INTERPRETATION IC 62.1-2004-03 OF ANSI/ASHRAE STANDARD 62.1-2004 VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY

Transfer Approved: June 25, 2006

Originally issued as interpretation of Standard 62-1999 (IC 62-1999-07) on June 23, 2000, transferred to Standard 62-2001 (IC 62-2001-09) on January 12, 2002 and subsequently transferred to Standard 62.1-2004. Even though Standard 62.1-2004 includes some changes to relevant sections of Standard 62-2001, only minor revisions (related to referenced sections and equations) were made in transferring this interpretation to apply to Standard 62.1-2004.

Request from: Rick Sellers, Desert Aire Corporation, 8300 West Sleske Court, Milwaukee, WI 53223, rick@desertaire.com.

<u>Reference:</u> This request refers to ASHRAE Standard62.1-2004, Table 6-1, Minimum Ventilation Rates in Breathing Zone.

<u>Background to Questions:</u> There have been questions among design engineers on how to apply Table 6-1 to indoor pools. Table 6-1 specifies an outdoor air requirement of 0.48 cfm per square foot of pool and deck area, but does not define deck area. In addition, the table contains outdoor air requirements for other spaces that might be served by the same air handler serving the pool, such as Spectator areas. Questions have also risen as to how the ventilation requirements for these two space types should be combined.

<u>Desert Aire's Interpretation No. 1</u>: Deck area refers to the area surrounding the pool itself that would typically be expected to be wetted during normal pool use (Occupied mode), typically extending to 6 feet on either side of the pool water surface.

Question No. 1: Is Interpretation No. 1 correct?

Answer: Yes, except for specifying a typical distance for the deck area.

<u>Comment</u>: While the standard does not define deck area, the comment in Table 6-1 referring to humidity control implies that the issue is the pool water and the substances in the water. However, the particular distance from the pool water surface will depend on the layout of the specific pool and deck area, and it could be different than 6 feet beyond the pool water surface.

<u>Desert Aire's Interpretation No. 2</u>: When a system serves a pool area and other areas in the same space (e.g., a spectator area), then the total outdoor air requirement for the system is determined by adding the requirements for each of the spaces as opposed to selecting the larger requirement of spectator area vs. pool area.

Question No. 2: Is Interpretation No. 2 correct?

Answer: Yes, provided the system supplies outdoor air directly to the spaces without any recirculation.

<u>Comment</u>: When a dedicated outdoor air system provides ventilation air to a space consisting of different areas with different ventilation requirements, the design ventilation rate in cfm (L/s) is determined for each area using Equations 6-1 and 6-2. In the case of 100% outdoor air systems, the rates are then added together to determine the total design ventilation rate for the system per Equation 6-4. When a system provides a mixture of outdoor air and recirculated return air to a space consisting of different areas with different ventilation requirements, the design ventilation rate in cfm (L/s) is determined for each area and the system outdoor air intake rate in cfm (L/s) is determined in accordance with Section 6.2.5.