



Technical Guidance Material for DEVELOPMENT OF AERODROME MANUAL Advisory Circular

Subject: TECHNICAL GUIDANCE MATERIAL FOR DEVELOPMENT OF AN AERODROME MANUAL

Date: 23 APRIL 2019

APPLICABILITY:

To all aerodrome operators, who has to and those who intends to compile an aerodrome manual as per Civil Aviation Regulations (CAR) Part 139.02.11 requirements.

This document is applicable to all South African aerodromes from category 4 and above as per CAR Part 139.02.11.

PURPOSE

The purpose of this guidance material is to assist airport operators in developing an aerodrome manual and to ensure uniformity. The information presented in the aerodrome manual shall demonstrate that the aerodrome conforms to the required licensing requirements and there are no shortcomings which would adversely affect the safety of aircraft operations.

TERMS OF REFERENCE

The intent of this manual "Guidelines for development of an aerodrome manual" is to serve as a guideline only and as such may not be used, as a standard, for the installation, operation and maintenance of an Aerodromes Civil, electrical and navigational Aids.

- a. Civil Aviation Regulations – Part 139. Aerodromes and Heliports: Licensing and Operation.
- b. Aerodromes – ICAO – Annex 14. Volume 1. Aerodrome Design and Operations. Std.1.4.4.
- c. ICAO Doc 9774- Manual on certification of aerodromes.

A. PREPARATION OF THE AERODROME MANUAL

Note: The operator of a certified aerodrome must have a manual, to be known as the aerodrome manual, for the aerodrome. The Security Manual to be submitted separately and the Safety Management System (SMS) manual, which may form part of the Aerodrome Manual (AM) or can be submitted as a separate document.

1.1. The aerodrome manual shall:

- a) Be typewritten or printed, and signed by the aerodrome operator;
- b) Be in a format that is easy to revise;
- c) Have a system for recording the currency of pages and amendments thereto, including a page for logging revisions; and
- d) Be organized in a manner that will facilitate the preparation, review and acceptance/approval process.
- e) The aerodrome operator must provide the SACAA with two identical copies of the aerodrome manual for approval/ acceptance.
- f) The aerodrome operator must keep at least one complete and current copy of the Aerodrome manual at the aerodrome.
- g) The aerodrome operator must make the copy of the approved/accepted aerodrome manual available for inspection by the SACAA inspector.

PART 1 – GENERAL

1.1. The Aerodrome Manual shall include the following:

- a) Purpose and scope of the aerodrome manual;
- b) The legal requirement for an aerodrome certificate and an aerodrome manual as prescribed in the national regulations;
- c) 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;
- d) The available aeronautical information system and procedures for its promulgation;
- e) The system for recording aircraft movements;
- f) Obligations of the aerodrome operator; and
- g) An aerodrome organizational chart showing the names and positions of key personnel, including their responsibilities.

1.2. QUALITY CONTROL SYSTEM

1.2.1. Minimum standards for Quality Assurance System as prescribed in CAR 139.02.12.

The Quality Assurance System should include the following essential elements in the internal quality assurance procedure as per CATS 139.02.12.

1.2.2. A clear definition of the level of quality an aerodrome operator intends to achieve CATS 139.02.12(a).

A level of quality is a statistical measurement an aerodrome operator intends to achieve through its inspections, audits and management review. It's the targets or goals' pertaining to quality an aerodrome operator intends to achieve. i.e. reduce the number of customer complaints by 10% by the year 2020.

1.2.3. A procedure that set out the level and frequency of the internal review CATS 139.02.12 (b).

1.2.3.1. Background of Internal Audits.

- a) Internal audits are those conducted internally by the organisation, using its own trained staff, to evaluate the organization's, or parts of the organisation's, performance. The results are used by

management to confirm compliance with the documented standards and procedures to initiate corrective action when the standard is not met or preventive actions where there is potential for non-conformance or non-compliance.

- b) Supplier/ Sub-contractors audits are carried out by an aerodrome on its suppliers or subcontractors. These audits are intended to satisfy the contracting organisation that the subcontractor meets the agreed requirements.

1.2.4. Difference between audits and inspection.

a) Audit

An audit is a methodical, independent, planned review used to determine how activities are being conducted, and compares results with how the activities should have been conducted according to established procedures and Civil Aviation Regulations Part 139. Audits are conducted for different purposes and have distinct identities that are defined.

b) Inspection

An inspection is the act of observing, measuring, or testing one or more characteristics of a particular event or action. The primary purpose of an inspection is to verify:

- i. that correct procedures and requirements are followed during an observed event or action;
- ii. that the end result conforms to the specified requirements of the event or action;
- iii. this normally done by safety officers during daily inspections (civil, apron, electrical, etc.).

