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THIRTEENTH AIR NAVIGATION CONFERENCE

Montréal, Canada, 9 to 19 October 2018

COMMITTEE A

Agenda Item 5: Emerging Issues

5.5: Other emerging issues impacting the global air navigation system including unmanned aircraft systems (drones), and supersonic and commercial space operations

VIEWS OF THE UNITED STATES ON CIVIL SUPERSONIC FLIGHT

(Presented by the United States)

EXECUTIVE SUMMARY

This paper presents the views of the United States on civil supersonic flight and the critical need for technical work to move forward within ICAO to develop Standards for supersonic aircraft.

1. INTRODUCTION

1.1 This paper presents the views of the United States on civil supersonic flight and the critical need for technical work to move forward within ICAO to develop Standards for supersonic aircraft. The United States is committed to advancing the development of supersonic aircraft, as part of our broader efforts to support innovation in transportation. The United States has been working through ICAO's Committee on Aviation Environmental Protection (CAEP) to develop supersonic certification Standards, and it is critical that this technical work move forward expeditiously. Due to the expected entrance of civil supersonic aircraft type(s) into the fleet within the next five to ten years, additional emphasis must be placed on this topic.

1.2 The United States Federal Aviation Administration (FAA) has begun to re-examine its policies and regulations concerning supersonic aircraft noise and engine emissions in light of domestic interest and renewed effort under ICAO CAEP. Technical discussions within the ICAO must continue to develop Standards and Recommended Practices (SARPs) to enable the development and certification of supersonic aircraft.

2. DISCUSSION

2.1 Given the increased activity in the development of supersonic aircraft and the potential to introduce civil supersonic aircraft into the fleet in the near term, the ICAO CAEP has placed additional emphasis on the supersonic transport work programme from the noise technical perspectives during the

eleventh meeting of the CAEP (CAEP/11), and the United States strongly supports this direction. For the civil supersonic flight to become reality, the supersonic transport work programme will need to continue so CAEP will meet industry plans for certification and the first entry into service.

2.2 Within ICAO CAEP, there are tasks dedicated to supporting the development of environmental SARPs for civil supersonic aircraft. CAEP has a long history of completing robust analyses for making data-driven decisions that support SARPs. The United States believes that it is essential that this same process be undertaken for supersonic aircraft. The United States is focused on timely execution of the necessary technical work within ICAO CAEP, as with any other environmental Standard, recognizing that there will be an appropriate time for policy decisions and political considerations following the technical work.

2.3 In addition to the environmental work, the United States aims to apply existing airworthiness standards when they are appropriate, and develop appropriate airworthiness standards when it determines that the current regulations do not contain adequate or appropriate safety standards for a product due to new or unique features. The United States regulatory regime currently allows for this flexibility in advance of promulgating new airworthiness regulations. Since the current airworthiness regulations do not adequately account for many aspects of new supersonic aircraft and engines, the United States will leverage this flexibility to achieve airworthiness certification of these designs. Historical work done in support of previous supersonic aircraft product development and research provides a starting point for discussions concerning new supersonic transports. However, application of even newer technology may require reassessment of some past technical and regulatory issues.

3. CONCLUSION

3.1 Due to the expected entrance of civil supersonic aircraft type(s) into the fleet within the next five to ten years, additional emphasis must be placed on development of supersonic certification Standards. The necessary technical work within ICAO must move forward to enable developing these Standards based on thorough technical analyses before policy decisions and political factors are considered.

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