

Madani, Mo

From: David John <David_John2@hotmail.com>
Sent: Thursday, July 18, 2019 7:50 AM
To: Madani, Mo
Cc: Campbell, Thomas
Subject: Mechanical TAC reject 8325

Mo,

I am recommending the TAC change their recommendation on 8325 to reject based on the follow:

8325 claims that returning bathroom air will "Reduce mold and indoor quality problems." In fact, allowing bathroom air to be returned rather than exhausted will increase VOCs and subject occupants with potential health, safety, and welfare issues. The issue of mold in bathrooms is an issues by returning air is not the solution.

VOCs released in bathrooms:

1. Cleaning fluids
2. Chloroform (which is a by-product of the water disinfection of chorine)
3. Human VOCs
4. Human generated odors

Also, many current national codes and standards do not recommend or allow bathroom air to be returned. Some which include the following:

1. **ASHRAE Standard 62.1**
Table 6.5 Minimum Exhaust Rates
Bathrooms are considered class 2
Class 2 air is considered moderately contaminated or odorous and is restricted in its recirculation.
2. **United States Consumer Products Safety Commission**
Recommendation for Reducing Exposure to Biological Contaminants
Install and use exhaust fans that are vented to the outdoors in kitchens and bathrooms and vent clothes dryers outdoors.
3. **EPA**
Care for Your Air: A Guide to Indoor Air Quality
Controlling the sources of pollution: Usually the most effective way to improve indoor air is to eliminate individual sources or reduce their emissions. Ventilating: Increasing the amount of fresh air brought indoors helps reduce pollutants inside. When weather permits, open windows and doors, or run an air conditioner with the vent control open. Bathroom and kitchen fans that exhaust to the outdoors also increase ventilation and help remove pollutants.
4. **EPA**
Building Codes and Indoor Air Quality siting DOE's comments

Table 2a: Residential Building Code Provisions Affecting Indoor Air Quality sites ASHRAE Standard 62.1

Table 3: DOE's Builders Challenge Program: Summary of Key Specifications for energy and indoor air DOE
13. Bathroom Ventilation – Required Include mechanical ventilation for all bathrooms with a bathtub, shower, spa, or similar source of moisture with an exhaust fan(s) that can provide at least 50 cfm (intermittent use) or 20 cfm (continuous use), or provide the room a window with an openable area of at least 4% of the floor area and no smaller than 1.5 square feet. All bathroom fans are vented to outdoors.

DOE 26. Pressure Balancing - Recommended All rooms in the conditioned space of the home do not exceed +/- 3 Pascals pressure difference relative to the central (open) areas of the home, when interior doors are closed and

the central air handler is operating. Powder rooms and laundry rooms are exempt. OR Return ducts or transfer grilles are installed in every room with a door to which conditioned air is supplied, except for bathrooms, closets, pantries, and laundry rooms.

We should address the mold and IAQ issues in a bathroom but returning bathroom air into a space is not the solution.

David John