



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

• Operator Name			
• Inspector Name			
• Airplane Type(s)			
• AOC Applicant/Holder Focal Point	Name	Phone No.	E-mail

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
----	--	---------------	-----	-----	----	----	---------

A	Operations Manual Part D - Training Program						
----------	--	--	--	--	--	--	--

1	Training Program.						
----------	--------------------------	--	--	--	--	--	--

a	Commercial operators must have a training program addressing the operational practices, procedures and training items related to RNP AR APCH operations (e.g. initial, upgrade or recurrent training for pilots, dispatchers or maintenance personnel)	6.3.2.6.2.1					
----------	--	-------------	--	--	--	--	--

b	Pilot/dispatch/operator knowledge and training.						
----------	--	--	--	--	--	--	--

(1)	The operator must provide training for key personnel (e.g. pilots and dispatchers) in the use and application of RNP AR APCH procedures. A thorough understanding of the operational procedures and best practices is critical to the safe operation of aircraft during RNP AR APCH operations. This program must provide sufficient detail on the aircraft's navigation and flight control systems to enable the pilots to identify failures affecting the aircraft's RNP capability and the appropriate abnormal/emergency procedures. Training must include both knowledge and skill assessments of the crew members' and dispatchers' duties	6.3.5.1					
------------	--	---------	--	--	--	--	--

(2)	Operator responsibilities						
------------	----------------------------------	--	--	--	--	--	--

(a)	Each operator is responsible for the training of pilots for the specific RNP AR APCH operations exercised by the operator. The operator must include training on the different types of RNP AR APCH procedures and required equipment. Training must include discussion of RNP AR APCH regulatory requirements. The operator must include these requirements and procedures in their flight operations and training manuals (as applicable). This material must cover all aspects of the operator's RNP AR APCH operations including the applicable operational authorization. An individual must have completed the appropriate ground and or flight training segment before engaging in RNP AR APCH operations	6.3.5.2					
------------	--	---------	--	--	--	--	--



