

ICAO/FAA Comprehensive Aerodrome Certification Inspector Workshop

Aerodrome Manual

Presented To: Caribbean States

By: FAA Office of Airports



Federal Aviation
Administration



OBJECTIVE

Development of an Aerodrome Manual (AM).



ICAO ANNEX 14 - SECTION 1.4, CERTIFICATION OF AERODROMES

ICAO Annex 14 requires States to certify airports with international operations
* recommends the same for any public use airport (ref. sec. 1.4.1 & 1.4.2).



ICAO ANNEX 14 - SECTION 1.4, CERTIFICATION OF AERODROMES

A major part of the process is the development of the required aerodrome manual; including specifications on:

- ✓ Aerodrome site
- ✓ Facilities
- ✓ Services
- ✓ Equipment
- ✓ Operating procedures

ICAO DOC 9774 - MANUAL ON CERTIFICATION OF AERODROMES

Aerodrome Manual

❖ Preparation (ref. sec. 3C.1)

- ❖ Typewritten/printed & signed
- ❖ Formatted for ease of revision
- ❖ System for recording & logging revisions / amendments / approvals

ICAO DOC 9774 - MANUAL ON CERTIFICATION OF AERODROMES

Aerodrome Manual

- ❖ Location (ref. sec. 3C.2)
 - ✈ CAA (complete and current copy)
 - ✈ At least one copy at Aerodrome
 - ✈ At place of business (if offsite)
- AO's manual must be available for CAA inspection

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Aerodrome Manual

* Amendments (ref. sec. 3C.4, 5, 6)

- Alter / amend to maintain accuracy (“realistic living doc”)
- CAA may direct alteration / amendment
- Notify CAA as soon as practicable
 - Allow for CAA acceptance / approval

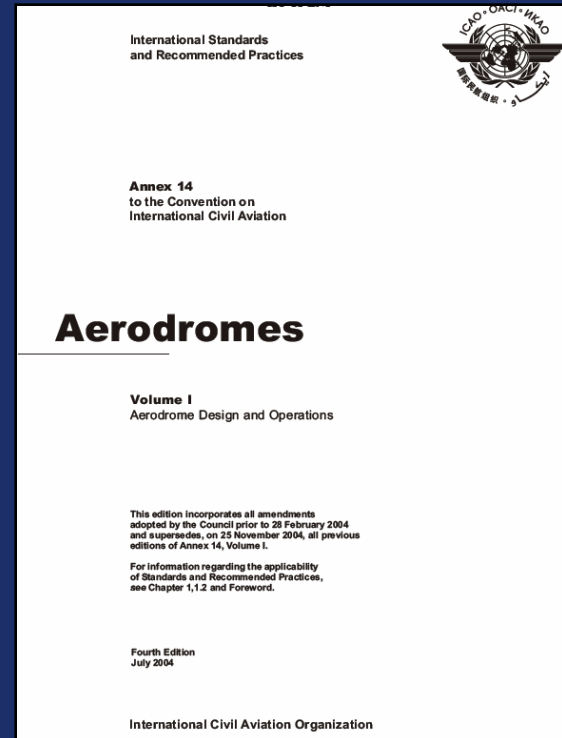
RESPONSE ITEM

Which of the following sections of Annex 14 references the requirement for States to ensure a comprehensive Aerodrome Manual?

A. Section 1.4.3

B. Section 1.4.4

C. Section 1.4.5



AERODROME MANUAL CONTENTS

Writing Tips

- A. WHO is responsible for duties or task
- B. WHAT is the information, task or procedure
- C. WHEN or in what circumstance is the operating procedure to be activated
- D. WHERE is the procedure to be performed
- E. HOW is the task/procedure to performed
(e.g. requirements for: # of qualified personnel, equipment, tools, etc.)

