

Welcome

- Thank you for joining us this evening. We will get started shortly.
- We will be discussing the Helix South End Brownfields Redevelopment, focusing on recent developments in Buildings 4 and 5
- If you have any questions, please place into the Q&A thread.



*Department of Environmental Quality
and Department of Health and Human Services
Kale-Bindex / Helix South End
Brownfields Project Number 16028-12-060*

October 13, 2020

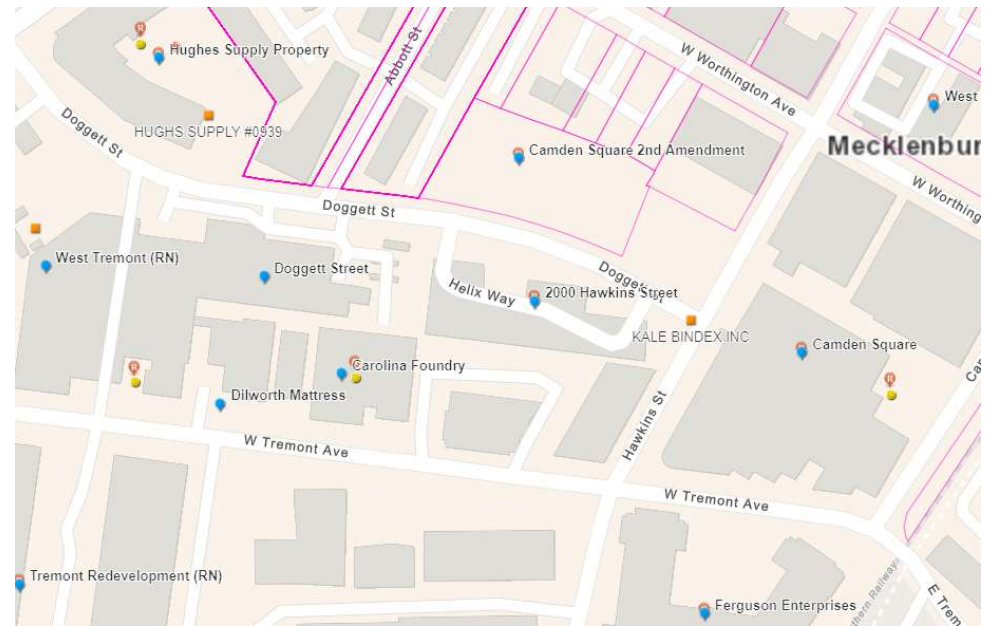


What is a Brownfields Property?

- A brownfields property is an “Abandoned, idled, or underused property where redevelopment is hindered by real or perceived environmental contamination.”
- NC DEQ Brownfields Program (NCBP) enacted through the Brownfields Property Reuse Act of 1997
 - Voluntary program - Prospective Developers (PDs) must not be responsible parties who have caused or contributed to the existing contamination.
 - By applying to the Brownfields Program and ultimately recording a Brownfields Agreement, PDs commit to assessment/redevelopment to assure end use in compliance with the Brownfields Agreement.
- Required annual notification of Land Use Restriction (LUR) compliance/deed notification of the Notice of Brownfields Property (NBP)
- Outcome: Brownfields Agreement (BFA) negotiated with prospective developer

Kale-Bindex Site History

- Property developed in 1960s and occupied by Package Products Co. Inc. until 1975.
- From about 1980 until 2005, it was occupied by Kale-Bindex, a book binding company.
- Surrounding area in South End Charlotte has historically been industrial and commercial.
- Multiple releases in the vicinity of the brownfields property have contributed to the known impacts.

