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NATIONAL AUDIO VISUAL CONSERVATION CENTER

MALORY J. FAUST
MECHANICAL OPTION
SENIOR THESIS 2006-2007

EXECUTIVE SUMMARY

The National Audio Visual Conservation Center mechanical systems were evaluated with ASHRAE Standard 62.1 – 2004 to verify that the ventilation requirements were met by the design. The building serves many different functions including storage spaces for different media types, conservation office and lab space where the media is restored and conserved, and public areas to view and listen to the media.

Each type of space requires a different amount of ventilation for its purposes. The vaults require ventilation only to prevent the chemicals they emit from building up to unacceptable levels, but require very little ventilation for people, since they are rarely occupied.

The conservation labs and workrooms are generally served by 100 % outdoor air units due to the amount of air exhausted to keep the chemical concentrations under the specified limits.

Public and offices spaces are served through variable volume air handling units and were designed according to ASHRAE 62.1 2001. For this reason the design values were expected to vary from the calculations provided with this report.