

Aerodrome Emergency Planning and Emergency Exercises

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GENERAL

Overseas Territories Aviation Circulars are issued to provide advice, guidance and information on standards, practices and procedures necessary to support Overseas Territory Aviation Requirements. They are not in themselves law but may amplify a provision of the Air Navigation (Overseas Territories) Order or provide practical guidance on meeting a requirement contained in the Overseas Territories Aviation Requirements.

PURPOSE

This OTAC provides guidance on the requirements for modular emergency exercises and testing. This Circular relates to the requirements in OTAR Part 139, and is based on ICAO Annex 14 Volume 1, Chapter 9.1.

RELATED REQUIREMENTS

This Circular relates to OTAR Parts 139.

CHANGE INFORMATION

Second issue.

ENQUIRIES

Enquiries regarding the content of this Circular should be addressed to Air Safety Support International at the address on the ASSI website www.airsafety.aero or to the appropriate Overseas Territory Aviation Authority.

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1. Introduction

This OTAC provides some high level guidance in relation to the requirements in OTAR Part 139, and ICAO Annex 14 Volume 1, Chapter 9.1.

The examples shown are just that. It is essential that the emergency plan is tailored to the local challenges as well as the local resources and agencies.

2. General

2.1 Aerodrome emergency planning is the process of preparing an aerodrome to cope with an emergency occurring at the aerodrome, or in its vicinity. The objective of aerodrome emergency planning is to minimise the adverse effects of an emergency, particularly in respect of harm and safe aircraft operations.

2.2 The aerodrome emergency plan sets forth the procedures for coordinating the response of different aerodrome agencies (or services) and of those agencies in the surrounding community that could be of assistance in responding to the emergency.

2.3 Examples of emergencies that the plan should cover, but may not be limited to:

- Aircraft emergencies (actual or potential);
- Sabotage including bomb threats;
- Unlawfully seized aircraft;
- Dangerous goods occurrences;
- Building fires;
- Natural disaster;
- Public health emergencies.

Note: Examples of public health emergencies are increased risk of travellers or cargo spreading a serious communicable disease internationally through air transport and severe outbreak of a communicable disease potentially affecting a large proportion of aerodrome staff.

3. Principal Objectives

3.1 The principal objectives of an emergency plan include:

- To save and protect life.
- To define predetermined and predicted response.
- To provide responders with a framework and information about the role and the requirements.
- To identify the limitations of the response capability.
- To ensure compliance.

3.2 The following are examples of agencies normally located on, or constituting parts of the aerodrome organisation:

- Air traffic control units;
- Rescue and fire fighting services (RFFS);
- Aerodrome administration;
- Aerodrome engineering (maintenance);
- Medical and ambulance services;
- Aircraft operators, security services and police;

- Ground handling agencies;
- Customs;
- Immigration.

This list should not be seen as limited to those items above.

3.3 Agencies normally located outside the aerodrome or not forming part of the aerodrome organisation:

- Fire departments;
- Police;
- Health authorities (including medical, ambulance, hospital and public health services);
- Military;
- Harbour patrol or coast guard;
- Mountain rescue.

Note 1: Which agencies will be involved may depend on the nature of the emergency and the local situation.

Note 2: Public health services include planning to minimise adverse effects on the community from health-related events and deal with population health issues rather than provision of health services to individuals.

3.4 The emergency plan should be built to provide guidance for emergency response within the resources, infrastructure and facilities available at the aerodrome and provided by government, local/municipal authority or other third party agencies.

4. Key elements of an Emergency Plan

4.1 The key elements of an emergency plan should include, but may not be limited to:

- RESPONSE
- COMMAND
- COMMUNICATION
- CO-ORDINATION

4.2 To be operationally sound, a comprehensive emergency plan must give consideration to:

- a) preplanning BEFORE an emergency (4.4, 4.5 and 4.8 below);
- b) operations DURING the emergency (4.6 and 4.8 below); and
- c) support and documentation AFTER the emergency (4.7 and 4.8 below).

4.3 The plan must include all participating agencies and associated equipment.

4.4 **Anticipation/Assessment** - OTAR Part 139 explicitly requires that the aerodrome certificate holder sets up an Emergency Planning Committee (EPC) which shall:

- discuss, determine and implement emergency planning arrangements; and
- ensure the ready availability of and coordination with appropriate specialist rescue services to be able to respond to emergencies.

It is important that all of the responding services, together with agencies from both on and off the airport, should be involved in the EPC.

The EPC accountabilities/responsibilities should be to ensure effective planning, preparing, training and testing/exercising is conducted for all likely scenarios. The EPC should have written terms of reference, they should meet at regular intervals and minute notes should be taken and improvement action plans produced.

- 4.5 **Preparation** - involves planning, training and exercising (of the plan). The objective must be to devise plans that are practical, robust and provide the basis for an effective integrated response to major emergencies whether they arise from known hazards or from unforeseen events.

