



## VIA ELECTRONIC MAIL

October 15, 2025

Karen A. Cahill  
Environmental Engineer  
Division of Environmental Remediation  
New York State Department of Environmental Conservation, Region 7  
5786 Widewaters Parkway  
Syracuse, NY 13214-1867

**Subject: Vapor Intrusion Mitigation Work Plan – Building 1 Interim Measures - Revised  
Former Emerson Power Transmission Facility, Ithaca, New York (DER Site No. 7-55-010)**

Dear Ms. Cahill:

On behalf of Emerson Electric Co. (Emerson), WSP USA Inc. (WSP) is submitting this revised Vapor Intrusion Mitigation Work Plan for interim measures to be implemented in Building 1 of the former Emerson Power Transmission (EPT) facility located at 620 South Aurora Street in Ithaca, New York (Site, Figure 1). The revisions are based on comments received from the New York State Department of Environmental Conservation (NYSDEC) in a letter dated September 9, 2025. The scope of work will initially consist of installation of passive and active vapor intrusion (VI) mitigation controls to address elevated concentrations of chlorinated volatile organic compounds (cVOCs), specifically trichloroethene (TCE), identified in indoor air and sub-slab gas beneath the building's basement floor. The controls will remain in place and operational on an interim basis until renovation plans are developed for future use of Building 1 by the building owner or their tenants sub-slab and indoor air monitoring results indicate that the interim measures are no longer required, or if indoor air monitoring results indicate that the interim active VI controls are unable to maintain TCE concentrations below 1 microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

The interim VI mitigation measures will be applied in a phased sequence according to the enclosed decision matrix (Enclosure A). After the VI measures are implemented, co-located sub-slab and indoor air samples will be collected and the results compared to the Soil Vapor/Indoor Air Matrices as described in the New York State Department of Health (NYSDOH) Soil Vapor Intrusion Guidance (May 2017). Additional actions to be taken based on the sample results are described in the decision matrix in Enclosure A. The plan's implementation will coincide with the current occupancy of Building 1 as a temporary office space during the redevelopment of onsite buildings across the property.

The remainder of this work plan provides site background information, the results of previous sub-slab and indoor air VI investigations and diagnostic testing, descriptions and installation details for the active and passive interim controls, indoor air and sub-slab sampling procedures, the potential additional actions to be taken based on the results of the sampling, and an overall schedule for implementation. This document was prepared in accordance with the 2021 Record of Decision (ROD) amendment, the New York State Department of Environmental Conservation's (NYSDEC) *Technical Guidance for Site Investigation and Remediation* (DER-10), the NYSDOH Soil Vapor Intrusion Guidance, and the Interim Site Management Plan, dated August 19, 2022.

WSP USA Inc.  
13530 Dulles Technology Dr.  
Suite 300  
Herndon, VA 20171

Tel.: +1 703 709-6500  
wsp.com



## BACKGROUND

Building 1 is a 4-story building with a finished basement and attic spaces constructed in 1906. The building's footprint is approximately 3,250 square feet. The building sits adjacent to and connected with Building 2, also a 4-story building with a basement constructed around the same time. Building 1 has historically functioned as an office and administration building for the overall manufacturing facility since its inception in 1906 by the Morse Industrial Corporation. Morse operated the facility until approximately 1928 when it was bought by Borg-Warner Corporation, manufacturer of automotive components and power transmission equipment. In 1983, Emerson acquired Borg-Warner. As a result, the Ithaca facility eventually became part of the former EPT, a wholly owned subsidiary of Emerson and part of Emerson's Power Transmission Solutions business. EPT 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. In December 2014, Emerson transferred the property to EMERSUB 15, LLC, a wholly owned subsidiary of Emerson, in anticipation of the sale of Emerson Power Transmission Solutions business. Sale of the property comprising Operable Unit 2 (OU-2) to L Enterprises was completed in December 2022.

Up until the late 1970s, Borg-Warner used TCE, a common solvent at the time, for cleaning and degreasing metal parts. Additional operations included metal finishing, plating, pickling, and salt bath quenching.

## SOIL VAPOR INTRUSION INVESTIGATIONS

As part of due diligence Site investigation activities, one sub-slab vapor and one indoor air sample were collected in Building 1 by LaBella Associates on behalf of L Enterprises, LLC in July 2013 to assess the potential for vapor intrusion into the building. Samples were collected over an 8-hour period in the basement level outside the heating season while the building was unoccupied.

Concentrations of TCE in indoor air and sub-slab vapor were found to be  $2.4 \mu\text{g}/\text{m}^3$  and  $2.5 \mu\text{g}/\text{m}^3$ , respectively. Concentrations of cis-1,2-dichloroethene (cis-1,2-DCE) in indoor air and sub-slab vapor were found to be  $2.3 \mu\text{g}/\text{m}^3$  and  $3.8 \mu\text{g}/\text{m}^3$ , respectively. The concentrations for TCE and cis-1,2-DCE indicated a decision of "Identify Source(s) and Resample or Mitigate" based on NYSDOH Soil Vapor Intrusion Guidance. No other constituents exceeded NYSDOH matrix-recommended actions to address potential receptor exposures.

Site-wide VI sampling was conducted by WSP in March 2023 following the sale of the property to assess current conditions. Sampling was conducted in accordance with *Operation Unit 2 (OU-2) Vapor Intrusion Assessment Work Plan*, dated March 6, 2023, and approved by the NYSDEC on March 8, 2023. Co-located indoor air and sub-slab vapor samples were collected over a 24-hour period from the lowest slab-on-grade level of all site buildings proposed of redevelopment. In addition to the co-located samples in the basement of Building 1, an indoor air sample was collected from the first floor of Building 1 where developer's personnel planned to occupy later in 2023 (the building was unoccupied at the time of sampling). At the basement level, concentrations of TCE in indoor air and sub-slab vapor were found to be  $1.3 \mu\text{g}/\text{m}^3$  and  $29 \mu\text{g}/\text{m}^3$ , respectively. These concentrations indicated a decision of "Mitigate" based on NYSDOH Soil Vapor Intrusion guidance. TCE in the first-floor indoor air sample was  $0.67 \mu\text{g}/\text{m}^3$ . No other constituents exceeded NYSDOH matrix-recommended actions to address potential receptor exposures.