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
(b)	Flight training segments must include training and checking modules representative of the type of RNP AR APCH procedures the operator conducts during line-oriented flying activities. Many operators may train for RNP AR APCH procedures under the established training standards and provisions for advanced qualification programs. They may conduct evaluations in LOFT scenarios, selected event training scenarios or in a combination of both. The operator may conduct required flight training modules in flight training devices, aircraft simulators, and other enhanced training devices as long as these training devices accurately replicate the operator's equipment and RNP AR APCH operations	6.3.5.2					
(c)	Operators must address initial RNP AR APCH training and qualifications during initial, transition, upgrade, recurrent, differences, or stand-alone training and qualification programs in the respective qualification category. The qualification standards assess each pilot's ability to properly understand and use RNP AR procedures (RNP AR APCH initial evaluation). The operator must also develop recurrent qualification standards to ensure their pilots maintain appropriate RNP AR APCH operations knowledge and skills (RNP AR APCH recurrent qualification)	6.3.5.2					
(d)	Operators may address RNP AR APCH operation topics separately or integrate them with other curriculum elements. For example, an RNP AR APCH pilot qualification may focus on a specific aircraft during transition, upgrade, or differences courses. General training may also address RNP AR APCH qualification, e.g. during recurrent training or checking events such as recurrent proficiency check/proficiency training, line-oriented evaluation or special purpose operational training. A separate, independent RNP AR APCH operations qualification program may also address RNP AR APCH training, e.g. by completion of an applicable RNP AR APCH curriculum at an operator's training centre or at designated crew bases	6.3.5.2					
(e)	Operators intending to receive credit for RNP training, when their proposed program relies on previous training (e.g. special RNP IAPs), must receive specific authorization from their principal operations inspector/flight operations inspector. In addition to the current RNP training program, the air carrier will need to provide differences training between existing training program and the RNP AR APCH training requirements	6.3.5.2					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
(f)	Training for flight dispatchers must include: the explanation of the different types of RNP AR APCH procedures, the importance of specific navigation equipment and other equipment during RNP AR APCH operations and the RNP AR APCH regulatory requirements and procedures. Dispatcher procedure and training manuals must include these requirements (as applicable). This material must cover all aspects of the operator's RNP AR operations including the applicable authorizations (e.g. Operations specifications, OM, MS pecs or LOA). An individual must have completed the appropriate training course before engaging in RNP AR APCH operations. Additionally, the dispatchers' training must address how to determine: RNP AR APCH availability (considering aircraft equipment capabilities), MEL requirements, aircraft performance, and navigation signal availability (e.g. GPS RAIM/predictive RNP capability tool) for destination and alternate airports	6.3.5.2					
(3)	Ground training segments content						
(a)	Ground training segments must address the following subjects, as training modules, in an approved RNP AR APCH training program during the initial introduction of a crew member to RNP AR APCH systems and operations. For recurrent programs, the curriculum need only review initial curriculum requirements and address new, revised, or emphasized items	6.3.5.3.					
(b)	General concepts of RNP AR APCH operation. RNP AR APCH training must cover RNP AR APCH systems theory to the extent appropriate to ensure proper operational use. The pilot must understand basic concepts of RNP AR APCH systems operation, classifications, and limitations. The training must include general knowledge and operational application of RNP AR procedures. This training module must address the following specific elements:	6.3.5.3.2					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
	<ul style="list-style-type: none"> • Definition of RNP AR APCH 	6.3.5.3.2					
	<ul style="list-style-type: none"> • The differences between RNAV and RNP 	6.3.5.3.2					
	<ul style="list-style-type: none"> • The types of RNP AR APCH procedures and familiarity with the charting of these procedures; the programming and displaying of RNP and aircraft specific displays (e.g. actual navigation performance (ANP display)) 	6.3.5.3.2					
	<ul style="list-style-type: none"> • How to enable and disable the navigation updating modes related to RNP 	6.3.5.3.2					
