



International
Civil Aviation
Organization

Organisation
de l'aviation civile
internationale

Organización
de Aviación Civil
Internacional

Международная
организация
гражданской
авиации

منظمة الطيران
المدني الدولي

国际民用
航空组织

PRES RK/1938
NACC-S11/01

13 April 2011

To: Representatives on the Council

cc: Members of the ANC, Secretary General, D/ANB

From: President of the Council

Subject: **Approval by the Air Navigation Commission, acting under delegated authority, of amendment to the *Regional Supplementary Procedures* (Doc 7030/5) (Council Subject No. 14.1.3)**

In accordance with the decision taken during the 8th and 12th Meetings of the 156th Session of the Council on 8 and 15 March 1999 respectively, the Council delegated the approval of amendments to PANS documentation and to Regional Supplementary Procedures to the Air Navigation Commission, subject to the approval by the President of the Council after their circulation to Representatives on the Council.

In view of the above, I am circulating the attached memorandum from the President of the Air Navigation Commission regarding amendment NACC-S11/01 to the *Regional Supplementary Procedures* (Doc 7030/5).

Should you have any comments, I would be grateful to receive them no later than 11 May 2011. In the absence of comments by that date, I shall approve this amendment to the SUPPs on behalf of the Council.

Roberto Kobeh González

Enclosure:

Memorandum from the
President of the Air Navigation Commission

Ref.: NACC-S11/01

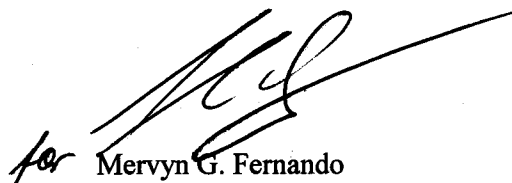
12 April 2011

To: President of the Council

From: President of the Air Navigation Commission

Subject: **Approval by the Air Navigation Commission of amendment to the *Regional Supplementary Procedures* (Doc 7030/5) (NACC-S11/01 – NAM)**

I am pleased to inform you that the attached amendment to the Regional Supplementary Procedures was approved by the Air Navigation Commission on 25 March 2011 according to the procedure approved by the Council (156/8) on 8 March 1999. I am now forwarding the amendment for your approval after its circulation to the Representatives on the Council.


for Mervyn G. Fernando

Enclosure:

Amendment (NACC-S11/01)

ATTACHMENT

PROPOSAL FOR AMENDMENT OF THE REGIONAL SUPPLEMENTARY PROCEDURES NAM REGION (DOC 7030/5)

(Serial No.: NACC S-11/01 – NAM)

a) **Regional Supplementary Procedures:**

Doc 7030/5 – NAM.

b) **Proposed by:**

Canada and the United States, supported by the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS).

c) **Proposed amendment:**

Editorial Note: Amendments are arranged to show deleted text using strikeout (~~text to be deleted~~), and added text with grey shading (text to be inserted).

1. *Amend* in the NAM SUPPs, as follows:

On page NAM 2-1:

CHAPTER 2. FLIGHT PLANS

2.1 CONTENT

...

2.1.2 Area navigation (RNAV) specifications

~~Nil.~~

2.1.2.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNAV specification prescribed, has been appropriately approved and can comply with all conditions of that approval. Additionally, the letter Z shall be inserted in Item 10 and NAV/RNP10 or NAV/RNP4, as appropriate, inserted in Item 18.

2.1.3 Required navigation performance (RNP) specifications

~~Nil.~~

2.1.3.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNP specification prescribed, has been appropriately approved and can comply with all conditions of that approval. Additionally, the letter Z shall be inserted in Item 10 and NAV/RNP10 or NAV/RNP4, as appropriate, inserted in Item 18.

On page NAM 4-1:

CHAPTER 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

...

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

~~Nil.~~

Note – RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation (PBN) Manual (Doc 9613), Volume I, 1.2.5.5.

Area of Applicability

4.1.1.1.1 For flights within the control area(s) of the Anchorage Arctic, Anchorage Continental and Edmonton FIRs, a lateral separation minimum of 93 km (50 NM) may be applied.

Means of Compliance

4.1.1.1.2 For application of 4.1.1.1.1, the aircraft and the operator must have been approved by the State of Registry or the State of the Operator, as appropriate, to meet the following requirements (or equivalent):

- a) aircraft are approved to RNP 10 or RNP 4; and
- b) operator programmes shall be established to mitigate the occurrence of large navigation errors due to equipment malfunction or operational error.

Note.— Detailed guidance material on RNP and RNAV is contained in the Performance-based Navigation (PBN) Manual (Doc 9613).

On page NAM 6-1:

CHAPTER 6. AIR TRAFFIC SERVICES

...