As detailed in the *Buildings 1, 5, 6, and 6A Vapor Intrusion Sampling Results – January 2025 Report*, additional indoor air (August 2024) and indoor air and sub-slab vapor samples (September 2024) were collected in Building 1 to evaluate passive mitigation measures conducted in the basement (i.e. cleaning floors and sealing cracks in the basement floor slab and foundation walls using polyurethane sealant). These measures coincided with efforts by facility personnel to reduce heat loss from older windows with the application of polyethylene sheeting on all windows in the basements of Buildings 1 and 2. Concentrations of TCE in sub-slab vapor ( $45 \mu\text{g}/\text{m}^3$ ) and two samples of indoor air ( $1.0$  to  $1.2 \mu\text{g}/\text{m}^3$ ) remained similar those from 2023 sampling. No other constituents exceeded NYSDOH matrix-recommended actions.

Additional VI sampling was completed in Building 1 in January 2025 as part of pre-renovation sampling activities in Buildings 5, 6 and 6A. Sampling was completed in accordance with *Operable Unit 2 (OU-2) Vapor Intrusion Assessment Work Plan (Additional*



*Sampling*), dated December 20, 2024 and conditionally approved by NYSDEC on January 6, 2025. Co-located indoor air and sub-slab vapor (one each) were collected from the Building 1 basement. Concentrations of TCE in sub-slab vapor and indoor air were found to be 23  $\mu\text{g}/\text{m}^3$  and 1.4  $\mu\text{g}/\text{m}^3$ , respectively. These concentrations indicated a decision of “Mitigate” based on NYSDOH guidance. No other constituents exceeded NYSDOH matrix-recommended actions to address potential receptor exposures. Results from historical VI investigations in Building 1 are provided in Table 1.

## PRE-DESIGN DIAGNOSTIC TESTING

In preparation of vapor intrusion mitigation activities, sub-slab depressurization (SSD) pilot testing was conducted in spring 2024 in Building 1. The work included ground penetrating radar (GPR) utility locating and surveying/mapping of shallow utilities, foundations, and other subsurface features that could inhibit vacuum influence beneath the slabs. Data was evaluated to assess the viability and effectiveness of SSD. Pilot testing equipment utilized included a 2-horsepower regenerative blower with a maximum flow rate of 65 cubic feet per minute and maximum vacuum rating of 186 inches of water column. The blower was connected to a 2-inch diameter, dilution air piping assembly inserted into a cored test point. The blower’s discharge was piped to a PRM Filtration VP-55 vapor phase carbon vessel filled with approximately 150 pounds of 4-millimeter granular activated carbon (GAC) to remove cVOCs from the extracted air before discharge to the atmosphere.

Pilot testing at Building 1 consisted of applying vacuum at a cored suction point (EX-3; Figure 2) and measuring corresponding vacuum and flow parameters via a dilution and instrumentation manifold connecting the two. Additionally, vacuum levels were measured at four temporary monitoring points (MP-18, MP-19, MP-20, and MP-21; Figure 2) and one permanent monitoring location (BLDG 1-1; Figure 2) through the slab located at incremental distances from the suction test point. Moderate vacuum response and flow rates (i.e., radius of influence between 25 and 50 feet) at the test location indicated that SSD may be impeded by the building’s sub-slab material and the presence of groundwater immediately present beneath the slab at the southeast corner of Building 1. Pilot testing data is included in Enclosure B. Utility mapping revealed numerous small utilities present within the subsurface which could be contributing to the lower vacuum response. No significant foundation features were present between rooms or areas of Building 1. The locations of the sub-slab utilities found by GPR survey are shown in Figure 2.

A heating, ventilation, and air conditioning (HVAC) study in Building 1 was also completed in 2024 to determine if building pressurization through management of HVAC controls could be an effective tool for vapor intrusion. Due to the current age, condition, and configuration of the HVAC equipment, the pressurization from the existing HVAC system was determined to not be a reliable VI mitigation measure in Building 1.

## VAPOR INTRUSION INTERIM MEASURES

This section details the active and passive interim measures to be implemented to address vapor intrusion into the unoccupied basement and the potential vapor intrusion into the occupied floors of Building 1. These actions will be implemented first before additional sub-slab and indoor air sampling to determine potential additional actions described in the decision matrix in Enclosure A.

## PASSIVE MITIGATION MEASURES

As an initial step, passive mitigation measures will be used to eliminate exposure pathways which may be present between Buildings 1 and 2 and the Building 1 basement and upper floors. As previously described, cracks and joints in the concrete slab and foundation walls were sealed with a polyurethane sealant in 2024. Other potential sources of cVOC vapors identified in the Building 1 basement include indoor air from the adjacent Building 2 (1.2  $\mu\text{g}/\text{m}^3$  TCE), floor drains, and the elevator shaft in Building 1. The elevator pit could not be accessed for inspection; however, the elevator doors at every floor level were sealed with spray foam in 2024. One floor drain found in a basement room was sealed with a monitoring well cap and is no longer considered a source of indoor air vapor intrusion. The locations of the passive mitigation measures to be implemented are shown in Figure 2 for the basement and in Figure 3 for the first floor of Building 1.



