

Executive Summary

The Ventilation Rate Calculation Procedure from ASHRAE Standard 62.1-2004 is the procedure used to calculate and determine if Clemson University AMRL complies with the ventilation requirements at the specified design conditions. Clemson University AMRL building has a gross square foot area of 111,270, which encompass office, research laboratory, clean room, and conferencing spaces within the two stories.

Supply air is delivered to the ARML by 19 air-handling units (AHU), ranging from 1,000 cfm to 20,650 cfm. The amount of minimum outside air to the 19 AHU's vary between 300 cfm to 20,650 cfm. The air class associated with these spaces is 1.0 based on the air distribution and from ASHRAE Standard 62.1-2004.

As discussed further on in calculations, all AHU units are compliant with ASHRAE 62.1-2004 except AHU-11. AHU-11 had a  $V_{ot}$  (Outdoor air intake airflow rate required at condition analyzed.) greater than the design OA supply. All other units were over designed, and with that gained extra points in LEED certification.