6.2 SEPARATION

6.2.1 Lateral

(A11 – Attachment B; P-ATM – Chapters 5 and 15)

6.2.1.1 ~~Minimum lateral separation in the Anchorage Arctic CTA shall be 167 km (90 NM) except the lower minima in 5.4.1.2 of the PANS-ATM may be applied, or further reduced in accordance with 5.11 of the PANS-ATM, when the conditions specified in the relevant PANS-ATM provisions are met~~ Except as provided for in 6.2.1.2 through 6.2.1.5, the minimum lateral separation in the Anchorage Arctic and Edmonton FIRs/CTAs shall be 167 km (90 NM).

6.2.1.2 The minimum lateral separation in Canadian domestic airspace shall be 110 km (60 NM) between aircraft which are MNPS approved but not approved RNP 10 or RNP 4.

6.2.1.3 The minimum lateral separation shall be 93 km (50 NM) between aircraft meeting the provisions in 4.1.1.1 except minimum lateral separation between aircraft transitioning from Canadian Minimum Navigation Performance Specification (CMNPS) airspace to other MNPS airspace, that shall be 110 km (60 NM).

On page NAM 7-1:

CHAPTER 7. SAFETY MONITORING

...

7.2 AIRSPACE MONITORING

...

7.2.2 RNAV

~~Nil.~~

7.2.2.1 RNAV 10 (RNP 10)

7.2.2.1.1 Prior to implementation, the safety level of airspace where a 93 km (50 NM) lateral separation minimum is to be applied shall be determined by an appropriate safety assessment. Safety will be assessed against a target level of safety (TLS) of 5×10^{-9} fatal accidents per flight hour per dimension and/or a Hazard Identification and Risk Analysis shall be performed.

Note.— Detailed guidance material on conducting safety assessments is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689) and the Safety Management Manual (Doc 9859).

7.2.2.1.2 Adequate monitoring of flight operations shall be conducted to provide data to assist in the assessment of the achieved lateral navigation performance of the aircraft population in relation to the lateral separation minimum. Ongoing safety assessments shall be carried out to ensure that acceptable levels of safety set in accordance with the ICAO safety management provisions are being met.

Note.— Monitoring will be conducted in accordance with the appropriate guidance material issued by ICAO. Detailed guidance is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689) and the Safety Management Manual (Doc 9859).

2. Amend in the PAC SUPPs, Chapter 4, 4.1.1 as follows:

CHAPTER 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

...

4.1.1 Area navigation (RNAV) specifications

...

4.1.1.1.1 For flights on designated controlled oceanic routes or areas within the ~~Anchorage-Arctic, Anchorage-Continental,~~ Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti Firs, a lateral separation minimum of 93 km (50 NM) may be applied.

d) **Date when proposal received:**

22 December 2010

e) **Proposer's reason for amendment:**

1. On 10 March 2011, Canada, in consultation with the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS), plans to implement a 93 km (50 NM) lateral separation within the control area of the Edmonton FIR. This implementation will harmonize operations between the Edmonton FIR and the control areas of the Anchorage Continental and Anchorage Arctic FIRs.
2. 93 km (50 NM) lateral separation has been authorized for RNP 10 operations since 1998 in the Anchorage Arctic and Anchorage Continental FIRs as part of the initial Pacific Region implementation. Authorization for use of this lateral separation minimum in the Anchorage Arctic and Anchorage Continental FIRs was included in the PAC SUPPS; however, it is now being moved into the NAM SUPPS as the FIRs are located in the NAM Region.
3. 93 km (50 NM) lateral separation will be applied between aircraft authorized required navigation performance 10 (RNP 10) or RNP 4 by the State of Registry or State of Operator, as appropriate.

Note. – Guidance and direction for RNP authorization are provided in ICAO Annex 6, Parts I and II, paragraph 7.2 (Navigation equipment). Criteria for the application of 93 km (50 NM) lateral separation between aircraft authorized RNP 10 or RNP 4 is currently published in Regional Supplementary Procedures for various regions including the CAR, NAT and PAC.

4. Implementation of 93 km (50 NM) lateral separation in the Anchorage Arctic and Edmonton FIRs/CTAs will harmonize the application of 93 km (50 NM) lateral separation across the northern airspace of the NAM Region.
5. Reduction of lateral separation from 110 km (60 NM) to 93 km (50 NM) in the Edmonton FIR/CTA will increase the availability of routes and flight levels in that airspace and enable more aircraft to operate on time and fuel efficient routes and flight levels. This, in turn, will reduce fuel burn and gas emissions. In addition, en route capacity and air traffic management (ATM) flexibility will be enhanced.
6. Analysis of aircraft types operating in the area affected by this initiative indicates that almost all of the flights conducted in the airspace are now flown by aircraft meeting RNP 10 or RNP 4 specifications without modification.
7. Aircraft that are not authorized for RNP 10 or RNP 4 will be allowed to continue to file any route at any flight level in areas listed above. They will be cleared to operate on their preferred routes and flight level as traffic permits; however, 93 km (50 NM) lateral separation will not be applied to them.
8. 93 km (50 NM) lateral separation has been authorized for RNP 10 or RNP 4 operations since 1998 in the Pacific Region. It is also currently applied in the West Atlantic Route System (WATRS), in the European-South American Corridor; on routes between Santiago, Chile and Lima, Peru; on routes that pass south of the Himalayas connecting Australia, Asia, the Middle

East, Europe and trans-Africa routes. Project planners will apply the experience gained in these other areas to support the current implementation planning.