1.2.5. This procedure must include, but not limited to the following:

- a) Frequency of the audit;
- b) Person responsible for conducting the audits;
- c) Audit Criteria - Policies, procedures or requirements used as a reference;
- d) Audit Scope - Areas to be audited; and
- e) Audit Method – method for auditing the process.

1.2.6. Person responsible for conducting the audits and frequency of the audit:

The auditor must be independent of the function, operation or group being audited (normally contacted by Safety Managers or Coordinators on an annual basis or bi-annually to ensure compliance by the whole aerodrome/organisation to the Civil Aviation Regulation, Organisation's policies and procedures.

1.2.7. Audit Scope - Areas to be audited:

- a) To facilitate and ensure the audit is thorough, divide the organisation into audit components based on the organisation's operational or functional structure.
- b) Dependent on the size of the organization the audit cycle might be greater than one year; however, eighteen months is the maximum.
- c) Schedule the audit within each component to allow enough flexibility for resources to be committed.

1.2.8. Procedure for recording findings and communicate them to management {CATS 139.02.12(c)}.

1.2.8.1. The procedure must include:

- a) Method used to report audit findings;
- b) Management of the area audited should be notified;
- c) Targets dates for responding to audit findings;
- d) Agreed corrective and preventive actions; and
- e) Schedule for follow-up and the closure of the corrective and preventive actions.

1.2.8.2. Records must be maintained by Aerodrome Operator for verification by SACAA inspectors. The record must be accurate, complete, reliable, and accessible.

1.2.9. Procedure by which other quality indicators such as facility malfunction reports, incidents, occurrence, complaints and defects are brought into the quality Control System {CATS 139.02.12 (e)}.

1.2.10. The procedure for reporting facility malfunctions and defects must include:

- a) Method used for reporting facility malfunction or defect including forms used for reporting;
- b) Process followed when reporting a facility malfunction or defect including role players;

- c) Time frames for closing out facility malfunction or defect.

1.2.11. The procedure for reporting incidents and accidents must include:

- a) Method used for reporting incident or accidents including forms used for reporting;
- b) Time frames for reporting accidents;
- c) Investigation of contributing factors (root cause), corrective actions (actions taken to correct the incidents) and preventive action (actions required to prevent recurrence of the incident or accident).

1.2.12. The procedure for reporting complaints must include:

- a) Method used for reporting complaints including forms used for reporting;
- b) Process followed when logging a complaint;
- c) Time frames for closing out complaints.

1.2.13. Procedure for rectifying any deficiencies which may be found {CATS 139.02.12 (g)}.

This procedure to ensure that corrective actions are developed in response to findings, deviation or concerns identified. The procedure should include:

- a) Method used to record the corrective action and preventive action;
- b) Allocation and acceptance of ownership;
- c) Monitoring each corrective action to verify timely and effective implementation and completion;
- d) Regular reviews of root causes of all corrective actions.

1.2.14. Procedure for management analysis and overview {CATS 139.02.12 (f)}.

Purpose of a management review is to review the Operational Quality Control System implemented at the aerodrome as well as to ensure its continuing adequacy, suitability and effectiveness. This should include an evaluation of the performance of the system, and should also address any decisions or actions necessary to improve system. It is an important tool used by Management to assess opportunities for improvement hence continual improvement of the system.

- a) To further define the concepts of adequacy, suitability and effectiveness:
 - i. Adequacy – Sufficient to satisfy a requirement. A quality management system should be capable of satisfying applicable requirements including those specified by the organization and regulations.
 - ii. Suitability – The quality of having properties that are right for the specific purpose.
 - iii. Effectiveness – Adequate to accomplish a purpose; producing the intended or expected result.
- b) A quality control system should enable the organization to meet its own needs and those of Civil Aviation.
- c) Management shall review organizational operational performance at planned intervals, i.e. annually, quarterly or even monthly.
- d) Inputs to Management review (agenda items) should include but not limited to:
 - i. Results of the audits (internal and external-SACAA);
 - ii. Non-conformances raised internally;
 - iii. Status of corrective and preventive actions (for (a) & (b));
 - iv. Need for changes that could affect the Quality Control System, example of changes in the procedures and policies;
 - v. Customer feedback;
 - vi. Recommendation for improvement.
- e) These topics should be considered as the minimum, it can be further modified or expanded, as necessary, to address any additional issues or considerations that the organization may have.
- f) Records of these reviews should be maintained. These records should include, as a minimum, the date of the review, participants in the review, discussion of agenda items, and any decisions or actions that are required and implementation dates.