ICAO DOC 9774 – APPENDIX 1, AERODROME MANUAL CONTENTS

The following outlines the parts required,
as applicable, in the Aerodrome Manual

AERODROME MANUAL CONTENTS

PART 1: General Information

- A. Purpose & Scope
- B. Legal requirement for manual & certificate from national regulation
- C. Condition of use based on equal terms and conditions for all persons
- D. Available AIS & circulation procedures
- E. System for recording aircraft movement
- F. Obligations of the AO

AERODROME MANUAL CONTENTS

PART 2: Aerodrome Site

Aerodrome plan showing:

- A. Facility Layout
- B. Boundaries
- C. Distance to nearest populous area
- D. Title (deed) Information

AERODROME MANUAL CONTENTS

PART 3: AIS Data (General Information)

A. Name, location, coordinates, elevation

B. Runway Elevation

1. End

2. Threshold

3. Significant high / low points

4. Highest point of TDZ on PIR

C. Aerodrome Reference Temperature

AERODROME MANUAL CONTENTS

PART 3: AIS Data (cont'd)

G. Aerodrome Beacon Details

H. AO Name, Address & 24/7 Contact Info.

I. Runways – Bearing, Designation, Dimensions, Displacement, Surface, Type & OFZ for PIR

J. Dimensions and Surface of Runway Strip, End Safety Areas & Stopways

K. Dimensions and Surface of Taxiways

AERODROME MANUAL CONTENTS

PART 3: AIS Data (cont'd)

L. Apron Surface & Aircraft Stands

M. Clearway Length & Ground Profile

N. Lighting – Visual Aids, Edge, Centerline, Stop Bars, Visual Docking Guidance & Availability of Standby Power

O. Frequency / Location VOR Checkpoint

P. Location / Designation of Standard Taxi Routes

AERODROME MANUAL CONTENTS

PART 3: AIS Data (cont'd)

- Q. Geo-Coordinates of each threshold
- R. Geo-Coordinates of applicable taxiway centre line points
- S. Geo-Coordinates of each aircraft stand
- T. Obstruction Chart
- U. Pavement surface type and bearing strength

AERODROME MANUAL CONTENTS

PART 3: AIS Data (cont'd)

- V. One or more pre-flight altimeter check locations & elevations
- W. Declared Distances
- X. Disabled aircraft removal plan (contact #s & local capabilities)
- Y. Rescue & Firefighting (RFF) Category & normally available amounts of ext. agent

RESPONSE ITEM

Which of the following would be included in the Aerodrome Manual under Part 3: AIS Data?

A. Runway Dimensions

B. Obstruction Chart

C. Both A & B



AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures

A. Aerodrome Reporting (aerodrome & CAA resp. persons / contact info.) (part 4.1)

1. Procedures to change AIP set
2. Procedures for issuing / cancelling NOTAMs

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

B. Movement Area Access (part 4.2)

1. Procedures to prevent unlawful interference & unauthorized access
2. Roles, responsibilities & contact info. of the aerodrome op., aircraft op., FBO., aerodrome security, CAA, etc.
3. e.g. security, badging, training, etc.

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

C. Aerodrome Emergency Plan (part 4.3)

Next session covers this very well

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

D. Rescue & Fire-Fighting (RFF) (part 4.4)

1. Details of the facilities, equipment and personnel
2. Procedures for meeting RFF services at the Aerodrome

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

E. Inspecting Movement Areas & Obstacle Limitation Surfaces (part 4.5)

1. Procedures and arrangements for carrying out inspections; including runway friction and water-depth meas.
2. Details on scheduled and unscheduled inspections (time intervals & triggers)

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

3. ATC arrangements and means of communication
4. Inspection logbook & official location
5. Inspection checklist w/ itemized elements

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

5. Procedures for reporting results and for timely follow-up actions to ensure correction of unsafe conditions
6. Responsible persons and 24/7 contact info.

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

F. Inspecting Visual Aids & Aerodrome Electrical Systems (part 4.6)

1. Procedures and arrangements for carrying out inspections during and outside normal operating hours
2. Details on scheduled and unscheduled inspections (time intervals & triggers)

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

3. ATC arrangements and means of communication
4. Inspection logbook & official location
5. Inspection checklist w/ itemized elements
6. Procedures for reporting results and for timely follow-up actions to ensure correction of unsafe conditions

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

7. Arrangements for routine and emergency maintenance
8. Arrangements for secondary power supplies, if any, and procedures for partial or total system failure
9. Responsible inspection and maintenance personnel and 24/7 contact information

QUESTION?