	<ul style="list-style-type: none"> • The navigation accuracy appropriate for different phases of flight and RNP AR APCH procedures and how to select the navigation accuracy, if required 	6.3.5.3.2					
	<ul style="list-style-type: none"> • The use of GPS RAIM (or equivalent) forecasts and the effects of RAIM availability on RNP AR APCH procedures (pilot and dispatchers) 	6.3.5.3.2					
	<ul style="list-style-type: none"> • When and how to terminate RNP navigation and transfer to traditional navigation due to loss of RNP and/or required equipment 	6.3.5.3.2					
	<ul style="list-style-type: none"> • How to determine database currency and whether it contains the navigational data required for use of GNSS waypoints 	6.3.5.3.2					
	<ul style="list-style-type: none"> • Explanation of the different components that contribute to the TSE and their characteristics (e.g. effect of temperature on baro-VNAV and drift characteristics when using IRU with no radio updating); and 	6.3.5.3.2					
	<ul style="list-style-type: none"> • Temperature compensation — pilots operating avionics systems with compensation for altimetry errors introduced by deviations from ISA may disregard the temperature limits on RNP AR APCH procedures, if pilot training on the use of the temperature compensation function is provided by the operator and the compensation function is utilized by the crew. However, the training must also recognize the temperature compensation by the system is applicable to the VNAV guidance and is not a substitute for the pilot compensating for the cold temperature effects on minimum altitudes or the DA 	6.3.5.3.2					
(c)	<p>ATC communications and coordination for use of RNP AR APCH. Ground training must instruct the pilots on proper flight plan classifications and any ATC procedures applicable to RNP AR APCH operations. The pilots must receive instructions on the need to advise ATC immediately when the performance of the aircraft's navigation system is no longer suitable to support continuation of an RNP AR APCH procedure. Pilots must also know what navigation sensors form the basis for their RNP AR APCH compliance, and they must be able to assess the impact of a failure of any avionics or a known loss of ground systems on the remainder of the flight plan</p>	6.3.5.3.3					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
(d)	RNP AR APCH equipment components, controls, displays, and alerts. Academic training must include a discussion of RNP terminology, symbology, operation, optional controls, and display features including any items unique to an operator's implementation or systems. The training must address applicable failure alerts and equipment limitations. The pilots and dispatchers should achieve a thorough understanding of the equipment used in RNP operations and any limitations on the use of the equipment during those operations	6.3.5.3.4					
(e)	AFM information and operating procedures. The AFM or other aircraft eligibility evidence must address normal and abnormal flight crew operating procedures, responses to failure alerts, and any equipment limitations, including related information on RNP modes of operation. Training must also address contingency procedures for loss or degradation of RNP capability. The flight operations manuals approved for use by the pilots (e.g. FOM or POH) should contain this information	6.3.5.3.5					
(f)	MEL operating provisions. Pilots must have a thorough understanding of the MEL requirements supporting RNP AR APCH operations	6.3.5.3.6					
(4)	Flight training segments — content. Training programs must cover the proper execution of RNP AR APCH procedures in concert with the OEM's documentation. The operational training must include: RNP AR APCH procedures and limitations; standardization of the set-up of the cockpit's electronic displays during an RNP AR APCH procedure; recognition of the aural advisories, alerts and other annunciations that can impact compliance with an RNP AR APCH procedure; and the timely and correct responses to loss of RNP AR APCH capability in a variety of scenarios, embracing the scope of the RNP AR APCH procedures which the operator plans to complete. Such training may also use approved flight training devices or simulators. This training must address the following specific elements:	6.3.5.4					
(a)	Procedures for verifying that each pilot's altimeter has the current setting before beginning the final approach of an RNP AR APCH procedure, including any operational limitations associated with the source(s) for the altimeter setting and the latency of checking and setting the altimeters approaching the FAF	6.3.5.4.1					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
(b)	The use of aircraft radar, TAWS, GPWS, or other avionics systems to support the pilot's track monitoring and weather and obstacle avoidance	6.3.5.4.1					