9. A Safety Risk Management (SRM) panel composed of aviation experts from Canada and United States agreed to ensure that hazards are identified and unacceptable risk mitigated prior to any changes to the United States National Airspace System. Applying the principles of the SRM process, the panel identified no high or medium risk hazards and only two low risk hazards. It was determined by the SRM panel that the reduction of lateral separation in the Anchorage Arctic and Edmonton FIR/CTAs can be safely implemented.

f) **Proposed implementation date of the amendment:**

10 March 2011.

g) **Proposal circulated to the following States and Organizations:**

Algeria	Dominica	Kenya
Antigua and Barbuda	Dominican Republic	Laos People's Democratic Republic
Argentina	Ecuador	Lebanon
Angola	Egypt	Luxembourg
Australia	El Salvador	Madagascar
Austria	Ethiopia	Malaysia
Bahamas	Fiji	Maldives
Bangladesh	Finland	Mexico
Barbados	France	Monaco
Belize	French Antilles	Mongolia
Belgium	French Guiana	Morocco
Bhutan	Gabon	Mozambique
Bolivia	Gambia	Myanmar
Brazil	Germany	Namibia
Brunei Darussalam	Ghana	Nepal
Bulgaria	Greece	Netherlands
Cambodia	Grenada	Aruba
Cameroon	Guatemala	Curacao
Canada*	Guinea-Bissau	St. Maarten
Cape Verde	Guyana	New Zealand
Central African Republic	Haiti	Nicaragua
Chile	Honduras	Niger
China	Hungary	Nigeria
Colombia	Iceland	Norway
Costa Rica	India	Pakistan
Congo	Indonesia	Panama
Cote d'Ivoire	Iran	Papua New Guinea
Cuba	Ireland	Paraguay
Czech Republic	Israel	Peru
Democratic People's Republic of Korea	Italy	Philippines
Democratic Republic of the Congo	Jamaica	Poland
Denmark	Japan	Portugal
	Jordan	Republic of Korea
	Kazakhstan	

Romania	Tajikistan	Uruguay
Russian Federation	Thailand	Uzbekistan
Saint Kitts and Nevis	Trinidad and Tobago	Venezuela
Saint Lucia	Tunisia	Viet Nam
Saint Vincent and the Grenadines	Turkey	
Saudi Arabia	Uganda	
Senegal	Ukraine	ASECNA *
Sierra Leone	United Arab Emirates	COCESNA *
Singapore	United Kingdom	EUROCONTROL *
Somalia	Anguilla	IACA *
South Africa	Bermuda	IAOPA *
Spain	British Virgin Islands	IATA *
Sri Lanka	Cayman Islands	IBAC *
Suriname	Montserrat	IFALPA *
Sweden	Turks and Caicos Islands	IFATCA *
Switzerland	United Republic of Tanzania	
	United States *	<i>* For information purposes only</i>

g) **Secretariat comments:**

1. Canada and United States have developed PBN implementation plans based on the implementation plan utilized for the WATRS airspace, and the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (RPBANIP), which was supported by the Third Directors General Meeting of North American, Central American and Caribbean (NACC/DCA/3).
2. The Second Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS/2) Meeting supported the implementation of RNP 10 specifications for use of 50 NM lateral separation in the Cross-Polar and Trans-East routes network (Conclusion 2/2 refers).
3. To maximize the benefits of this implementation, the TRASAS established a Cross Polar Route Working Group (CPWG) to harmonize PBN implementation in the airspaces covering the Cross-Polar and Trans-East routes areas of operation.
4. Implementation of 50 NM lateral separation will enable more aircraft to operate on time, on new direct and efficient routes and at optimum flight levels, thereby reducing route lengths, fuel burn and gas emissions. In addition, en route capacity and Air Traffic Management (ATM) flexibility will be enhanced.
5. Monitoring arrangements for pre and post RNP implementation in the Cross-Polar route network within the NAM Region have been established between Canada and United States through their safety risk panel to ensure agreed TLS in the designated airspaces.
6. Parts of this proposal will require further amendment consequential to and in support of the implementation of Amendment No. 1 to the PANS-ATM (Doc 4444), applicability date of 15 November 2012. The States concerned will be notified at the appropriate time.