Summary of TRC Call Agenda for 7/6/20

The following is a summary of phone-based discussions for Change Requests (CRs) addressed by the Technical Review Committee (TRC) for the week of 7/6/2020. A link the recording of the call can be viewed at the CMAHC's Youtube channel by visiting our website at https://cmahc.org/technical-review-committee.php.

Due to the lack of a consensus for this call, the TRC discussed the CRs below and indicated a recommended vote for the absent TRC members. The votes were collected via email between 6/30 and 7/3.

Members Present: James Amburgey, Kevin Boyer, Michele Hlavsa, Vince Hill (for Joe Laco), Jodi Jensen, Cindy Marshall, Ellen Meyer, Tina Moore, Jason Schallock, Joe Stefanyak, Amanda Tarrier, Miklos Valdez

Members Absent: Chris Nelson

4.1.2.3.13-0002: This CR has been withdrawn by the CR submitter so the TRC did not address.

4.1.2.3.14-0002: This CR would require that the air filters used be suitable for elevated humidity levels. The TRC agreed that the intent of the CR was good but were concerned about how operators would know if a filter was suitable for elevated humidity levels, or if this would possibly conflict with manufacturer specifications. They suggested that information about air filters and suitability with elevated humidity levels be discussed in the Annex. It was acknowledged that the filter location is usually at the air intake so there would not be an opportunity to reduce humidity prior to the air going through the filter. The TRC unanimously recommended a Yes vote on this CR.

4.2.2.2.1-0001: This CR adds specific language to what constitutes the building envelope of an indoor aquatic venue. The TRC felt that the additions were not needed and that the MAHC definition of Indoor Aquatic Facility covered what would be included in inside building surfaces. The TRC unanimously recommended a No vote on this CR.

4.2.2.2.1.1-0001: This CR proposes to add a requirement that the ASHRAE Dehumidification Weather Data for the facility geographical location be used when calculating the effects of the ventilation air to the space it is being introduced. The TRC discussed that this was somewhat redundant to 4.6.2.5-0001

but it did expand the requirement to include that this be added to the evaporation load of all water surfaces, and occupant (includes spectators, swimmers and non-swimmers on the deck) latent moisture when sizing the climate control equipment. The TRC stated that information on accessing this database needed to be included in the Annex. The TRC unanimously recommended a Yes vote on this CR.

4.2.2.3.3.1-0001: This CR proposes to add language specifying that the air handling system for the chemical storage space shall not be interconnected with that of the indoor aquatic facility. The TRC proposed some minor modifications to the wording and unanimously recommended a Yes vote on the revised language.

4.2.2.3.4.1-0001: This CR proposes some clarification to the exterior duct section to specify that Insulated Duct ~~Exterior~~ Any system duct work located in an area not being conditioned ~~Ducts~~ shall be insulated on the exterior of the duct with a mold-resistant material where the surface temperature of the duct is capable of being less than the airstream temperature within the duct. The TRC unanimously recommended a Yes vote on this CR.

4.6.2.6.4-P0313: This CR proposes to delete the requirement "AIR HANDLING SYSTEM design may not consider mechanical fans used to push air within the space as part of the outdoor air calculations for the INDOOR AQUATIC FACILITY as defined in MAHC 4.6.2.7." The TRC disagreed and felt this was a useful reminder. They felt that in the future it would be useful to clarify this section. The TRC unanimously recommended a No vote on this CR.

4.6.2.6.4.1-0001: This CR adds a reference to the specific MAHC section for air delivery rate. The TRC unanimously recommended a Yes vote on this CR.

4.6.2.7-0001: This CR specifies performance objectives at the beginning of the section on air handling systems. The TRC discussed that although it may difficult to assess these in plan review there is more detail on the specific system requirements throughout the section, and that in general with performance based requirements there is a degree of reliance on the design professional's statement that the requirements are being met. The TRC recommended a Yes vote on this CR with one member recommending a No vote.

4.6.2.7.1-0001: This CR updates the referenced ASHRAE standard 62.1 from the 2011 to the 2016 version and provides an alternative for allowing higher minimum outdoor air levels than that calculated using ASHRAE standard 62.1 if determined by the registered design professional. The TRC unanimously recommended a Yes vote on this CR.

4.6.2.7.2-0001: This CR proposes to require that alarms for minimum airflow be set for each operating mode instead of just an absolute minimum of 0.48 cfm/ft2. The TRC felt that this may be complicated although it could always be an option for operators. The TRC proposed revised language to require either an alarm for the existing minimum or for each operating mode. The TRC recommended a Yes vote on the modified language.

4.6.2.7.3-0001: This CR proposes the following change:

4.6.2.7.3 Real-Time Occupancy. Design of the AIR HANDLING SYSTEM for stadium seating areas shall meet the requirements in ASHRAE 62.1-2019 for the Area Outdoor Air Rate (0.06 cfm/ft2) and the People Outdoor Air Rate (7.5 cfm/person) ~~shall meet the requirements for the number of cfm/ft2~~ based on the THEORETICAL PEAK OCCUPANCY of the stadium seating area.