(c)	The effect of wind on aircraft performance during RNP AR APCH procedures and the need to remain within RNP containment area, including any operational wind limitation and aircraft configuration essential to safely complete an RNP AR procedure	6.3.5.4.1					
(d)	The effect of ground speed on compliance with RNP AR APCH procedures and bank angle restrictions impacting the ability to remain on the course centre line. For RNP AR APCH procedures, aircraft are expected to maintain the standard speeds associated with the applicable category; The relationship between RNP and the appropriate approach minima line on an approved published RNP AR APCH procedure and any operational limitations noted on the chart, e.g. temperature limits, RF leg requirements or loss of GNSS updating on approach	6.3.5.4.1					
(e)	Concise and complete pilot briefings for all RNP AR APCH procedures and the important role CRM plays in successfully completing an RNP AR APCH procedure	6.3.5.4.1					
(f)	Alerts from the loading and use of improper navigation accuracy data for a desired segment of an RNP AR procedure	6.3.5.4.1					
(g)	The performance requirement to couple the autopilot/flight director to the navigation system's lateral and vertical guidance on RNP AR APCH procedures requiring an RNP of less than RNP 0.3	6.3.5.4.1					
(h)	The importance of aircraft configuration to ensure the aircraft maintains any required speeds during RNP AR procedures	6.3.5.4.1					
(i)	The events triggering a missed approach when using the aircraft's RNP capability	6.3.5.4.1					
(j)	Any bank angle restrictions or limitations on RNP AR APCH procedures	6.3.5.4.1					
(k)	The potentially detrimental effect on the ability to comply with an RNP AR APCH procedure when reducing the flap setting, reducing the bank angle or increasing airspeed	6.3.5.4.1					
(l)	Pilot knowledge and skills necessary to properly conduct RNP AR APCH operations	6.3.5.4.1					
(m)	Programming and operating the FMC, autopilot, auto throttles, radar, GPS, INS, EFIS (including the moving map), and TAWS in support of RNP AR APCH procedures	6.3.5.4.1					
(n)	The effect of activating TOGA while in a turn	6.3.5.4.1					
(o)	FTE monitoring and impact on go-around decision and operation	6.3.5.4.1					
(p)	Loss of GNSS during a procedure	6.3.5.4.1					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
(q)	Performance issues associated with reversion to radio updating and limitations on the use of DME and VOR updating; and	6.3.5.4.1					
(r)	Flight crew contingency procedures for a loss of RNP capability during a missed approach. Due to the lack of navigation guidance, the training should emphasize the flight crew contingency actions that achieve separation from terrain and obstacles. The operator should tailor these contingency procedures to their specific RNP AR APCH procedures.	6.3.5.4.1					
(5) Evaluation module							
(a)	Initial evaluation of RNP AR APCH operations knowledge and procedures. The operator must evaluate each individual pilot's knowledge of RNP AR APCH procedures prior to employing RNP AR APCH procedures as appropriate. As a minimum, the review must include a thorough evaluation of pilot procedures and specific aircraft performance requirements for RNP AR APCH operations. An acceptable means for this initial assessment includes one of the following:	6.3.5.5.1					
	<ul style="list-style-type: none"> An evaluation by an authorized instructor/evaluator or check-airman using an approved simulator or training device 	6.3.5.5.1					
	<ul style="list-style-type: none"> An evaluation by an authorized instructor/evaluator or check-airman during line operations, training flights, proficiency checks, practical tests events, operating experience, route checks, and/or line checks; or 	6.3.5.5.1					
	<ul style="list-style-type: none"> LOFT/LOE programs using an approved simulator that incorporates RNP operations that employ the unique RNP AR APCH characteristics (i.e. RF legs, RNP missed approach) of the operator's approved procedures 	6.3.5.5.1					
(b)	Evaluation content. Specific elements that must be addressed in this evaluation module are	6.3.5.5.2					
	<ul style="list-style-type: none"> demonstrate the use of any RNP limits that may impact various RNP AR APCH procedures 	6.3.5.5.2					
	<ul style="list-style-type: none"> Demonstrate the application of radio-updating procedures, such as enabling and disabling ground based radio updating of the FMC (i.e. DME/DME and VOR/DME updating) and knowledge of when to use this feature. If the aircraft's avionics do not include the capability to disable radio updating, then the training must ensure the pilot is able to accomplish the operational actions that mitigate the lack of this feature 	6.3.5.5.2					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMD	YES	NO	NA	Remarks
	<ul style="list-style-type: none"> • Demonstrate the ability to monitor the actual lateral and vertical flight paths relative to the programmed flight path and complete the appropriate flight crew procedures when exceeding a lateral or vertical FTE limit 	6.3.5.5.2					
