NAMIBIA CIVIL AVIATION AUTHORITY

(Tel) +264 61 702 2212 | Web: http://www.dca.com.na | Private Bag 12003 Windhoek Namibia

RNP APCH OPERATIONS

FSS-OPS- FORM 126: APPLICATION AND JOB AID

1. Introduction

This Job Aid was developed to provide operators and inspectors with guidance on the process to be followed by an operator in order to obtain an RNP APCH approval. It shall be used for application by the operator and as an aid for the approval process by the inspector. Reference should be made to advisory pamphlets FSS-AOC-AP 120 and FSS-AOC-AP 126 A and B. The applicant may also use the ICAO PBN Manual (DOC9613) for guidance as required.

2. Purpose of the Job Aid

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

3. Actions Recommended for the Inspector and Operator

Some recommendations for use of the Job Aid follow:

3.1 At the pre-application meeting with the operator, the inspector reviews the “basic events of the RNP APCH approval process ”described in Part 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 RNP APCH approval application.
3.3 The operator uses this Job Aid as a guide to collect the documents/annexes of the RNP APCH application.
3.4 The operator inserts in the Job Aid references showing in what part of its documents are the RNP APCH programme elements located.
3.5 The operator submits the Job Aid and the application to the inspector (documents/annexes).
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 CAA provides the operator with the operational specifications (OpSpecs) or a letter of authorisation (LOA), as applicable, when the tasks and documents have been completed.

4. Main reference documents

Reference Document	Title
Namibia DCA-005/2014	Operational Directive – Performance Based Navigation for Air Operators
Namibia FSS-AOC-AP 120	PBN Approval General Information
Namibia FSS-AOC-AP 126 A	RNP APCH (LNAV/VNAV) Operations Approval Process
Namibia FSS-AOC-AP 126 B	RNP APCH (LP/LPV) Operations Approval Process
Other Documents	
ICAO Doc 9613	Performance based navigation (PBN) manual
EASA AMC 20-27	Airworthiness approval and operational criteria for RNP APPROACH (RNP APCH) operations including APV BARO-VNAV operations
EASA AMC 20-28	Airworthiness approval and operational criteria for RNP APPROACH (RNP APCH) operations including LP and LPV Operations
FAA AC 90-105	Approval Guidance for RNP approach operations including Baro-VNAV
FAA AC 90-107	Approval Guidance for RNP approach operations with LP and LPV
FAA AC 20-130A	Airworthiness approval of navigation or flight management systems integrating multiple navigation sensors
FAA AC 20-138A	Airworthiness approval of Global navigation satellite system (GNSS) equipment
TSO-C129a	Airborne supplemental navigation equipment using the global positioning system (GPS)
TSO-C145a	Airborne navigation sensors using the global positioning system (GPS) augmented by the wide area augmentation system (WAAS)
TSO-C146a	Stand-Alone airborne navigation equipment using the global positioning system (GPS) augmented by the wide area augmentation system (WAAS)

PART 1. GENERAL INFORMATION BASIC EVENTS OF THE APPROVAL PROCESS

	Action by Operator	Action by Inspector
1	Establish the need for the authorization	
2	Review the AFM, AFM supplement, TC data sheet, other appropriate documents (e.g. STCs, SBs, SLs) to determine aircraft eligibility. If necessary contact the aircraft and/or avionics OEM to confirm eligibility1.	
3	Schedule a pre-application meeting with the inspector.	
4		During the pre-application meeting establish: ✓ form and contents of the application; ✓ documents required to support the application; ✓ target date for the application submission; ✓ requirement for flight validation.
5	Submit the application at least 90 days prior to startup of the planned operations.	
6		Review submission.
7	Ensure that amendments to manuals, programmes and other relevant documents are complete; provide training to flight crews, flight dispatchers and maintenance personnel; if required, conduct a validation flight.	If required, participate in the validation flight.
8		Once the requirements have been met, issue operational approval.

