RNP APCH JOB AID

APLICATION TO CONDUCT RNP APCH OPERATIONS

1. Introduction

This Job Aid was developed by the Latin American Regional Safety Oversight Cooperation System (SRVSOP) to provide States, operators, and inspectors with guidance on the process to be followed by an applicant in order to obtain an RNP APCH authorization.

2. Purpose of the Job Aid

2.1 To give operators and inspectors information on the main RNP APCH 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 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/RNP APCH Job Aides 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. Structure of the Job Aid

5. Main Sources of Documents, Information, and Contacts

To access the RNP APCH, enter to the Web page of the ICAO/SAM Regional Office (www.lima.icao.int) under the SRVSOP link.

6. Main Reference Documents

Reference documents	Titles
Annex 6	Operation of aircraft
ICAO Doc 9613	Performance-based navigation (PBN) manual
FAA AC 90-105 Appendix 1	Qualification criteria for RNP approach operations
EASA AMC 20-27	Airworthiness approval and operational criteria for RNP APPROACH (RNP APCH) operations including APV BARO-VNAV operations
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-C115b	Airborne area navigation equipment using multi-sensor inputs
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 in RNP APCH approval process

	Action by the operator	Action by the CAA
1	Establishes the need to obtain the RNP APCH authorization.	
2	Reviews the AFM, AFM supplement or Type Certificate Data Sheet (TCDS), or other appropriate documents (*e.g.,* service bulletins (SB), service letters (SL), etc.) to determine the eligibility of the aircraft for RNP APCH operations. The operator contacts the aircraft or avionics manufacturer, if necessary, to confirm RNP APCH eligibility of the aircraft.	
3	Contacts the CAA to schedule a pre-application meeting to discuss the operational approval requirements.	
4		During the pre-application meeting, establishes: • the form and contents of the application; • the documents that support RNP APCH approval • the date in which the application will be submitted for evaluation • if necessary, conduct a validation flight observed by the CAA
5	Submits the application at least 60 days in advance of the planned star of RNP APCH operations.	
6		Reviews operator submissions
7	Once the amendments to manuals, programmes, and documents have been approved or accepted, provides training to flight crews, flight dispatchers, and maintenance personnel, and conducts a validation flight, if required by the CAA.	Only if required, participates in the validation flight.
8		Once the operational and airworthiness requirements have been met, issues the operational approval in the form of OpSpecs for LAR 121 or 135 or equivalents, or an LOA for LAR 91 or equivalents, as appropriate.

Notes related to the approval process

1. **Responsible authority**

   a. **Commercial air transport (LAR 121 and/or 135 regulations or equivalent). -** The **State of registry** determines that the aircraft meets the airworthiness requirements. The **State of the operator** issues the RNP APCH approval (*e.g.,* OpSpecs).

   b. **General Aviation (LAR 91 regulations or equivalent).-** The **State of registry** determines that the aircraft meets airworthiness requirements and issues the operational approval (*e.g.,* an LOA).

2. The CAA does not need to issue an LOA or equivalent document for each individual area of operation in the case of LAR 91 operators.

3. LAR 121 and/or 135 operators with RNP APCH approval must list this approval in the OpSpecs.

4. Related sections of the Latin American Aeronautical Regulations (LAR) or equivalent regulations

   a. LAR 91 Sections 91.1015 and 91.1640 or equivalent

   b. LAR 121 Section 121.995 (b) or equivalent

   c. LAR 135 Section 135.565 (c) or equivalent

5. Related ICAO Documents

   a. Annex 6 to the Convention on International Civil Aviation – Operation of aircraft

   b. Annex 10 to the Convention on International Civil Aviation – Aeronautical telecommunications

   c. Annex 15 to the Convention on International Civil Aviation – Aeronautical information services

   d. ICAO Doc 9613 – Manual on performance-based navigation (PBN)

   e. ICAO Doc 4444 – Procedures for air navigation services – Air traffic management

PART 2: INFORMATION ON THE IDENTIFICATION OF AIRCRAFT AND OPERATORS

NAME OF THE OPERATOR: _____

Aircraft manufacturer, model and series	Registration numbers	Serial numbers	RNP APCH system Number, manufacturer, and model	RNP specification

