澳門特別行政區
REGIÃO ADMINISTRATIVA ESPECIAL DE MACAU
民航局
AUTORIDADE DE AVIAÇÃO CIVIL
CIVIL AVIATION AUTHORITY

AC
No. : AC/AGA/008R00
Date : 15 Jun 2012

AERONAUTICAL CIRCULAR

SUBJECT:

Aerodrome Manual Requirements

EFFECTIVE DATE:

15 June 2012

CANCELLATION:

Nil.

GENERAL:

The President of Civil Aviation Authority – Macao, China, in exercise of his power under Paragraph 89 of the Air Navigation Regulation of Macao (ANRM) and Article 35 of the Statutes of Civil Aviation Authority, approved by the Decree-Law 10/91/M, establishes this Aeronautical Circular (AC) which elaborates on the requirements of an aerodrome manual within Macao ATZ, in accordance with Article 8 of Administrative Regulation no. 18/2012.

Alameda Dr. Carlos D'Assumpção, 336-342 Centro Comercial Cheng Feng, 18º andar, Macau
Tel.: (853) 2851 1213 • Fax: (853) 2833 8089 • AFTN: VMMCYAYI • E-mail: aacm@aacm.gov.mo

Revision History

No.	Revision summary	Revision date
R00	First Issue	15 Jun 2012

Table of Contents

REFERENCE

- ICAO Annex 14: Annex 14 (Volume I – II) to the Convention on International Civil Aviation – (incorporates Amendments 1 – 10B)

- ICAO Doc 9774: Manual on Certification of Aerodromes

- ICAO Doc 9859: Safety Management Manual

CHAPTER 1: INTRODUCTION

Section 1: General

Section 1.1. Standards

1.1.1. The standards pertaining to the aerodrome service and thus to the required aerodrome manual in this AC are in accordance with the Standards and Recommended Practices in Annex 14 to the Convention on International Civil Aviation. The standards comprise specifications (Standards) prescribed by AACM, of uniform application, determined to be necessary for the safety of air navigation. Service providers must document internal actions (Rules) in their own Operational Manuals and maintain the required records, to ensure compliance with the standards. Such Operational Manuals and required records should be available for inspection as well as for exposition of evidence by AACM inspectorate staff.

1.1.2. An aerodrome operator shall prepare and submit an aerodrome manual for approval by AACM as part of the requirements for the aerodrome certification procedure. The aerodrome manual shall be prepared to accurately describe the facilities, services and equipment at the aerodrome and that it contains all the details and information as set out in Chapter 2 of this AC. Under each section of the aerodrome manual, complete list of pointers to the corresponding operational procedures for fulfilling the requirements should be included.

Section 1.2. Differences between ICAO Standards and those in this AC

Where there is a difference between a standard prescribed in ICAO Annexes and this AC, the standards in this AC shall prevail.

Section 1.3. Differences Published in AIP

Differences to the ICAO Standards and Recommended Practices are published in AIP GEN 1.7.

Section 1.4. Related Documents

These standards should be read in conjunction with ICAO Annex 14 (Volume I – II) including the appendices and attachments, and ICAO Doc 9774 – Manual on Certification of Aerodromes.

Section 1.5. Preparation of the aerodrome manual

1.5.1. The aerodrome manual shall:

- Be type written or printed and signed by the aerodrome operator.
- Be in a format that is easy to revise.
- Have a system for recording the currency of page and amendments.
- Include a page for logging revisions.
- Be organized in a manner that will facilitate the preparation review and approval process.

1.5.2. If AACM exempts the aerodrome operator from complying with the requirements set out in Chapter 2 of this AC, the aerodrome manual must show the identifying number given to that exemption by AACM and the date the exemption came into effect, and any condition(s)/procedure(s) subject to which the exemption was granted.

1.5.3. If a particular is not included in the aerodrome manual because it is not applicable to the aerodrome, the aerodrome operator must identify, inside the manual, the particular that is not applicable and state the reason for non applicability of the particular.

Section 1.6. Submission of aerodrome manual

One paper copy and one unrestricted electronic copy of an aerodrome manual with the requirements as prescribed in Chapter 2 of this AC shall be submitted.