	<ul style="list-style-type: none"> • Demonstrate the ability to read and adapt to a RAIM (or equivalent) forecast, including forecasts predicting a lack of RAIM availability 	6.3.5.5.2					
	<ul style="list-style-type: none"> • demonstrate the proper set-up of the FMC, the weather radar, TAWS, and moving map for the various RNP AR APCH operations and scenarios the operator plans to implement 	6.3.5.5.2					
	<ul style="list-style-type: none"> • Demonstrate the use of pilot briefings and checklists for RNP AR APCH operations, as appropriate, with emphasis on CRM 	6.3.5.5.2					
	<ul style="list-style-type: none"> • Demonstrate knowledge of and ability to perform an RNP AR APCH missed approach procedure in a variety of operational scenarios (e.g. loss of navigation or failure to acquire visual conditions) 	6.3.5.5.2					
	<ul style="list-style-type: none"> • Demonstrate speed control during segments requiring speed restrictions to ensure compliance with an RNP AR APCH procedures 	6.3.5.5.2					
	<ul style="list-style-type: none"> • Demonstrate competent use of RNP AR APCH procedure plates, briefing cards, and checklists 	6.3.5.5.2					
	<ul style="list-style-type: none"> • Demonstrate the ability to complete a stable RNP AR APCH operation including bank angle, speed control, and remain on the procedure's centre line; and 	6.3.5.5.2					
	<ul style="list-style-type: none"> • Knowledge of the operational limit for deviation below the desired flight path on an RNP AR APCH procedure and how to accurately monitor the aircraft's position relative to the vertical flight path 	6.3.5.5.2					
(6)	Recurrent training						
(a)	The operator should incorporate recurrent RNP training that employs the unique AR characteristics of the operator's approved procedures as part of the overall program	6.3.5.6.1					
(b)	A minimum of two RNP AR APCHs, as applicable, must be flown by each pilot for each duty position (pilot flying and pilot monitoring), with one culminating in a landing and one culminating in a missed approach, and may be substituted for any required "precision-like" approach	6.3.5.6.2					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMA	YES	NO	NA	Remarks
B	Operations Manuals						
1	Operations Manuals Part A						
a	Preflight considerations						
(1)	<p>MEL. The operator’s MEL should be developed / revised to address the equipment requirements for RNP AR instrument procedures. Guidance for these equipment requirements is available from the aircraft manufacturer. The required equipment may depend on the intended navigation accuracy and whether the missed approach requires an RNP less than 1.0. For example, GNSS and autopilot are typically required for high navigation accuracy. Dual equipment is typically required for approaches when using a line of minima less than RNP 0.3 and/or where the missed approach has an RNP less than 1.0. An operable Class A TAWS is required for all RNP AR APCH procedures. It is recommended that the TAWS use an altitude that compensates for local pressure and temperature effects (e.g. corrected barometric and GNSS altitude), and includes significant terrain and obstacle data. The TAWS must not utilize the captain’s altimeter subscale setting as the sole reference to help militate against a dual QNH setting error by the pilot. The pilot must be cognizant of the required equipment</p>	6.3.4.1.1					
(2)	<p>Autopilot and flight director. RNP AR APCH procedures with a lateral navigation accuracy of less than RNP 0.3 or with RF legs require the use of an autopilot or flight director driven by the RNP system in all cases. Thus, the autopilot/flight director must be operable and able to track the lateral and vertical paths defined by the procedure. When the dispatch of a flight is predicated on flying an RNP AR APCH procedure requiring the autopilot at the destination and/or alternate, the dispatcher must determine that the autopilot is operational</p>	6.3.4.1.2					
(3)	<p>Dispatch RNP availability prediction. The operator must have a predictive performance capability which can forecast whether or not the specified RNP will be available at the time and location of a desired RNP AR APCH procedure. This capability can be a ground service and need not be resident in the aircraft’s avionics equipment. The operator must establish procedures requiring use of this capability as both a preflight dispatch tool and as a flight following tool in the event of reported failures. The RNP assessment must consider the specific combination of the aircraft capability (sensors and integration)</p>	6.3.4.1.3					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMA	YES	NO	NA	Remarks
