

DECEMBER 2023

The U.S. Environmental Protection Agency (EPA) is assisting New York State Department of Environmental Conservation (NYSDEC) in reducing elevated levels of volatile organic compounds (VOCs), particularly trichloroethylene (TCE), that are entering into the 543 Union Street building in Brooklyn, New York. EPA will also provide input on the design of the long-term system to prevent the buildup of harmful TCE vapors. At the request of the NYSDEC and the New York State Department of Health (NYSDOH), EPA installed a temporary basement air extraction system comprised of two energy recovery ventilators (ERVs) and two RadonAway fans to immediately address the contamination while longer term plans are being developed.

What is the result of EPA sampling and what is being done to address the harmful chemicals?

EPA installed two ventilators and two RadonAway fans to enhance the interim mitigation systems installed by NYSDEC. The preliminary results from two rounds of post-mitigation indoor air sampling events conducted by NYSDEC, NYSDOH and EPA in late October and early December 2023 showed the systems are working to reduce levels of TCE in the air. However, the levels of TCE in the basement and some of the first-floor units remain above the guideline values set by NYSDOH. EPA modified the ERVs and RadonAway fans with additional extraction points near the basement sump pump as well as in areas where contaminated groundwater is believed to be infiltrating to the basement.

What are the next steps?

EPA is planning to apply an environmentally friendly agent (foam and sealant paint) to the basement ceiling to prevent TCE vapor from moving from the basement to the occupied units above. Following this work, EPA will collect additional indoor air samples to evaluate the effectiveness of the ERVs and RadonAway fans.



Contaminants

Volatile Organic Compounds (VOCs) from underground give off gases, or vapors, that can move through the soil and seep into buildings through cracks in slabs and foundations, sewer lines, and other openings. For more information on vapor intrusion, visit: www.epa.gov/vaporintrusion.

Trichloroethylene (TCE) is used as a solvent for cleaning metal. Exposure to very high concentrations of TCE vapors can cause dizziness, headaches, sleepiness, confusion, nausea, unconsciousness, and even death. For more information on TCE, visit: www.atsdr.cdc.gov/toxfaqs/tfacts19.pdf

How did trichloroethylene (TCE) get into the air in the building?

The main source of the TCE contamination in the building is vapors from historic groundwater contamination in the area.

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For general information or questions about EPA's Superfund program, please contact [Jim Haklar](#) of EPA's Regional Public Liaison Office, at haklar.james@epa.gov, (732) 906-6817, or toll free at (888) 283-7626.