CHAPTER 16 PERFORMANCE-BASED NAVIGATION APPROVAL

DSA.AOC.MAN.002

16.1 BACKGROUND

16.1.1 Cameroon regulations require operators to be authorized prior to conducting flights in defined portions of airspace or any routes where a navigation specification for performance-based navigation is prescribed. In addition, the aircraft must be equipped with navigation equipment in accordance with the navigation specification and flight crews provided with appropriate training. This chapter outlines the CCAA procedures for providing authorization where a navigation specification is prescribed.

16.1.2 Conventional navigation is dependent upon ground-based radio navigation aids. It has been the mainstay of aviation for the last seventy years and pilots, operators, manufacturers and air navigation service providers are all familiar with the associated technology, avionics, instrumentation, operations, training and performance.

16.1.3 Performance-based navigation (PBN) detailed in the ICAO Performance-based Navigation (PBN) Manual (Doc 9613) is based upon area navigation principles. While various methods of area navigation have been in existence for many years, the widespread use of area navigation as a primary navigation function is a more recent phenomenon. The PBN concept is intended to better define the use of area navigation systems and is expected to replace much of the existing conventional navigation routes within the next twenty years.

16.1.4 The fundamentals of PBN operations are relatively straightforward and operational approval need not be a complicated process for either applicant or CCAA. However, the transition to new technology, new navigation and new operational concepts and the dependence on data driven operations requires careful management. Concerning this matter, CCAA has developed a Performance-based Navigation (PBN) Operational Approval Manual **DSA.AOC.MAN.002**, based on ICAO Doc 9997 to provide guidance on the operational approval process in the context of performance-based navigation (PBN). It is intended for inspectors and others involved in the regulation of PBN operations.

16.2 PBN OVERVIEW

16.2.1 Area navigation systems evolved in a manner similar to conventional ground-based routes and procedures. The early systems used very high-frequency omnidirectional radio range (VOR) and distance measuring equipment (DME) for estimating their position in domestic operations and inertial navigation systems (INS) were employed in oceanic operations. In most cases, a specific area navigation system was identified and its performance was evaluated through a combination of analysis and flight testing. In some cases, it was necessary to identify the individual models of equipment that could be operated within the airspace concerned. Such prescriptive requirements resulted in delays to the introduction of new area navigation system capabilities and higher costs for maintaining appropriate certification. The PBN concept was developed with globally-applicable performance requirements, detailed in accompanying navigation specifications, in order to avoid these high costs and delays.

16.2.2 The PBN concept requires that the aircraft area navigation system performance is defined in terms of the accuracy, integrity, availability, continuity and functionality necessary to operate in the context of a particular airspace concept. Appropriate positioning sensors are also identified. These may include VOR/DME, DME/DME, GNSS and/or INS. The performance is detailed in a navigation specification at sufficient a level of detail to facilitate global harmonization. The navigation specification not only lays out the aircraft system performance requirements but also the requirements in terms of flight crew procedures and training, as well as any appropriate maintenance requirements, such as the provision of navigation databases.

16.3 RNAV AND RNP

16.3.1 RNAV specifications have been developed to support existing capabilities in aircraft equipped with area navigation systems which, in the general case, were not designed to provide on-board performance monitoring and alerting. RNAV specifications are similar to RNP specifications but do not require an on-board performance monitoring and alerting capability.

16.3.2 RNP specifications have been developed from a need to support operations that require greater integrity assurance, where the pilot is able to detect when the navigation system is not achieving, or cannot guarantee with appropriate integrity, the navigation performance required for the operation.

Such systems are known as RNP systems. RNP systems provide greater assurance of integrity and, hence, can offer safety, efficiency, capacity and other operational benefits.

16.4 CCAA PBN OPERATIONAL APPROVAL PROCESS

16.4.1 CCAA will issue authorization to operators, where a navigation specification for performance-based navigation is prescribed, provided that the operator can demonstrate compliance with the applicable requirements.

Inspectors will use **DSA.AOC.MAN.002** as guidance material and fill the checklists within the manual.