PART 2: INFORMATION ON THE IDENTIFICATION OF AIRCRAFT AND OPERATORS

NAME OF THE OPERATOR: _____ is applying for RNP APCH approval

Aircraft manufacturer, model, and series	Registration numbers	Aircraft Serial numbers	Area navigation system and manufacturer,	Model serial number

DATE OF PRE-APPLICATION MEETING _____

DATE APPLICATION WAS RECEIVED _____

DATE OPERATOR INTENDS TO BEGIN RNP APCH OPERATIONS _____

SIGNATURE BY RESPONSIBLE POST HOLDER _____

NAME OF RESPONSIBLE POST HOLDER _____

Note: Application should be made 90 days before date of intended commencement of operations

PART 3 – OPERATOR APPLICATION DOCUMENTS

Item No.	Title of Annex/Document	Indication of inclusion by the operator	Comments by the Inspector
1.	**Operator letter requesting RNP APCH authorization**		
2.	**Airworthiness documents showing aircraft eligibility for RNP APCH.** AFM, AFM revision, AFM supplement, or Type certificate data sheet (TCDS) showing RNP system eligibility for RNP APCH. Statement by the manufacturer, or Aircraft modification documentation		
3.	**Maintenance practices** • For aircraft with established RNP APCH maintenance practice, the list of references of the document or programme showing RNP APCH system maintenance practices.		
4.	**Minimum equipment list (MEL) (only for operators conducting operations based on a MEL):** Updated MEL showing provisions for RNP APCH systems.		
5.	**Training** 1. **Part 91 operators or equivalent: Training method:** Details of Courses done to successful completion. 2. **Part 121 and/or 135 operators or equivalent:** Details of Training programmes (training curricula) for flight crews, flight dispatchers and maintenance personnel as applicable.		
6.	**Operating policies and procedures** 1. **Part 91 operators or equivalent:** Applicable extracts from Operations manual (OM) or other documentation corresponding to RNP APCH operating procedures and policies 2. **Part 121 and/or 135 operators or equivalent:** Operations manual and checklists.		
7.	**Navigation database** Details of the navigation data validation programme including installation of new databases.		
8.	**Validation flight plan:** As required by the CAA.		

Note: Documents may be grouped in a single folder or may be sent as individual documents.

PART 4 – CONTENTS OF THE OPERATOR APPLICATION

Item	Topic	Reference (Doc 9613, Volume II, Part C, Chapter 2)	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector (Include follow-up and dates)
	Application for Authorisation			
1.	Authorization request: Statement of intent to obtain authorization.			
	Aircraft eligibility and maintenance			
2.	Aircraft/navigation system eligibility; Documents that establish eligibility.	5.3.2.2 5.3.2.3.1		
3.	Maintenance practices; Document navigation database maintenance practices.	5.3.2.3.5, 5.3.6 (Section A LNVAV/VNAV) 5.3.6 (Section B LP/LPV)		
4.	MEL	5.3.2.3.4		
	Training			
5.	Details of courses completed (Part 91 operators). Details of training programmes for approval (Part 121 and Part 135 operators).	5.3.2.3.2; 5.3.5		
6.	Operating policies and procedures Extracts from the operations manual or other documentation (xxx91 operators). Operations manual and checklists (xxx121 and xxx135 operators).	5.3.2.3.3		
	Flight Planning			
7.	Verify that the aircraft and crew are approved for RNP APCH operations to LNAV, and/or LNAV/VNAV and/or LP and/or LPV minima.	5.3.4 (LNAV/VNAV) 5.3.4.1 (LP and/or LPV		
8.	Verify RAIM and SBAS	5.3.4.1.3		

Item	Topic	Reference (Doc 9613, Volume II, Part C, Chapter 2)	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector (Include follow-up and dates)
	availability as applicable	(Section A) 5.3.4.2 (Section A) 5.3.4.3 (Section B)		
9.	Verify that the navigation database is current.	5.3.4.1.1 (Section A) 5.3.4.1.2 a) (Section A) 5.3.4.2.1 (Section B) 5.3.4.2.2 (Section B)		
10.	Verify the FPL: "R" and "B" (LPV only) should appear in field 10 and PBN/S1 (RNP APCH) or PBN/S2 (RNP APCH Baro-VNAV) in field 18.	5.3.4.1.1 (Section A) 5.3.4.2.1 (Section B)		
	Prior to commencing procedure			
11.	Verify that the correct procedure is loaded and contains the appropriate approaches for the destination and alternates	5.3.4.3.1 (Section A) 5.3.4.4.1 (Section B)		
12.	Cross-check the chart with the RNAV system display.	5.3.4.3.2 (Section A) 5.3.4.4.1 (Section B)		
13.	Verify the GNSS sensor in use (only multi-sensor systems).	5.3.4.3.3 (Section A)		
14.	Input the barometric altimeter setting into the RNP system when required (only LNAV/VNAV requires barometric input).	5.3.4.3.4 (Section A		