To address the remaining pathways, edge seals and floor sweeps were installed on doors between the Building 1 and Building 2 basements and on doors between the Building 1 basement and first floor to eliminate air gaps between the frame and door and between the door and floor between October 1 and 8, 2025. The materials for door sealing were commercially available weather stripping and door sweeps specifically designed to reduce air flow around exterior doors and were installed by WSP's remediation contractor (Ontario Specialty Contracting, Inc.). While the doors to the elevator shaft have been sealed with spray foam at every floor, the integrity of the seals will be inspected and resealed as required. Several through-hole utility penetrations in the ceiling (i.e., between basement and first floor) and through the walls (i.e., between Building 1 and 2) were sealed with closed-cell spray foam. The integrity of the previous floor seals were inspected and areas with compromised sealing were repaired. The passive VI measures will remain in place and functional until a building renovation plan is developed or an SSD system is installed.

## ACTIVE MITIGATION MEASURES

In correspondence dated July 25, 2025, the NYSDEC required the installation of active mitigation measures in the basement of Building 1 to temporarily address any potential vapor intrusion into the occupied first floor. The NYSDEC indicated that these measures may be ventilation units, negative pressure machines, or air treatment units. Based on the size and configuration of the basement and concentrations of cVOCs present in indoor air, air treatment units commonly referred to as air purifying units (APUs) were selected to satisfy the NYSDEC's requirement for active mitigation. The APUs utilize adsorptive-based treatment consisting of a bed of GAC and were sized based on VOC removal efficiency, adsorptive capacity, basement surface area, and volume of air present within the basement.

Two APUs (Airpura model C700DLX) were installed and began operation in the basement of Building 1 on August 12, 2025, at the approximate locations shown in Figure 2. The selected APUs will effectively treat the indoor air space by providing approximately one air exchange per hour (ACH) per unit. The APUs will be periodically inspected and maintained in accordance with the manufacturer's recommendations.

## CONFIRMATION SAMPLING AND DATA EVALUATION

Following implementation of passive and active mitigation measures, confirmation sampling will be conducted to assess the efficacy of the controls. Sampling will consist of collection of co-located indoor air and sub-slab vapor samples at the basement level and one indoor air sample at the first-floor level. To the extent possible based on site activities, the co-located samples will be collected from the same locations sampled during the 2025 event (Figure 2). Sampling will be performed in accordance with the December 2024 *Operable Unit 2 (OU-2) Vapor Intrusion Assessment Work Plan (Additional Sampling)* with the exception that the APUs will be turned off at least 48 hours before the planned sampling event. Sampling will be performed approximately 30 days after installation of interim active and passive controls (mid-November 2025). The APUs will be reactivated after sample collection and will remain operational until the analytical data report is received.

The co-located sample results at the basement level will be compared to the NYSDOH Decision Matrices A, B, and C. If TCE in the basement indoor air exceeds  $1 \mu\text{g}/\text{m}^3$ , an additional indoor air sample will be collected from the basement with the APUs operating. This second sample will determine if the APUs are an effective control to reduce VOC concentrations overall and specifically TCE to below  $1 \mu\text{g}/\text{m}^3$ . If TCE in this second sample exceeds  $1 \mu\text{g}/\text{m}^3$  in the basement or if any indoor air sample of the first floor exceeds  $1 \mu\text{g}/\text{m}^3$ , a work plan to install a SSD in the basement of Building 1 will be submitted to the NYSDEC within 15 days of the date the analytical results are received.

## ADDITIONAL VAPOR INTRUSION MITIGATION ACTIONS

Based on the results of confirmation sampling, additional actions will be taken corresponding to the decision matrix (Attachment A). Four possible outcomes based on the results of the sampling are summarized below:



- Sampling Outcome 1: "No Further Action" based on co-located basement results and first floor indoor air TCE concentration  $< 1 \mu\text{g}/\text{m}^3$
- Sampling Outcome 2: "Monitor" based on co-located basement results and a first floor indoor air TCE concentration  $< 1 \mu\text{g}/\text{m}^3$
- Sampling Outcome 3: "Mitigate" based on co-located basement results and a first floor indoor air TCE concentration  $< 1 \mu\text{g}/\text{m}^3$
- Sampling Outcome 4: Any sampling scenario where first floor indoor air TCE concentration  $\geq 1 \mu\text{g}/\text{m}^3$  or where the interim active VI controls cannot maintain TCE concentrations in the basement  $< 1 \mu\text{g}/\text{m}^3$ .

## **SAMPLING OUTCOME 1 - NO FURTHER ACTION**

In the event that the results of co-located sub-slab and indoor air sampling (with interim active VI controls turned off) indicate "No Further Action" using the NYSDOH Decision Matrices and the indoor air concentration of TCE at the occupied first floor remain below  $1 \mu\text{g}/\text{m}^3$ , no immediate subsequent actions will be taken. Winter heating season sampling will be performed mirroring the locations and procedures during the initial summer season sampling. The results of this sampling will be compared again to the decision matrix to determine whether additional actions are warranted. If the heating season sampling event confirms the "No Further Action" decision, no further VI measures will be taken until the start of building renovation or redevelopment activities.

## **SAMPLING OUTCOME 2 - MONITOR**

In the event that the results of co-located sub-slab and indoor air sampling (with interim active VI controls turned off) indicate "Monitor" using the NYSDOH Decision Matrices and the indoor air concentration of TCE at the occupied first floor remain below  $1 \mu\text{g}/\text{m}^3$ , annual monitoring will be performed during the heating season in accordance with the *Operable Unit 2 (OU-2) Vapor Intrusion Assessment Work Plan (Additional Sampling)* dated December 2024. Locations and procedures will mirror those of initial confirmation sampling. Results of the sampling will be compared for each event to the decision matrix to determine whether additional actions are warranted. Annual monitoring will continue until the start of renovation or redevelopment activities.

## **SAMPLING OUTCOME 3 - MITIGATE (WITH FIRST FLOOR TCE LESS THAN $1 \mu\text{g}/\text{m}^3$ )**

In the event that the results of co-located sub-slab and indoor air sampling (with interim active VI controls turned off) indicate "Mitigate" using the NYSDOH Decision Matrices and the indoor air concentration of TCE at the occupied first floor below  $1 \mu\text{g}/\text{m}^3$ , the interim active VI mitigation measures will be reactivated followed by an additional round of indoor air sampling to confirm that the APUs are effective in reducing VOC concentrations overall and specifically TCE to below  $1 \mu\text{g}/\text{m}^3$ . As long as the first floor remains occupied, annual monitoring using the procedures described above will continue in this "Mitigate" scenario. Interim active VI mitigation system operation will continue until the start of renovation or redevelopment activities.