An emergency plan should provide a prepared and agreed framework within which organisations and individuals can work in a concerted manner. People need to be aware of the contribution of their own and other organisations will be expected to make to avoid a muddled response. The overall response to an incident will invariably need input from a number of different departments. Effective planning should therefore ensure that arrangements and activities within different organisations are cohesive.

- 4.6 **Response** - The emergency plan must set out the response agreed by the EPC. The EPC is responsible for ensuring the plan is appropriate and commensurate to the size of aircraft operation.

The Pre-Determined Attendance (PDA) from each service will be calculated based on the worst-case scenario, historic evidence from previous incidents and availability of resources. ICAO Doc 9137 Part 7 provides further guidance.

- 4.7 **Re-start of operations (business recovery)** - To ensure that the aerodrome returns to operation as soon as is reasonably practicable following a major incident, aerodromes will require procedures that are tried and tested. Airports should have robust contingency plans, crisis management teams, protocols and procedures to ensure the re-start of operations is timely, effective and safe.

- 4.8 **Human factors** - The plan should observe human factor principles to ensure the safest, best and most efficient response by all participants. In setting up the plan the EPC should consider the effects on human performance of, for example, but not limited to:

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| <ul style="list-style-type: none"> • Workload; • Capabilities (personnel, equipment and facilities); • Functions; • Fatigue; • Decision aids; • Environmental conditions and constraints; • Team versus individual performance; and | <ul style="list-style-type: none"> • Training effectiveness; • Knowledge; • Experience; • Staffing including numbers; • Skill levels; and • Organisational structure; • Safety and health aspects; , • Safety systems and protective equipment; |
|--|---|

The plan should take account of the need for adequate rest and breaks, especially in physically demanding roles, whilst sustaining continuity of response.

5. Exercises

- 5.1 OTAR Part 139 requires that a certificated aerodrome has an emergency plan commensurate with the aircraft operations. The plan shall contain procedures for periodic testing of the adequacy of the plan and for reviewing the results in order to improve its effectiveness.

5.2 In addition to the requirements in OTAR Part 139, Annex 14 requires that the emergency plan shall contain procedures for periodic testing of the adequacy of the plan and for reviewing the results in order to improve its effectiveness. Testing may be by conducting:

- A full-scale emergency exercise not exceeding 2 years, and
- Partial exercises in the intervening year; or
- A series of modular tests concluding in a full emergency exercise not exceeding 3 years (OTAC 139-21 provides guidance).

5.3 OTAC 139-21 Provides some additional guidance regarding modular emergency exercises, should an aerodrome certificate holder consider following this system.

5.4 Exercise elements

5.4.1 Assuming the core compliance and prevention measures are established as required in 3.1, the exercise programme may include some or all of the following. Clearly each aerodrome must reflect its own plan, environment and response which may include elements not mentioned here:

- (a) Call-out System/Alerting
- (b) Rendezvous Point
- (c) Command and Control, e.g.:
 - i. Operational Command (Bronze) (if applicable)
 - ii. Tactical Command (Silver) (if applicable)
 - iii. Strategic Command (Gold) (if applicable)
- (d) Medical Response
- (e) Reception Centres/Non-Emergency services Response
- (f) Post Disaster Management/Operational re-start
- (g) Difficult environs
- (h) Business Continuity
- (i) Practical Fire-Fighting/Search and Rescue
- (j) Emergency Co-ordination Centre
- (k) Crisis Management Team
- (l) Interfaces – ATC/AD/RFFS/Police/Ambulance/Municipal fire service
- (m) Programme should provide a comprehensive cycle of testing.

5.5. Exercise scenarios must be:

- **Realistic** - All scenarios and exercises should be realistic tests of the emergency plan and structure.
- **Thorough** - The exercise, though testing a particular aspect of the plan, should be thorough and a complete simulation.
- **Inclusive** - All interested and involved parties should participate in the exercises. A key issue that is identified in the UK, and one that has been observed in the Territories, is the need for cooperation between different agencies (e.g. Police, ambulance/medical, search and rescue, welfare etc.). If a particular agency cannot participate, their role should be simulated. Their lack of participation should be part of the follow-up plan.
- **Reviewed** - The results of an exercise (lesson learned) must be reviewed, solutions identified and corrections/improvements implemented
- **Improved** - All of this, through the QMS and SMS should be documented and tracked.

6. Records and action plans

- 6.1 Records and improvement action plans should be made of all EPC meetings, working group and exercises.
- 6.2 The records of meetings and exercises will be used as evidence during audit of the application of the exercise programme.

7. Further guidance material

Guidance material to assist the appropriate authority in establishing aerodrome emergency planning is given in the ICAO Airport Services Manual (Doc 9137), Part 7.

Guidance material on Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).

Guidance on notification of suspected communicable diseases on board an aircraft or other public health risks can be found in PANS ATM (ICAO Doc 4444) Chapter 16.