Item	Topic	Reference (Doc 9613, Volume II, Part C, Chapter 2)	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector (Include follow-up and dates)
15.	Perform a RAIM availability check if ETA is more than 15 minutes difference from the FPL ETA (only for ABAS).	5.3.4.3.5 (Section A)		
16.	Do not modify the flight plan in the RNAV system after ATC heading assignment until a clearance is received to re-join the route or a new clearance is confirmed. Manual entry of coordinates within the terminal area is not permitted. "Direct to" clearances accepted up to IF, provided that the resulting track change at the IF does not exceed 45 degrees- (may not be permitted in some airspaces).	5.3.4.3.6 (Section A) 5.3.4.4.2 (Section B)		
17.	Do not modify the final approach segment.	5.3.4.3.7 (Section A)		
18.	Use VTF to respect ATC clearances when appropriate	5.3.4.4.3 (Section B)		
	During Procedure			
19.	Establish the aircraft on the final approach course before starting descent.	5.3.4.4.1 (Section A) 5.3.4.5.4 (Section B)		
20.	Verify that the approach mode is activated 2 NM prior to FAF.	5.3.4.4.2 (Section A) 5.3.4.5.3 (Section B)		
21.	Use of appropriate display systems.	5.3.4.4.3 (Section A)		

Item	Topic	Reference (Doc 9613, Volume II, Part C, Chapter 2)	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector (Include follow-up and dates)
		5.3.4.5.5 (Section B)		
22.	Discontinue the approach if: • the navigation display is flagged invalid; • loss of integrity alert; •) if the integrity alerting function is annunciated not available before passing the FAF; • Flight Tracking Error is excessive	5.3.4.4.4 (Section A) 5.3.4.5.7 5.3.4.5.8 (Section B)		
23.	Do not use the RNP system in missed approach if the: • RNP system is not operational; or • missed approach is not loaded from the database.	5.3.4.4.5 (Section A)		
24.	Follow the route centre line within 0.5 NM initial approach / 0.15 final approach / 0.5 missed approach.	5.3.4.4.6 (Section A)		
25.	If baro-VNAV is used, follow vertical path ±75 ft (±22 m).	5.3.4.4.7 (Section A)		
26.	Execute a missed approach if the lateral or vertical deviations exceed the limits in item 24 and 25 above (LNAV and LNAV/VNAV) or if excessive deviations are encountered and cannot be corrected in time (LP and LPV).	5.3.4.4.8 (Section A) 5.3.4.5.9 (Section B)		
	General Operating Procedures			
27.	Advise ATC if unable to meet the requirements for an RNP APCH.	5.3.4.5.1 (Section A) 5.3.4.6.1		

Item	Topic	Reference (Doc 9613, Volume II, Part C, Chapter 2)	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector (Include follow-up and dates)
		(Section B)		
28.	Comply with the manufacturer's instructions/procedures.	5.3.4.5.2 (Section A) 5.3.4.6.2 (Section B)		
29.	If the missed approach is based on conventional means, appropriate navigation equipment must be installed and serviceable.	5.3.4.5.3 (Section A) 5.3.4.6.3 (Section B)		
30.	Use FD or AP during the entire procedure if available.	5.3.4.5.4 (Section A) 5.3.4.6.4 (Section B		
	Contingency Procedures			
31.	Contingency procedures to include: a) failure of the RNP APCH system components, (*e.g.,* failures of GPS sensor, FD or AP); and b) loss of navigation signal-in-space (loss or degradation of the external signal).			
32.	Advise ATC if unable to comply with the requirements for an RNP APCH.	5.3.4.6.1 (Section A) 5.3.4.7.2 (Section B)		
33.	Notifying ATC of any loss of the RNP APCH capability, together with the proposed course of action.	5.3.4.6.1 (Section A) 5.3.4.7.2 (Section B)		
34.	Air-ground communications failure.	5.3.4.6.2 (Section A) 5.3.4.7.3 (Section B)		
	Navigation Database			

Item	Topic	Reference (Doc 9613, Volume II, Part C, Chapter 2)	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector (Include follow-up and dates)
35.	Databases from a qualified supplier that complies with the standards for processing aeronautical data: the database supplier has provided the operator with a Type 2 LOA and their respective suppliers have a Type 1 or 2 LOA.			
36.	The Operator has a navigation database quality system in place			

Recommendation/observation (FOPS):

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AIR Inspector's Name & ASI # **Signature** **Date**

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FOPS Inspector's Name & ASI # **Signature** **Date**

SUBDIVISION CHIEF'S REMARKS:

The above requirements have been evaluated against the operator submissions and is hereby **approved / not approved.**

Signature / Date: …….....