Section 1.7. Location of an aerodrome manual

1.7.1. The aerodrome operator must provide AACM with a complete and current copy of the aerodrome manual.

1.7.2. The aerodrome operator must keep at least one complete and current copy of the aerodrome manual at the aerodrome and one copy at the operator's principal place of business, if different from the aerodrome.

1.7.3. The aerodrome operator must make the aerodrome manual available for inspection by AACM.

Section 1.8. Amendment to the aerodrome manual

1.8.1. The aerodrome operator must alter or amend the aerodrome manual, whenever necessary, in order to maintain the accuracy of the manual.

1.8.2. To maintain the accuracy of the aerodrome manual, AACM may issue written directions to the aerodrome operator to alter or amend the manual in accordance with the directions.

1.8.3. An aerodrome operator must submit in writing a proposed amendment to its aerodrome manual at least 30 days before the proposed effective date of the amendment.

Section 2: Definitions

The terms listed below shall have the following meaning whenever they appear in this AC:

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome beacon. Aeronautical beacon used to indicate the location of an aerodrome from the air.

Aerodrome certificate. A certificate issued by AACM under applicable regulations for the operation of an aerodrome.

Aerodrome elevation. The elevation of the highest point of the landing area.

Aerodrome facilities and equipment. Facilities and equipment, inside or outside the boundaries of an aerodrome, that are constructed or installed and maintained for the arrival, departure and surface movement of aircraft.

Aerodrome manual. The manual that forms part of the application for an aerodrome certificate pursuant to the Administrative Regulations no. 18/2012, including any amendments thereto accepted or approved by AACM.

Aerodrome operator. In relation to a certificated aerodrome, means the aerodrome certificate holder.

Aerodrome reference point. The designated geographical location of an aerodrome.

Aeronautical information service (AIS). A service established within the defined area of coverage responsible for the provision of aeronautical information/data necessary for the safety, regularity and efficiency of air navigation.

Air Traffic Service (ATS). Air Traffic Service as defined in Annex 11 to the Convention on International

Civil Aviation.

Aircraft classification number (ACN). A number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category.

Note.— The aircraft classification number is calculated with respect to the centre of gravity (CG) position which yields the critical loading on the critical gear. Normally the aftmost CG position appropriate to the maximum gross apron (ramp) mass is used to calculate the ACN. In exceptional cases the forwardmost CG position may result in the nose gear loading being more critical.

Apron. A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

Clearway. A defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height.

Datum. Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities (ISO 19104**).

Declared distances.

a) Take-off run available (TORA). The length of runway declared available and suitable for the ground run of an aeroplane taking off.
b) Take-off distance available (TODA). The length of the take-off run available plus the length of the clearway, if provided.
c) Accelerate-stop distance available (ASDA). The length of the take-off run available plus the length of the stopway, if provided.
d) Landing distance available (LDA). The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

Displaced threshold. A threshold not located at the extremity of a runway.

Geoid. The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents.

Note.— The geoid is irregular in shape because of local gravitational disturbances (wind tides, salinity, current, etc.) and the direction of gravity is perpendicular to the geoid at every point.

Instrument runway. One of the following types of runways intended for the operation of aircraft using instrument approach procedures:

a) Non-precision approach runway. An instrument runway served by visual aids and a non-visual aid providing at least directional guidance adequate for a straight-in approach.

b) Precision approach runway, category I. An instrument runway served by ILS and/or MLS and visual aids intended for operations with a decision height not lower than 60 m (200 ft) and either a visibility not less than 800 m or a runway visual range not less than 550 m.

c) Precision approach runway, category II. An instrument runway served by ILS and/or MLS and visual aids intended for operations with a decision height lower than 60 m (200 ft) but not lower than 30 m (100 ft) and a runway visual range not less than 300 m.

d) Precision approach runway, category III. An instrument runway served by ILS and/or MLS to and along the surface of the runway and:

A — intended for operations with a decision height lower than 30 m (100 ft), or no decision height and a runway visual range not less than 175 m.

B — intended for operations with a decision height lower than 15 m (50 ft), or no decision height and a runway visual range less than 175 m but not less than 50 m.

C — intended for operations with no decision height and no runway visual range limitations.