CHAPTER 17 LOW VISIBILITY TAKE-OFF, CATEGORY II AND III APPROVAL

DSA.AOC.CHKL.122

17.1 BACKGROUND AND OBJECTIVES

17.1.1 "**Instruction N°00456/CCAA/DNA du 22 Août 2006 relative à la circulation dans les espaces à minimum de séparation verticale réduit**" require air operators to be authorized prior to conducting low visibility take-off (LVTO) and Category II and III operations. Furthermore, the regulations prescribe requirements for ground and aircraft equipment, crew training and authorization, and the establishment of Category II and/or Category III operating procedures. Operating procedures should be contained in the operations manual. This chapter outlines the procedures for providing authorization to air operators for LVTO; Category II and/or Category III operations.

7.1.2 Depending on a variety of factors, an operator may be granted approval to conduct the following categories of approaches to the limits specified:

Decision Height Runway Visual Range

Category (DH) (Meters)
CAT II 30 m (100 ft) 300 m
CAT III a No DH or <30m (100 175 m ft)
CAT III b No DH or <15m (50 175 m to ≥ 50 m ft)

17.1.3 Low visibility take-off requirements are outlined in 17.4 of this chapter.

17.2 GENERAL APPROVAL REQUIREMENTS

17.2.1 There are five elements involved in the approval of an operation by CCAA as follows: authorization of the aeroplane and its equipment;

a) authorization of the use of the aerodrome;
b) authorization of the flight crew;
c) authorization of the operation; and
d) authorization of minima.

17.2.1.1 Authorization of the aeroplane and its equipment. These are indicated by appropriate entries in the aircraft flight manual.

Note.— Detailed requirements outlined in 17.3.

17.2.1.2 Authorization of the use of the aerodrome. Air operators are responsible for determining the facilities available at the aerodrome meet the requirements of regulations and shall ensure the following:

a) the State of the Aerodrome authorizes use of the facilities and services;
b) the appropriate Obstacle Clearance Altitude/Height (OCA/H) is published by the State of the Aerodrome; and
c) where the State of the Aerodrome has established an aerodrome operating minima policy and published landing and take-off minima in the AIP, the minima authorized for the use of an operator by CCAA will not be lower than the former, except where specifically authorized by the State of the Aerodrome.

17.2.1.3 Authorization of the flight crew. Flight crews will be qualified to operate to the applicable aerodrome operating minima as follows:

a) the pilot-in-command and co-pilot each hold a valid instrument rating and meet the requirements for recent experience established by regulations;
b) flight crew members are qualified and trained for take-off, instrument approaches and operations for low visibility take-off, Category II and/or Category III operations, as applicable;
c) flight crew members have completed all required proficiency checks, including demonstration of proficiency for low visibility take-off and using the relevant types of instrument approaches; and
d) the pilot-in-command has the necessary experience in the aeroplane type with restricted (higher) minima before being authorized to use the lowest approved minima;
e) the operator maintains a system of records to ensure that the necessary qualifications of the flight crew members are being met on a continuing basis.

Note.— Detailed requirements outlined in 17.3.

17.2.1.4 Authorization of the operation. Before granting such an authorization, inspectors shall ensure that the operator has established a system to ensure that:

a) applicable aerodrome operating minima for the use of flight crews for all types of approaches to all aerodromes to be used in the operations have been determined;
b) the proficiency of flight crews has been determined;
c) required operating procedures have been established;
d) an operations manual with instructions appropriate to the intended operation and that reflect the mandatory procedures and/or limitations contained in the aircraft flight manual; and
e) sufficient experience has been gained by the air operator in operational service in weather minima higher than those proposed.

Note.— Detailed requirements outlined in 17.3.

17.2.1.5 Authorization of minima. Cameroon regulations require an air operator establishing aerodrome-operating minima to have its method for determining such minima approved by the CCAA. Approval may be granted provided the operator's method for determining aerodrome-operating minima accurately accounts for:

a) the type, performance and handling characteristics of the aircraft;
b) the composition and experience of the flight crew;
c) the dimensions and characteristics of the runways selected for use;
d) aircraft equipment used for navigation and aircraft control during the approach to landing and the missed approach;
e) obstacles in the approach and missed approach areas and the obstacle clearance altitude/height for the intended instrument approach procedures;
f) the means used to determine and report meteorological conditions;
g) the obstacles in the climb out areas and the necessary clearance margins; and
h) the adequacy and performance of the available visual and non-visual ground aids.

