

# AERODROME CERTIFICATION & SAFETY MANAGEMENT

Paul Roberts

Senior Aerodrome Regulation and  
Licensing Officer



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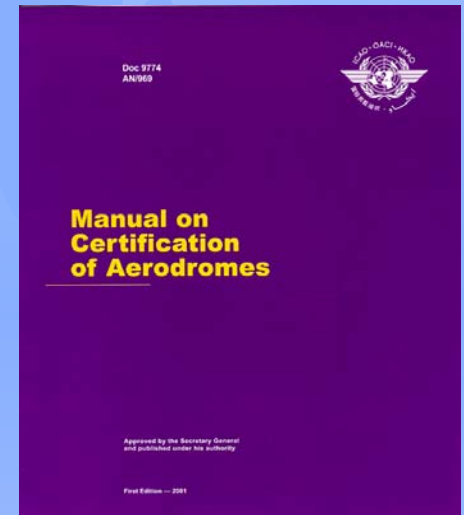
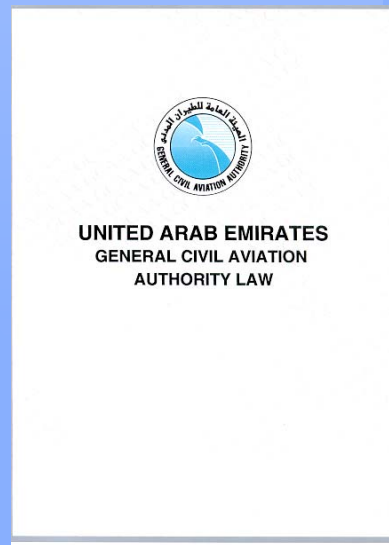
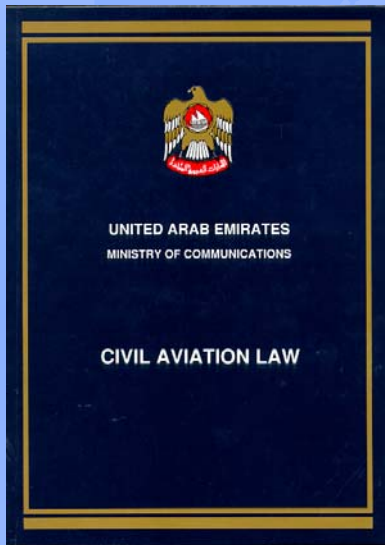
# 1.OBJECTIVES OF AERODROME CERTIFICATION

- ◆ Ensure continued safety, regularity and efficiency of aircraft operations at aerodromes.
- ◆ Ensure the aerodrome is in compliance with the relevant ICAO Standards and Recommended Practices and Civil Aviation Regulations



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# 2. REGULATORY BACKGROUND



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# Development of ICAO SARPs and Guidance material

- ◆ Annex 14 to the Convention on International Civil Aviation, Volume 1 Aerodrome Design and Operations
  - Adopted by Council in 1951
- ◆ Amendment 4 to Annex 14
  - 1<sup>st</sup> November 2001
- ◆ Manual on Certification of Aerodromes
  - First Edition 2001



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## Amendment 4 to Annex 14

“As of 27 November 2003, States shall certify aerodromes used for international operations in accordance with the specifications contained in Annex 14 as well as other relevant ICAO specifications through an appropriate regulatory framework”



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Doc 9774  
AN/969



# Manual on Certification of Aerodromes

Approved by the Secretary General  
and published under his authority

First Edition — 2001



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**Civil Aviation Regulations  
Of The  
United Arab Emirates**

**Part IX  
AERODROME LICENSING**

Published by the General Civil Aviation Authority, P.O.Box 6558, Abu Dhabi, U.A.E.



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## 3. PROGRESS TO DATE

- ◆ Aerodrome Manual Guidance Notes (Jun 01)
- ◆ Aerodrome Licensing Regulations (Jan 02)
- ◆ Seminar at GCAA Dubai Office (Feb 02)
- ◆ SMS Guidance notes (Mar-Jul 02)
- ◆ Safety Oversight Audit Schedule (Jun 02)
- ◆ Aerodrome Manual Inspection Checklist (Aug 02)
- ◆ Aerodrome operator internal audit results (Nov 02)
- ◆ Aerodrome manual submission (Jan 03)



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# 4. CIVIL AVIATION REGULATIONS