DATE OF PRE-APPLICATION MEETING _____

DATE ON WHICH THE APPLICATION WAS RECEIVED _____

DATE ON WHICH THE OPERATOR INTENDS TO BEGIN RNP APCH OPERATIONS _____

IS THE CAA NOTIFICATION DATE APPROPRIATE? YES _____ NO _____

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PART 3 – OPERATOR APPLICATION (ANNEXES AND DOCUMENTS)

Annex	Title of Annex/document	Indication of inclusion by the operator	Comments by the Inspector
A	**Operator letter requesting RNP APCH authorization**		
B	**Airworthiness documents showing aircraft eligibility for RNP APCH.** AFM, AFM revision, AFM supplement, or Type certificate data sheet (TCDS) showing that the RNP navigation system is eligible for RNP APCH. Manufacturer statement.- Aircraft with a manufacturer statement documenting compliance with SRVSOP CA 91-008 criteria or equivalent, meet the performance and functional requirements of said document.		
C	**Aircraft modified to meet RNP APCH standards. Documentation on aircraft inspection and/or modification, if applicable.** Maintenance records documenting the installation or modification of aircraft systems (*e.g.,* FAA Form 337 – major repairs and alterations).		
D	**Maintenance programme** • For aircraft with established maintenance practices for RNP APCH systems, the list of references of the document or programme. • For recently installed RNP APCH systems, the maintenance procedures for their review.		
E	**Minimum equipment list (MEL) (only for operators conducting operations based on a MEL):** MEL showing provisions for RNP APCH systems.		
F	**Training** **1. LAR 91 operators or equivalent: Training methods:** Training at home, LAR 142 training centres, or other training courses, course completion		

Annex	Title of Annex/document	Indication of inclusion by the operator	Comments by the Inspector
	records. **2. LAR 121 and/or 135 operators or equivalent:** Training programmes (training curricula) for flight crews, flight dispatchers, and maintenance personnel.		
G	**Operating policies and procedures** **1. LAR 91 operators or equivalent:** Operations manual (OM) or sections to be attached to the application, corresponding to RNP APCH operating procedures and policies. **2. LAR 121 and/or 135 operators or equivalent:** Operations manual and checklists.		
H	**Navigation database** Details of the navigation database validation programme		
I	**Withdrawal of RNP APCH approval** Indication of the need to follow up on navigation error reports submitted and the possibility of withdrawal of RNP APCH approval.		
J	**Validation flight plan** Only if required by the CAA.		

CONTENTS OF THE APPLICATION TO BE SUBMITTED BY THE OPERATOR

____ **DOCUMENTATION SHOWING RNP APCH COMPLIANCE OF THE AIRCRAFT/NAVIGATION SYSTEMS**

____ **OPERATING PROCEDURES AND POLICIES**

____ **SECTIONS OF THE MAINTENANCE MANUAL RELATED TO THE RNP APCH SYSTEM (if not previously reviewed)**

Note 1: Documents may be grouped in a single folder or may be sent as individual documents.

PART 4: CONTENTS OF THE OPERATOR APPLICATION FOR RNP APCH OPERATIONS

#	Contents of the RNP APCH application by the operator	Reference paragraphs CA 91-009	In what Annexes/Documents of the operator can the application contents be located	Comments and/or recommendations by the inspector	Follow-up by the inspector: Item status and date
1	**Operator request letter** Statement of intent to obtain RNP APCH authorization.	Paragraph 10.1 b) 1) Appendix 2, Paragraph e)	Annex A		
2	**Type of aircraft and description of aircraft equipment** A configuration list with details of the relevant components and the equipment to be used in the operation. The list shall include each manufacturer, model and version of the equipment and software of the installed FMS.	Paragraph 10.1 b) 1) Paragraph 10.2			
3	**Aircraft and navigation system eligibility and qualification for RNP APCH** Airworthiness documents which establish aircraft and navigation system eligibility for RNP APCH operations, their approval status and a list with the aircraft for which the approval is requested.	Paragraph 10.1 b) 2) Paragraphs 9.2 , 9.4 and 10.3	Annex B Annex C		
4	**Training programmes** a) **LAR 121 or 135 operators or equivalent: Training programmes:**	Paragraph 10.1 b) 6) Paragraphs 10.8	Annex F		