17.3 SPECIFIC APPROVAL REQUIREMENTS CATGORY II/III

17.3.1 Aeroplane and its equipment

17.3.1.1 The instruments and equipment for Category II and III operations shall comply with the airworthiness requirements of the State of Registry of the aeroplane. In addition, aeroplane performance shall enable a missed approach to be carried out with an engine inoperative and without outside visual reference, from any height down to the decision height

in Category II operations and down to touchdown in Category III operations, while remaining clear of obstacles. The instruments and equipment appropriate to various precision approach operations are outlined in "**Instruction N°00456/CCAA/DNA du 22 Août 2006 relative à la circulation dans les espaces à minimum de séparation verticale réduit**". The MEL shall reflect the equipment required for low visibility operations.

17.3.1.2 The target level of safety and the acceptable frequency of missed approaches due to airborne equipment performance, in conjunction with the intended operating minima, determine the airborne equipment design requirements with regard to:

a) system accuracy;
b) reliability;
c) characteristics in case of failures;
d) monitoring procedures and equipment; and
e) degree of redundancy.

17.3.1.3 A reporting system shall be implemented to enable continual checks and periodic reviews during the operational evaluation period before the operator is authorized to conduct Category II and III operations. Furthermore, the reporting system will be used for a after the authorization has been given to ensure that the required standards of performance are maintained. The reporting system shall cover all successful and unsuccessful approaches, with reasons for the latter, and include a record of system component failures.

17.3.1.4 For Category II operations, air operators will differentiate between successful and unsuccessful approaches and provide a questionnaire to be completed by the flight crew to obtain data on actual or practice approaches which were not successful. As a minimum, the following data will be gathered to evaluate a Category II operation:

a) the aerodrome and runway used;
b) weather conditions;
c) time;
d) reason for failure leading to an aborted approach;
e) adequacy of speed control;
f) trim at time of automatic flight control system disengagement;
g) compatibility of automatic flight control system;
h) flight director and raw data; and

i) an indication of the aeroplane's position relative to the ILS centre line and glide path when descending through 30 m (100 ft).

The number of approaches made during initial operational evaluation will vary depending on the capabilities of the aircraft and the operator's experience. A minimum of [State CAA established numbers] simulated approaches shall be completed to demonstrate that the performance of the system in commercial service is such that an adequate approach success rate will result. When determining the success rate, failures due to external factors, such as ATC instructions or ground equipment faults, should be taken into account.

17.3.1.5 For Category III similar but more stringent demonstration procedures will be followed.

Use may be made of recording equipment such as a sophisticated flight data recorder to obtain the necessary data. Any landing irregularity will be fully investigated using all available data to determine its cause. Failure to positively identify and correct the cause of any landing reported to be unsatisfactory may jeopardize the future of the particular operation. A minimum of 100 simulated approaches will be conducted prior to approval being granted.

17.3.1.6 Aircraft manufacturer's design and certificate aircraft having CAT II and III operational capability. The automatic systems concept is described in type-certification requirements, including requirements for minimum system performance and failure conditions, flight demonstration during certification and information to be included in the aeroplane flight manual. Inspectors will confirm that the authorization being sought by the air operator is within the operational capability as outlined in the aircraft flight manual. Additional considerations for the certification of the aeroplane as a whole for approach and landing in restricted visibility must be included in the operators programme (e.g. experience and operational demonstration of performance).

17.3.1.7 The operator shall establish a maintenance programme to ensure that the airborne equipment continues to operate in service to the required performance level. This programme shall be capable of detecting any deterioration in the overall level of performance as described in 17.3.1.3 to 17.3.1.6.

17.3.1.8 Maintenance programmes shall be established consistent with the aeroplane manufacturer's recommendations. Aeroplane system design and architecture and the manufacturer's maintenance philosophy can introduce significant variation between aeroplane types for failure detection, annunciation and return-to-service methods.

17.3.2 Operating procedures

17.3.2.1 Low weather minima operations require special procedures and instructions to be included in the operations manual, but it is desirable that any such procedures should also be used as the basis for all operations in order to provide the same operating philosophy for all categories of operations.

These procedures cover all foreseeable circumstances so that flight crews are fully informed as to the correct course of action which should be followed. This is particularly true for the last part of the approach and landing where limited time is available for decision making. Possible modes of operation include:

a) manual take-off;
b) manual approach and landing;
c) coupled approach down to DA/H, manual landing thereafter;
d) coupled approach to below DA/H, but manual flare and landing;
e) coupled approach followed by auto-flare and auto-landing; and
f) coupled approach followed by auto-flare, auto-landing and auto-roll-out.

