manufacturer of steel roller chain for the automobile industry. Morse operated the facility until approximately 1928 when it was bought by Borg-Warner Corporation. In 1983, Emerson Electric Company purchased the facility from Borg-Warner. The plant became known as Emerson Power

Transmission (EPT) and continued to manufacture industrial roller chain, bearings, and clutching for the power transmission industry until operations ceased in 2009. The facility was subsequently decommissioned and has been vacant since 2011.

Until the late 1970s, Borg-Warner used trichloroethene (TCE) for cleaning and degreasing metal parts. TCE and other spent solvents appear to have been discharged into the plant's sanitary sewer system and are believed to have leaked through cracks and joints in the sewer lines in the vicinity of the residential neighborhood to the north and west of the plant. In addition, investigations conducted by DEC under the State Superfund Program suggest that spent solvents were discharged to sanitary sewer lines originating from the former National Cash Register and Therm facilities, located south and southeast, respectively, of the Emerson site. Both sewer lines ultimately discharge into OU3 at Columbia Street (see Figures 1 and 2 for street references in relation to OU3).

Between 2004 and 2006, Emerson collected soil vapor samples along the Turner Place and South Cayuga Street sewer lines, both of which originate from the plant site. Based on these results, Emerson conducted SVI testing in 105 residential structures and 2 commercial buildings within OU3. TCE was detected in indoor air above the analytical detection limit in 67 residential structures, five of which also met DOH criteria for mitigation. Emerson offered to install soil vapor mitigation systems in all 67 homes, 59 of which accepted the offer. The highest concentrations of TCE were detected in soil vapor and sub-slab samples collected along the East Spencer Street sanitary sewer line beginning at Turner Place. Although 59 homes were mitigated, only five of the 67 homes met DOH criteria for mitigation. It appears that soil vapor migration was occurring through bedrock fractures that extended beneath the East Spencer Street sewer line and the homes (see Figure 3). Based on this information, DEC issued a Record of Decision (ROD) for OU3 on October 15, 2010, which incorporated the following components:

- Continued operation and maintenance of the previously installed vapor mitigation systems;
- Removal and replacement of 300 linear feet of sanitary sewer line and any associated bedding material along East Spencer Street;
- Installation of a perforated vent pipe within the bedding material adjacent to the new sewer which would be enhanced with a standpipe(s) fitted with wind turbine or barometric pressure-activated device at the top to vent soil vapor to the atmosphere; and
- Site Management Plan including:
    a) An Engineering Control Plan for venting system and residential vapor mitigation systems.
    b) Monitoring Plan which includes a schedule of monitoring/reporting and a provision to evaluate the potential for soil vapor intrusion for any new buildings developed or modified within OU3.

The replacement sewer line was to be constructed using air- and water-tight joints to prevent the intrusion of vapors from the line into the surrounding formation. A perforated pipe was to be placed in permeable bedding material as a preferential pathway to vent contaminated vapors to the atmosphere via a single or series of standpipes connected to the perforated pipe. The standpipe(s) was to be fitted with a wind turbine or barometric pressure-actuated device. Monitoring including, at a minimum, testing of the standpipe(s) emissions, was proposed to be implemented after the venting system is installed.

3.0 CURRENT STATUS

The remedial design for the OU3 remedy was approved by DEC in July 2011. In order to construct the remedy, Emerson required an easement from the City of Ithaca. As part of the process, the residents of the South Hill neighborhood filed a petition requesting that the easement require Emerson conduct additional soil, indoor, and outdoor air testing after installation of the planned 25-foot vent stack. Emerson was agreeable to conduct additional outdoor air testing; however, despite several attempts by the City and Emerson to negotiate an agreeable resolution, the City chose not to approve the easement to allow for sewer line replacement and venting system installation during the 2011 construction season. Although originally delayed until 2013, to date, the sewer line capital improvement project that includes this sewer line replacement has not been implemented, and the City has no forecasted plans to perform this work.

4.0 DESCRIPTION OF SIGNIFICANT DIFFERENCE

4.1 New Information

Construction and future operation and maintenance of the project requires an easement for the City-owned property and is only readily implementable with approval by and coordination with the City of Ithaca. In the absence of these conditions, this component of the remedy is not feasible to implement. To date, the sewer line capital improvement project has not been implemented, and the City has no forecasted plans to do this work.

4.2 Comparison of Changes with Original Remedy

As stated in the ROD, continued operation of the existing vapor mitigation systems is sufficient to meet the remedial action objective of mitigating potential exposures due to soil vapor intrusion. At the time of remedy selection, Emerson proposed the additional measures of removing the sewer line and installing the venting system to reduce the potential for contaminated soil vapor to migration. Since the additional measures were an enhancement to the remedy but did not add to the protectiveness of the remedy, remedial objectives have been met by the continued operation of the existing vapor mitigation systems without the vapor venting system enhancement.