As previously described, two APUs have been installed in the basement of Building 1 and are currently operating. The APUs will be turned off at least 48 hours before co-located sub-slab and indoor air sampling. If necessary, APUs will be turned back on and will operate for at least 24 hours before additional indoor air sampling is conducted to confirm the efficacy of indoor air treatment via APUs. If APUs are found to be unable to maintain TCE concentrations to below  $1 \mu\text{g}/\text{m}^3$ , an active SSD system will be installed in the Building 1 basement as described below.



## SAMPLING OUTCOME 4 – FIRST FLOOR OR BASEMENT TCE ABOVE 1 $\mu\text{g}/\text{m}^3$

In the event that confirmation results indicate the need to “Mitigate” at the basement level, indoor air TCE concentration in the occupied first floor exceeds 1  $\mu\text{g}/\text{m}^3$ , or the APUs or other interim active controls cannot effectively reduce TCE concentrations to below 1  $\mu\text{g}/\text{m}^3$ , a SSD system will be installed. The SSD system will be designed to address the entire footprint of Building 1. The conceptual plan for the SSD system consists of two extraction points each equipped with individual in-line fans to depressurize the approximate 3,250-square-foot basement level and vent the sub-slab vapors to the atmosphere above the roof level of Building 1. The conceptual SSD system layout is shown in Figure 4. Existing sub-slab sampling points will be converted to vacuum monitoring points.

## SCHEDULE

As described above, two APUs have been installed and are operating in the basement of Building 1 and the passive controls have been installed during the first week of October 2025. Heating season sampling will be performed between November 15 through March 31. The remainder of the schedule is dependent upon the results of the confirmation sampling events. If an SSD system is required based on the conditions described herein, a SSD work plan will be submitted to the NYSDEC within 15 days of receipt of the confirmation sampling data.

If you have any questions regarding the enclosed information, please contact us.

Sincerely yours,

Lisa Kelly  
Vice President

David Rykaczewski, P.E.  
Vice President

LKK::DAR

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Enclosures

cc/encl: Stephen L. Clarke, Emerson  
Lisa Douglas, Emerson  
Anthony Perretta, NYSDOH

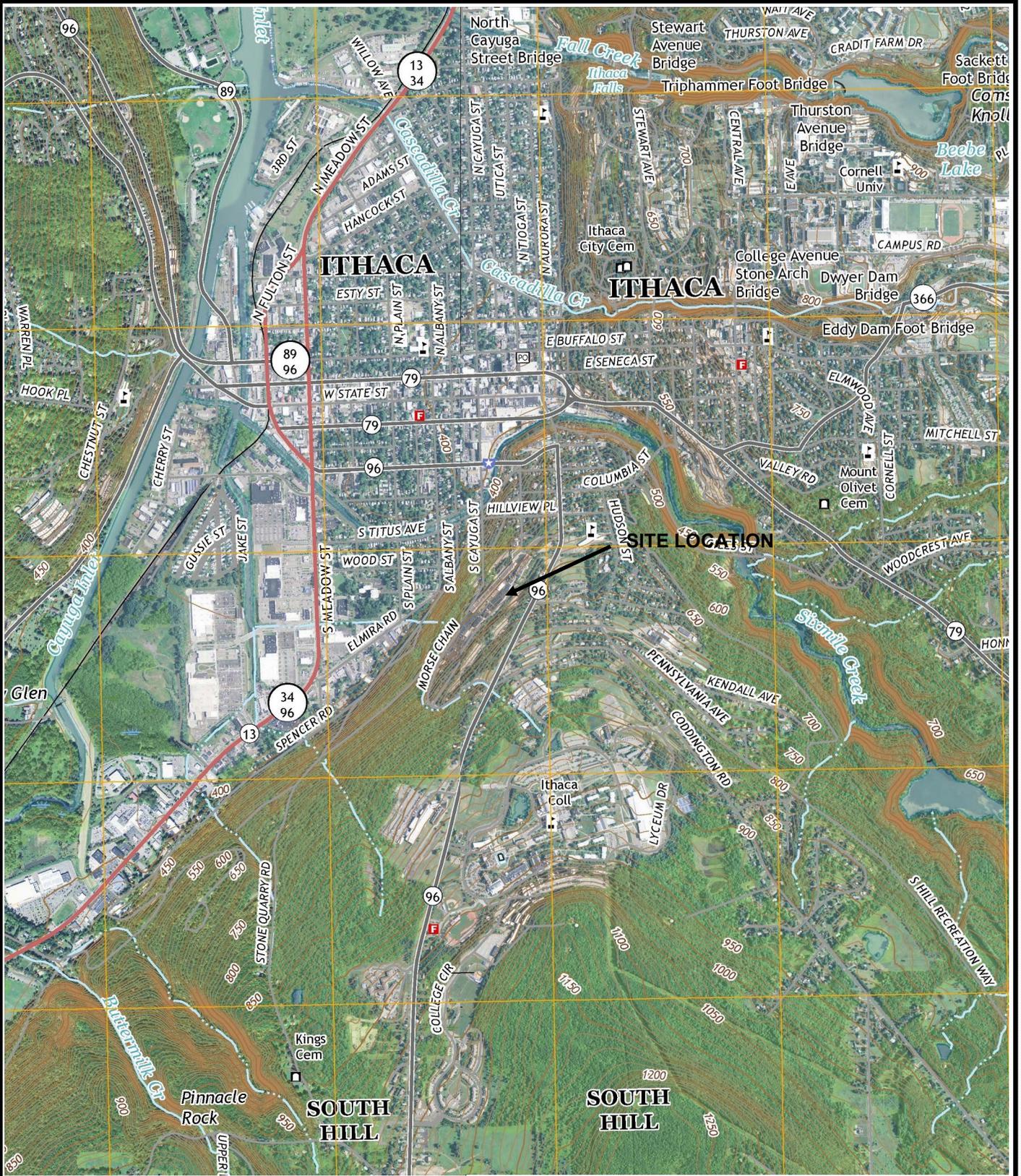
## FIGURES

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Checked: Approved:

Drawn By: Date: 03/14/19

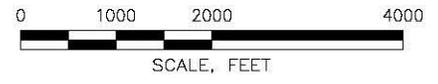
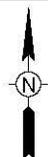
**A**



**REFERENCE:**  
 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE  
 ITHACA EAST AND WEST, NEW YORK 2016  
 SCALE 1:24,000



QUADRANGLE LOCATION

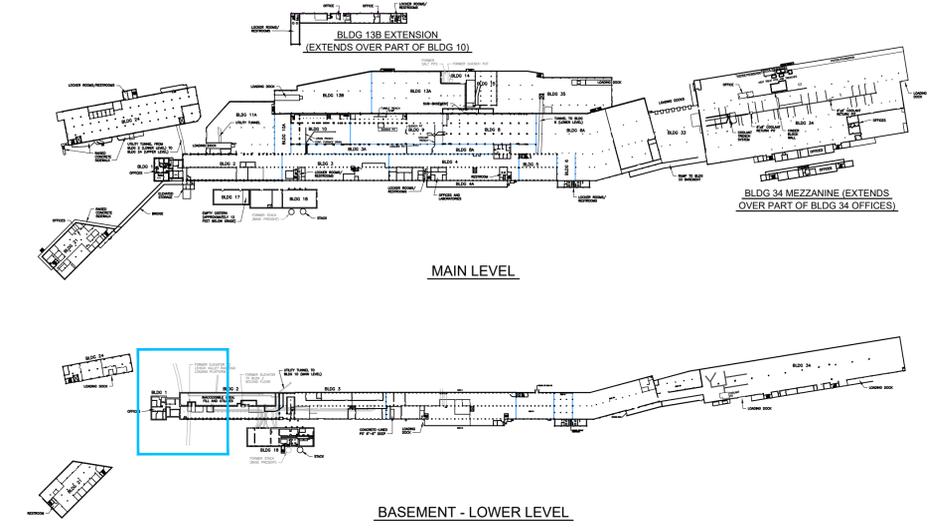
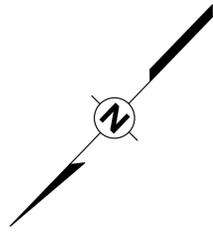


SCALE, FEET

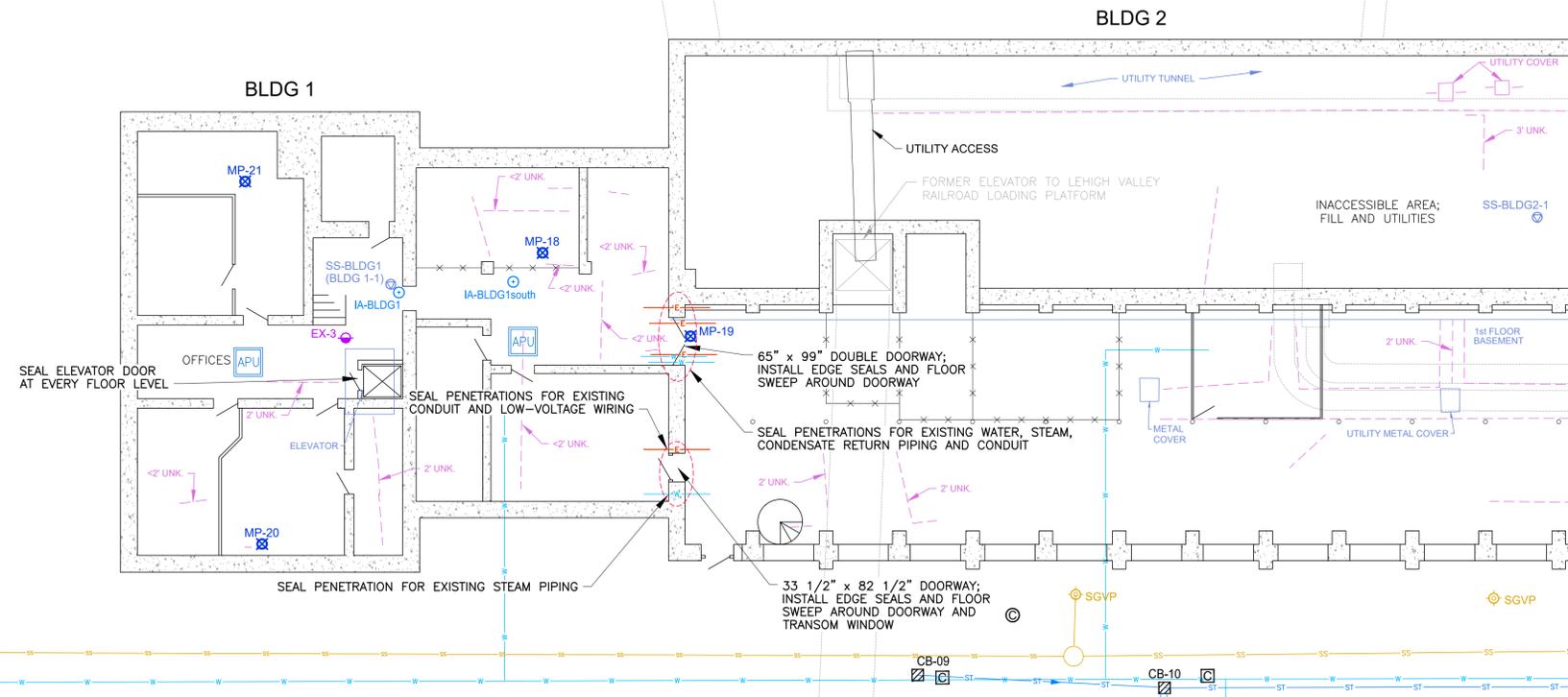
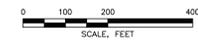