17.3.2.2 The precise nature and scope of procedures and instructions shall be a function of the airborne equipment used and the flight deck procedure applied. The duties of flight crew members during take-off, approach, flare, roll-out and missed approach are to be clearly delineated in the operations manual. Particular emphasis shall be placed on flight crew responsibilities when transitioning from non-visual conditions to visual conditions and on procedures to be used in deteriorating visibility or when failures occur. Special attention should be paid to the distribution of flight deck duties to ensure that the workload of the pilot making the decision to land or to execute a missed approach enables the pilot to concentrate on flight management and decision-making.

17.3.2.3 The following areas are to be addressed in the operations manual:

a. checks for satisfactory functioning of equipment, both on the ground and in flight;

b. effects on minima caused by changes in the status of the ground installations;
c. use and application of RVR reports from multiple runway positions and sensors;
d. pilot assessment of aircraft position and monitoring of the performance of the automatic flight control system, the effects of the failure of any required portion of the automatic flight control system or instruments used with the system and action to be taken in the event of inadequate performance or failure of any portion of either the system or the associated instruments;
e. actions to be taken in the case of failures, such as engines, electrical systems, hydraulics and flight control systems;
f. allowable aeroplane equipment deficiencies;
g. precautions necessary when making practice approaches where full ATC procedures to support Category III operations are not in force;
h. operating limitations resulting from airworthiness certification; and
i. information on the maximum deviation allowed from the ILS glide path and/or localizer from the region of the DA/H down to touchdown, as well as guidance regarding the visual reference required.

17.3.2.4 Air operators will establish procedures for the gradual introduction of low weather minima operations. The procedures shall implement reduced visibility operations through a gradual reduction in meteorological criteria commensurate with experience. Such procedures will ensure the following:

a) the practical evaluation of airborne equipment before commencing actual operations as outlined in 17.3.1.5 and 17.3.1.6;
b) accumulation of experience with the procedures discussed above before commencing actual operations and, if necessary, the adjustment of those procedures;
c) accumulation of operating experience before proceeding to Category III operations minima;
d) providing, for analysis purposes, a means of pilot reporting on ground and airborne system performance;
e) accumulation of flight crew experience; and
f) accumulation of experience in the maintenance of particular equipment.

Note.— Procedures and limitations for all weather operations are contained in the operations manual.

17.3.3 Flight crew qualification and training

17.3.3.1 Before conducting Category II or III operations, the flight crew shall complete an approved programme of training and education. The approved programme of training will be related to the aeroplane type and the operating procedures adopted, as outlined in 17.3.2. For modern transport aircraft and operators, this is typically incorporated as part of the operator's approved flight crew training programme.

17.3.3.2 The increased dependence on the use of automatic systems highlights the role of the flight crew in safely and effectively operating these systems and the need for this role to be addressed in training and qualification processes. This emphasis should include pilot assessment of the position of the aeroplane and monitoring of the automatic flight control system performance throughout all phases of the approach, flare, touchdown and roll-out.

17.3.3.3 Flight crews shall be required to demonstrate their competency to the designated examiner or CCAA inspector. The captain will have at least 500 hours as pilot-in-command in turbo-jet and 100 hours of pilot-in-command on the aeroplane type before being authorized by the air operator to apply Category II or III operations minima under actual conditions.

17.3.3.4 Flight crews shall make full use of ground and airborne equipment intended for use during Category II and III operations. They shall therefore be instructed in how to obtain maximum benefit from redundancy provided in the airborne equipment and to fully understand the limitations of the total system, including both ground and airborne elements. The ground instruction shall cover at least the following:

a) the characteristics, capabilities and limitations of the NAVAIDs involved (e.g. ILS, GLS) including the effect on aeroplane system performance of interference to the ILS signal caused by other landing, departing or overflying aeroplanes and the effect of the infringement of ILS critical and sensitive areas by aeroplanes or vehicles in the manoeuvring area;

b) the characteristics of the visual aids (e.g. approach lighting, touchdown zone lighting, centre line lighting) and the limitations on their use as visual cues in reduced visibility with various glide path angles and cockpit cut-off angles, and the heights at which various cues may be expected to become visible in actual operations;

c) the operation, capabilities and limitations of the airborne systems (e.g. the automatic flight control systems, monitoring and warning devices, flight instruments including altimetry systems and the means the pilot has to assess the position of the aeroplane during the approach, touchdown and rollout);