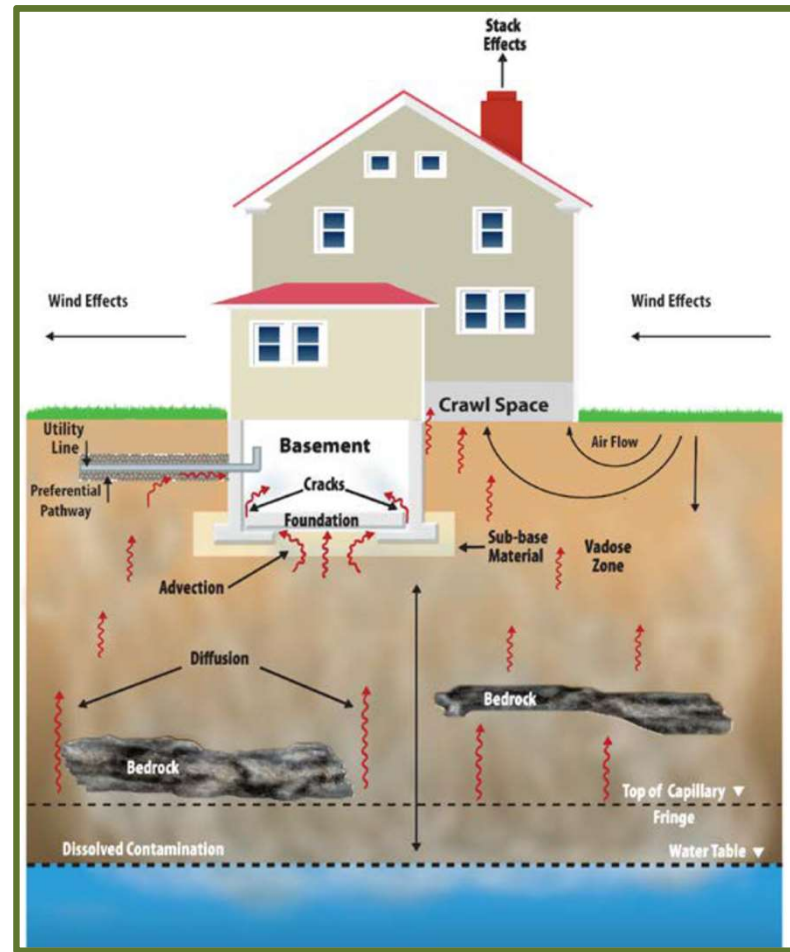


[NC DEQ DWM Site Locator Tool](#)



What is Vapor Intrusion?

- Underground vapor entering the home
- Radon is most commonly recognized example



Source: "Overview of Vapor Intrusion" Fact Sheet, Agency for Toxic Substances and Disease Registry

What is TCE?

- TCE = Trichlorethylene or Trichloroethene
- TCE can turn into a gas easily (known as volatile), and it is a colorless, nonflammable, sweet odor (at higher concentrations).
- Industrial solvent (ex: metal degreaser)
- Some possible household sources:
 - Wood stains, varnishes, and finishes,
 - Adhesives,
 - Typewriter correction fluids,
 - Paint removers, and
 - Cleaners.



Possible human health risks for TCE

- Fetal heart malformations (change in heart growth and development)
 - Fetal heart develops during the first trimester
 - Short-term exposure – heart formation happens over an approximately three-week period
- Immune system effects
 - Long-term exposure (many years to a lifetime)
- Certain types of cancer
 - Kidney, liver, non-Hodgkin's lymphoma
 - Long-term exposure (many years to a lifetime)



Additional Assessment Activities

2013

- **March**
Brownfields
Agreement
Recorded

2015

- **December**
Vapor
Mitigation
Plan

2016

- **January**
Vapor
Mitigation
Plan
Approved
- **Began**
Townhome
Construction

2017

- **Completed**
Townhome
construction
- **July**
Vapor
Mitigation
Installation
Report

2018

- **November**
Site Visit by
DEQ
- **December**
DEQ
requests
indoor air to
check VIM
Effectiveness



Additional Assessment Activities

2019

February – DEQ Secretary’s Science Advisory Board approval of 2.1 $\mu\text{g}/\text{m}^3$ action level for TCE in indoor air for residential use

April - Work plan for indoor air sampling

July - Indoor air samples collected from 4 units in Buildings 4 and 5

- TCE found at levels close to but below action level of 2.1 $\mu\text{g}/\text{m}^3$

September - Follow up sample event in Building 5

- TCE found above action level in 2 townhome units.
- Austin Air Filters supplied to all units in Building 5.

December - Utility line opening sealing in two units in building 5

2020

January – Resampled units after sealing utility conduits

- TCE was not detected above action level

August – Indoor air samples collected from all units in Buildings 4 and 5

September - Sample results reported to DEQ

- TCE detected in 6 of 12 units above action level of 2.1 $\mu\text{g}/\text{m}^3$
- TCE identified in remaining units below immediate action limit

October - Property owners notified by DEQ/DHHS and more Air Filters supplied

Next Steps and Interim Measures

- Interim Measures
 - October 1-5 2020: Austin Air filters deployed in units that exceed 2.1 ug/m^3
 - Week of October 5: confirmation indoor air testing conducted and results expected in October 2020
 - Currently the Austin Air filters are available to all units within Buildings 4 and 5
- Soil Gas Assessment of Side Walls – Work Plan expected from development team to DEQ
- Evaluation of Vapor Mitigation Efforts

Department of Environmental Quality



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