**FIGURE 1**  
  
**SITE LOCATION**

**FORMER EMERSON POWER TRANSMISSION**  
**ITHACA, NEW YORK**  
 PREPARED FOR  
**EMERSON**  
 ST. LOUIS, MISSOURI



LOCATION MAP



BASEMENT - LOWER LEVEL PLAN VIEW



LEGEND

- BLDG 1 FACILITY BUILDING NUMBER
- FACILITY BUILDING BOUNDARY (IF INTERIOR WALL NOT PRESENT)
- ++ STEEL COLUMN
- CONCRETE COLUMN
- ⊙ UTILITY COVER
- ⊙ VAPOR EXTRACTION TEST POINT
- ⊙ SUB-SLAB SAMPLE
- ⊙ INDOOR AIR SAMPLE
- ⊙ 5/8" TEMPORARY VACUUM MONITORING POINT
- UNKNOWN UTILITY (BELOW GRADE)
- MISCELLANEOUS UTILITY
- ELECTRIC CONDUIT OR LOW VOLTAGE WIRING
- SANITARY SEWER
- STORM SEWER
- WATER LINE (BELOW GRADE)
- APU AIR-PURIFYING UNIT

NOTE:  
ANY POTENTIAL VAPOR INTRUSION PATHWAY IDENTIFIED IN THE FLOORS, WALLS, OR CEILING OF THE BUILDING 1 BASEMENT SHALL BE SEALED WITH SUITABLE MATERIAL.

REV	CHECKED	APPROVED	DESCRIPTION

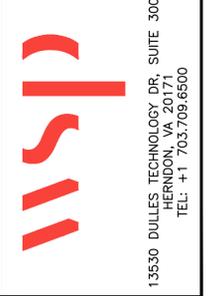
DATE	

DRAWN BY	CHECKED	APPROVED
RA 07/18/2015		
DC 10/22/25		

**BUILDING 1 BASEMENT  
ACTIVE AND PASSIVE MITIGATION MEASURES**

FORMER EMERSON POWER TRANSMISSION SITE  
ITHACA, NEW YORK

PREPARED FOR  
EMERSON  
ST. LOUIS, MISSOURI



13530 DULLES TECHNOLOGY DR., SUITE 300  
HERNDON, VA 20171  
TEL: +1 703.709.6500

**FIGURE 2**

Drawing Number  
**314P5608.001-D66**

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TABLE

**Table 1**  
**Indoor Air and Sub-Slab Soil Vapor Sample Results**  
**Building 1**  
**Former Emerson Power Transmission**  
**Ithaca, New York (a)**

Building Number:	Building 1										
Building Level:	Basement										First Floor
Sample Date (b):	7/29/2013 (d)		3/16/2023		8/14/2024	9/6/2024			1/6/2025		3/16/2023
Sample Type:	SS	IA	SS	IA	IA	SS	IA (W)	IA (E)	SS	IA	IA
<b>VOCs (µg/m<sup>3</sup>) (c)</b>											
1,1-Dichloroethene	0.60 U	0.60 U	0.19 U	0.17 U	0.11 U	0.10 U	0.10 U	0.25	0.14	0.094 U	0.16 U
1,1-Dichloroethane	20	0.62 U	1.8	0.18	0.28 J	2.3	0.10 U	0.21 J	9.6	0.54	0.16 U
1,1,1-Trichloroethane	78	1.2	6.8	0.47	1.3	25	0.48 J	0.48 J	20	0.75	0.17
1,2-Dichloroethane	NA	NA	0.19 U	0.17 U	0.085 U	0.38 U	0.38 U	0.38 U	0.082 U	0.075 U	0.16 U
1,2,4-trimethylbenzene	5.5	1.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-trimethylbenzene	0.75 U	0.75 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2,4-trimethylpentane (Isooctane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1	0.49 U	2.1	0.68	1.2	0.64 U	0.29 J	0.32 J	NA	NA	0.55
Carbon tetrachloride	NA	NA	0.54	0.44	0.41	0.43	0.36	0.31	0.47	0.45	0.46
cis-1,2-Dichloroethene	3.8	2.3	1.4	0.18	1.2	0.62	0.16 J	0.10 J	1.2	0.56	0.22
Cyclohexane	1.3	0.52 U	1.2 J	1.6 U	0.22 U	0.69 U	0.69 U	0.69 U	NA	NA	1.6 U
Ethylbenzene	1.5	0.66 U	9.5	0.17 J	0.28	0.87 U	0.87 U	0.87 U	NA	NA	0.15 J
Heptane	0.62 U	0.62 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	0.53 U	1.0 U	5.7	0.41 J	0.30 J	0.63 U	0.63 U	0.63 U	0.24 J	0.37 J	0.4 J
Tetrachloroethene	1.0 U	1.5	2.6	0.32	0.87	5.6	0.18 J	0.15 J	2.4	0.22	0.19
trans-1,2-Dichloroethene	0.6 U	0.6 U	0.19 U	0.17 U	0.11	0.091 U	0.091 U	0.091 U	0.10 U	0.094 U	0.16 U
Toluene	8.8	1.3	13	0.94	1.5	0.75	0.96	0.91	NA	NA	0.88
Trichloroethene	2.5	2.4	29	1.3	5.6	45	1.2	1.0	23	1.4	0.67
Vinyl chloride	0.39 U	0.10 U	0.42	0.17 U	0.082 U	0.054 U	0.054 U	0.054 U	0.079 U	0.072 U	0.16 U
m,p-Xylene	4.5	0.66	18	0.42 J	0.86	0.62 J	1.3 J	0.73 J	0.90 J	1.5	0.34 J
o-xylene	1.6	0.66 U	9.5	0.17 J	0.33	0.87 U	0.46 J	0.87 U	0.38 J	0.59 J	0.14 J

