Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

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March 8, 2018

The Honorable Calvin L. Scovel III
Inspector General
U.S. Department of Transportation
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

Dear Inspector General Scovel:

The post-engine-fire evacuation of American Airlines flight 383 in October 2016, coupled with the airline industry's newfound interest in reducing seat pitch and increasing the number of seats in commercial airliners, raises a decades-old question: Can airliners so full of passengers safely be evacuated in an emergency?

The Federal Aviation Regulations currently require a manufacturer of an aircraft with more than 44 passenger seats to prove, in short, that by virtue of the locations and types of emergency exits, the maximum number of crew and passengers can evacuate the aircraft within 90 seconds with half the exits blocked.[1] A manufacturer must show that each new airplane design meets this standard, thereby ensuring a high and consistent level of safety across the commercial fleet. However, an actual full-scale emergency evacuation drill is not required if the manufacturer can show that "a combination of analysis and testing will provide data equivalent to that which would be obtained by an actual demonstration."[2]

Aviation stakeholders have reported that commercial airplane manufacturers today generally favor, for various reasons, the use of simulations and modeling to show their compliance with the cabin emergency evacuation standards— standards that have not been significantly updated since 1990. Passengers today commonly carry large roll-aboard suitcases as hand baggage (due in part to airlines' increased fees for checked baggage). Stakeholders have noted other behavioral shifts as well, such as the propensity to film evacuations on smartphones rather than focusing on actually evacuating. For these reasons, we have concerns about the continuing validity of Federal Aviation Administration (FAA) assumptions within computer simulations of cabin evacuations. We therefore request that your office assess the following:

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[1] *See* 14 C.F.R. §§ 25.803, 25.807; 14 C.F.R. part 25, app'x. J.
[2] 14 C.F.R. § 25.803(c).

(1) How does the FAA ensure that aircraft evacuation simulation and modeling accurately replicate the results of actual full-scale evacuation drills previously relied upon by manufacturers to demonstrate compliance with the FAA's emergency evacuation standards?

(2) Has the FAA researched whether passenger behavior and industry changes, such as reduced seat pitch and denser seating configurations, affect passengers' ability to safely evacuate airliners in 90 seconds with half the exits blocked? If not, should the FAA conduct more analysis of these changes?

(3) Are there any additional steps the FAA, or the airline industry, can take to improve post-accident survivability when an evacuation is required?

If you have any questions regarding this request, please contact Alex Burkett with the Subcommittee on Aviation at (202) 225-9161. Thank you for your assistance.

Sincerely,

PETER DeFAZIO
Ranking Member

RICK LARSEN
Ranking Member
Subcommittee on Aviation