

Responding to Community Concerns about Vapor Intrusion in Winston-Salem, NC

Leveraging the NIEHS-supported Superfund Research Program Network

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Research Translation Core Leader
UNC Superfund Research Program
10-20-15

UNC Superfund Research Program

Funded by NIEHS (P42ES005948)

- **Biomedical projects**

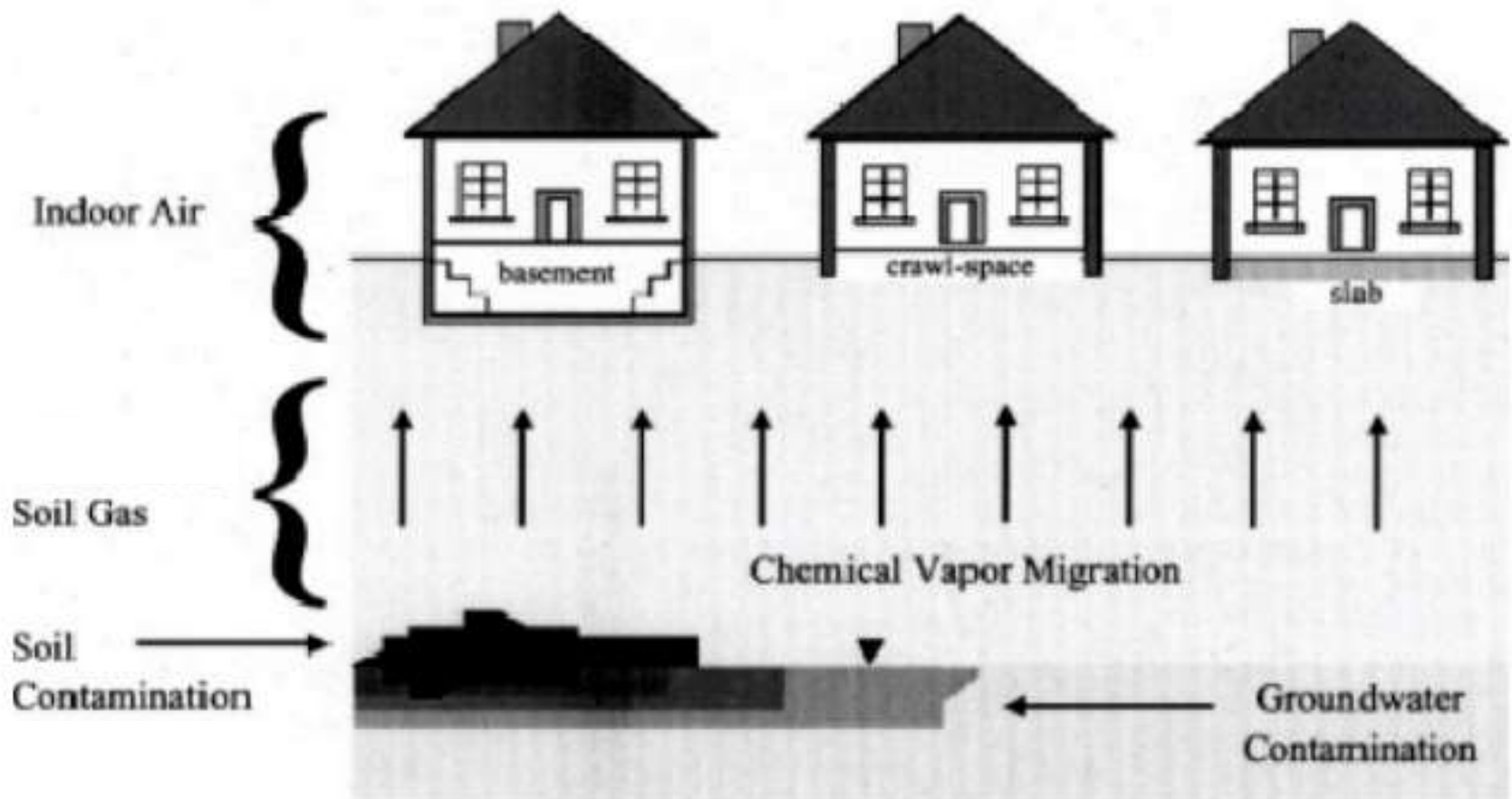
- Toxicity caused by oxidative stress (PCBs, formaldehyde)
- Metabolism of TCE
- Prenatal exposures to toxic metals