Note 1.— See Annex 10, Volume I, for related ILS and/or MLS specifications.

Note 2.— Visual aids need not necessarily be matched to the scale of non-visual aids provided. The criterion for the selection of visual aids is the conditions in which operations are intended to be conducted.

Intermediate holding position. A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.

Marker. An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

Marking. A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

Obstacle. All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that:

a) are located on an area intended for the surface movement of aircraft; or

b) extend above a defined surface intended to protect aircraft in flight**;** or

c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

Obstacle free zone (OFZ). The airspace above the inner approach surface, inner transitional surfaces, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes.

Obstacle limitation surfaces. A series of surfaces that define the volume of airspace at and around an aeroplane be kept free of obstacles in order to permit the intended aeroplane operations to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome.

Pavement classification number (PCN). A number expressing the bearing strength of a pavement for unrestricted operations.

Precision approach runway, see **Instrument runway.**

Runway. A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway end safety area (RESA). An area symmetrical about the extended runway centre line and

adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

Runway visual range (RVR). The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

Safety management system. A systematic approach to managing safety including the necessary organizational structure, accountabilities, policies and procedures.

Sign.

a) Fixed message sign. A sign presenting only one message.
b) Variable message sign. A sign capable of presenting several predetermined messages or no message, as applicable.

Stopway. A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take off.

Taxiway. A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

a) Aircraft stand taxilane. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.
b) Apron taxiway. A portion of a taxiway system located on an apron and intended to provide a through taxi-route across the apron.
c) Rapid exit taxiway. A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

Taxiway strip. An area including a taxiway intended to protect an aircraft operating on the taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.

Threshold. The beginning of that portion of the runway usable for landing.

Touchdown zone. The portion of a runway, beyond the threshold, where it is intended landing aeroplanes first contact the runway.

Usability factor. The percentage of time during which the use of a runway or system of runways is not restricted because of the crosswind component.

Note.— Crosswind component means the surface wind component at right angles to the runway centre line.

CHAPTER 2: AERODROME MANUAL CONTENT

An Aerodrome Manual shall include the following parts:

- General Information;
- Particulars of the aerodrome site;
- Particulars of the aerodrome required to be reported to the Aeronautical Information Service;
- The aerodrome operating procedures and safety measures;
- Aerodrome Administration and the Safety Management System.

Section 1: General Information

1.1. The purpose and scope of the manual;

1.2. Legal requirements for an aerodrome certificate and the manual;

1.3 Conditions for use of the aerodrome – a statement to indicate that the aerodrome shall at all times, when it is available for the take-off and landing of aircraft, be so available to all persons on equal terms and conditions;

1.4 Obstacle map;

1.5. The aeronautical information service available and the procedure for their promulgation;

1.6. The system for recording aircraft movements;

1.7. Obligations and power of the aerodrome operator.

Section 2: Particulars of the aerodrome site

2.1. A plan of the aerodrome showing the main aerodrome facilities for the operation of the aerodrome including, particularly, the location of each wind direction indicator and radio navigation aids;

2.2. A plan of the aerodrome depicting the layout of runways, taxiways and aprons, showing aerodrome lighting, visual markings, signs, VOR checking points, holding positions;

2.3. Aerodrome boundaries;

2.4. A plan showing the location and access of the aerodrome in Macao SAR, and the location of any aerodrome facilities and equipment outside the boundaries of the aerodrome;

2.5. All above-mentioned plans in this manual should be submitted in electronic (AutoCAD format) and paper format in suitable scale/accuracy.

Section 3: Particulars of the aerodrome required to be reported to the Aeronautical Information Service (AIS)

Section 3.1: General information of the aerodrome

a) The name of the aerodrome;

b) The location of the aerodrome;

c) The geographical coordinates of the aerodrome reference point determined in terms of the World Geodetic System – 1984 (WGS-84) reference datum;

d) The aerodrome elevation and geoids undulation;

e) The elevation of each threshold and geoids undulation, the elevation of the runway end and any significant high and low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway;

f) The aerodrome reference temperature;

g) Details of the aerodrome beacon (if applicable);

h) The name of the aerodrome operator and the address and telephone numbers at which the aerodrome operator may be contacted at all times.

