ASHRAE Standard 62.1 Ventilation Compliance Evaluation EXECUTIVE SUMMARY

The Ventilation Rate Procedure described in ASHRAE Standard 62.1 (ASHRAE 2004) is used as the basis for calculating the ventilation requirements for the Milton Hershey School New Supply Center. The Supply Center consists of 14 air handling units supplying conditioned air to every space by way of VAV and CAV systems. Ventilation calculations for the Supply Center prove whether or not each of the air handling units complies with Standard 62.1 (ASHRAE 2004).

The Milton Hershey School New Supply Center is an 110,000 square foot, single story building with four elevated mechanical mezzanine rooms housing the 14 AHUs. Approximately 48,000 square feet of the building consists of the food distribution center for the Milton Hershey School while the remainder of the building consists of a clothing shop, general offices, a mail distribution center, and storage for the supply center and the school. Ventilation rates set fourth by Standard 62.1 (ASHRAE 2004) are determined for each space based on the occupancy, use, and square footage of these areas.

Ventilation effectiveness is determined by using the primary outdoor air fraction to locate the critical space for each AHU. The required amount of outdoor air each AHU must intake is then increased to ensure all spaces are properly ventilated and this value is compared to what is actually being supplied.

Complies OA Complies OA Min OA Min OA AHU Supplied with Std. AHU Supplied with Std. Req (cfm) Req (cfm) (cfm) 62.1 (cfm) 62.1 1124 YES 335 YES 1 1150 8 7400 2 795 1150 YES 9 1348 1000 NO 3215 3640 YES 10 1414 1125 NO 4 3008 5585 YES 394 1045 YES 11 5 1041 3000 YES 12 552 1250 YES 13500 996 YES 6 1416 YES 13 3000 7 686 3000 YES 14 647 800 YES

Table 1 Standard 62.1 Compliance Summary

Table 1 summarizes the OA requirements for each AHU in the supply center as well as the amount of outdoor air each AHU is scheduled to intake according to the construction documents prepared by H. F. Lenz Company. The table illustrates that 12 of the 14 AHUs comply with Standard 62.1 (ASHRAE 2004) based on the assumptions that were made for this report. AHU-9 and AHU-10 are not scheduled to supply enough outdoor air to their spaces as proven by the ventilation calculations and therefore do not comply with ASHRAE Standard 62.1 (ASHRAE 2004).