(a)	RNP assessment when GNSS updating. This predictive capability must account for known and predicted outages of GNSS satellites or other impacts on the navigation system's sensors. The prediction program should not use a mask angle below 5 degrees, as operational experience indicates that satellite signals at low elevations are not reliable. The prediction must use the actual GNSS constellation with the integrity monitoring algorithm (RAIM, AAIM, etc.) identical to that used in the actual equipment. For RNP AR APCH operations with high terrain, use a mask angle appropriate to the terrain; and	6.3.4.1.3					
(b)	RNP AR APCH operations must have GNSS updating available prior to the commencement of the procedure	6.3.4.1.3					
(4)	NAVAID exclusion. The operator must establish procedures to exclude NAVAID facilities in accordance with NOTAMs (e.g. DMEs, VORs, localizers)	6.3.4.1.4					
(5)	Navigation database currency. During system initialization, pilots of aircraft equipped with an RNP capable system, must confirm that the navigation database is current. Navigation databases are expected to be current for the duration of the flight. If the AIRAC cycle changes during flight, operators and pilots must establish procedures to ensure the accuracy of the navigation data, including the suitability of the navigation facilities used to define the routes and procedures for the flight. An outdated database must not be used to conduct the RNP AR APCH operation unless it has been established that any amendments to the database have no material impact on the procedure. If an amended chart is published for the procedure, the database must not be used to conduct the operation	6.3.4.1.5					
b	In-flight considerations						
(1)	Modification of the flight plan. Pilots are not authorized to fly a published RNP AR APCH procedure unless it is retrievable by the procedure name from the aircraft navigation database and conforms to the charted procedure. The lateral path must not be modified, with the exception of	6.3.4.2.1					
(a)	Accepting a clearance to go direct to a fix in the approach procedure that is before the FAF and that does not immediately precede an RF leg	6.3.4.2.1					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMA	YES	NO	NA	Remarks
(b)	Changing the altitude and/or airspeed waypoint constraints on the initial, intermediate, or missed approach segments of an approach (e.g. to apply cold temperature corrections or comply with an ATC clearance/instruction)	6.3.4.2.1					
(2)	Required list of equipment. The pilot must have a required list of equipment for conducting RNP AR APCH operations or alternate methods to address in-flight equipment failures prohibiting RNP AR APCH procedures (e.g. a quick reference handbook)	6.3.4.2.2					
(3)	RNP management. The pilot's operating procedures must ensure the navigation system uses the appropriate navigation accuracy throughout the approach. If multiple lines of minima associated with different navigation accuracy are shown on the approach chart, the crew must confirm that the desired navigation accuracy is entered in the RNP system. If the navigation system does not extract and set the navigation accuracy from the on-board navigation database for each leg of the procedure, then the pilot's operating procedures must ensure that the smallest navigation accuracy required to complete the approach or missed approach is selected before initiating the procedure (e.g. before the IAF and before take-off roll). Different segments may have a different navigation accuracy, which are annotated on the approach chart	6.3.4.2.3					
(4)	GNSS updating. All RNP AR instrument procedures require GNSS updating of the navigation position solution. The pilot must verify that GNSS updating is available prior to commencing the RNP AR procedure. During an approach, if at any time GNSS updating is lost and the navigation system does not have the performance to continue the approach, the pilot must abandon the RNP AR APCH unless the pilot has in sight the visual references required to continue the approach	6.3.4.2.4					
(5)	Radio updating. Initiation of all RNP AR APCH procedures is based on the availability of GNSS updating. Except where specifically designated on a procedure as "Not Authorized", DME/DME updating can be used as a reversionary mode during the approach or missed approach when the system complies with the navigation accuracy. VOR updating is not authorized at this time. The pilot must comply with the operator's procedures for inhibiting specific facilities	6.3.4.2.5					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMA	YES	NO	NA	Remarks
(6)	Procedure confirmation. The pilot must confirm that the correct procedure has been selected. This process includes confirmation of the waypoint sequence, reasonableness of track angles and distances, and any other parameters that can be altered by the pilot, such as altitude or speed constraints. A procedure must not be used if the validity of the navigation database is in doubt. A navigation system textual display or navigation map display must be used	6.3.4.2.6					