Members were confused as to whether this changed the requirement to only require calculations for spectator seating areas and will reached out to the ventilation ad hoc committee for clarification. This CR will be revisited.

4.6.2.7.3.1-0001: This CR clarifies the section on determining real time occupancy. The TRC decided that as CR 4.6.2.7.3-0001 needed to be revisited it would be best to vote on this CR at that time, so it will be deferred.

4.6.2.7.4-0001: This CR proposes to add clarifications and additional language for air delivery rate. The Design & Construction TSC had proposed minor modifications and the TRC agreed with these and unanimously recommended a Yes vote on the CR as modified by the TSC.

4.6.2.7.5-0001: This CR proposes to make clarifications to the section on air flow. The TRC agreed that the changes would be useful and unanimously recommended a Yes vote on this CR.

4.6.2.7.6-0001: This CR proposes to update the reference to the ASHRAE Handbook in the Relative Humidity section. The TRC unanimously recommended a Yes vote on this CR.

4.6.2.7.6.1-0001: This CR proposes to add clarifications to the section on designing the air handling system to maintain dew point. The TRC unanimously recommended a Yes vote on this CR.

4.6.2.7.6.2-0001: This CR proposes to add clarifications to the section on condensation and mold control. The TRC unanimously recommended a Yes vote on this CR.

4.6.2.7.7-0001: This CR has been withdrawn by the CR submitter so the TRC did not address.

4.6.2.7.8-0001: This CR proposes additions to the Annex section on disinfection byproduct removal. The TRC unanimously recommended a Yes vote on this CR.

4.6.2.7.8-0002: This CR proposes a small edit to the section on disinfection byproduct removal. The TRC unanimously recommended a Yes vote on this CR.

At this time the scheduled call had ended and a number of TRC members had to drop off the call. The remaining members discussed the following CRs and took provisional votes on five of them. Votes are needed from the remainder of the TRC in order to make an official recommendation. The votes were collected via email after the TRC call

4.6.2.7.8.1-0002: Provisional YES **FINAL VOTE: Yes**

This CR proposes to add the requirement "Sufficient return air intakes shall be placed low in the space near aquatic venue surfaces such that they draw air across the water surfaces and pull in the highest concentration of airborne DBP contaminated air." The TRC agreed and all members present provisionally recommended a Yes vote on this CR.

4.6.2.7.8.1-0003: Provisional YES **FINAL VOTE: YES**

This CR proposes to add the requirement "Where a source capture exhaust system is provided, the AIR HANDLING SYSTEM shall be designed to help move the air on the water surface towards the exhaust. This exhaust air should not be allowed to mix with any return airflow in the AIR HANDLING SYSTEM." The TRC felt this made sense for both DBPs and biological contaminants and all members present provisionally recommended a Yes vote on this CR.

4.6.2.7.8.1-0004: Provisional YES **FINAL VOTE: YES**

This CR proposes to add the requirement "Air velocities shall not exceed 30 feet per minute (FPM) so as not to increase the evaporation rate and dehumidification requirement, unless adjustments are made to the evaporation rate as stated in section 4.6.2.7.1." The TRC agreed and all members present provisionally recommended a Yes vote on this CR.

4.6.2.7.9-0001: Provisional YES **FINAL VOTE: YES**

This CR proposes to make some clarifications to the section on re-entrainment of exhaust and contaminants. The TRC agreed and all members present provisionally recommended a Yes vote on this CR.

4.6.2.7.11.1-0001: Provisional YES **FINAL VOTE: YES**

This CR proposes to update the referenced ASHRAE Standard 62.1 from the 2013 to the 2019 edition. The TRC agreed and all members present provisionally recommended a Yes vote on this CR.

4.6.2.7.11.2-0001: This CR proposed changes to the requirements for outdoor air delivered in a system designed for 100% purge mode, that during winter the outdoor air delivered during purge be heated to a temperature established by the design engineer in order to prevent condensation. The TRC was concerned with the use of the term winter and also discussed the possibility of the air needing to be cooled or conditioned during warmer months. They proposed the following modified language but want to discuss with the rest of the TRC, so this CR needs to be revisited. In addition there should be a discussion in the Annex about needs during various seasons.

4.6.2.7.11.2 Outdoor Air. If a system is designed with 100% purge mode, the outdoor air delivered during PURGE shall be heated or conditioned to a temperature and humidity established by the HVAC design engineer to address any condensation in the duct system, the AIR HANDLING SYSTEM, and the building surfaces.

The TRC was unable to address the following CRs related to ventilation, which will be moved to an email discussion along with those listed above that need to be revisited:

4.6.2.8.1-0001, 4.6.2.9.2-0001, 4.6.2-0002, 4.2.2-0001, 4.9.1.4.1-0001, 5.6.2.3.1-0001

The other CRs scheduled for 7/6 were unable to be addressed and will be moved to a future call.