- ◆ Part IX – Aerodrome Licensing (January 2002)
- ◆ Based upon :
  - Standards and Recommended Practices contained in ICAO Annex 14 Volume 1
  - ICAO Manual on Certification of Aerodromes Doc 9774 (2001)
  - International best practice



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# Part IX-Aerodrome Licensing Contents

- ◆ Licensing process
- ◆ Aerodrome Manual
- ◆ Obligations of the Aerodrome Operator
- ◆ Physical Characteristics
- ◆ Obstacles
- ◆ Visual aids
- ◆ Equipment and Installations
- ◆ Aerodrome Services
- ◆ Appendices (1to 6)



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# Licensing Process

- ◆ Requirement
- ◆ Grant of the Licence
- ◆ Validity
- ◆ Amendment



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# Aerodrome Manual

- ◆ Purpose and scope
- ◆ Preparation
- ◆ Location
- ◆ Information to be included
- ◆ Revision of information



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# Obligations of the Aerodrome Operator

- ◆ Compliance
- ◆ Competence of Personnel
- ◆ Operation and Maintenance
- ◆ Safety Management System
- ◆ Safety Audits
- ◆ Access
- ◆ Notifying and Reporting to AIS



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# Physical Characteristics

- ◆ Facilities provided for aircraft manoeuvring and parking
  - Runways
  - Taxiways
  - Aprons
- ◆ Dimensions, strength, slope etc.



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# Obstacles

- ◆ Obstacle limitation surfaces
- ◆ Requirements for different runway types
- ◆ Treatment of objects outside the obstacle limitation surfaces



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# Visual Aids

- ◆ Indicators and signalling devices
- ◆ Surface markings
- ◆ Lighting
- ◆ Signs
- ◆ Markers
- ◆ Lighting of obstacles



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# Equipment and Installations

- ◆ Secondary power supplies
- ◆ Electrical systems
- ◆ Monitoring of visual aids
- ◆ Fencing
- ◆ Airport design
- ◆ Siting of installations in operational areas
- ◆ Vehicles
- ◆ Surface movement guidance and control



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# Aerodrome Services

- ◆ Emergency planning
- ◆ Rescue and Fire-fighting
- ◆ Disabled aircraft removal
- ◆ Maintenance
- ◆ Bird hazard reduction
- ◆ Apron management service



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# Appendices

- ◆ 1. Particulars to be included in Aerodrome Manual
- ◆ 2. Application for Aerodrome Licence
- ◆ 3. Aerodrome Licence form
- ◆ 4. Aeronautical Studies
- ◆ 5. Bird strike occurrence report form
- ◆ 6. RFF personnel medical standards



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# Particulars to be included in the Aerodrome Manual

- ◆ Part 1 – General introduction
- ◆ Part 2 – Aerodrome site data
- ◆ Part 3 – AIS data for publication in AIP
- ◆ Part 4 – Aerodrome Operating Procedures
- ◆ Part 5 – Administration & Safety Management System



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## 5. TIMESCALES

- ◆ January 2002
  - Civil Aviation Regulations Part IX published
- ◆ January 2003
  - Aerodrome Manual to be submitted to GCAA for approval
- ◆ November 2003
  - Operator of an International Aerodrome to be in possession of an Aerodrome Licence
- ◆ 2004 onwards
  - ICAO Universal Safety Oversight Programme



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# 6. IMPLEMENTATION OF AERODROME CERTIFICATION

- ◆ Aerodrome Operations
  - Review of organisation
- ◆ Aerodrome Manual
  - Review of existing data
  - Development of Operating Procedures
- ◆ Grant of the Aerodrome Licence
  - Approval of the Aerodrome Manual
  - Audit of aerodrome based on data contained in the Manual
- ◆ Annual Validation of Aerodrome Licence
  - Safety Oversight Audit Programme



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# Aerodrome Operations

- ◆ Review of Organisation
  - Define responsibilities and accountabilities
  - Ensure coordinated operations
- ◆ Management of the Aerodrome
  - Safety
  - Regularity
  - Efficiency
- ◆ Aerodrome Standards
  - Establish responsibility for aerodrome licensing
  - Internal Audit



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# Aerodrome Manual

- ◆ Fundamental to the licensing process
- ◆ Demonstrates that the aerodrome complies with the licensing standards
- ◆ Provides the base material for GCAA audit
- ◆ Licence is based upon the information presented



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# Grant of the Aerodrome Licence

- ◆ Approval of the Aerodrome Manual
  - Verification of data, procedures and systems
- ◆ Audit of the aerodrome
  - Facilities
  - Operating procedures
  - Safety Management System



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# 7. SAFETY MANAGEMENT

- ◆ What is a Safety Management System (SMS)?
- ◆ What is it expected to achieve?
- ◆ What are the key requirements of SMS?
- ◆ How do we implement and maintain the SMS?



