

## **PART 3 JOB AIDS**

### **APPLICATION TO CONDUCT BASIC RNP 1**

#### **1. Introduction**

This Job Aid was developed to provide operators, and inspectors with guidance on the process to be followed in order to obtain a Basic-RNP 1 approval. It should be used as an aid for the approval process but frequent reference to the ICAO PBN Manual (DOC 9613) and PBN Operational Approval Handbook will be required. Volume II, Part C, Chapter 3 contains detailed guidance on the implementation of Basic-RNP 1.

#### **2. Purpose of the Job Aid**

- 2.1 To give operators and inspectors information on the main Basic-RNP1 reference documents.
- 2.2 To provide tables showing the contents of the application, the associated reference paragraphs, the place in the application of the operator where Basic -RNP 1 elements are mentioned and columns for inspector comments and follow-up on the status of various elements of Basic -RNP 1.

#### **3. Actions Recommended for the Inspector and Operator**

- 3.1 At the pre-application meeting with the operator, the inspector reviews the “basic events of the Basic -RNP 1 approval process” described in Section 1 of this Job Aid, in order to provide an overview of the approval process events.
- 3.2 The inspector reviews this Job Aid with the operator in order to establish the form and content of the Basic -RNP 1 approval application.
- 3.3 The operator uses this Job Aid as a guide to collect the documents of the Basic -RNP 1 application.
- 3.4 The operator inserts in the Job Aid references showing in what part of its documents are the Basic -RNP 1 elements located.
- 3.5 The operator submits the Job Aid and the application to the inspector (with the required documents).
- 3.6 The inspector indicates in the Job Aid whether an item is in compliance or needs corrective action.
- 3.7 The inspector informs the operator as soon as possible when a corrective action by the operator is required.
- 3.8 The operator provides the inspector with the revised material when so requested.
- 3.9 The MCAA provides the operator with the operational specifications (air operator) or a letter of authorization (other), as applicable, when the tasks and documents have been completed.



## APPLICATION TO CONDUCT BASIC RNP 1

### SECTION 1 - INFORMATION ON AIRCRAFT AND OPERATOR IDENTIFICATION

**NAME OF THE OPERATOR:** \_\_\_\_\_ is applying for Basic-RNP 1 Operations Approval.

Aircraft manufacturer, model, and series	Aircraft Registration (required only if installed equipment varies between model and series)	List relevant make and model of related navigation equipment

**DATE OF PRE-APPLICATION MEETING** \_\_\_\_\_

**DATE ON WHICH THE APPLICATION WAS RECEIVED** \_\_\_\_\_

**DATE ON WHICH THE OPERATOR INTENDS TO BEGIN BASIC-RNP 1 OPERATIONS** \_\_\_\_\_



## SECTION 2 – OPERATOR APPLICATION (ITEMS AND DOCUMENTS)

Item	Title of document	Indication of inclusion by the operator	Comments by the Inspector
1	<b>Airworthiness documents showing aircraft eligibility for Basic-RNP 1.</b> AFM, AFM revision, AFM supplement, or Type certificate data sheet (TCDS) showing that the RNP navigation system is eligible for Basic-RNP 1 or less. or Manufacturer statement - Aircraft with a manufacturer statement documenting compliance with the performance and functional requirements of the ICAO PBN Manual.		
2	<b>Aircraft modified to meet Basic-RNP 1 standards.</b> Documentation on aircraft inspection and/or modification, if applicable. Maintenance records documenting the installation or modification of aircraft systems		
3	<b>Maintenance programme</b> <ul style="list-style-type: none"><li>For aircraft with established maintenance procedures for Basic-RNP 1 systems, the list of references of the document or programme.</li><li>For recently installed Basic-RNP 1 systems, the maintenance procedures for their review.</li></ul>		
4	<b>Minimum equipment list (MEL) if applicable</b> showing provisions for Basic-RNP 1 systems.		
5	<b>Operating policies and procedures</b> including relevant section of Operations Manuals and checklists attached to the application, applicable to Basic RNP 1		



Item	Title of document	Indication of inclusion by the operator	Comments by the Inspector
6	<b>Training</b> Training programme for flight crews, flight dispatchers, and maintenance personnel as applicable.		
7	<b>Navigation database</b> Details of the navigation data validation programme.		

### SECTION 3 – GUIDE FOR DETERMINING BASIC-RNP 1 AIRCRAFT ELIGIBILITY

Item	Topics	Reference paragraphs ICAO Doc 9613 Vol II Part C 3	Location in the Documents of the operator	Comments
1	<b>Aircraft and system requirements – one of the following:</b>			
	Aircraft with E/TSO-C129a GNSS sensor (Class B or C) installed in an FMS	3.3.3 a)		
	Aircraft with E/TSO-C145 () GNSS sensor installed in an FMS	3.3.3 a)		
	Aircraft with E/TSO-C129a Class A1 system or E/TSO-C146 () stand-alone GNSS system	3.3.3 b)		
	Aircraft with RNP capability certified or approved with equivalent standards.	3.3.3 c)		



