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UNITING AVIATION

AERODROME CERTIFICATION WORKSHOP

ROLE OF OPERATOR



OBJECTIVES

By the end of this module participants will be able to:

- Highlight the Obligations of the Aerodrome Operator in developing and Aerodrome manual
- Describe the procedures that need to be included in the Aerodrome Manual
- Highlight the requirements of SMS in Aerodrome Operations

Aerodrome Manual



General

- Purpose and Scope of the Aerodrome Manual
- Legal Requirements
- Conditions for Use of the Aerodrome
- Limitations on the Operation of the Aerodrome
- Responsibilities for Aerodrome Certification and Safety Issues
- Obligations of the Aerodrome Operator



Particulars of the Aerodrome Site

General Description of Aerodrome including:

- Location Plan
- Boundary Plan
- Aerodrome Plan
- Apron Plan
- Ground Movement Plan
- Lighting Plan

Particulars of the Aerodrome Required by AIS

- Description of procedures to ensure accuracy and quality of AIS information
- Description of procedures to promulgation and review AIS information
- All other particulars of aerodrome required to by AIS such as General Information : ,Aerodrome Name, Aerodrome Location,Geographical Location, taxiways, runways etc



Aerodrome Operating Procedures & Safety Measures

Reporting of Aerodrome Information

Reporting or changing information in the AIP and Issuing NOTAMS including:

- Procedures for checking AIP information
- Procedures for issuing a NOTAM
- Procedures for changing AIP information
- Procedures for briefing Aircraft Operators
- Details of persons responsible
- Details for reporting changes to the Authority



Access to the Aerodrome Movement Area

Procedures for preventing unauthorized access into movement area including:

- Role of each agency with key responsibility for aerodrome security
- Procedures to control access of personnel and contractors
- Procedures to control access of vehicles and equipment.
- Details of persons responsible



Aerodrome Movement Area Inspections

Procedures for daily inspection of movement area and OLS including:

- Description of inspections undertaken including frequency
- Inspection checklists
- Description of record keeping and corrective actions
- Description of communications with ATC & Apron Management Services
- GRF



Aerodrome Movement Area Inspections

- Procedures for reporting results to ATC and parties responsible for defect rectification
- Runway inspection and defect reporting
- Taxiway inspection and defect reporting
- Apron inspection and defect reporting
- Procedures for restricting aircraft operations
- Details of persons responsible
- Procedures for amending all Checklists

Aerodrome Electrical Systems & Visual Aids

Synopsis of facilities and procedures for the inspection and maintenance of the electrical system, aeronautical lights, signs and markings including:

Electrical

- Description of electrical system and power supplies
- Single line diagram of electrical system as built
- Description of testing including frequency for secondary power supply



Aerodrome Electrical Systems & Visual Aids

Airfield Lighting

- ❖ Description of Aerodrome Ground Lighting.
- ❖ Description of lighting circuitry
- ❖ Details of inspection schedule, type of inspections and calibration methods
- ❖ Inspection checklists
- ❖ Details of record keeping and tracking of corrective actions
- ❖ Procedures for reporting results and parties responsible for defect rectification
- ❖ Description of preventative maintenance program
- ❖ Number of staff and details of shift structure

Aerodrome Electrical Systems & Visual Aids

Signs and Markings

- ❖ Description of aerodrome signs and markings
- ❖ Description of inspection schedule and inspections undertaken
- ❖ Inspection checklists
- ❖ Details of record keeping and tracking of corrective actions
- ❖ Procedures for reporting results and parties responsible for defect rectification



Aerodrome Electrical Systems & Visual Aids

Signs and Markings

- ❖ Description of preventative maintenance program
- ❖ Details of persons responsible for the following:
 - ✓ Electrical System
 - ✓ Airfield Lighting
 - ✓ Airfield signs
 - ✓ Pavement Markings

Aerodrome Movement Area Maintenance

Synopsis of pavement maintenance program and description of pavement management system for the movement area including:

- Pavement inventory
- Inspection schedule, types of inspection/surveys/assessment including:
- Paved and unpaved areas
- Runways and taxiways strips



Aerodrome Movement Area Maintenance

Synopsis of pavement maintenance program and description of pavement management system for the movement area including:

- ✓ Details of record keeping and tracking of corrective actions
- ✓ FOD management arrangements
- ✓ Description of friction testing, assessment and corrective action programme
- ✓ Rubber removal programme for runways
- ✓ Drainage system maintenance and adequacy



Aerodrome Works Safety

Procedures for works on or in the vicinity or the movement area or those that may extend above the OLS including:

- Methodology for development of a safety plans and control of contractors
- Methodology for implementation of airside works safety plans
- Works notification and work authority permit process
- Procedures for closing off and reopening work areas
- Formal acceptance of work areas prior to return them to service
- Supervisory oversight of works in progress
- Communications between parties (contractors, ATC, Apron Management Services, etc)
- Details of persons responsible



Apron Management

Synopsis for apron management including communication between ATC and Apron Management Services including:

