



ADAM J. SENK
MECHANICAL OPTION
PENNSYLVANIA STATE UNIVERSITY
CHEMISTRY BUILDING
TECHNICAL ASSIGNMENT #1



EXECUTIVE SUMMARY

The Pennsylvania State University Chemistry Building was evaluated using ASHRAE Standard 62 Addendum 'n' to determine if the design ventilation rates meet the suggested rates by the standard. The Chemistry Building is 5 stories with a basement and a mechanical penthouse. The building contains offices, laboratories, conferences, seminars and classrooms as far as educational spaces. Public spaces include lounges, atriums and entryways. Proper ventilation is required in order to have a healthy learning environment.

The laboratories are ventilated using three of the four air handlers. They are ventilated using a constant air volume system. The laboratory air handler's supply CFM ranges from 72,500-100,000 CFM. Supply air consists of 100% outdoor air.

The offices and conference areas are ventilated using the fourth air handler. The spaces served by this air handler are ventilated using a variable air volume system. The supplied from the air handler is comprised of 100% outdoor air, and supplied to the spaces at 72,000 CFM.

It is assumed that there is perfect mixing, and the effectiveness of the units is 100%. All four air handling units meet complied with the standard.

In addition, differences and applications of the Ventilation Rate Procedure and Indoor Air Quality Procedure are discussed.