

CASE STUDY 4 UNIVERSITY OF VIRGINIA'S SCOTT STADIUM



PURAFIL PROVIDES CLEAN RECIRCULATION AIR 4 UNIVERSITY OF VIRGINIA'S SCOTT STADIUM



ABOUT SCOTT STADIUM

Located approximately 120 miles from Washington, D.C., the University of Virginia's (UVA) Scott Stadium is considered one of the most beautiful stadiums anywhere, with the Monticello Mountain as a backdrop and the Blue Ridge Mountains on the horizon. After a landmark \$25-million grant in June of 1997 from the UVA alumnus Carl W. Smith – a lineman during the late 1940s and early 1950s – the university embarked on a three-year plan to renovate Scott Stadium, home of the Virginia Cavaliers, and increase its capacity from 40,000 to over 60,000.

THE PROBLEM

After a landmark \$25-million grant in June of 1997 from the UVA alumnus Carl W. Smith – a lineman during the late 1940s and early 1950s – the university embarked on a three-year plan to renovate Scott Stadium, home of the Virginia Cavaliers, and increase its capacity from 40,000 to over 60,000.

The renovation presented a unique challenge to Heery International Engineering, the project's head firm. Each of the stadium's 44 existing restrooms relied on ventilation ductwork to dilute odors and provide fresh indoor air. Expanding the stadium's seating capacity would require Heery International Engineering to build new and more sophisticated ductwork.

Instead, the firm instructed Southern Air, the project's appointed contractor, to install ventilators with an "air cleaning" capability. Southern Air called Purafil's representative in Virginia.

"It would have been difficult – and costly – to duct the restroom exhaust air out of the stadium," explained Joe George with Southern Air. "We had worked with Purafil on previous projects and knew that with their expertise we could find a more efficient and economical solution."

PURAFIL PROVIDES THE SOLUTION

Purafil, Inc. is one of the leading manufacturers of gas-phase air filtration systems. Purafil's technology is based on the use of dry chemical, air cleaning pellets, or "media", which eliminate airborne pollutants via adsorption, absorption, and/or chemisorption.

Purafil engineers designed a custom air purification unit to meet the specifications outlined by project engineers. The result was a self-contained unit that sits above the restroom ceiling, with only the air inlet grille (the size of a ceiling tile) visible from the room. Sized to meet an airflow of 75 CFM

(127 m³/hr), the unit itself measures approximately 16 inches in height and contains a disposable module with Purafil® Select CP Blend media.

The unit draws air from the room, through an inlet grille, and into a small plenum area. Next, air is forced through a single pass of Purafil Select CP Blend media, where a chemical reaction occurs and odorous pollutants are transformed into non-toxic solids.

This process is essentially instantaneous and irreversible. Lastly, clean air is discharged back into the environment. Purafil's systems allowed the university to clean and recirculate air that would previously have been exhausted. The Indoor Air Quality Procedure, outlined in ASHRAE Standard 62.01-2004, allows for ventilation air to be reduced to below standard levels, so long as recirculation air is acceptable for human occupants.

CUSTOMER SATISFACTION

"With Purafil's systems, we reduced the HVAC system load and eliminated the need to build complex ductwork – a major savings to the university," explained Mike O'Hare with Southeastern Engineering Sales, Purafil's local representative.

Also, by reducing the demand on the HVAC system to heat and cool ventilation air, the university would save on energy costs – another benefit of gas-phase air filtration technology.

"We chose Purafil's Select CP Blend media because it removes more odors than activated carbon alone," stated O'Hare.

The renovation project was completed at the beginning of the UVA's 64th college football season. All are pleased to report that Purafil's air filtration units are operating effectively. When it comes to clean air, the Virginia Cavaliers can expect a winning season.