1.2.15. Procedure to control, amend and distribute the aerodrome manual.

PART 2 - PARTICULARS OF THE AERODROME SITE

2.1. The manual shall include general information, including the following:

- a) 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.
- b) a plan of the aerodrome showing the aerodrome boundaries.
- c) a plan showing the distance of the aerodrome from the nearest city, town or other populous area, and the location of any aerodrome facilities and equipment outside the boundaries of the aerodrome.
- d) particulars of the title of the aerodrome site. If the boundaries of the aerodrome are not defined in the title documents, particulars of the title to, or interest in, the property on which the aerodrome is located and a plan showing the boundaries and position of the aerodrome.

PART 3 - PARTICULARS OF AERODROME REQUIRED TO BE REPORTED TO AERONAUTICAL INFORMATION SERVICES (AIS) FOR NOTIFICATION IN THE AIP

3.1. GENERAL INFORMATION

The manual shall include the following:

- a) Name and location of the aerodrome;
- b) The geographical coordinates of the reference point determined in terms of the Wold Geodetic System;
- c) The aerodrome elevation and geoid undulation;
- d) The elevation of each threshold and geoid undulation;
- e) The elevation of the runway end and any significant high and low points long the runway;
- f) The highest elevation of the touchdown zone of a precision approach runway;
- g) The aerodrome reference temperature;
- h) Details of the aerodrome beacon; and
- i) The name of the aerodrome operator and the address and telephone numbers at which the aerodrome operator may be contacted at all times.

3.2. AERODROME DIMENSIONS AND RELATED INFORMATION

- a) Runway — true bearing;
- b) Runway designation number;
- c) length, width of the runway;
- d) displaced threshold location;
- e) slope of the runway (Longitudinal and transverse slopes);
- f) surface type;
- g) type of runway approaches;
- h) for a precision approach runway, indicate the existence of an obstacle free zone;
- i) Code of the runway;
- j) RESA- Length, width, slopes, surface;
- k) Runway strip- Length, width and surface type;
- l) Runway shoulders- width;
- m) Stopways - Length, width, slopes, surface type;
- n) Clearway length and ground profile;
- o) Length, width and surface type of taxiways;

- p) Apron surface type and aircraft stands;
- q) Pavement bearing strength of runway, taxiway and apron using the Aircraft Classification Number — Pavement Classification Number (ACN-PCN) method;
- r) The location and designation of standard taxi routes;
- s) The geographical coordinates of each threshold;
- t) The geographical coordinates of appropriate taxiway centre line points; As a minimum, the coordinates at the following positions must be provided: The start of a taxiway, all runway holding positions, all intermediate holding positions, at a change of direction of a taxiway, at significant points of each taxiway;
- u) The geographical coordinates of the stop line for the nose wheel catering for the most demanding aircraft utilising the aircraft stand;
- v) Declared distances: take-off run available (TORA), take-off distance available (TODA), accelerate stop distance available (ASDA), landing distance available (LDA);
- w) 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;
- x) One or more pre-flight altimeter check locations established on an apron and their elevation;
- y) The location and radio frequency of VOR aerodrome checkpoints;
- z) The geographical coordinates and the top elevation of significant obstacles in the approach and take-off areas, in the circling area and in the vicinity of the aerodrome. (This information may best be shown in the form of charts such as those required for the preparation of aeronautical information publications, as specified in Annexes 4 and 15 to the Convention);
- aa) 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; and
- bb) 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 longest aeroplane normally using the aerodrome and the type and amounts of extinguishing agents normally available at the aerodrome.

PART 4 - PARTICULARS OF THE AERODROME OPERATING PROCEDURES AND SAFETY MEASURES

The manual shall include the following:

4.1. AERODROME REPORTING — ELECTRICAL

Note: 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) Procedures for reporting any changes to the SACAA 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 SACAA, of the place where changes are to be reported to the SACAA.
- d) Any infrastructure limitations.

