

Flint Hill Schools Environmental Health & Safety Assessment Update

Fort Mill School District Board Meeting - August 5, 2025



Citadel EHS - Who We Are



30+ Years Experience & 100% Employee Owned

100% Employee-owned and nationally recognized for integrity and scientific rigor.



Deep Environmental & Regulatory Expertise

Environmental Engineers, Environmental Scientists, Certified Industrial Hygienists, Toxicologists, Geologists, Certified Safety Professionals, Hazardous Materials, Sustainability and Environmental Compliance Professionals.



Environmental Protection Agency (EPA) Award Winning

Recognized for excellence in climate leadership, innovation, and commitment to environmental sustainability projects.



Federal Emergency Management Agency (FEMA) & Government Security Association (GSA) Certified

Authorized to provide emergency response services and approved as a federal contractor meeting rigorous government quality and security standards.



Extensive Insurance Coverage

\$10M in professional liability and pollution insurance protection, ensuring full financial security for all project engagements and contingencies.

Citadel EHS - What We Do



We support projects where schools, communities, and industry intersect—often in settings with heightened public interest and shared concerns.

We work in high-profile environments where health and safety concerns, regulatory scrutiny, transparency, and community trust all converge.

We help communities navigate concerns, build understanding, and move forward with confidence—through objective analysis, clear communication, and decades of technical and practical experience.

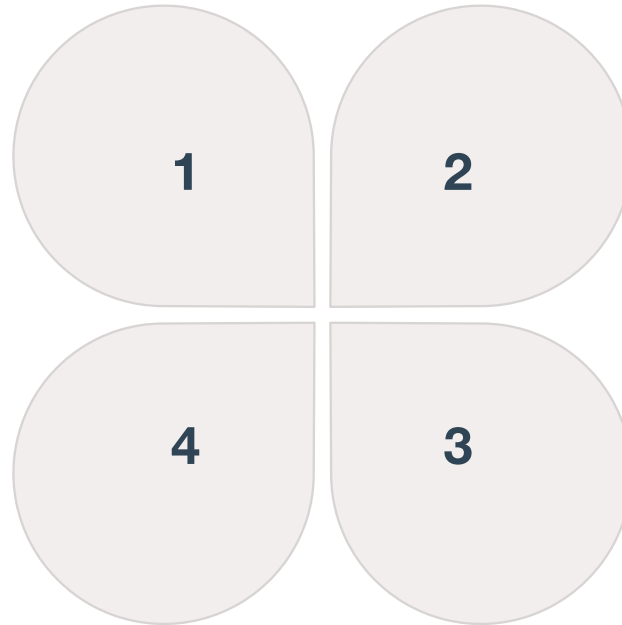
Citadel EHS - Why We Are Here

Independent Assessment

Conduct a comprehensive Environmental Health & Safety assessment for the Flint Hill Elementary & Middle School Campus.

Foster Trust

Provide objective science and public health focused recommendations, education, and updates.



Gather Community Feedback

Engage with families and staff to listen, acknowledge concerns, and recommend meaningful, responsive strategies.

Facilitate Safer School Environments

Prioritizing the health and safety of students, staff, and the entire Fort Mill community.

Key Terms & Definitions



Indoor Air Quality (IAQ)

Refers to the air quality within buildings, especially as it relates to the health and comfort of people in buildings.



Heating Ventilation & Air Conditioning (HVAC)

A system in buildings that keeps the air comfortable by heating, cooling, and moving it around.



Volatile Organic Compounds (VOC)

Organic materials that are emitted into the air by a wide array of products, including chemicals and building materials.



Particulate Matter or Particle Pollution (PM)

Particulate Matter is a microscopic mixture of solids and/or liquid particles found in the air that are so small that they can be inhaled.

Initial Scope of Work



Reviewed Silfab Solar Documentation + Site Walk

Evaluate Silfab's air permits, emissions modeling, chemical and gas inventories, and emergency response protocols



Reviewed Fort Mill School District Documentation

Evaluate District HVAC plans and filtration specifications, emergency operation protocols, facility maintenance procedures, and cleaning practices and products



Developed Action Plan

Identify target contaminants of potential concern (COPCs), air quality monitoring plan, and health safety and emergency response recommendations



Pursue WELL Health-Safety Rating

Conducted gap analysis and created documentation to support the District's pursuit of the WELL Health-Safety Rating



Engage & Educate Stakeholders

Facilitated meetings with District staff and board members, community members and parents, Silfab Solar leaders and staff, York County leaders and office of emergency management team



Implement Action Plan

Execute action plan and implement recommended improvements, and document compliance measures

Forthcoming Scope of Work Summary



Scheduled Indoor & Outdoor Air Quality Testing

Comprehensive assessment and continuous monitoring of air quality both within school facilities and the surrounding environment.



Continuous Outdoor Air Perimeter Monitoring

Implementation of real-time monitoring systems at the school perimeter to track and detect any external environmental impacts.



Emergency Protocol Development & Drills

Creation and refinement of emergency response plans, followed by regular drills to ensure swift and effective action.



Environmental Health Enhancements

Recommendations and support for upgrades aligned with WELL Health-Safety Rating standards for a healthier school environment.



Community Engagement & Training

Facilitating transparent communication with stakeholders and providing training sessions for staff and community members.

Air Quality Monitoring Plan



Scheduled Indoor & Outdoor Air Quality Monitoring

Targeted sampling within and outside of Flint Hill Elementary, specifically focusing on **classrooms** and **shared spaces** where students and staff spend most time, and **near rooftop air intake vents**.