- **Environmental science projects**

- Bioremediation of PAH-contaminated soil
- Passive sampling devices to monitor chemicals in water & sediment



What is vapor intrusion?



Source: U.S. EPA 2002 Draft Vapor Intrusion Guidance

Capital project reveals contamination to public



camel city dispatch
WINSTON SALEM'S ONLINE NEWS

Friday, February 6, 2015

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Hanes-Lowrance Parents & Students Fired Up After Being Kept in the Dark About Toxic Waste Under Their School

January 29, 2015 4:09 am - 10 comments

Views: 7026

By Chad Nance, Carissa Joines, & Michael Wiseman

"I haven't heard an articulate answer this evening."

- A Hanes Magnet Middle parent

"When you threaten me with an attorney, I can say less."

- WS/FC County Superintendent of Schools Dr. Beverly Emory

"It is not prudent to play with people's health."

- Rohan Kapileshwari, current student, Hanes Magnet Middle

Young Rohan stood straight and confident as he asked the Superintendent of Schools, Dr. Beverly Emory, a simple question. A question so straightforward and blunt that only a child could have asked it. "Would you play with fire?" Rohan never got an answer from the adults, but there is no doubt that the WS/FC School Administration and School Board have been playing with fire for some time by staying quiet as student after student passed through the doors of Hanes Magnet and Lowrance Middle School - a facility that the entire community now knows is built on top of one



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Toxic Legacy Schools sit on contaminated earth

Story Comments Image (6)

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Contamination under Lowrance and Hanes middle schools
Winston-Salem Journal



Posted: Saturday, January 24, 2015 9:37 pm

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Bertrand M. Gutierrez and Arika Herron/Winston-Salem Journal



As students walk up to Hanes and Lowrance middle schools in northern Winston-Salem, a loud buzzing noise follows them to the front door of the building. It's the sound of a very strong pump, part of a \$665,000 project financed by a manufacturer across the street to clean up a large plume of underground