d) approach, including missed approach procedures and techniques, along with descriptions of the factors affecting height loss during missed approach in normal and abnormal aeroplane configurations;

e) the use and limitations of RVR, including the applicability of RVR readings from different positions on the runway, the different methods of assessing RVR, the conversion method of visibility into an RVR in some States and the limitations associated with each method;

f) the basic understanding of obstacle limitation and the obstacle-free zone, including missed approach design criteria and obstacle clearance for Category II and III operations;

g) the effects of low-level wind shear, turbulence and precipitation;

h) pilot tasks at decision height, and procedures and techniques for transition from instrument to visual flight in low visibility conditions, including the geometry of eye, wheel and antenna positions with reference to ILS reference datum height;

i) action to be taken if the visual reference becomes inadequate when the aeroplane is below decision height and the technique to be adopted for transition from visual to instrument flight should a go around become necessary at these low heights;

j) use of alert height and appropriate actions;

k) action to be taken in the event of failure of approach and landing equipment above and below decision height;

l) recognition of and action to be taken in the event of failure of ground equipment;

m) significant factors in the determination of decision height;

n) effect of specific aeroplane malfunctions (e.g. engine failure) on auto-throttle, auto-pilot performance;

o) procedures and precautions to be followed while taxiing during limited visibility conditions; and

p) the existence and effects of visual illusions.

17.3.3.5 Each member of the flight crew shall be trained to carry out the duties appropriate to the particular airborne system and subsequently demonstrate their ability to carry out the duties, as a member of the flight crew, to an acceptable level of competency before being authorized to engage in the particular category of operations. Additionally, before a pilot is authorized to operate to Category II or III minima, the pilot shall have gained experience as outlined in 17.3.2.4 in using the appropriate procedures in meteorological conditions above the relevant minima. Flight crews shall be given practical training and tests in the use of applicable systems and associated procedures in conditions of the lowest minima to be authorized.

17.3.3.6 Training may only be carried out in an approved FSTD with a suitable visual system qualified for LVTO, CAT II and/or CAT III as applicable. It is important that the visibility simulated for both static and dynamic visual scenes is a correct reflection of the RVR intended. The specific type of training will depend upon the particular airborne system and on the operating procedures adopted. The initial training shall at least include:

a. approaches with all engines operating, and with an engine inoperative, using the appropriate flight guidance and control systems installed in the aeroplane down to the appropriate minimum height, without external visual reference, followed by transition to visual reference and landings;

b. approaches with all engines operating, and with an engine inoperative, using the appropriate flight guidance and control systems installed in the aeroplane down to the appropriate minimum height, followed by missed approaches, all without external visual reference;

c. approaches utilizing the automatic flight control and landing system, followed by reversion to manual control for flare and landing after disconnecting the automatic system at low level, if appropriate;

d. approaches utilizing the automatic flight control and landing system with automatic flare, automatic landing and, where appropriate, automatic roll-out;

e. procedures and techniques for reversion to instrument flight and the execution of a missed approach from DA/H, including obstacle clearance aspects; and

f. go-around from a height below decision height which may result in a touchdown on the runway in cases of a go-around initiated from a very low altitude, e.g. such as to simulate failures or loss of visual reference prior to touchdown.

17.3.3.7 The flight training programme shall provide practice in handling system faults, particularly those which have an effect on the operating minima and/or subsequent conduct of the operation. However, the frequency of system malfunctions introduced shall not be such so as to undermine the confidence of flight crews in the overall integrity and reliability of the systems used in low minima operations.

17.3.3.8 In conjunction with normal pilot proficiency checks at regular intervals, a pilot shall demonstrate the knowledge and ability necessary to perform the tasks associated with the authorized category of operation. The use of an approved FSTD for recurrent training, proficiency checking and renewal of authorizations is mandatory.

17.3.3.9 Air operators shall ensure that pilots use procedures developed for Category II or III operations during normal service, regardless of the weather conditions, when the necessary ground facilities are available and traffic conditions permit. This practice ensures flight crew familiarity with the procedures, builds confidence with the equipment and ensures appropriate maintenance of the Category II and III related systems.

17.3.3.9 When a flight crew member becomes fully qualified for Category II or III operations, the operator shall document these qualifications by either an endorsement in the pilot logbook or the issuance of a qualification card which shall contain evidence of recurrent checks.