4.2. AERODROME REPORTING — CIVIL

Note: 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) Procedures for reporting any changes to the SACAA 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 SACAA, of the place where changes are to be reported to the SACAA.
- d) Any change which may affect the use of aerodrome including the presence of water on the runway, timeously.
- e) Any infrastructure limitations.

4.3. ACCESS TO THE AERODROME MOVEMENT AREA

Note: 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 SACAA and other government departments, as applicable; and
- 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.

4.4. AERODROME EMERGENCY PLAN

Note: 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; 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) Details of tests for aerodrome facilities and equipment to be used in emergencies, including the frequency of those tests;
- c) Details of exercises to test emergency plans, including the frequency of those exercises;
- d) A list of organizations, agencies and persons of authority, both on- and off-airport, for site roles; their telephone and facsimile numbers, e-mail and SITA addresses and the radio frequencies of their offices;
- e) The establishment of an aerodrome emergency committee to organize training and other preparations for dealing with emergencies; and
- f) The appointment of an on-scene commander for the overall emergency operation.
- g) Aerodrome must state that the manual is submitted as a separate document to SACAA for approval/ acceptance.

4.5. RESCUE AND FIRE-FIGHTING

Note: Particulars of the aerodrome Rescue and Fire Fighting Services.

- a) Total number of firefighting personnel available for rescue and firefighting services during normal aerodrome operational hours;
- b) Number of shifts providing the services at the aerodrome;
- c) Total number and type of fire fighting vehicles;
- d) Total carrying capacity of the individual fire fighting vehicle;
- e) Total discharge rates of these individual vehicles, including complementary agent;

- f) Number of staffing per individual fire fighting vehicle;
- g) A list of all rescue equipment carried on the fire fighting vehicles;
- h) Name and telephone number of a responsible person co-ordinating these services;
- i) List of procedures used to check the firefighting appliances for operational status; and
- j) Record keeping of the check results and where it is kept.

4.6. INSPECTION OF THE AERODROME MOVEMENT AREAS AND OBSTACLE LIMITATION SURFACES BY THE AERODROME OPERATOR

Note: Particulars of the procedures for the inspection of the aerodrome movement area and obstacle limitation surfaces, including the following:

- a) arrangements for carrying out inspections on the runways, taxiways and aprons , 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
- g) correction of unsafe conditions; and
- h) roles of persons responsible for carrying out inspections, and their telephone numbers during and after
- i) working hours.
- j) if the inspections are to be carried out by a contractor, the AM must indicate as such and the names of the responsible person must be reflected in the manual.
- k) proof of competencies of personnel carrying out such inspection.

4.7. VISUAL AIDS AND AERODROME ELECTRICAL SYSTEMS

Note: Particulars of the 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, if any, and, if applicable, the particulars of any other method of dealing with partial or total system failure; including testing procedure (attach checklist);
- 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;
- f) the names and telephone numbers of competent person(s) responsible for the switching of High Tension distribution switchgear, list of qualified electrical personnel to perform critical activities for aerodrome and maintenance;
- g) Aerodrome Maintenance programme which should include but not limited to:
 - i. maintenance performance level for visual aids as part of their preventative maintenance programme;
 - ii. maintenance of obstruction lighting;
 - iii. maintenance objectives for runway centre line lights that use the 30m spacing option or less;
 - iv. precautions for surface debris.
- h) procedure of conducting flight check on applicable aeronautical ground lighting for aerodrome with ILS procedures.

- i) the procedure to prevent aircraft entering permanently closed runways and taxiways by removing of lighting.
- j) the procedure to evaluate the impact of change on safety of existing operations, whenever a change to physical characteristics, facilities or equipment is proposed.
- k) procedure of inspecting all fuel installations/facilities including periodic audits of all fuel installations.
- l) arrangements for extinguishing, screening or otherwise modifying lights which could present a hazard to aircraft safety.

4.8. MAINTENANCE OF THE MOVEMENT AREA

Note: Particulars of the facilities and procedures and programme for the maintenance of the movement area, including:

- a) arrangements for maintaining the paved areas;
- b) arrangements for maintaining the runway and taxiway strips; and
- c) arrangements for the maintenance of aerodrome drainage.
- d) if the maintenance are to be carried out by a contractor, the AM must indicate as such and the names of the responsible person must be reflected in the manual.

4.9. AERODROME WORKS — SAFETY

Note: Particulars of the procedures for planning and carrying out construction and maintenance work safely (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;
- e) restriction of construction or maintenance activities in the proximity of aerodrome electrical systems during low visibility operations;
- f) Arrangements to return any part of the movement areas to operational status following any maintenance work, day or night, thereon.