Data show plume migrating beneath school property

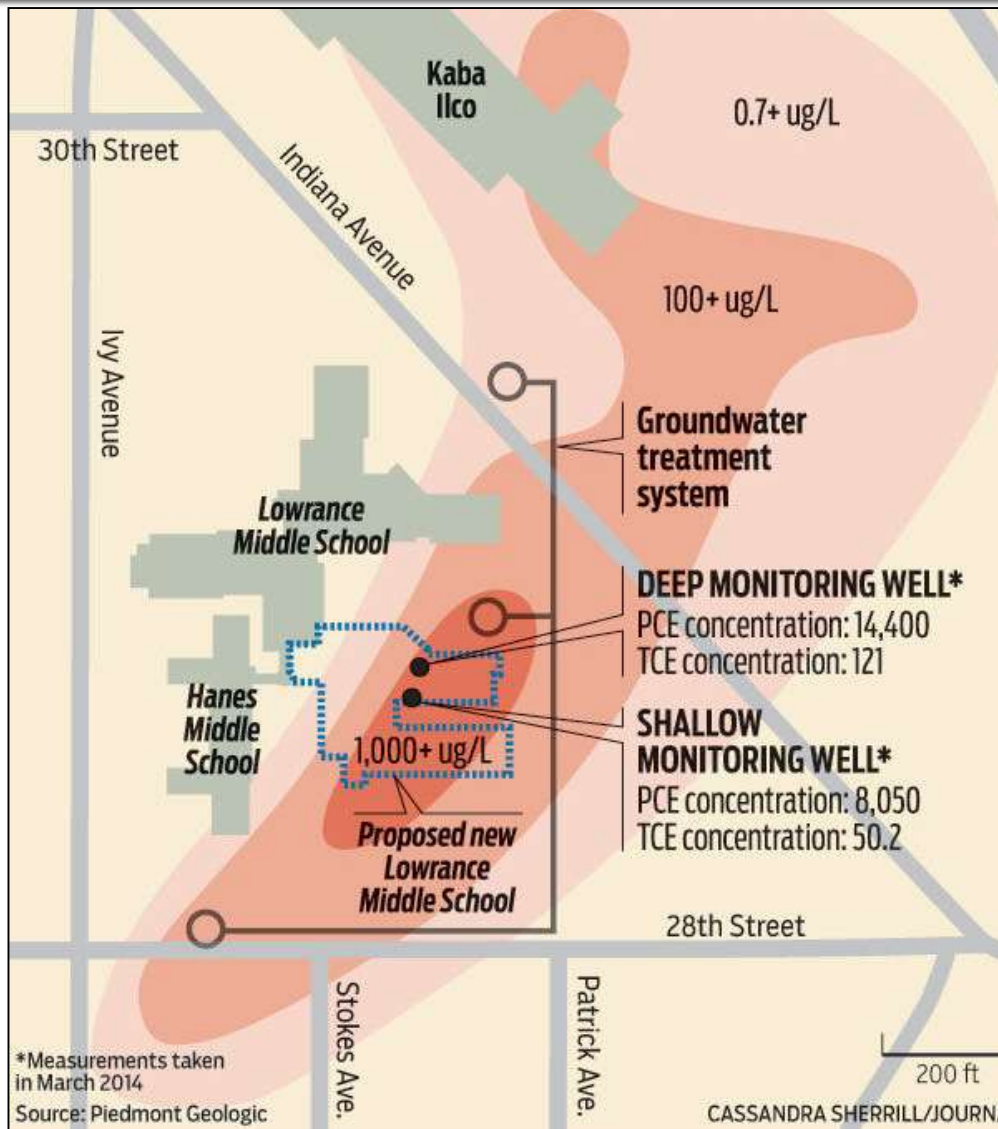
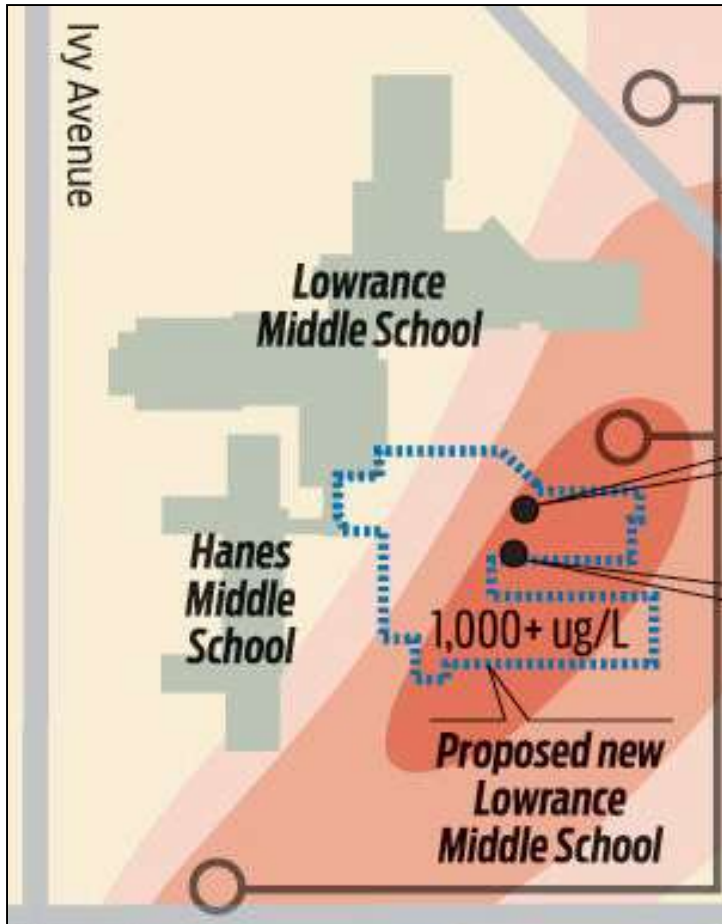