Section 3.2: Aerodrome dimensions and related information

a) Runway: true bearing, designation number, length, width, displaced threshold location, slope, surface type, type of runway and, for a precision approach runway, the existence of an obstacle free zone;

b) Length, width and surface type of strip, runway end safety areas, stopways;

c) Length, width and surface type of taxiways;

d) Apron surface type and aircraft stands;

e) Clearway length and ground profile;

f) Visual aids for approach procedures, viz. approach lighting type and visual approach slope indicator system (PAPI/APAPI and T-VASIS/AT-VASIS); marking and lighting of runways,

taxiways, and aprons; other visual guidance and control aids on taxiways (including runway holding positions, intermediate holding positions and stop bars) and aprons, location and type of visual docking guidance system; availability of standby power for lighting;

g) The location and radio frequency of VOR aerodrome checkpoints;

h) The location and designation of standard taxi routes;

i) The geographical coordinates of each threshold;

j) The geographical coordinates of appropriate taxiway center line points;

k) The geographical coordinates of each aircraft stand;

l) Pavement surface type and bearing strength using the Aircraft Classification Number – Pavement Classification Number (ACN-PCN) method;

m) One or more pre-flight altimeter check locations established on an apron and their elevation;

n) Declared distances: take-off run available (TORA), take-off distance available (TODA), accelerate-stop distance available (ASDA), landing distance available (LDA);

o) Disabled aircraft removal plan: the telephone/telex/facsimile numbers and e-mail address of the aerodrome coordinator for the removal of a disabled aircraft on or adjacent to the movement area, information on the capability to remove a disabled aircraft, expressed in terms of the largest type of aircraft which the aerodrome is equipped to remove;

p) Rescue and fire-fighting: the level of protection provided, expressed in terms of the category of the rescue and fire-fighting services, which should be in accordance with the aeroplane with largest dimensions normally using the aerodrome and the type and amounts of extinguishing agents normally available at the aerodrome.

Section 4: The aerodrome operating procedures and safety measures

Section 4.1: Aerodrome reporting

Particulars of the procedures for reporting any changes to the aerodrome information set out in the AIP and procedures for requesting the issue of NOTAMs, including the following:

a) Arrangements for reporting any changes to the AACM and AIS provider and recording the reporting of changes during and outside the normal hours of aerodrome operations;

b) The names and roles of persons responsible for notifying the changes, and their telephone numbers during and outside the normal hours of aerodrome operations;

c) The address and telephone numbers, as provided by the AACM and AIS provider, of the place where changes are to be reported to the AACM.

Section 4.2: Access to the aerodrome movement area

Particulars of the procedures that have been developed and are to be followed in coordination with the agency responsible for preventing unlawful interference in civil aviation at the aerodrome and for preventing unauthorized entry of persons, vehicles, equipment, animals or other things into the movement area, including the following:

a) The role of the aerodrome operator, the aircraft operator, aerodrome fixed-base operators, the aerodrome security entity, the AACM and other government departments, as applicable;

b) The names and roles of the personnel responsible for controlling access to the aerodrome, and the telephone numbers for contacting them during and after working hours.

Section 4.3: Aerodrome emergency plan

Particulars of the aerodrome emergency plan, including the following:

a) Plans for dealing with emergencies occurring at the aerodrome or in its vicinity, including the malfunction of aircraft in flight; structural fires; natural disaster; occurrences involving

dangerous goods; sabotage, including bomb threats (aircraft or structure); unlawful seizure of aircraft; and incidents on the airport covering "during the emergency" and "after the emergency" considerations;

b) A list of organizations, agencies and persons of authority involved, both on and off airport, for site roles; their contact details such as telephone and facsimile numbers, e-mail and SITA addresses and the radio frequencies of their offices;

c) Responsibility and role of each agency for each type of emergency;

d) Emergency operations center and mobile command post; the appointment of an on-scene commander for the overall emergency operation;

e) Grid Map of the aerodrome and its vicinity;

f) Communication network and equipment;

g) Details of tests for aerodrome facilities and equipment to be used in emergencies, including the frequency of those tests;

h) Details of exercises to test emergency plans, including the frequency of those exercises;

Section 4.4: Rescue and fire-fighting

Particulars of the facilities, equipment, personnel and procedures for meeting the rescue and fire-fighting requirements, including the names and roles of the persons responsible for dealing with rescue and fire-fighting services at the aerodrome.