Sample Date:	Outdoor Air				
	7/29/2013 (b)	3/16/2023	8/14/2024	9/6/2024	1/6/2025
<b>VOCs (µg/m<sup>3</sup>) (c)</b>					
1,1-Dichloroethene	0.6 U	0.14 U	0.11 U	0.10 U	0.099 U
1,1-Dichloroethane	0.62 U	0.14 U	0.11 U	0.10 U	0.10 U
1,1,1-Trichloroethane	0.83 U	0.14 U	0.097 U	0.24 U	0.088 U
1,2-Dichloroethane	NA	0.089 J	0.087 U	0.38 U	0.079 U
1,2,4-trimethylbenzene	1.1 U	NA	NA	NA	NA
1,3,5-trimethylbenzene	0.75 U	NA	NA	NA	NA
2,2,4-trimethylpentane (Isooctane)	NA	NA	NA	NA	NA
Benzene	0.49 U	0.51	0.42	0.64 U	NA
Carbon tetrachloride	NA	0.46	0.44	0.29	0.45
cis-1,2-Dichloroethene	0.6 U	0.14 U	0.18	0.083 U	0.10 U
Cyclohexane	0.52 U	0.14 U	0.22 U	0.69 U	NA
Ethylbenzene	0.66 U	0.1 J	0.18	0.87 U	NA
Heptane	0.62 U	NA	NA	NA	NA
Hexane	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA
Methylene chloride	0.53 U	0.39 J	0.29 J	0.63 U	0.33 J
Tetrachloroethene	1 U	0.12 J	0.15 J	0.14 U	0.092 U
trans-1,2-Dichloroethene	0.6 U	0.14 U	0.11 U	0.091 U	0.099 U
Toluene	1	0.66 J	0.86	0.75 U	NA
Trichloroethene	0.22 U	0.14 U	0.11 U	0.13 U	0.096 U
Vinyl chloride	0.1 U	0.14 U	0.084 U	0.054 U	0.076 U
m,p-Xylene	0.49	0.24 J	0.43	2.2 U	NA
o-xylene	0.66 U	0.69 U	0.16	0.87 U	NA

a) U = not detected (method detection limit provided); D = diluted; J = estimated concentration; ND = not detected (laboratory method detection limit not available); NA= not analyzed or included in reporting document;  
 IA = Indoor Air; SS = Sub-Slab; VOCs = volatile organic compounds; µg/m<sup>3</sup> = microgram per cubic meter; W = West; E = East; Du = Duplicate  
 b) 2013 samples were collected by LaBella & Associates  
 c) Compounds shown are included in the New York State Department of Health (DOH) Soil Vapor/Indoor Air Matrices A through F.  
 d) Location for the indoor air and sub-slab vapor samples collected in 2013 are not in the same location as in 2023 and 2025.

The following color codes are based on the New York State Department of Health 2006 Soil Vapor Intrusion Guidance document Soil Vapor/Indoor Air Matrices (and any updates)

- Mitigate
- Monitor
- Identify Sources and Sample or Mitigate
- No Further Action

## ENCLOSURE A – BUILDING 1 VAPOR INTRUSION DECISION MATRIX

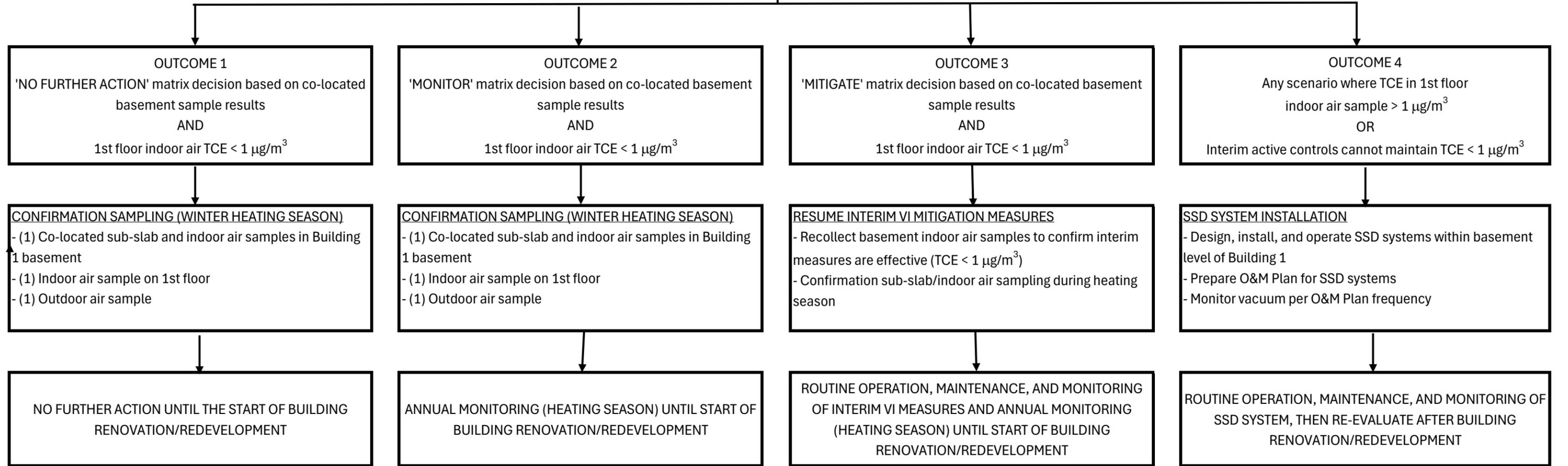
**VAPOR INTRUSION MITIGATION DECISION MATRIX - BUILDING 1**  
**FORMER EMERSON POWER TRANSMISSION FACILITY**  
**ITHACA, NEW YORK**

IMPLEMENT ACTIVE MEASURES ON INTERIM BASIS  
 Install and operate one or more of the following interim active measures until the start of building renovation/redevelopment:  
 - Depressurize basement air space using negative air machine(s)  
 - Indoor air exchange using ventilation fan(s)  
 - Filter indoor air using air purifying unit(s)

IMPLEMENT PASSIVE MITIGATION MEASURES  
 - Apply edge seal (2) basement doors between Buildings 1 and 2  
 - Apply edge seal (1) first floor door between Building 1 basement and 1st floor  
 - Apply edge seal (2) first floor doors between Buildings 1 and 2  
 - Evaluate elevator pit conditions and seal elevator doors at all building levels  
 - Seal any other VI pathways observed between the basement and upper floors of Building 1 and between Building 1 and Building 2 basement level.