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# What is SMS?

- ◆ Systematic management of the risks associated with aircraft operations
- ◆ Important element of the airport management responsibility which sets out the safety policy and defines how the Airport manages safety as an integral part of its overall business strategy
- ◆ Can be compared with a financial management system as a method of systematically managing a vital business function



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# What is it expected to achieve?

- ◆ To improve on existing levels of aviation safety in the light of continuing growth of the industry
- ◆ SMS is as important to business success as a financial management system and leads to achievement of one of civil aviation's key business goals - enhanced safety performance
- ◆ Compliance with ICAO and GCAA requirements



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# Key requirements of SMS

- ◆ A comprehensive “corporate” approach to safety
  - Integral part of the airport management system
- ◆ An effective organisation for delivering safety
  - Must be developed from within the organisation and be seen as a strategic aspect of business management, recognising the high priority attached to safety
- ◆ Accountability
  - Every level of management must be given a safety accountability
- ◆ Systems to achieve safety oversight
  - Internal audit programme



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# How do we implement and maintain the SMS?



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# Comprehensive “corporate” approach to safety

- ◆ Publish safety accountabilities
- ◆ Establish responsibility for the SMS
- ◆ Positive safety culture
- ◆ Documentation of safety policies and practices
- ◆ Internal safety oversight audit process
- ◆ Regularly reviewed safety plans
- ◆ Formal safety review processes



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# Effective organisation for delivering safety

- ◆ Arrangements for recruitment, training and development
- ◆ Safety awareness training for management and staff
- ◆ Defined standards and auditing of contracted services
- ◆ Performance monitoring of safety critical systems and services



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# Effective organisation for delivering safety

- ◆ Recording and monitoring of safety standards
- ◆ Hazard analysis
- ◆ Risk assessment
- ◆ Change management
- ◆ Arrangements for staff to report safety issues
- ◆ Emergency response planning



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# Systems to achieve safety oversight

- ◆ Safety reporting system
- ◆ Arrangements for analysis of safety reports
- ◆ Safety audit reviews
- ◆ Internal safety incident investigations
- ◆ Remedial action follow up
- ◆ Effective use of safety data for performance analysis



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# Systems to achieve safety oversight

- ◆ Arrangements for ongoing safety promotion
- ◆ Regular review of Safety Management System
- ◆ Task monitoring by line managers



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# Formal safety review processes

- ◆ Establish a Safety Review Board (SRB)
  - Chaired by Director responsible for safety
  - To ensure that the SMS functions correctly, and
  - all risks are properly addressed in good time
- ◆ Establish a Safety Action Group (SAG)
  - Reporting to the SRB
  - Supporting risk assessment process, and
  - Other safety-related issues



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# Safety Policy Documentation

- ◆ Safety policy statement
- ◆ Structure of the SMS (accountabilities)
- ◆ Responsibilities of the Safety Review Board and Safety Action Group
- ◆ System for hazard identification and risk assessment
- ◆ Safety reporting system and its confidentiality
- ◆ Remedial action process
- ◆ Records to be maintained.



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# Example Terms of Reference for the Safety Review Board

- ◆ operational safety performance
- ◆ corrective action is being taken in a timely manner
- ◆ effectiveness of the safety management processes
- ◆ effectiveness of the corporate oversight processes



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# Example Terms of Reference for the Safety Review Board

- ◆ effectiveness of safety oversight of sub-contracted operations
- ◆ appropriate resources to meet agreed actions to enhance safety performance
- ◆ strategic direction to the Safety Action Group.



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# Example Terms of Reference for the Safety Action Group

- ◆ hazard identifications and risk assessments
- ◆ safety report capture and employee feedback
- ◆ regular review of safety performance indicators
- ◆ conducting staff meetings or briefings



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# Example Terms of Reference for the Safety Action Group

- ◆ adequate investigation of safety issues and safety reviews
- ◆ appropriate safety, emergency and technical training
- ◆ reviewing incident, accident and safety information



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# Aerodrome Certification & Safety Management System

- ◆ Effective method of achieving improvement on existing levels of safety
- ◆ A method which is transparent and auditable



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