Section 4.5: Inspection of the aerodrome movement area and obstacle limitation surface

a) Arrangements for carrying out inspections, including runway friction and water-depth measurements on runways and taxiways, during and outside the normal hours of aerodrome operations;

b) Arrangements and means of communicating with air traffic control during an inspection;

c) Arrangements for keeping an inspection logbook, and the location of the logbook;

d) Details of inspection intervals and times;

e) Inspection checklist;

f) Arrangements for reporting the results of inspections and for taking prompt follow-up actions to ensure correction of unsafe conditions;

g) The names and roles of persons responsible for carrying out inspections, and their telephone numbers during and after working hours.

Section 4.6: Visual Aids and aerodrome electrical systems

Procedures for the inspection and maintenance of aeronautical lights (including obstacle lighting), signs, markers and aerodrome electrical systems, including the following:

a) Arrangements for carrying out inspections during and outside the normal hours of aerodrome operation, and the checklist for such inspections;

b) Arrangements for recording the result of inspections and for taking follow-up action to correct deficiencies;

c) Arrangements for carrying out routine maintenance and emergency maintenance;

d) Arrangements for secondary power supplies, the particulars of any other method of dealing with partial or total system failure;

e) The names and roles of the persons responsible for the inspection and maintenance of the lighting, and the telephone numbers for contacting those persons during and after working hours.

Section 4.7: Maintenance of the movement area

a) Arrangements for maintaining the paved areas;

b) Arrangements for maintaining the unpaved runways and taxiways; (if applicable)

c) Arrangements for maintaining the runway and taxiway strips;

d) Arrangements for the maintenance of aerodrome drainage.

Section 4.8: Aerodrome works - Safety

Procedures for planning and carrying out construction and maintenance work safety (including work that may have to be carried out at short notice), on or in the vicinity of the movement area which may extend above an obstacle limitation surface, including the following:

a) Arrangements for communicating with air traffic control during the progress of such work;
b) The names, telephone numbers and roles of the persons and organizations responsible for planning and carrying out the work, and arrangements for contacting those persons and organizations at all times;
c) The names and telephone numbers, during and after working hours, of the aerodrome fixed-base operators, ground handling agents and aircraft operators who are to be notified of the work;
d) A distribution list for work plans, if required.

Section 4.9: Apron management procedures

a) Arrangements between air traffic control and the apron management unit;
b) Arrangements for allocating aircraft parking positions;
c) Arrangements for initiating engine start and ensuring clearance of aircraft push-back;
d) Marshalling service;
e) Follow-me service.

Section 4.10: Apron safety management

Procedures to ensure apron safety, including:

a) Protection from jet blasts;
b) Protection from other hazards;
c) Enforcement of safety precautions during aircraft refueling operations;
d) Apron sweeping;
e) Apron cleaning;
f) Arrangements for reporting incidents and accidents on an apron;
g) Arrangements for auditing the safety compliance of all personnel working on the apron.

Section 4.11: Airside vehicle control

Procedures for the control of surface vehicles operating on or in the vicinity of the movement area, including the following:

a) Details of the applicable traffic rules (including speed limits and the means of enforcing the rules);
b) The method of issuing driving permits for operating vehicles in the movement area.

Section 4.12: Wildlife hazard management

Particulars of the procedures to deal with the danger posed to aircraft operations by the presence of birds or mammals in the aerodrome flight pattern or movement area, including the following:

a) Arrangements for assessing wildlife hazards;
b) Arrangements for implementing wildlife control programmes;
c) The names and roles of the persons responsible for dealing with wildlife hazards, and their telephone numbers during and after working hours.

Section 4.13: Obstacle control

a) Procedures for monitoring reporting the obstacle limitation surfaces and Type A Chart for obstacles in the take-off surface;
b) Procedures for controlling obstacles within the authority of the operator;
c) Procedures for monitoring and reporting the height of buildings or structures within the boundaries of the obstacle limitation surfaces;
d) Arrangements for reporting to the AACM of the nature and location of obstacles and any subsequent addition or removal of obstacles for action as necessary, including suggestions for amendment of the AIS publications to the AACM.