#	Contents of the RNP APCH application by the operator	Reference paragraphs CA 91-009	In what Annexes/Documents of the operator can the application contents be located	Comments and/or recommendations by the inspector	Follow-up by the inspector: Item status and date
	Operators will develop an initial and periodic training programme for flight crews, flight dispatchers and maintenance personnel. b) **LAR 91 operators or equivalent: Training methods:** The following methods are acceptable for these operators: Training at home, LAR 142 training centres, or other training courses**.**	For maintenance Paragraph 10.1 b(7)			
5	**Operations Manual (OM) and checklists** a) **LAR 121 and/or 135 operators or equivalent:** Operations manual and checklists. b) **LAR 91 operators or equivalent:** Operations manual or section of the operator application documenting RNP APCH policies and procedures.	Paragraph 10.1 b) 4) and 8) Paragraphs 10.6 and 10.7			
6	**Maintenance procedures** • For aircraft with established maintenance practices for RNP APCH navigation systems, the operator will provide document references. • For newly installed RNP APCH systems, the operator will provide	Paragraph 10.1 b) 9)	Annex D		

#	Contents of the RNP APCH application by the operator	Reference paragraphs CA 91-009	In what Annexes/Documents of the operator can the application contents be located	Comments and/or recommendations by the inspector	Follow-up by the inspector: Item status and date
	maintenance practices for review.				
7	**Minimum equipment list (MEL)** The operator will submit any revision to the MEL, necessary to carry out RNP APCH operations.	Paragraph 10.1 b) 10)	Annex E		
8	**Navigation data validation programme** Details of the navigation data validation programme.	Paragraph 10.1 b) 5)	Annex F		
9	**Withdrawal of RNP APCH operation authorization** Indication of the need for follow-up on the navigation error reports and the potential of withdrawal of the RNP APCH approval.				
10	**Validation test plan, only if required** The validation flight plan will be presented only if required	Appendix 7, paragraph b) 14)	Annex I		

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PART 5 – GUIDE TO DETERMINE THE ELIGIBILITY OF RNP APCH AIRCRAFT

#	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the inspector	Follow-up by the inspector: Item status and date
1	**Aircraft and system requirements**	Paragraph 9.2	Annex B		
	a) Aircraft approved to conduct RNAV $_{(GNNS)}$ or GNSS approaches.	Paragraph 9.2 a)			
	b) Aircraft that have a statement of compliance with respect to the criteria contained in the AC 91-008 or equivalent document in their flight manual (AFM), AFM supplement, pilot operations handbook (POH), or in the avionics operating manual.	Paragraph 9.2 b)	Annex B		
	c) Aircraft that have a statement from the manufacturer documenting compliance with the criteria of the AC 91-008 or equivalent document.	Paragraph 9.2c)	Annex B		
	d) RNP installation based on GNSS stand-alone system	Paragraph 9.2 d)			
	e) RNP installation is based on GNSS sensor equipment used in a multi-sensor system	Paragraph 9.2 e)			

#	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the inspector	Follow-up by the inspector: Item status and date
	f) Multi-sensor systems using GNSS	Paragraph 9.2 f)			
2	**Eligibility for RNP APCH operations**	Paragraph 9.4 b)			
	a) Systems that meet the requirements of Paragraph 1 above are eligible for RNP APCH operations	Paragraph 9.4 b)			
	b) Aircraft qualified in accordance with SRVSOP AC 91-009 or equivalent, *e.g.*, FAA AC 90-101 or EASA AMC 20-26 is considered qualified for RNP APCH operations without further examination.	Paragraph 9.4 b)			
3	**System eligibility for RNP APCH operations**	Paragraph 9.4 c)			
	a) LNAV Line of minima qualification	Paragraph 9.4 c) 1)			
	1) Stand-alone systems	Paragraph 9.4 c) 1) (a)			
	2) Multi-sensor systems	Paragraph 9.4 c) 1) (b)			
	b) LNAV/VNAV Line of minima qualification	Paragraph 9.4 c) 2)			
	1) Stand-alone systems	Paragraph 9.4 c) 2) (a)			