- Description of geographical areas of responsibility including points of transfer
- Procedures for transfer of control for arriving and departing aircraft
- Arrangements for allocating aircraft parking positions
- Arrangements for ensuring stand availability, equipment serviceability and stand is clear of FOD prior to aircraft arrival
- Arrangements for communicating stand availability and clearance
- Description of stand guidance system used
- Arrangements for engine start-up and ensuring clearance during push-back
- Description of follow-me procedures including communication of instructions- Radio Discipline matters



Apron Safety Management

Synopsis of procedures and facilities used to ensure apron safety including:

- Procedures for protection from jet blast
- Procedures to protect aircraft from FOD
- Fuel spillage response and cleanup procedures
- Enforcement of safety precaution during refueling
- Procedures for reporting accidents/incidents
- Procedures for investigation
- Procedures for analysis of accidents/incidents
- Procedures for auditing safety compliance of apron personnel
- Details of any apron/ground safety committees
- Details of persons responsible

Airside Vehicle Control

Procedure for control of surface vehicles operating on or in the vicinity of the movement area including:

- Description of airside traffic rules including:
- Speed limits
- Means of enforcement
- Description of vehicle serviceability requirements
- Method for issuing driving permits
- Method for authorization for airside vehicles/equipment
- Considerations for vehicles/equipment that will remain airside
- Details of persons responsible

Obstacle Control

Synopsis of system to control and remove obstacles at the aerodrome and its environs (off the aerodrome) including:

- Methodology for obstacle assessment
- Frequency of obstacle assessment or confirmation
- Methodology to control new obstacles
- Methodology to monitor new building developments
- Description of systems to remove existing obstacles
- Process to notify the National Authority of obstacles
- Process to notify the National Authority of additional or removed obstacles

Obstacle Control

Synopsis of system to control and remove obstacles at the aerodrome and its environs (off the aerodrome) including:

- Process for amending the AIS publications regarding obstacles
- Description of system to obtain and report data in the applicable data collection areas
- Details of persons responsible

Handling Hazardous Materials

Procedures for handling and storage of hazardous material on the aerodrome including:

- Details of special areas set-up for storage of flammable liquids and any other hazardous material
- Details of special areas set-up for storage of aviation fuel
- Methods for handling hazardous materials including:
 - Description for method for accepting delivery
 - Description for method for storage
 - Description for method for dispensing

Handling Hazardous Materials

Procedures for handling and storage of hazardous material on the aerodrome including:

- Description of system for testing the quality of aviation fuel prior dispensing into aircraft
- Procedures for ensuring apron safety during fuelling operations
- Procedures for ensuring apron safety during defuelling operations
- Details of persons responsible

Low Visibility Operations

Procedures to be introduced for Low Visibility Operations (LVO) including:

- Lowest limits for aircraft approaches
- Lowest limits for aircraft departures
- Description of how RVR is made
- Description of how RVR is reported
- Description of safeguarding methods and stages of implementation
- Description of systems for the control of aircraft during LVO
- Description of systems for the control of vehicles during LVO
- Details of persons responsible

Protection of Radar and Navigation Sites

Procedures for protection, operations and maintenance of radar and radio navigational aids:

- Description of aerodrome navigation aids
- Inspection schedule and types of inspection and calibration
- Inspection checklists
- Description of record keeping and tracking of corrective actions
- Procedures for reporting results and parties responsible for defect rectification
- Procedures for reporting results to units responsible for control of aircraft on movement areas

Protection of Radar and Navigation Sites

Procedures for protection, operations and maintenance of radar and radio navigational aids:

- Procedures for follow-up of reported deficiencies
- Description of preventative measures methods
- Number of staff and details of shift structure
- Description of maintenance schedule programme
- Description of control measures in the vicinity of radars
- Description of control measures for navigation aids
- Details of persons responsible



Rescue & Firefighting Service

- Details of persons responsible
- High-level policy statement of provided RFF categories
- Descriptions of actions required to upgrade/downgrade the facility, if higher/lower category available by prior arrangement
- Chart of defined objectives (with operational levels acceptable as per policy) for each RFF category provided including:
 - Amounts of media provided



Rescue & Firefighting Service

- Discharge rates
- Number of foam-producing appliances
- Manning levels
- Levels of supervision
- Procedures for monitoring and maintaining adequate response time capability

Rescue & Firefighting Service

- Management of personnel engaged in extraneous duties to ensure no effect on response capability
- Details of specialist equipment such as water tankers, rescue craft, emergency tenders, hose layers, appliances with aerial capability, etc.
- Procedures to be followed if above specialist equipment is temporarily unavailable
- Policies or letters of agreement with third party organizations that provide essential equipment for safe operation of the aerodrome (e.g. water rescue)



Rescue & Firefighting Service

- Contingency plans if organizations providing essential equipment not available
- Process for selection and retention of RFS personnel
- Process for ensuring initial and continued competence of RFF personnel
- Procedures for accessing accidents within 1,000 m of the threshold of each runway and details of access to difficult environs