Section 4.14: Removal of disabled aircraft

Procedures for removing a disabled aircraft on or adjacent to the movement area, including the following:

a) The roles of the aerodrome operator and the holder of the aircraft certificate of registration;
b) Arrangements for reporting to the AACM;
c) Arrangements for notifying the holder of the certificate of registration;
d) Arrangements for liaising with the air traffic control unit;
e) Arrangements for obtaining equipment and personnel to remove the disabled aircraft;
f) The names, role and telephone numbers of persons responsible for arranging for the removal of disabled aircraft.

Section 4.15: Handling of hazardous materials

Procedures for the safe handling and storage of hazardous materials on the aerodrome, including the following:

a) Arrangements for special areas on the aerodrome to be set up for the storage of inflammable liquids (including aviation fuels) and any other hazardous materials;
b) The method to be followed for the delivery, storage, dispensing and handling of hazardous materials.

Section 4.16: Low-visibility operations

a) Procedures to be introduced for low-visibility operations;
b) Measurement and reporting of runway visual range as and when required;
c) Names and telephone numbers, during and after working hours, of the persons responsible for measuring the runway visual range.

Section 4.17: Protection of sites for radar and navigational aids

Procedures for the protection of sites for radar and radio navigational aids located on the aerodrome to ensure that their performance will not be degraded, including the following:

a) Arrangements for the control of activities in the vicinity of radar and navigational aids installations;
b) Arrangements for ground maintenance in the vicinity of these installations;

c) Arrangements for the supply and installation of signs warning of hazardous microwave radiation.

Section 4.18: Maintenance and engineering service provided by the aerodrome operator

a) Procedures to operation and maintenance of the aerodrome critical and essential systems and facilities, including radio navigation aids, communication facilities, ATS and AIS related equipment and associated supporting systems;

b) Particulars of documents and records to the design, installation, testing, operation, maintenance, repair of fault or breakdown, personnel training, overhaul, replacement or modification.

Section 5: Aerodrome Administration and the Safety Management System

Section 5.1: Aerodrome administration

a) An aerodrome organizational chart showing the names and positions of key personnel, including their responsibilities;

b) The name, position and telephone number of the person who has overall responsibility for aerodrome safety;

c) Airport coordination committees.

Section 5.2: Safety management system (SMS)

Particulars of the safety management system established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance, the essential features being highlighted as below while the detail requirements for safety management system should be in accordance with Aeronautical Circular No. AC/GEN/005 with subject "Safety Management System" as well as the ICAO document 9859 Safety Management Manual:

a) The safety policy, insofar as applicable, on the safety management process and its relation to the operational and maintenance process;

b) The structure or organization of the SMS, including staffing and the assignment of individual and group responsibilities for safety issues;

c) SMS strategy and planning, such as setting safety performance targets, allocating priorities for implementing safety initiatives and providing a framework for controlling the risks to as low a level as is reasonably practicable keeping always in view the requirements of the Standards and Recommended Practices in Volume I of Annex 14 to the Convention on International Civil Aviation, and the related ICAO guidance materials, the governmental regulations, standards, rules or orders;

d) SMS implementation, including facilities, methods and procedures for the effective communication of safety messages and the enforcement of safety requirements;

e) A system for the implementation of, and action on, critical safety areas which require a higher level of safety management integrity (safety measures programme);

f) Measures for safety promotion and accident prevention and a system for risk control involving analysis and handling of accidents, incidents, complaints, defects, faults, discrepancies and failures, and continuing safety monitoring;

g) The internal safety audit and review system detailing the systems and programmes for quality control of safety;

h) The system for documenting all safety-related airport facilities as well as airport operational and maintenance records, including information on the design and construction of aircraft pavements and aerodrome lighting. The system should enable easy retrieval of records including charts;

i) Staff training and competency, including the review and evaluation of the adequacy of training provided to staff on safety-related duties and of the certification system for testing their competency;

j) The incorporation and enforcement of safety-related clauses in the contracts for construction work at the aerodrome.

- END -