17.4 SPECIFIC APPROVAL REQUIREMENTS LOW VISIBILITY TAKE-OFF

17.4.1 Take-off minima are usually stated as visibility or RVR limits. Where there is a specific need to see and avoid obstacles on departure, take-off minima may include cloud base limits. Where avoidance of such obstacles may be accomplished by alternate procedural means, such as use of climb gradients or specified departure paths, cloud base restrictions need not be applied.

17.4.2 While the State of the Aerodrome may establish standard take-off minima, low visibility take- off (LVTO) minima may also be established for aerodromes based on the availability of specified facilities and aerodrome procedures. CCAA may authorize the use of LVTO minima based on the following factors:

a) flight characteristics and cockpit instrumentation typical of multi-engine turbine aircraft;

b) comprehensive programmes for crew qualification which address use of the specified minima;

c) comprehensive programmes for airworthiness, with any necessary equipment operational (MEL);

d) availability of specified facilities for the respective minima, including programmes for assurance of the necessary reliability and integrity;

e) availability of air traffic services to ensure separation of aircraft and timely and accurate provision of weather, NOTAM and other safety information;

f) standard runway and airport configurations, obstruction clearance, surrounding terrain, and other characteristics typical of major facilities serving scheduled international operations;

g) routine low visibility weather conditions (e.g. fog, precipitation, haze, wind components) which do not require special consideration; and

h) availability of alternate courses of action in the event of emergency situations.

17.4.3 Air operators requesting authorization for LVTO at aerodromes where these may be available may make application to CCAA. The application will be approved provided the air operator can adequately demonstrate that each of the factors outlined above has been addressed.

17.4.4 The air operator may be authorized to the LVTO minima outlined in 17.4.5 below provided these minima are authorized by the State of the Aerodrome for that particular aerodrome.

17.4.5 Approved take-off minima for commercial air transport aeroplanes:

FACILITIES	RVR/VIS1
Adequate visual reference (day only)2	500 m/1 600 ft
Runway edge lights or runway centre line markings3	400 m/1 200 ft
Runway edge lights and runway centre line markings3	300 m/1 000 ft
Runway edge lights and runway centre line lights	200 m/600 ft
TDZ 150 m/500 ft	
Runway edge lights and runway centre line lights 4 information Stop-end 150	MID 150 m/500 ft and relevant RVR
TDZ 125 m/400 ft	
High intensity runway edge lights and runway centre line lights (spacing 15 m or 4 MID 125 m/400 ft less) and relevant RVR information	
Stop-end 125	
TDZ 75 m/300 ft	
High intensity runway edge lights and runway centre line lights (spacing 15 m or	

4 MID 75 m/300 ft less), approved lateral guidance system and relevant RVR information

Stop-end 75 m/300

1. The TDZ RVR/VIS may be assessed by the pilot.

2. Adequate visual reference means that a pilot is able to continuously identify the take-off surface and maintain directional control.

3. For night operations at least runway edge lights or centre line lights and runway end lights are available.

4. The required RVR is achieved for all relevant RVRs.

17.4.5 Take-off minima, which are relevant to the take-off manoeuvre itself, should not be confused with weather minima required for flight initiation. For flight initiation, departure weather minima at an aerodrome shall not be less than the applicable minima for landing at that aerodrome unless a suitable take-off alternate aerodrome is available. The take-off alternate aerodrome shall be located within the following distances of the aerodrome of departure:

a) aeroplanes with two engines: one hour of flight time at a one-engine-inoperative cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or

b) aeroplanes with three or more engines: two hours of flight time at an all-engine operating cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or

c) aeroplanes engaged in extended diversion time operations (EDTO): where an alternate aerodrome meeting the distance criteria of a) or b) is not available, the first available alternate aerodrome located within the distance of the operator's approved maximum diversion time considering the actual take-off mass.

17.5 ISSUANCE OF OPERATIONS SPECIFICATION

17.5.1 Operations and airworthiness inspectors will review the air operator's submission utilizing Job Aid – Low Visibility Operations. Once all requirements of this chapter have

been met for the authorization requested, inspectors shall authorize the operations through the issue of operations specifications for low visibility operations. The operations specification will include the applicable precision approach category (CAT II, IIIA, or IIIB) and minimum RVR in metres and decision height in feet. For low visibility take-off the operations specification will include the approved minimum take-off RVR in metres.