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**RE: Tupelo Aquatic Center - Exhaust Air Modifications**

Dear Don,

Per your request, this letter details recent improvements to the Tupelo Aquatic Center for your use in distributing to the US Southern Zone Committee.

The goal of the changes to the Aquatics Center ventilation system is to more effectively remove chloramines from the air in the natatorium space. Since chloramines are heavier than air and tend to linger close to the floor, the air that is exhausted from the building will be collected from floor level and exhausted directly to the outside. Previously this low exhaust was being drawn from the west side of the natatorium at floor level, opposite side from the primary building return air flow. This tended to cause the low exhaust to compete with the predominant west-to-east air flow in the building.

To resolve this, the large return air plenum cavity wall that runs the length of the east wall has been separated into lower and upper chambers, using aluminum sheet metal, and sealed to prevent cross contamination. Three new exhaust fans have been installed to exhaust all of the air and chloramines from the lower chamber directly to the outside. The 10 existing large Return Air Grills (RAG) at the bottom of the wall have been blanked off with sheet metal and openings cut to accept 1'x 2' balancing dampers to fit behind the existing grills. This allows the grills to be balanced for equal airflows and will keep the exhaust pulling from as low in the room as possible. Two additional 8"x16" RAGs have been added near the practice pool to further improve the ability to remove chloramines from that area. Also three new large RAGs have been added high up in the plenum wall to allow for the recirculation of the clean air in the building to the air conditioning system.

The exhaust fans on the west side of the building have been disabled. Now, all of the air flow in the building moves from west to east, improving the ability to sweep the air and chloramines across the room, evacuating the low "dirty" air and recirculating the higher "clean" air. These changes will have a positive impact on the air quality in the natatorium, particularly during large events when there are many swimmers in the water for extended periods of time.

We are excited to see these improvements further enhance an already great facility and remain committed to working to help the City of Tupelo achieve its goals.

Sincerely,



Will Lewis, AIA

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