protek™

A Case Study:
University of Washington, Bothell

Client:
University of Washington

Project:
Classroom Indoor Air Monitoring

Location:
Bothell, WA

Background:

The University of Washington's Bothell campus includes 15 academic buildings with intensively used classrooms and lecture halls. They needed a comprehensive program to assess ventilation and filtration effectiveness and assure students and faculty that good indoor air quality was maintained, supporting occupant health and comfort.

Scope of Services:

Intertek's engineering partner, Engineering Economics Inc. (EEI) began working with the client by reviewing ventilation system testing data provided by a subcontractor and applying an airborne pathogen risk assessment model to the classrooms. EEI then directed ventilation system adjustments and recommended filtration enhancements to reduce risks.

To confirm the performance of ventilation and filtration enhancements, Intertek developed and implemented an air quality monitoring plan based on the client's priorities, testing for particulate matter and carbon dioxide in a random sampling of classrooms. These two air quality parameters are effective proxies for a range of potential pathogens and pollutants that the owner's program is intended to control. The plan had to be implemented over a limited number of days and without disturbance to classes in session. Intertek's team deployed monitoring devices before classes commenced in the morning and relocated them in the short breaks between classes. Each classroom was sampled for a minimum of two hours, with some spaces monitored for the entire day through five class sessions. Air quality readings were recorded at 5-minute intervals, to identify variable and cumulative IAQ impacts from intensive use.

Results:

Intertek compiled and analyzed the results, looking for patterns and areas of concern. In most cases, the monitoring confirmed that the implemented ventilation and filtration enhancements were performing as intended. The data for a few classrooms revealed some readings above recommended thresholds, prompting follow up investigation by EEI to guide corrective actions. Intertek summarized the monitoring results in a report, giving the client clear documentation of the performance of their air quality program.