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The Honorable Michael P. Huerta
Administrator
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Dear Administrator  Huerta:

I am enclosing the summary detail findings and recommendations from the Spring 2015 meetings of the standing REDAC Subcommittees (Aircraft Safety, NAS Operations, Environment and Energy, Airports, and Human Factors).

The committee also identified a few emergent areas where research will be important to position the agency. You are certainly aware of each but the committee wanted to highlight these as potential high priority areas. They include:

Certification of Additive Manufacturing - The rapid emergence of additive manufacturing technologies, materials, and approaches will require understanding of the processes, materials properties and flaw characteristics to develop certification criteria for these new technologies.

Mixed UAS and Manned Aircraft Operations - The committee appreciates the recent progress in UAS operational approval for small UAS but notes that the approaches for low altitude segregated operations do not address the larger UAS integration challenge. Many future UAS operations will require Con-Ops and procedures for mixed UAS and manned aircraft. This will be very challenging and the committee is concerned that the fundamental work to support this has been deferred or neglected.

Evaluating Community Noise Impact of Advanced Terminal Area Procedures - Community noise concerns with advanced PBN procedures at levels below the 65DNL threshold appear to be raising. This is a dual concern as it creates a barrier to implementation of NextGen procedures and creates pressure to revisit noise metrics and evaluation processes. Research is required to improve the noise evaluation process, support a strong scientific basis for any metric adjustments and to enhance community involvement.

Opportunities for Cross Cutting Approaches - The REDAC notes that many emerging technical opportunities (e.g. Big Data Analysis, Cyber-Security, Human-Automation System Integration) impact multiple lines of business throughout the agency. There appear to be opportunities to take cross-cutting approaches in these areas.

I am sorry that we were not able to work out the schedule so that you could attend the recent meeting. I hope you can join us in the future.

Sincerely,

R. John Hansman



Chair, FAA Research, Engineering and Development Advisory Committee

Enclosure