澳門特別行政區
REGIÃO ADMINISTRATIVA ESPECIAL DE MACAU

民航局
AUTORIDADE DE AVIAÇÃO CIVIL

Application for Performance-based Navigation (PBN) Operational Approval

Instructions for applicant:

CIVIL AVIATION AUTHORITY

- i) Refer to Macao Aeronautical Circular AC/OPS/022 for detail of the application process.
- ii) Application shall be submitted by a cover letter enclosing the completed application form.
- iii) All attachments (section 5) to support the application must be submitted with this form. Incomplete application will not be processed and may delay the operational approval.
- iv) For applicant requesting an AOC variation, operational approval will be incorporated into the AOC Operations Specifications. Submission of an AOC variation form is <u>not required</u>.

v) Separate application form and attachment shall be used for each navigation specification. vi) Extra information may be provided with separate sheet of A4-paper attached to this form.						
4 Navigation Cassi	Signation (class	.1	L' (' (' V))			
 1. Navigation Specification (check one box per application form ') □ RNAV 10 (designated as RNP 10) □ RNP 4 						
☐ RNAV 10 (designat	eu as KINP	10)	RNP 4			
	·		☐ RNP 1			
RNAV 1 and RNAV 2			RNP APCH			
Other:			(Specification in accordance with ICAO Doc 9613)			
2. Applicant Details						
Operator :						
☐ Variation of AOC iv)	No.:			☐ Non-	AOC holder	
Focal point(s) for furth	er details re	garding opera	ational/airworthiness as	spects of this	s application:	
,			Name :			
Title:			Title:			
Tel. no. :			Tel. no. :			
Fax no. :			Fax no.:			
E-mail :			E-mail:			
			ircraft details in case of ins)	
Aircraft type / model	Serial no.	Registration	Aircraft type / model	Serial no.	Registration	
4. Applicant's Declaration						
• • • • • • • • • • • • • • • • • • • •						
I declare that all information provided in this application is correct to the best of my knowledge and belief. (Signatory shall be an accountable person who holds the responsibility for AOC affairs or person with equivalent authority as delegated by the applicant.)						
Name:			Title:			
Signature : Date:						

Application for Performance-based Navigation (PBN) Operational Approval

5. Support documents submitted with the application				
Attachment for the operational approval	Content of the attachment / Applicant remarks	For official use only		
A Aircraft eligibility				
⇒ Evidence of aircraft compliance against the relevant airworthiness criteria, i.e. airworthiness certification such as approved flight manual (or AFM supplement).				
B Description of aircraft equipment				
⇒ Configuration list with detail of the pertinent components and equipment used for the intended PBN operation.				
C Maintenance programme				
Maintenance programme for the individual navigation systems pertinent to the intended operation or the necessary changes to maintenance programme, including reliability programme (if applicable).				
D Minimum Equipment List (MEL)				
⇒ Proposed (or amendment of) MEL identifying the minimum equipment and specifying the required dispatch conditions for each item pertinent to the intended PBN operation.				
E Past performance				
⇒ History of events or incidents related to navigation errors that have been covered by training, procedures, and maintenance, or aircraft / navigation system modifications.				

Application for Performance-based Navigation (PBN) Operational Approval

F Operations manuals and checklists ⇒ Information / guidance on the standard operating procedures, navigation operating instructions and contingency procedures for the intended PBN operations.	
G Training and evaluation programme	
⇒ Training programme addressing operational practices, procedures and training items related to the operations for the desired navigation specification (e.g. initial, recurrent training for flight crew members, flight operations officers or maintenance personnel).	
H Navigation database management	
⇒ Evidence of navigation database's compliance with EUROCAE/RTCA ED-76/DO-200A Standards for Processing Aeronautical Data, and means to ensure its currency and integrity (if applicable).	
Navigation error control	
⇒ Process of navigation error reporting and analysis for remedial actions which shall remove the causal factors of the error.	
J Compliance matrix	
⇒ Compliance matrix against the applicable provisions for navigation specification, as specified in relevant chapter of ICAO PBN manual (Doc 9613). Refer to the sample compliance matrix provided at the end of this application form.	

Application for Performance-based Navigation (PBN) Operational Approval

	Compliance Matrix for RNAV 10 (with respect to ICAO Doc 9613 – Volume II Part B chapter 1)						
Paragraph	Means of compliance / Operator's document reference	Additional supporting information	Comply?	AACM comment			
1.1 ~ 1.2	Informational materials only		N/A				
1.3.2	Approval process Application is submitted in accordance with AC/OPS/022R00	Application and implementation process will follow the submitted Schedule of Events (SoE)	YES				
1.3.3.1	Aircraft eligibility RNP certification through Aircraft Flight Manual (AFM)	Attachment A – AFM section 01-02-34 Aircraft is compliant with AC-90-xxx	YES				
1.3.3.2 1.3.3.2.1 1.3.2.2.2.1 1.3.3.2.2.2 1.3.3.2.2.3 1.3.3.2.2.4 1.3.3.2.2.5 1.3.3.2.2.6	Operational approval Aircraft eligibility Description of aircraft equipment Training documentation OMs and checklists MEL considerations Continuing airworthiness Past performance	Attachment A – Copies of AFM Attachment B – List of navigation equipment Attachment G – Training manual extract Attachment F – Operations manual extract Attachment D – MEL amended pages Attachment C – Aircraft maintenance program Attachment E – History of navigation errors	YES				
1.3.4 1.3.4.2.1	Aircraft requirements Aircraft is equipped with (dual) GNSS (TSO-C129) and meets the RNP 10 requirements without time limitation	Attachment A – AFM section 01-02-34 Aircraft equipped with GNSS compliant with AC 20-1xx	YES				
1.3.5	Operating procedures Operations Manual – Part A volume 1 (OM-A1)	Attachment F - OM-A1 chapter 8.3.5.2 (flight planning) and 8.4.5.3 (pre-flight procedures)	YES				
1.3.6	Navigation equipment Aircraft is fitted with two LRNS (2 x GPS)	Attachment A – AFM 1-01-34 paragraph 2.1 Attachment F – OM-A1 chapter 8.4.5	YES				
1.3.7	Flight plan designation Operations Manual – Part A volume 3 (OM-A3)	Attachment F – OM-A3 chapter 3.3.2 (filing of ICAO ATS flight plan)	YES				
1.3.8.1 1.3.8.2	Availability of NAVAIDs Operations Manual – Part A volume 1 and 3 (OM-A1/A3)	Attachment F — OM-A1 chapter 8.4.5.3 and OM-A3 chapter 3.3.1	YES				
1.3.9.1 thru 1.3.9.9	En route Generic: Operations Manual – Part A volume 1 (OM-A1) A/C specific: Operations Manual – Part B volume 1 (OM-B1)	Attachment F – OM-A1 chapter 8.3.5.4 Attachment F – OM-B1 section SPO 2.1 ~ 2.7	YES				
1.3.10	Pilot knowledge and training Operations Manual – Part D volume 1 (OM-D1)	Attachment G – OM-D1 chapter 5.2.2 (PBN courses Module B – CBT for RNAV 10)	YES				
1.3.11	Navigation database (not mandatory)	Navigation database is not carried	N/A				
1.3.12	Oversight of operators Operations Manual Part A volume 1 and 3 (OM-A1/A3) Maintenance Control Manual (MCM)	Attachment I – OM-A1 chapter 3.5.1.8 Attachment I – OM-A3 chapter 7.2.5 Attachment C – MCM chapter 10.2.6	YES				

FS/APP/008 (Rev. 0 / 19 Oct 15)