A requirement of the ROD which is unaffected by this ESD is to implement a monitoring plan to assess the performance and effectiveness of the remedy. The plan includes, but is not limited to:

(i) a schedule of monitoring and frequency of submittals to the Department;
(ii) a provision to evaluate the potential for vapor intrusion for any new buildings (i.e., homes, offices, etc.) developed within OU No. 3, including a provision for mitigation of any impacts identified;
(iii) a provision to evaluate the potential for soil vapor intrusion for existing buildings within OU No. 3 if building use changes significantly or if a vacant building become occupied.

Continued operation of the residential vapor mitigation systems will be effective in the long term, will have no short- or long-term impacts to the neighborhood, and the ROD, as modified by this ESD, is protective of public health and the environment, and meets the original goals of the October 2010 ROD.

5.0 MORE INFORMATION

If you have questions or need additional information you may contact any of the following:

Project-Related Questions
Karen Cahill, Project Manager
NYSDEC Region 7
615 Erie Blvd W
Syracuse, NY 13204
315-426-7551
karen.cahill@dec.ny.gov

Health-Related Questions
Anthony Perretta
NYSDOH
Empire State Plaza
Corning Tower, Room 1787
Albany, NY 12237
518-402-7860
BEEI@health.ny.gov

DECLARATION

The selected remedy is protective of public health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

3/2/2023	
Date	Karen A. Cahill, Project Manager Region 7
3/2/2023	
Date	Gary Priscott, RHWRE Region 7
3/6/2023	
Date	David Harrington, Director Remedial Bureau D
3/12/2023	Andrew Guglielmi
Date	Andrew Guglielmi, Director Division of Environmental Remediation

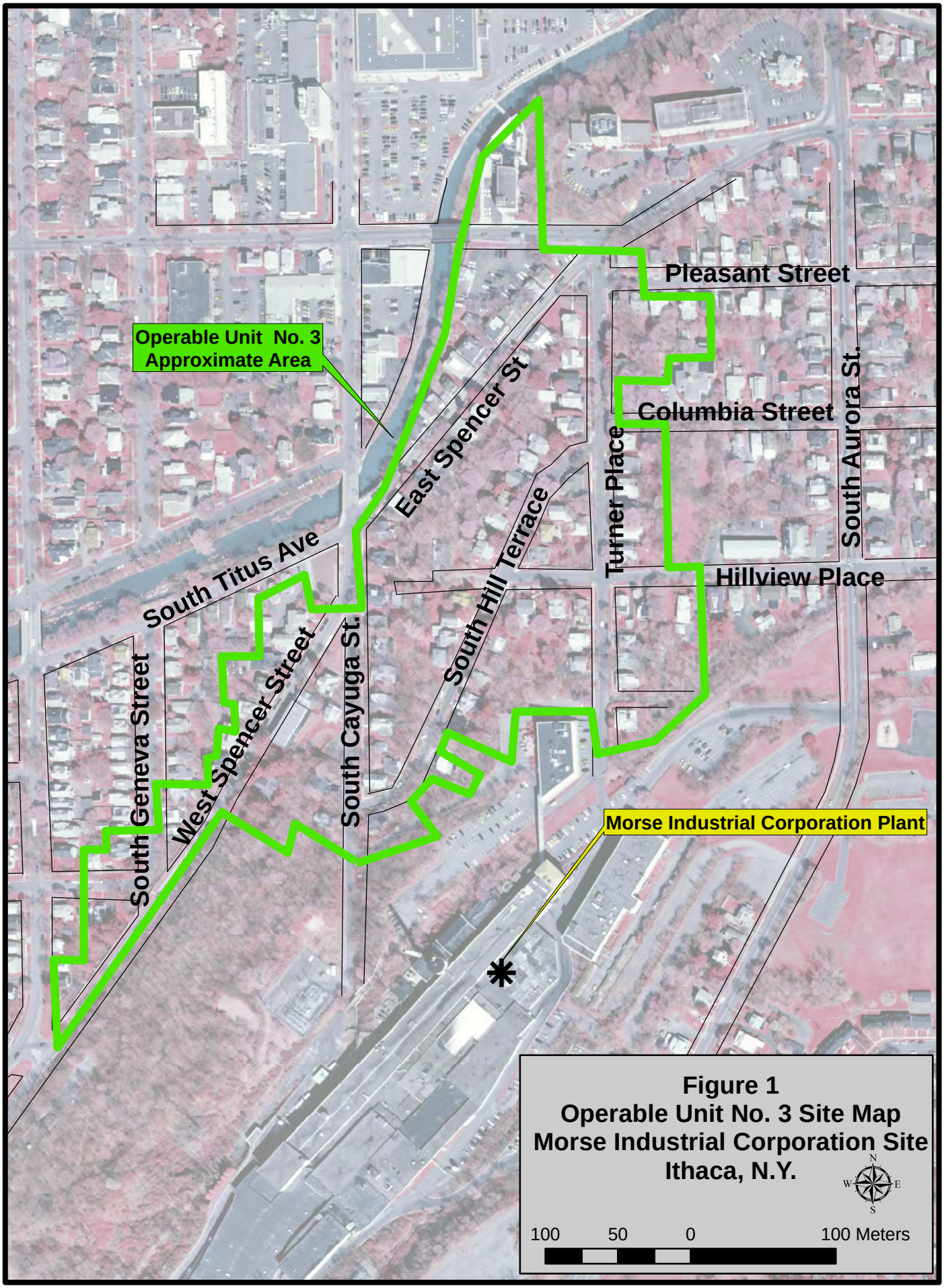

Figure 1
Operable Unit No. 3 Site Map
Morse Industrial Corporation Site
Ithaca, N.Y.