30 days ↓

SAMPLING (SUMMER/NON-HEATING SEASON)  
 - Turn off APUs at least 48 hours before sampling  
 - (1) Co-located sub-slab and indoor air samples in basement  
 - (1) Indoor air sample on 1st floor  
 - (1) Outdoor air sample



## ENCLOSURE B – PILOT TESTING DATA – BUILDING 1

**EX-3 PERFORMANCE MONITORING DATA**  
**Former Emerson Power Transmission Facility**  
**Ithaca, New York**

**Building 1, Lower (Basement)**

STEPPED-RATE TEST			VACUUM MEASUREMENTS (wci)						Pre-Dilution PID (ppm)
Step	Time	Step Time Elapsed (min)	Extraction Point (wci)	MP-18 (35 feet) (wci)	MP-19 (50 feet) (wci)	MP-20 (25 feet) (wci)	MP-21 (20 feet) (wci)	BLDG 1-1 (15 feet) (wci)	
1	16:15	45	-7.48	-0.003	0.000	-0.037	-0.003	-0.483	1.7
2	16:25	55	-3.008	-0.010	+0.005	-0.011	-0.002	-0.223	1.6
Initial Vacuum	15:20	-	0	0.000	0.000	0.000	0.000	0.000	-

**NOTES:**

Date & Time 5/30/24 15:30 Observation EX-3 test blower turned on to allow subsurface materials to further dry out prior to testing

Date & Time 5/30/24 15:45 Observation Generator placed at doorway into Bldg 2 to divert exhaust fumes outside building. CO monitored.

Date & Time 5/30/24 15:55 Observation MP drilled at NE corner of Bldg 1 abandoned due to presence of high water table.

Date & Time 5/30/24 16:20 Observation Vacuum propagation limited to small footprint in eastern portion of Bldg 1; subsurface interference west and southeast.

CONSTANT-RATE TEST			VACUUM MEASUREMENTS (wci)						Pre-Dilution PID (ppm)
Date	Time	Hours of Operation	Extraction Point (wci)	MP-18 (35 feet) (wci)	MP-19 (50 feet) (wci)	MP-20 (25 feet) (wci)	MP-21 (20 feet) (wci)	BLDG 1-1 (15 feet) (wci)	
5/30/2024	17:00	0.6	-3.002	-0.006	+0.001	-0.019	+0.000	-0.219	0.9

**NOTES:**

Date & Time 5/30/24 17:05 Observation End constant-rate test. Limited improvement in vacuum propagation in comparison to stepped-rate values with the exception of MP-20 located in the northern limit of the building.

NM = Not Measured; - = Not Applicable; (xx feet) = distance from Extraction Point; wci = inches water column; ppm = parts per million

**EX-3 EQUIPMENT OPERATIONAL DATA**  
**Former Emerson Power Transmission Facility**  
**Ithaca, New York**

**Building 1, Lower (Basement)**

STEPPED-RATE TEST			SYSTEM EQUIPMENT MEASUREMENTS							FLOW Calc.	
Step	Time	Step Time Elapsed (min)	Pre-Dilution Vacuum (wci)	Pre-Dilution Temp. (°F)	Pre-Dilution ΔP (wci)	Dilution Valve (% open)	Dilution Vacuum (wci)	Dilution Temp. (°F)	Dilution ΔP (wci)	Pre-Dilution Flow (scfm)	Dilution Flow (scfm)
1	16:15	6	-7.48	60	1.055	0	-	-	-	56.42	-
2	16:25	22	-3.008	60	0.361	60	-0.861	68	0.212	33.19	25.31

**NOTES:**

Date & Time 5/30/24 15:30 Observation EX-3 test blower turned on to allow subsurface materials to further dry out prior to testing

Date & Time 5/30/24 15:45 Observation Generator placed at doorway into Bldg 2 to divert exhaust fumes outside building. CO monitored.

Date & Time 5/30/24 15:55 Observation MP drilled at NE corner of Bldg 1 abandoned due to presence of high water table.

Date & Time 5/30/24 16:20 Observation Vacuum propagation limited to small footprint in eastern portion of Bldg 1; subsurface interference west and southeast.

CONSTANT-RATE TEST			SYSTEM EQUIPMENT MEASUREMENTS							FLOW Calc.	
Date	Time	Hours of Operation	Pre-Dilution Vacuum (wci)	Pre-Dilution Temp. (°F)	Pre-Dilution ΔP (wci)	Dilution Valve (% open)	Dilution Vacuum (wci)	Dilution Temp. (°F)	Dilution ΔP (wci)	Pre-Dilution Flow (scfm)	Dilution Flow (scfm)
5/30/2024	17:00	0.6	-3.002	60	0.366	60	-1.035	68	0.214	33.42	25.42

**NOTES:**

Date & Time 5/30/24 17:05 Observation End constant-rate test. Limited improvement in vacuum propagation in comparison to stepped-rate values with the exception of MP-20 located in the northern limit of the building.

NM= Not Measured; - = Not Applicable; wci = inches water column; °F= degrees Fahrenheit; scfm = standard cubic feet per minute