(7)	Track deviation monitoring. Pilots must use a lateral deviation indicator and/or flight director in lateral navigation mode on RNP AR APCH procedures. Pilots of aircraft with a lateral deviation indicator must ensure that lateral deviation indicator scaling (full-scale deflection) is suitable for the navigation accuracy associated with the various segments of the RNP AR APCH procedure. All pilots are expected to maintain procedure centre lines, as depicted by on-board lateral deviation indicators and/or flight guidance during all RNP operations described in this manual, unless authorized to deviate by ATC or under emergency conditions. For normal operations, cross-track error/deviation (the difference between the RNP system computed path and the aircraft position relative to the path) should be limited to $\pm\frac{1}{2}$ the navigation accuracy associated with the procedure segment. Brief lateral deviations from this standard (e.g. overshoots or undershoots) during and immediately after turns, up to a maximum of one-times the navigation accuracy of the procedure segment are tolerable	6.3.4.2.7					
(8)	The vertical deviation must be within 22 m (75 ft) during the FAS noting that transients in excess of 75 ft above the vertical path are acceptable (e.g. configuration changes or energy management actions). Vertical deviation should be monitored above and below the vertical path; while being above the vertical path provides margin against obstacles on the final approach, continued intentional flight above the vertical path can result in a go-around decision closer to the runway and reduce the margin against obstacles in the missed approach	6.3.4.2.8					
(9)	Pilots must execute a missed approach if the lateral deviation exceeds 1 \times RNP or the vertical deviation exceeds -22 m (-75 ft), unless the pilot has in sight the visual references required to continue the approach	6.3.4.2.9					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMA	YES	NO	NA	Remarks
(a)	Some aircraft navigation displays do not incorporate lateral and vertical deviations scaled for each RNP AR APCH operation in the primary optimum field of view. Where a moving map, low-resolution vertical deviation indicator (VDI), or numeric display of deviations are to be used, pilot training and procedures must ensure the effectiveness of these displays. Typically, this involves the demonstration of the procedure with a number of trained crews and inclusion of this monitoring procedure in the recurrent RNP AR APCH training program	6.3.4.2.9					
(b)	For installations that use a CDI for lateral path tracking, the AFM or aircraft qualification guidance should state which navigation accuracy and operations the aircraft supports and the operational effects on the CDI scale. The pilot must know the CDI full-scale deflection value. The avionics may automatically set the CDI scale (dependent on the phase of flight) or the pilot may manually set the scale. If the pilot manually selects the CDI scale, the operator must have procedures and training in place to assure the selected CDI scale is appropriate for the intended RNP operation. The deviation limit must be readily apparent given the scale (e.g. full-scale deflection)	6.3.4.2.9					
(10)	System cross-check. For approaches with a navigation accuracy less than RNP 0.3, the pilot must monitor the lateral and vertical guidance provided by the navigation system by ensuring it is consistent with other available data and displays that are provided by an independent means	6.3.4.2.10					
(11)	Procedures with RF legs. An RNP AR APCH procedure may require the ability to execute an RF leg to avoid terrain or obstacles. This requirement will be noted on the chart. As not all aircraft have this capability, pilots must be aware of whether or not they can conduct these procedures. When flying an RF leg, pilots must not exceed the maximum airspeeds shown in Table II-C-6-1 throughout the RF leg segment. For example, a Category C A320 must slow to 160 KIAS at the FAF or may fly as fast as 185 KIAS if using Category D minima. A missed approach prior to DA may require the segment speed for that segment be maintained	6.3.4.2.11					
(12)	Altimeter setting. RNP AR APCH IAPs use barometric data to derive vertical guidance. The pilot must ensure that the current local QNH is set prior to the FAF. Remote altimeter settings are not permitted	6.3.4.2.13					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMA	YES	NO	NA	Remarks
(13)	Temperature compensation. For aircraft with temperature compensation capabilities, approved operating procedures may allow pilots to disregard the temperature limits on RNP AR APCH procedures if the operator provides pilot training on the use of the temperature compensation function. Temperature compensation by the system is applicable to the baro-VNAV guidance and is not a substitute for the pilot compensating for the cold temperature effects on minimum altitudes or the DA. Pilots should be familiar with the effects of the temperature compensation on intercepting the compensated path described in EUROCAE ED-75B/ RTCA DO-236B Appendix H.	6.3.4.2.12					