When writing your Aerodrome Manual, what five questions should you carefully consider?

ANSWER:

1. WHO?
2. WHAT?
3. WHEN?
4. WHERE?
5. **HOW?**

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

G. Movement Area Maintenance (part 4.7)

1. Details of: facilities / procedures for maintenance of the movement area; to include:
 - a) Paved areas
 - b) Unpaved areas
 - c) Runway & Taxiway Strips
 - d) Aerodrome Drainage

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

H. Aerodrome Works (part 4.8)

1. Details of the procedures for planning and carrying out construction and maintenance work safely
2. ATC arrangements and means of communication
3. Responsible persons / organizations & 24/7 contact information

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

4. Notification list with 24/7 contact info. of those to be notified of the work (e.g. FBO, Aircraft Operators, etc.)
5. Distribution list for work plans, if required.

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

I. Apron Management (part 4.9)

1. Arrangements between ATC and the apron management unit
2. Arrangements for allocating aircraft parking positions
3. Arrangements for initiating engine start and ensuring clearance of aircraft push-back
4. Marshall and leader (follow-me van) service

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

- J. Procedures to ensure apron safety: (part 4.10)
 - 1. Jet blast
 - 2. Aircraft refueling operations
 - 3. Apron sweeping & cleaning
 - 4. System for reporting of incidents and accidents
 - 5. Arrangements for auditing the safety compliance of apron personnel

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

K. Airside Vehicle Control (part 4.11)

1. Procedures for the control of surface vehicles operating on or in the vicinity of the movement area
2. Details of the applicable traffic rules (e.g. speed limit, enforcement / consequences)
3. Method of issuing driving permits

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

L. Wildlife Hazard Management (part 4.12)

1. Arrangements for assessing wildlife hazards
2. Details for implementing wildlife control programs
3. Responsible persons and 24/7 contact information

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

M. Obstacle Control (part 4.13)

1. Procedures for monitoring obstacle limitation surfaces; incl. buildings
2. Details on controlling obstacles within the authority of the operator
3. Procedures to control new developments
4. Procedures to notify CAA of obstacles and any subsequent addition or removal

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

N. Removal of Disabled Aircraft (part 4.14)

1. Explain the roles of the AO and the holder of the aircraft certificate of registration
2. Arrangements for notifying the holder of the certificate of registration
3. Coordination with ATC

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

5. Details on obtaining equipment and personnel to remove the disabled aircraft
6. Responsible persons and 24/7 contact information

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

O. Handling Hazardous Materials (part 4.15)

1. Arrangements for special areas to be set up for the storage of hazardous materials
2. Methods to be followed for the safe delivery, storage, dispensing and handling of hazardous materials.

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

P. Low-Visibility Operations (part 4.16)

1. Procedures to be used during low-visibility operations, including the measurement and reporting of runway visual range
2. Responsible persons and 24/7 contact information

AERODROME MANUAL CONTENTS

PART 4: Aerodrome Operating Procedures & Safety Measures (cont'd)

Q. Protection of Radar & NAVAIDS (part 4.17)

1. Arrangements for the control of activities in the vicinity of RADAR & NAVAIDS
2. Procedures for coordinating ground maintenance in the vicinity of these installations
3. Details on the supply and installation of signs warning of hazardous microwaves

AERODROME MANUAL CONTENTS

PART 5: Aerodrome Administration & Safety Management System

A. Aerodrome Administration

1. Organization Chart – showing information on key personnel
2. Contact information for key person responsible for overall safety
3. Airport Committee

AERODROME MANUAL CONTENTS

PART 5: Aerodrome Administration & Safety Management System

B. Safety Management System (SMS)

1. Tasked with ensuring compliance with all safety requirements and achieving continuous improvement in safety performance.
2. Four foundational pillars: Safety Policy, Safety Risk Management, Safety Assurance & Safety Promotion

RESPONSE ITEM

Which “Part” of the Aerodrome Manual addresses operating procedures & safety measures?

A. Part 4

B. Part 3

C. Part 2



QUESTIONS???

