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INFORMATION PAPER

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Mexico City, 29 August - 1 September 2023

Agenda Item 3: Follow-up of NACC/WG 2022-2023 Action Plan

3.6 NACC/WG progress in operations: AO, Air Traffic Management (ATM), Search and Rescue (SAR), ATFM and Aerodromes and Ground Aids (AGA)

20-NM PERFORMANCE-BASED LONGITUDINAL SEPARATION (PBLs)

(Presented by the United States)

EXECUTIVE SUMMARY	
The following paper provides information on the FAA's plans for implementation of 20-NM PBLs in the U.S. delegated oceanic control areas of New York East, New York West, Oakland and Anchorage air traffic facilities.	
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Economic Development of Air Transport• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• ICAO Doc 4444, PANS-ATM, 5.4.2.9 PERFORMANCE-BASED LONGITUDINAL SEPARATION MINIMA

1. Introduction

1.1. To align with the International Civil Aviation Organization's (ICAO) Annex 6, Annex 11, and Procedures for Air Navigation and Air Traffic Management (PANS-ATM) (Doc 4444), and to harmonize with neighboring air navigation service providers, the FAA is implementing a 20 NM PBLs standard in the oceanic areas of New York, Oakland and Anchorage Flight Information Regions (FIRs).

1.2. The specific change to Doc 4444 is the addition of para 5.4.2.9 and the associated separation table in that section. This change is included in Amendment 16 published in November of 2020. The change is presented in the **Attachment**. Guidance to States on the implementation of PBLs will be published in 2024 in Document 10120. The draft material was finalized in November 2020, however, due to COVID-19 impacts, publication was delayed. The final draft material is available through ICAO.

1.3. This change adds a new 20 NM PBLs standard for properly equipped aircraft operating in portions of FAA-controlled oceanic airspace. The FAA will continue to support the 30 NM longitudinal standard.

1.4. 20 NM PBLs will be applicable between Performance-based Communication and Surveillance (PBCS) aircraft meeting Required Navigation Performance (RNP) 4, Required Communication Performance (RCP) 240, Required Surveillance Performance (RSP) 180, and reporting via Automatic Dependent Surveillance – Contract (ADS-C) at least every 192 seconds.

2. Discussion

2.1 The FAA’s oceanic automation system, Advanced Technology and Oceanic Procedures (ATOP), has the capability to detect conflicts between oceanic flights, fully integrates flight data processing, depicts aircraft for the controller using a situational display, and supports the use of satellite data link communication and ADS-C. ATOP will be modified to update the ADS-C periodic rate to 192 seconds when applying the 20 NM PBLs standard.

2.2 The FAA considered a number of different ways to implement 20 NM longitudinal separation within U.S.-delegated airspace. Based upon language in Doc 4444, and from an operational and safety viewpoint, the most likely implementation will be through confirmation (acknowledgment) that both aircraft in the pair have established ADS-C periodic reporting intervals of 192 seconds prior to application of the separation standard. This will be performed manually or with automation software and controller management. The initial implementation will be between specific aircraft pairs versus utilization of a 192-second reporting interval for all eligible aircraft.

2.3 The FAA administered a safety risk management assessment for the implementation of 20 NM longitudinal separation in U.S. delegated airspace. A panel of experts conducted the assessment during the last week of October 2022.

2.4 The FAA also recently completed the pre-implementation safety assessment in accordance with ICAO Doc 9689 and ICAO Doc 10120 (PBLs Manual). The results of that study indicate that the target level of safety (TLS) will be met for the U.S. oceanic airspaces examined.

2.5 Implementation of the 20 NM PBLs will be available after the latest ATOP update scheduled for release in October 2024.

3. Conclusion

3.1 The Group is invited to note the information provided.

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APPENDIX
PANS-ATM PBLs excerpt

5.4.2.9 PERFORMANCE-BASED LONGITUDINAL SEPARATION MINIMA

Note.— Guidance material for implementation and application of the separation minima in this section is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869), the Global Operational Data Link (GOLD) Manual (Doc 10037), the Satellite Voice Operations Manual (SVOM) (Doc 10038), the Guidelines for the Implementation of Performance-based Longitudinal Separation Minima (Doc 10120) and the Manual on Monitoring the Application of Performance-Based Horizontal Separation Minima (Doc 10063).

5.4.2.9.1 Within designated airspace, or on designated routes, separation minima in accordance with the provisions of this section may be used.

5.4.2.9.2 The following separation minima may be used for aircraft cruising, climbing or descending on:

- a) the same track; or
- b) crossing tracks provided that the relative angle between the tracks is less than 90 degrees.

<i>Separation minima</i>	<i>RNP</i>	<i>RCP</i>	<i>RSP</i>	<i>Maximum ADS-C periodic reporting interval</i>
93 km (50 NM)	10	240	180	27 minutes
	4	240	180	32 minutes
55.5 km (30 NM)	2 or 4	240	180	12 minutes
37.0 km (20 NM)	2 or 4	240	180	192 Seconds (3.2 Minutes)
5 minutes	2 or 4 or 10	240	180	14 minutes

Note. — The 192 Seconds (3.2 minute) maximum ADS-C periodic reporting interval is intended for use during application of the 37 km (20 NM) separation minimum between specific aircraft pairs and is not intended for use as a default periodic reporting interval for all aircraft. Attention is drawn to the guidance regarding ADS contract – periodic in the Global Operational Data Link (GOLD) Manual (Doc 10037).