Item	Topics	Reference paragraphs ICAO Doc 9613 Vol II Part C 3	Location in the Documents of the operator	Comments
	Positioning data from other types of navigation sensors can be integrated with GNSS data provided they do not cause position errors that exceed the total system error (TSE)). Otherwise, means must be provided to deselect or cancel the other types of navigation sensors.	3.3.3.2		
2	<b>Aircraft and System eligibility for Basic-RNP 1 operations</b>			
	Aircraft with an approved statement of compliance	3.3.2.4		
	Aircraft with a statement by the manufacturer	3.3.2.4		
	Modified aircraft	3.3.2.4		
3	<b>Functional requirements</b> <i>Note: Aircraft with RNAV 1 and RNAV 2 approval or equivalent (e.g. P-RNAV and FAA AC 90-100) based on GNSS capability meet the functional requirements of this AC for Basic-RNP 1 operations.</i>	3.3.3		



## SECTION 4 - PROCEDURES FOR BASIC-RNP 1 OPERATIONS

Item	Operating Procedures	Reference paragraphs ICAO Doc 9613 Vol II Part C 3	Location in the Documents of the operator	Comments
1	<b>Pre-flight planning</b>			
	File appropriate flight plan suffix	3.3.4.1.1		
	Ensure on-board navigation data current and appropriate for the region of intended operation	3.3.4.1.2		
	Use all the information available, to confirm the availability of the required navigation infrastructure for the projected routes, including any non-RNAV contingency, for the intended operation.	3.3.4.1.3		
	Check GNSS integrity prediction	3.3.4.2		
2	<b>General operating procedures</b>			
	Operator procedures comply with any instruction or procedure identified by the manufacturer, as necessary, to meet the performance requirements of this section.	3.3.4.3.1		



Item	Operating Procedures	Reference paragraphs ICAO Doc 9613 Vol II Part C 3	Location in the Documents of the operator	Comments
	Operator procedures to ensure flight crew do not request, or file a flight plan for RNP 1 routes unless they meet all the criteria in the relevant State documents.	3.3.4.3.2		
	At system initialization, pilots must: a) confirm the validity of the navigation database; b) verify the current position of the aircraft; c) verify the proper entry of the assigned ATC route once the initial clearance is received, and of any subsequent route changes; and d) ensure that the WPT sequence displayed on the navigation system coincides with the route shown in the appropriate charts and with the assigned route.	3.3.4.3.3		
	Operator procedures to ensure a basic RNP 1 SID/STARs is retrieved from the on-board navigation database using the procedure name, is consistent with the charted procedure and only modified as outlined in the PBN Manual .	3.3.4.3.4		
	Operator procedures for verifying navigation system text display.	3.3.4.3.5		
	Operator procedures for confirming reasonableness of navigation.	3.3.4.3.6		



Item	Operating Procedures	Reference paragraphs ICAO Doc 9613 Vol II Part C 3	Location in the Documents of the operator	Comments
	For Basic-RNP 1 routes procedures requiring the use of a lateral deviation indicator, flight director or autopilot in lateral navigation mode	3.3.4.3.7		
	Operator procedures for limiting FTE to +/- ½ navigation accuracy	3.3.4.3.8		
	Operator procedures for rejoining route following ATC course assignment	3.3.4.3.9		
	Operator procedures for setting bank angle limitations.	3.3.4.3.10		
3	<b>Aircraft with RNP selection capability</b>			
	Pilots of aircraft capable of selecting RNP input must select RNP 1 or lower for Basic-RNP 1 SIDs, STARs or procedures.	3.3.4.4		
4	<b>Basic-RNP 1 SID specific requirements</b>			
	Operator procedures for determining system availability and pre-departure setup	3.3.4.5.1		
	Operator procedures/requirement for equipment use to ensure meeting basic RNP 1 performance	3.3.4.5.3		





Item	Operating Procedures	Reference paragraphs ICAO Doc 9613 Vol II Part C 3	Location in the Documents of the operator	Comments
	GNSS requirements for acquiring signal and flight plan loading to ensure the appropriate navigation system monitoring and sensitivity	3.3.4.5.4		
	Procedures for setting lateral deviation display scale for aircraft using a lateral deviation display (e.g., a navigation map display), and use of FD or autopilot	3.3.4.5.5		
5	<b>Basic-RNP 1 STAR specific requirements</b>			
	Operator procedures for loading/checking route	3.3.4.6.1		
	Operator procedures related to restriction on waypoint creation.	3.3.4.6.2		
	Operator procedures for contingency procedures to revert to a conventional arrival route (where required).	3.3.4.6.3		
	Operator procedures for accepting radar headings or "direct to" tracking	3.3.4.6.4		
	Operator procedures for verifying system operation and selection of procedures	3.3.4.6.5		
	Operator procedures for observing published altitude and speed constraints.	3.3.4.6.6		



Item	Operating Procedures	Reference paragraphs ICAO Doc 9613 Vol II Part C 3	Location in the Documents of the operator	Comments
	For aircraft using stand-alone GNSS systems, operator procedures/requirements for equipment setup/flight planning to ensure basic RNP 1 lateral deviation display scale sensitivity	3.3.4.6.7		
6	<b>Contingency procedures</b>			
	Operator contingency procedures for loss of navigation capability	3.3.4.7.1		