#	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the inspector	Follow-up by the inspector: Item status and date
	2) Multi-sensor systems	Paragraph 9.4 c) 2) (b)			
4	**Modified aircraft**	Paragraph 9.5	Annex B		
5	**Performance an functional requirements for RNP APCH systems**	Paragraph 9.3			
5	**Navigation database** Details of the navigation data validation programme.	Paragraph 10.9 Appendix 1	Annex B		

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PART 6 - BASIC PILOT PROCEDURES FOR RNP APCH OPERATIONS

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	Operating procedures	Paragraph 10.6	Annex G		
1	**Pre-flight planning**	Paragraph 10.6 a)			
	Operators and pilots planning to conduct RNP APCH operations must file the appropriate flight plan suffixes.	Paragraph 10.6 a) 1)			
	At system initialization, pilots must confirm the navigation database is current and includes appropriate procedures. Likewise, pilots must also verify that the aircraft position is correct.	Paragraph 10.6 a) 2)			
	Pilots must verify the proper entry of their ATC assigned route once they have received the initial clearance and following any subsequent changes of the route. Likewise, pilots must ensure the WPT sequence depicted by their navigation system matches their assigned route and the route depicted on the appropriate charts.	Paragraph 10.6 a) 3)			
	The aircraft RNP capability depends on the aircraft operational equipment. The flight crew must be able to assess the impact of equipment failure on the anticipated RNP APCH operation and take appropriate action. When a flight dispatch is predicated on flying an RNP APCH procedure that requires the use of the AP or FD at the destination	Paragraph 10.6 a) 4)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	and/or alternate aerodrome, the operator must determine that the AP and/or FD are installed and operational.				
	Pilots must ensure that the approaches which may be used for the intended flight (including the approaches in alternates aerodromes): a) can be selected from a valid navigation data base (current AIRAC cycle); b) have been verified through an appropriate process (navigation database integrity process); and c) have not been prohibited by any NOTAM issued by the CAA or by the air navigation service providers or by an operational instruction of the company.	Paragraph 10.6 a) 5)			
	Pilots must ensure that there are sufficient means available to fly and land at the destination or alternate aerodrome in case of loss of RNP APCH capability.	Paragraph 10.6 a) 6)			
	Operators and flight crews must take account of any NOTAM issued by the CAA or by the ANSP, or by an operational instruction of the company that might adversely affect aircraft system operation or the availability or suitability of the procedures at the destination aerodrome or at any alternate aerodromes.	Paragraph 10.6 a) 7)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	For missed approach procedures based on conventional NAVAIDs (VOR, NDB), pilots must verify that the appropriate airborne equipment required to fly such procedures is installed and operational in the aircraft. Likewise, they must verify that the associated ground based NAVAIDs are operational.	Paragraph 10.6 a) 8)			
	The availability of the NAVAID infrastructure, required for the intended routes and RNP APCH operations, including any non-RNP contingency, must be confirmed for the period of intended operations, using all available information. Since GNSS integrity (receiver autonomous integrity monitoring (RAIM) or satellite-based augmentation system (SBAS) signal) is required by Annex 10, the availability of such signals must also be determined as appropriate. For aircraft navigating with SBAS receivers (all TSO-C145()/C146()/ ETSO-C145()/C146()), operators must check appropriate GPS RAIM availability in areas where SBAS signal is unavailable.	Paragraph 10.6 a) 9)			
	RAIM prediction must be performed prior to departure. a) The predictive capability must account for known and predicted outages of GPS satellites or other impacts on the navigation system's sensors. The prediction programme should not use a mask angle below 5 degrees, as operational experience indicates	Paragraph 10.6 a) 10)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	that satellite signals at low elevations are not reliable. RAIM availability prediction should take into account the latest GPS constellation notices to airmen (NOTAMs) issued by the CAA or by the ANSP, and use the identical algorithm to that used in the airborne equipment, or an algorithm based on assumptions for RAIM prediction that give a more conservative result. The service may be providing by the ANSP, avionics manufacturer, other entities or through an airborne receiver RAIM prediction capability. RAIM availability may be confirmed by using a model-specific RAIM prediction software. b) The RAIM availability prediction software does not guarantee the service. The software is rather a tool to assess the expected capability to meet the required navigation performance. Because of unplanned failures of some GPS elements, pilots must realize that RAIM or GPS navigation my be lost while in flight which may require reversion to an alternative means of navigation. Therefore, pilots must assess their capability to navigate to an alternate aerodrome in case of failure of GPS navigation. c) In the event of a predicted, continuous loss of RAIM of more than 5 minutes for any part of the intended RNP APCH operation, the flight should be delayed, cancelled, or re-routed				