Figure 2
Operable Unit No. 3 - Partial View
Morse Industrial Corporation Site
Ithaca, N.Y.

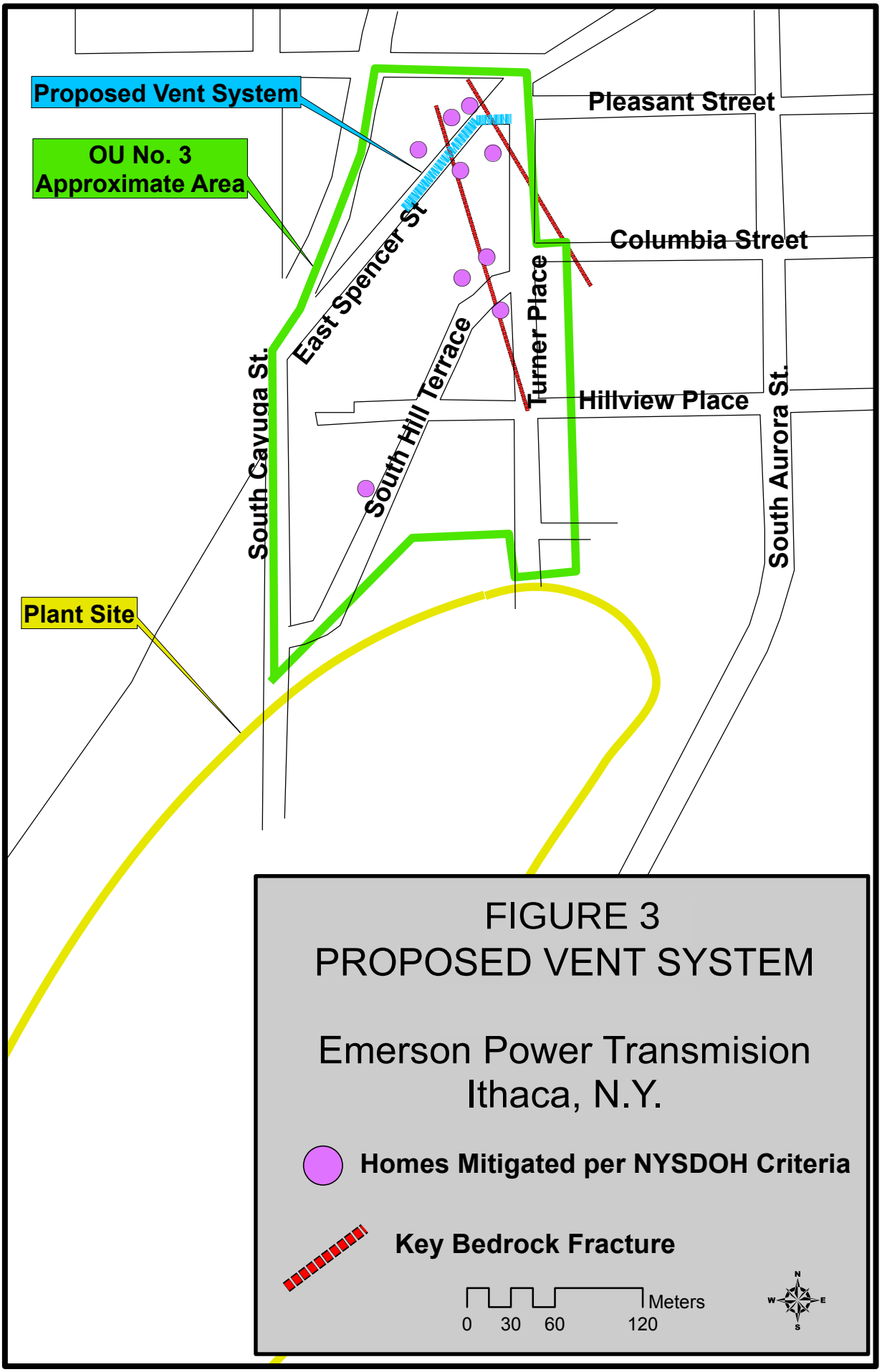

FIGURE 3
PROPOSED VENT SYSTEM

Emerson Power Transmision
Ithaca, N.Y.