4.10. APRON MANAGEMENT

Note: Particulars of the apron management procedures, including the following:

- 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) leader (van) service; and
- f) Arrangements for aerodrome operator to restrict the operations of personnel and vehicles on the apron during low visibility operations.

4.11. APRON SAFETY MANAGEMENT

Note: Procedures to ensure apron safety, including:

- a) protection from jet blasts;
- b) enforcement of safety precautions during aircraft refuelling operations;
- c) apron sweeping;
- d) apron cleaning;
- e) arrangements for reporting incidents and accidents on an apron; and
- f) arrangements for auditing the safety compliance of all personnel working on the apron.

4.12. AIRSIDE VEHICLE CONTROL

Note: Particulars of the procedure 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); and
- b) the method of issuing driving permits for operating vehicles in the movement area.

4.13. WILDLIFE HAZARD MANAGEMENT

Note: 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
- d) numbers during and after working hours; and
- e) Arrangements for conducting bird and wildlife risk assessment on and in the vicinity of an aerodrome.

4.14. OBSTACLE CONTROL

Note: Particulars setting out the procedures for:

- a) monitoring the obstacle limitation surfaces and Type A Chart for obstacles in the take-off surface;
- b) Reviewing and amending, where and when applicable, Type A Charts and PATC;
- c) controlling obstacles within the authority of the operator;
- d) monitoring the height of buildings or structures within the boundaries of the obstacle limitation surfaces;
- e) controlling new developments in the vicinity of aerodromes; and
- f) notifying the SACAA of the nature and location of obstacles and any subsequent addition or removal of obstacles for action as necessary, including amendment of the AIS publications.

4.15. REMOVAL OF DISABLED AIRCRAFT

Note: Particulars of the 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 notifying the holder of the certificate of registration;
- c) arrangements for liaising with the air traffic control unit;
- d) arrangements for obtaining equipment and personnel to remove the disabled aircraft; and
- e) the names, role and telephone numbers of persons responsible for arranging for the removal of disabled aircraft.

- f) the names of the crane companies, contact details as well as the crane weight limitations.
- g) the full procedure must be included in the AEMS manual.

4.16. HANDLING OF HAZARDOUS MATERIALS

Note 1: Particulars of the 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; and
- b) the method to be followed for the delivery, storage, dispensing and handling of hazardous materials.

Note 2: Hazardous materials include inflammable liquids and solids, corrosive liquids, compressed gases and magnetized or radioactive materials. Arrangements for dealing with the accidental spillage of hazardous materials should be included in the aerodrome emergency plan.

4.17. LOW-VISIBILITY OPERATIONS

Note: Particulars of procedures to be introduced for low-visibility operations, including;

- a) Measurement and reporting of runway visual range as and when required.
- b) The names and telephone numbers, during and after working hours, of the persons responsible for measuring the runway visual range.

4.18. PROTECTION OF SITES FOR RADAR AND NAVIGATIONAL AIDS

Note 1: Particulars of the 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 navaids installations;
- b) arrangements for ground maintenance in the vicinity of these installations; and
- c) arrangements for the supply and installation of signs warning of hazardous microwave radiation.

Note 2: In writing the procedures for each category, clear and precise information should be included on:

- 1) when, or in what circumstances, an operating procedure is to be activated;
- 2) how an operating procedure is to be activated;
- 3) actions to be taken;
- 4) the persons who are to carry out the actions; and
- 5) the equipment necessary for carrying out the actions, and access to such equipment.

Note 3: If any of the procedures specified above are not relevant or applicable, the reason should be given.

PART 5 - AERODROME ADMINISTRATION AND SAFETY MANAGEMENT SYSTEM

5.1. Aerodrome administration

5.1.1. Particulars of the aerodrome administration, including the following:

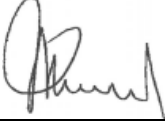


- a) the name, position and telephone number of the person who has overall responsibility for aerodrome safety; and
- b) airport safety committee.

5.2. Safety Management System (SMS)

5.2.1. 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:

- a) the safety policy, insofar as applicable, on the safety management process and its relation to the operational and maintenance process;
- b) the structure 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 national 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); Appendix 1. Schedule of the aerodrome certifications regulations A1-7;
- 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; and
- j) the incorporation and enforcement of safety-related clauses in the contracts for construction work at the aerodrome.

DEVELOPED BY:		
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