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	where RAIM requirements can be met.				
	For aircraft navigating with SBAS receivers (all TSO-C145/C146/ ETSO-C145/C146 systems), operators shall take into account the latest GPS constellation and SBAS NOTAMs issued by the CAA or ANSP. If the NOTAMs indicate the SBAS signal is not available over the intended flight route, operators should check appropriate GPS RAIM availability.	Paragraph 10.6 a) 11)			
2	**Prior to commencing the procedure**	Paragraph 10.6 b)			
	In addition to normal procedures, prior to commencing the approach (before the initial approach fix (IAF)), the flight crew must verify the correct procedure has been loaded, by comparing said procedure with the approach charts. This check must include: a) the WPT sequence; b) the integrity of the tracks and distances of the approach legs, the accuracy of the inbound course and the length of the final approach segment.	Paragraph 10.6 b) 1)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	The flight crew must also check from the publish charts, map display or control display unit (CDU), which WPT are fly-by and which are flyover.	Paragraph 10.6 b) 2)			
	For multi-sensor systems, the flight crew must verify during the approach that GNSS sensor is used for position computation.	Paragraph 10.6 b) 3)			
	For a RNP system with aircraft-based augmentation system (ABAS) requiring barometric corrected altitude, the current aerodrome barometric altimeter setting, must be set at the appropriate time and location, consistent with the performance of the flight operation.	Paragraph 10.6 b) 4)			
	When the operation is based on ABAS availability, the flight crew must perform a new RAIM availability check if the estimated time of arrival (ETA) is more than 15 minutes different from the ETA used during the flight planning. This check is also processed automatically 2 NM before the final approach fix (FAF) for a TSO-C129a/ ETSO-C129a Class A1 receiver.	Paragraph 10.6 b) 5)			
	In the terminal area, ATC tactical interventions may include radar headings, “direct to” clearances which by-pass the initial approach legs, interception of an initial or intermediate approach segment, or the insertion of WPT loaded from the database. In complying with ATC instructions, the flight crew must be aware of the implications for the RNP	Paragraph 10.6 b) 6)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	system. a) The manual entry of coordinates into the RNP system by the flight crew for operations within the terminal area is not permitted. b) "Direct to" clearances may be accepted up to the intermediate fix (IF), provided that the resulting track change at the IF does not exceed 45º.				
	The lateral definition of the flight path between the FAF and the missed approach point (MAPt) must not be revised by the flight crew under no circumstances.	Paragraph 10.6 b) 7)			
3	**During the procedure**	Paragraph 10.6 c)			
	Pilots must comply with the instructions or procedures identified by the operator, as necessary, to meet the performance requirements of this AC.	Paragraph 10.6 c) 1)			
	Before starting the descent, the aircraft must be established on the final approach course no later than the FAF to ensure obstacle and terrain clearance.	Paragraph 10.6 c) 2)			
	Pilots must check that the navigation system is in approach mode within 2 NM prior to the FAF.	Paragraph 10.6 c) 3)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	The appropriate displays must be selected so that the following information can be monitored by the flight crew: a) the RNP computed desired track (DTK); and b) the aircraft position relative to the path cross track deviation (XTK) for the flight technical error (FTE) monitoring.	Paragraph 10.6 c) 4)			
	A RNP APCH procedure must be discontinued: a) if the navigation display is announcing a failure (flagged invalid): or b) in case of loss of the integrity alerting function; or c) if the integrity alerting function is annunciate not available before passing the FAF; or d) if the FTE is excessive.	Paragraph 10.6 c) 5)			
