

## **Laboratory Ventilation Management Program**

### **Appendix 10.1 ECD Commissioning**

Proper operation of Exposure Control Devices (ECDs) must be demonstrated by the contractor prior to project closeout. All ECDs, except fume hoods, are to be commissioned according to the testing requirements in Table 7.1 of the [Laboratory Ventilation Management Program](#) or manufacturer's specifications, whichever is more stringent.

#### Fume Hood Commissioning

Proper operation of fume hoods must be demonstrated by the contractor installing the fume hood prior to project closeout.

For fume hoods that operate at a constant volume or face velocity, the recommended containment performance test is ANSI/ASHRAE 110. The fume hood must also be tested and certified according to the [Stanford Performance Specifications in the Laboratory Ventilation Management Program Appendix 10.2.1](#).

For fume hoods that have Zone Proximity Sensors (ZPS) and may enter a 60 foot per minute (fpm) setback mode, the fume hood shall be certified by ANSI/ASHRAE 110 at both 60 fpm and 100 fpm (Cal/OSHA 8 CCR 5154.1).

The standard ASHRAE 110 test uses sulfur hexafluoride (SF<sub>6</sub>), which is a potent greenhouse gas (GHG). To mitigate this impact, Stanford strongly encourages that nitrous oxide (N<sub>2</sub>O) be used - this is referred to as the modified ASHRAE 110 test.

Cal/OSHA approved a variance for Stanford to perform the modified test with N<sub>2</sub>O, but the instrument detection performance specifications are rigorous. While the modified test is preferred, selection of any vendor other than TSS must be approved by EH&S, which will evaluate the vendor's SOP and instrument performance to ensure compliance with the variance.

Due to instrument performance requirements, TSS is the only pre-approved vendor for an ASHRAE 110 test using nitrous oxide instead of sulfur hexafluoride (SF<sub>6</sub>). EH&S must approve any other vendor before they are contracted. Contact [labventilation@lists.stanford.edu](mailto:labventilation@lists.stanford.edu) to request EH&S review of vendor protocols.

ASHRAE 110 records must be retained for 5 years.