Photo credit: Lenny Siegel

Let's take a closer look at the Hanes-Lowrance schools



Credit: Cassandra Sherrill, Winston-Salem Journal

Lowrance Middle

- 125 students
- Profound disabilities
- ~58% subsidized lunches

Hanes Middle

- 1,049 students
- STEM magnet
- Highly academically gifted & "multiple abilities"
- ~28% subsidized lunches

It's a small world after all...



All in a day's work...

WINSTON-SALEM
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Tuesday, February 10th, 2015

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Toxic Legacy

Experts: Testing should have been done yearly at Lowrance, Hanes

Story Comments Image (3) Print Font Size

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Expert speaks about vapors at Lowrance and Hanes



Posted: Monday, February 9, 2015 11:12 pm

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Arika Herron and Bertrand M. Gutierrez/Winston-Salem Journal

School officials should consider installing pre-emptive vapor-mitigation systems at Hanes and Lowrance middle schools, air-pollution experts said Monday during a series of meetings with parents and school

- 12pm: meet w-school sampling consultant
- 1pm: radio interview
- 2pm: media session
- 3pm: school site visit
- 4pm: school board briefing
- 6:30pm: community meeting



What happened?

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Toxic Legacy

School board votes to close Lowrance, Hanes middle schools by March 2

Story Comments Image (3) Print Font Size

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Posted: Tuesday, February 10, 2015 9:26 pm

Journal staff report

The Winston-Salem/Forsyth County Board of Education voted 7-2 Tuesday night to close Hanes and Lowrance middle schools by March 2 and move the students to other schools.

Under the plan, Hanes sixth-graders will go to Smith Farm Elementary School and Hanes seventh- and eighth-graders will go to the former Hill Middle School.

Lowrance students will go to Atkins High School.

[What do you think about the board's decision to close the schools?](#)



Andrew Dye/Journal

The Winston-Salem/Forsyth County Board of Education votes 7-2 to close Hanes and Lowrance middle schools by March 2. Voting in favor were school board members: Mark Johnson, Vic Johnson, Robert Barr and Deanna Taylor joined by Vice Chair Jeannie Metcalf and Chair Dana Caudill Jones. Voting against were school board members David Singletary and Elisabeth Molsinger.



Photo credit: Lenny Siegel

What's next?



A screenshot of the UNC Gillings School of Global Public Health website. The page features a navigation bar with links for 'About', 'Students', 'Departments', and 'Research'. The main content area is titled 'Vapor Intrusion Resources' and includes a section for 'CONTACT US' with contact information for Dr. James Smithberg, Deputy Director Dr. Rebecca Fry, and Research Translation Kathleen Gray. Below this is a 'UNC Superfund Research Program' navigation menu with links for 'About', 'Research projects', 'Research translation and community engagement', 'Support cores', 'Publications', and 'Resources'. The right sidebar contains a 'Video from Community Information' section with a date of February 9, 2015, and a 'Fact sheets and case studies' section with a link to 'Understanding Vapor Intrusion'.

Additional sampling, risk analysis, engaging impacted community

Thanks to **Kelly Pennell, UK SRP** and **Lenny Siegel, CPEO** for their technical expertise and leadership and to **NIEHS** and **USEPA** for their support.



Questions?

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