	A missed approach must be flown in accordance with the published procedure. Use of the RNP system during the missed approach is acceptable, provided: a) the RNP system is operational (*e.g.,* there is no loss of function, no NSE alert, no failure indication, etc.). b) the whole procedure (including the missed approach) is loaded from the navigation data base.	Paragraph 10.6 c) 6)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	During the RNP APCH procedure, pilots must use a lateral deviation indicator, FD and/or AP in the lateral navigation mode. Pilots of aircraft with lateral deviation indicator (*e.g.*, CDI) must ensure that lateral deviation indicator scaling (full-scale deflection) is suitable for the navigation accuracy associated with the different procedure segments (*e.g.,* ± 1.0 NM for the initial, intermediate, and missed approach segments, and ± 0.3 NM for the final approach segment).	Paragraph 10.6 c) 7)			
	All pilots are expected to maintain procedure centrelines, as depicted by onboard lateral deviation indicators and/or flight guidance during all the approach procedure unless authorized to deviate by ATC or in emergency conditions.	Paragraph 10.6 c) 8)			
	For normal operations, the cross-track error/deviation (the difference between the RNP system computed path and the aircraft position relative to the path) must be limited to ± ½ of the navigation accuracy associated with the procedure (*e.g.,* 0.5 NM for the initial, intermediate and missed approach segments and 0.15 NM for the final approach segment). Brief deviations from this standard (*e.g.,* overshoots or undershoots) during and immediately after turns, up to a maximum of one (1) times the navigation accuracy (*e.g.,* 1.0 NM for the initial and	Paragraph 10.6 c) 9)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	intermediate segments), are allowable.				
	When baro-VNAV is used for vertical path guidance during the final approach segment, deviations above and below the baro-VNAV path must not respectively exceed + 100/-50 ft.	Paragraph 10.6 c) 10)			
	Pilots must execute a missed approach if the lateral or vertical deviations exceed the criteria of the previous paragraph, unless the pilot has in sight the visual references required to continue the approach.	Paragraph 10.6 c) 11)			
	For aircraft requiring two pilots, the flight crew must verify that each pilot's altimeter has the current setting before beginning the final approach of a RNP APCH approach procedure. The flight crew must also observe any operational limitations associated with altimeter setting sources and the latency of checking and setting the altimeters when approaching the FAF.	Paragraph 10.6 c) 12)			
	Although the scale should change automatically, the pilots of an aircraft with lateral deviation indicator (*e.g.,* CDI) must make sure that the scale of the lateral deviation indicator (maximum deflection) is consistent with the different segments of the procedure (e.g., ± 1.0 NM for the initial, intermediate, and missed approach segments, and ± 0.3 NM for the final approach segment).	Paragraph 10.6 c) 13)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	RNP APCH procedures require flight crew monitoring of lateral and, if installed, vertical track deviations on the pilot's primary flight displays (PFD) to ensure the aircraft remains within the bounds defined by the procedure.	Paragraph 10.6 c) 14)			
4	**Contingency procedures**	Paragraph 10.7			
	The pilots must notify ATC of any loss of the RNP APCH capability, together with the proposed course of action.	Paragraph 10.7 a)			
	If the pilots cannot meet the requirements of a RNP APCH procedure, they must notify the air traffic service (ATS) as soon as possible.	Paragraph 10.7 b)			
	The loss of RNP APCH capability includes any failure or event causing the aircraft to no longer satisfy the RNP APCH requirements of the procedure.	Paragraph 10.7 c)			
	The operators must develop contingency procedures in order to react safely following the loss of the RNP APCH capability during the approach.	Paragraph 10.7 d)			
	In the event of communication failure, the flight crew must continue with the RNP APCH procedure in accordance with the published lost	Paragraph 10.7 e)			

	Topics	Reference paragraphs CA 91-009	Location in the Annexes of the operator	Comments and/or recommendations by the CAA	Follow-up by the Inspector: Item status and date
	communication procedure.				
	The operator's contingency procedures must address at least the following conditions: a) failure of the RNP system components, including those affecting lateral or vertical deviation performances (*e.g.,* failures of a GPS sensor, FD or AP); and b) loss of navigation signal-in-space (loss or degradation of the external signal).	Paragraph 10.7 f)			
	The pilot must ensure the capability to navigate and land at an alternate aerodrome if loss of RNP APCH capacity occurs.	Paragraph 10.7 g)			

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