(14)	Altimeter cross-check. The pilot must complete an altimetry cross-check ensuring both pilots' altimeters agree within 30 m (± 100 ft) prior to the FAF but no earlier than the IAF on approach. If the altimetry cross-check fails then the procedure must not be continued. If the avionics systems provide a comparator warning system for the pilots' altimeters, the pilot procedures should address actions to take if a comparator warning for the pilots' altimeters occurs while conducting an RNP AR APCH procedure	6.3.4.2.14					
(15)	VNAV altitude transitions. The aircraft barometric VNAV system provides fly-by vertical guidance, and may result in a path that starts to intercept the vertical path of the procedure prior to the FAF. The small vertical displacement which may occur at a vertical constraint (e.g. the FAF is considered operationally acceptable, providing a smooth transition to the next flight path vertical segment. This momentary deviation below the published minimum procedure altitude is acceptable provided the deviation is limited to no more than 30 m (100 ft) and is a result of a normal VNAV capture. This applies to both "level off" or "altitude acquire" segments following a climb or descent, or vertical climb or descent segment initiation, or joining of climb or descent paths with different gradients	6.3.4.2.15					
(a)	Non-standard climb gradient. When an approach procedure specifies a non-standard climb gradient, the operator must ensure the aircraft is capable of complying with the published climb gradient at the aircraft landing weight under ambient atmospheric conditions	6.3.4.2.16					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	OMA	YES	NO	NA	Remarks
(b)	Go-around or missed approach. Where possible, the missed approach will require a navigation accuracy of RNP 1.0. The missed approach portion of these procedures is similar to a missed approach of an RNP APCH approach. Where necessary, navigation accuracy less than RNP 1.0 will be used in the missed approach. Approval to conduct these approaches, equipment and procedures must meet criteria in 6.3.3.4.4,0 "Requirements for approaches with missed approach less than RNP 1.0"	6.3.4.2.17					
(c)	In some aircraft, activating TOGA during the initiation of a go-around or missed approach may cause a change in lateral navigation mode or functionality, (i.e. TOGA disengages the autopilot and flight director from lateral navigation guidance) and track guidance may revert to track-hold derived from the inertial system. In such cases, lateral navigation guidance to the autopilot and flight director should be re-engaged as quickly as possible	6.3.4.2.18					
(d)	The pilot procedures and training must address the impact on navigation capability and flight guidance if the pilot initiates a go-around while the aircraft is in a turn. When initiating an early go-around, the pilot must ensure adherence to the published track unless ATC has issued a different clearance. The pilot should also be aware that RF legs are designed for a maximum ground speed. Initiating an early go-around at speeds higher than those considered in the design, may cause the aircraft to diverge throughout the turn and require pilot intervention to maintain the path	6.3.4.2.19					
(e)	Contingency procedures - failure while en route. The aircraft RNP capability is dependent on operational aircraft equipment and GNSS. The pilot must be able to assess the impact of equipment failure on the anticipated RNP AR APCH procedure and take appropriate action. As described in 6.3.4.1.3, "Dispatch RNP availability prediction", the pilot also must be able to assess the impact of changes in the GNSS constellation and take appropriate action	6.3.4.2.20					
(f)	Contingency procedures - failure on approach. The operator's contingency procedures need to address the following conditions: Failure of the RNP system components, including those affecting lateral and vertical deviation performance (e.g. failures of a GPS sensor, the flight director or automatic pilot); and loss of navigation SIS (loss or degradation of external signal)	6.3.4.2.21					



Flight Operations Standards Directorate
Commercial Air Transport Section - Special Approvals - PBN Approvals / RNP AR APCH
RNP AR APCH Approval Application Attachments Compliance List

No	RNP AR APCH Operational Approval Application Attachments	ICAO Doc 9613	MEL	YES	NO	NA	Remarks
----	--	---------------	-----	-----	----	----	---------

2	Minimum Equipment List (MEL)						
---	------------------------------	--	--	--	--	--	--

a	MEL revisions necessary to address provisions for RNP AR APCH operations must be approved. Operators must adjust the MEL, or equivalent, and specify the required dispatch conditions	6.3.2.6.4					
---	---	-----------	--	--	--	--	--

• Assessment Result							
<input type="checkbox"/> Satisfactory				<input type="checkbox"/> Unsatisfactory			

• Remarks							

Flight Operations Inspector Name	Signature	Date