

ASHRAE Standard 62.1-2004 Ventilation Compliance Evaluation Report

Wednesday, October 5, 2005

Executive Summary

The Ventilation Rate Calculation Procedure from ASHRAE Standard 62.1-2004 was used to determine whether the Hilton Hotel at BWI Airport complies with the prescribed ventilation requirements at design conditions. The building was served by four air-handling units (AHU), which ranged in size from 7500 cfm to 25,000 cfm for supply air. The amounts of outside air to the four AHUs varied between 2000 cfm and 16,000 cfm. The ventilation effectiveness was found to be 1.0 based on the air distribution configuration with ceiling supply of cool air. A comprehensive summary of the building's mechanical systems was included to provide background information on the hotel's design.

As described later in the Discussion section, two of the AHUs meet the standard and the other two AHUs do not comply with the standard. AHU-1 and AHU-3 both had unit minimum outdoor air quantities greater than the required design outdoor air intake flows. However, AHU-2 and AHU-4 both had unit minimum outdoor air quantities less than the required outdoor air intake flows. As a result, AHU-1 and AHU-3 were compliant with the minimum outside air requirements of ASHRAE Standard 62.1-2004, but AHU-2 and AHU-4 were not compliant.