Continuous Outdoor Air Quality Monitoring

Strategic perimeter monitoring along **fence line near the Silfab facility** and **Flint Elementary & Middle School properties**.



Key Contaminants

Monitoring for critical COPCs including but not limited to: **Hydrochloric Acid (HCl)**, **Hydrogen Fluoride (HF)**, **VOCs**, **TVOCs**, **Ammonia**, **PM2.5/PM10**, **Formaldehyde**, and **Silane**.



Sampling Schedule

Pre and post occupancy air quality testing and regular **quarterly sampling thereafter**, supplemented by additional monitoring during **Silfab startup and occupancy milestones** for dynamic assessment.

Why it matters: Establishing a baseline and regularly monitoring air quality helps ensure the air students and staff breathe while in and around the schools is optimal, compared to, and in alignment with South Carolina's Toxic Air Pollutants (TAP) limits and the EPA's Regional Screening Levels (RSLs).

Indoor & Outdoor Air Quality Monitoring Event Schedule

1

Baseline Testing (Before School Opens)

When: After construction is finished but before students arrive.

Why: To understand the initial air quality in the brand-new buildings.

2

Testing During School Session

When: Approximately 1 month into the school year.

Why: To assess air quality while classrooms are full and the building is in regular use.

3

Testing After Silfab Solar Operations Begin

When: 1–2 months after the nearby facility commences operations.

Why: To determine if any external industrial activity is impacting air quality at the schools.

4

Quarterly Monitoring (Ongoing)

When: Every 3 months for a year, starting after Silfab begins operations.

Why: To monitor for any changes in air quality over time and through different seasons.

Continuous Outdoor Air Quality Monitoring

Silane will be monitored through Particulate Matter

Deploy Continuous Outdoor Air Monitors

Two advanced real-time monitoring units strategically placed along the **fence line near the Silfab facility** and **Flint Elementary & Middle School properties**.

Measure Contaminants

Continuous tracking and real-time monitoring of **PM2.5, PM10, Total VOCs**, wind speed and direction.

Operational Insights

Data directly informs operational decisions, enabling proactive adjustments to school HVAC systems and activities.

Alert & Response

Establishes thresholds for immediate alerts and supports robust emergency response protocols.

Why it matters: Continuous monitoring provides real-time data to help ensure outdoor air around the schools remains optimal and in alignment with the EPA's National Ambient Air Quality Standards (NAAQS). This allows school and emergency officials to act quickly if conditions change.

Emergency Operation Protocol Alignment

Enhance Emergency Response Plans

Evolve District EOP plan to include detailed coordinated response protocols related for potential emergency scenarios.

Ensure Integrated Emergency Response Drills with Silfab and York County OEM

Practice coordinated responses with external partners for seamless action.

Formalize MOUs for Shared Roles, Alerts, and Training

Establish official agreements between the District, Silfab Solar, York County and surrounding OEM to ensure efficient emergency response.

Educate Staff & Families on Emergency Procedures

Provide training and materials to ensure District staff and families understand roles, actions, and communication pathways during emergencies.

Why it matters: Aligned emergency protocols—supported by training, drills, and formal partnerships—ensure that **students, staff, and families** are prepared to respond confidently and effectively during any high-risk event.

Environmental Health Operations

Recommend As Needed Supplementary Air Filtration

Introduce stand-alone air filtration units in classroom or common areas that demonstrate elevated volatiles or particulate matter, such as HEPA and carbon filters, ensuring optimal air purity.

Develop Comprehensive Management Plans

Develop and implement robust mold/moisture and Legionella management plans to prevent contaminants and ensure facility health and to ensure alignment with WELL Health-Safety Rating requirements.

Conduct Water Quality Testing

Conduct annual testing of drinking water to ensure alignment with WELL Health-Safety Rating requirements.

Conduct As Needed Noise Monitoring

Sound assessments may be performed if exterior noise becomes disruptive to the learning environment.

Why it matters: Healthy indoor environments support student focus, comfort, and well-being. Targeted actions help prevent disruptions and maintain classroom quality.

Stakeholder Engagement & Communication

Public Forums

Host community events to discuss safety plans, share air quality monitoring results, and gather feedback from all stakeholders.

Family Communication Resources

Create resources for families explaining, including evacuation procedures and shelter-in-place directives for parents and guardians.

Staff Training

Provide comprehensive training to school staff on incident response protocols, communication best practices, and student support during emergencies.

Provide Education

Provide education for staff and families on environmental safety, promoting awareness and understanding of healthy practices.

Publish Regular Status Updates

Share ongoing air monitoring findings, safety updates, and project milestones through the District website to keep staff and family informed.

Why it matters: Transparent, inclusive communication builds trust and ensures families and staff are prepared.

Project Goal



Preserve Health

Safeguarding the well-being of every student and staff member through comprehensive environmental health assessments.



Build Emergency Preparedness

Establishing robust emergency response plans that align with the highest local and federal safety standards.



Foster Transparency

Engaging with the community through open communication and clear, accessible reporting on all findings and actions.



Empower Personnel

Equipping school staff with the necessary training, tools, and protocols to maintain a safe and healthy environment daily.

Thank You!

To the Fort Mill School District for entrusting us with this meaningful work. It's a privilege to apply our expertise and industry experience in support of a project that directly impacts the well-being of students, staff, and the broader Flint Hill school community.



CITADEL EHS
assess • resolve • strengthen