Rescue & Firefighting Service

- Procedures for managing normal aircraft RFF response if the RFF responds to domestic fires or special services
- Policy if the RFF facility responds to aircraft accidents landside/off-aerodrome
- Procedures to manage the effects on continued aircraft operations if RFF facility responds to aircraft accidents landside/off aerodrome
- Description of the availability of additional water supplies following an aircraft accident
- Policy in the event of contractual work which requires isolation or depletion of water supplies
- Description of scale of available medical equipment including location and transport arrangements if not held on the RFF appliances

Integrated Emergency Planning

- Description of arrangements for determining and implementing plans ensuring the integrated management of response to an aircraft incident/accident. These arrangements should take account of the **complexity** and **size** of the aircraft operations.
- Policy statement of the distance the RFF would respond to an off-aerodrome aircraft accident
- Additional information/instructions within the emergency plan based upon the Aerodrome Operator's hazard/risk registry



Integrated Emergency Planning

- Public Health Emergency planning and management
- Screening of passengers during entry and exit
- Responsible persons for handling of public health emergencies
- Handling of Radioactive substances
- Fumigation and vector control measures
- Decontamination of Airport premises and equipment following Public Health emergencies



Extraordinary Emergencies

- Extreme weather phenomena- Kansai case.
- Building fires at Airports
- Handling of Industrial Action cases
- Aircraft accidents outside area of jurisdiction but affecting Airport operations.
- Community issues

Aircraft Recovery Plan

- Description of arrangements and implementation plans ensuring the integrated management of aircraft recovery and business continuity following an aircraft incident/accident.
- These arrangements should take account of the complexity and size of the aircraft operations and based on the largest aircraft using the aerodrome.



Safety Management System (SMS)

Aerodrome Administration and SMS Organization:

- Organizational chart of key personnel
- Description safety accountabilities
- Description of safety management groups/committees
- Description of published safety accountabilities

Safety Management System (SMS)

- Safety Management System (SMS)
 - Description of the SMS established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance including:
 - Statement of safety policies on the process of safety management and its relation to the operational and maintenance process

Safety Management System (SMS)

Description of how planning and strategy is undertaken including:

- Description for setting priorities of and implementing safety initiatives
- Description for setting safety performance targets
- Description of how performance against targets is assessed
- Description of Aerodrome Quality Assurance System
- Description of internal safety auditing process and review schedule

Safety Management System (SMS)

Description of the SMS established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance including:

- Statement of safety policies on the process of safety management and its relation to the operational and maintenance process
- Description of how planning and strategy is undertaken including:
- Description for setting priorities of and implementing safety initiatives
- Description for setting safety performance targets



Safety Management System (SMS)

- Description of how performance against targets is assessed
- Description of Aerodrome Quality Assurance System
- Description of internal safety auditing process and review schedule
- Description of method for ensuring compliance with the Regulations
- Description of quality control on safety

Safety Management System (SMS)

- Description of documentation methods relating to safety
 - Airport operational records
 - Airport maintenance records including pavements and lighting
- Description of method used for risk identification
- Description of hazard identification, recording and reviewing
- Description of how risks are mitigated
- Description of how risks are controlled

Safety Management System (SMS)

- Description of how critical safety areas are identified
- Description of Safety Measures Program (e.g. works safety plan, airside driver licensing, low visibility operations)
- Description of system for reporting, recording, investigating occurrences, complaints, defects, faults, discrepancies and failures
- Description of system for reporting
- Description of system for continued safety monitoring



Safety Management System (SMS)

- Description of system for analysis of trends
- Description of methods and procedures for communicating safety measures
- Safety messages
- Enforcement of safety requirements
- Description of system for recruitment, training and competency testing of staff
- Description of system for review and evaluation of the adequacy of training provided

Safety Management System (SMS)

- Description of certification system for testing competency
- Safety Policies should include the following:
 - Statement for maintaining or improving safety performance
 - Statement for minimizing risks of an accident
 - Statement for implementing safety systems
 - Statement about individual and management accountabilities and responsibilities for safety performance

Safety Management System (SMS)

- Statement about priority of flight safety in relation to other priorities
- Statement about compliance with safety standards and regulatory requirements
- Statement about ensuring sub-contractors meet safety standard and requirements.
- Description of system to brief Air Transport Operators and Air Carriers
- Details of procedures to restrict operators who do not meet national civil aviation regulatory requirements or are subject to a ban; a cease-and-desist order; or grounding order



Operator Challenges

- State owned Airports not meeting regulatory requirements yet international
- Lack of Trained airport personnel
- Insufficient Procedures
- Insufficient maintenance programs and plans
- Overreliance on consultants
- QMS verses SMS

SUMMARY



Purpose



Key tool for the Aerodrome



Key tool for the CAA



Uniform Structure and Content



Must reflect reality



Must be a living Document



ICAO

SAFETY



ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU