

Australian Government
Civil Aviation Safety Authority

**ADVISORY CIRCULAR**
**AC 139.C-18 v2.0**

# Aerodrome emergency planning

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## Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and their continuing connection to land, water and community, and pays respect to Elders past, present and emerging.

Artwork: James Baban.

Advisory circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

**Advisory circulars should always be read in conjunction with the relevant regulations.**

# Audience

This advisory circular (AC) applies to:

- aerodrome owners/operators
- aerodrome rescue and firefighting service providers
- air traffic control
- the Civil Aviation Safety Authority (CASA).

# Purpose

This AC provides guidance to operators of certified aerodromes on their emergency planning obligations under Chapter 24 of the Part 139 (Aerodromes) Manual of Standards (MOS). Irrespective of the type of response plan required, emergency response arrangements should always:

- ensure coordination with responding organisations
- be commensurate with the aircraft operations conducted at the aerodrome.

Operators of non-regulated aerodromes are encouraged to observe these guidelines.

# For further information

For further information or to provide feedback on this AC, visit CASA's contact us page.

Unless specified otherwise, all subregulations, regulations, Divisions, Subparts and Parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

# Status

This version of the AC is approved by the National Manager, Flight Standards Branch.

> **Note:** Changes made in the current version are not annotated. The document should be read in full.

**Table 1: Status**

| Version | Date | Details |
|---|---|---|
| v2.0 | October 2026 | The following amendments have been made in this new version:<br>• Restructured the AC so that guidance for aerodrome emergency plans (AEPs) and emergency response arrangements is combined in Chapter 6 and removed former Chapter 7.<br>• Expanded the acronyms, definitions and references tables.<br>• Added new guidance on aerodrome access and escorting, role-specific response cards, and disabled aircraft recovery plans.<br>• Clarified public health plan apply only to international aerodromes.<br>• Amendments to improve readability.<br>• Section 6.1 now explains that the section covers both documents required under Chapter 24 of the Part 139 MOS.<br>• New subsection 6.3.11 "Aerodrome access and escorting" added under section.<br>• Added guidance aligned with AIP Australia on the relationship between emergency declarations (PAN PAN and MAYDAY) and response levels, including changes in response level (new subsection on emergency declarations and response levels in section 6.3).<br>• Added emergency response principles (safety first and early activation) to Chapter 2, and information sharing guidance to sections 6.1 and 6.3. |
| v1.1 | June 2023 | Add guidance on including aerodrome public health plans in the aerodrome emergency plan for international airports. |
| v1.0 | August 2020 | This AC replaces AC 139-7(0) - Aerodrome emergency planning. |

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# 1 Reference material

## 1.1 Acronyms

The acronyms and abbreviations used in this AC are listed in the table below.

**Table 2: Acronyms**

| Acronym | Description |
|---|---|
| AC | advisory circular |
| AEC | aerodrome emergency committee |
| AEP | aerodrome emergency plan |
| ARFFS | aerodrome rescue and firefighting service |
| ATC | air traffic control |
| ATI | aerodrome technical inspection |
| ATIS | automatic terminal information service |
| ATS | air traffic service |
| ATSB | Australian Transport Safety Bureau |
| AUSAVPLAN | Australian Government Aviation Disaster Response Plan |
| CAR | *Civil Aviation Regulations 1988* |
| CASA | Civil Aviation Safety Authority |
| CASR | *Civil Aviation Safety Regulations 1998* |
| CNS | communication, navigation and surveillance |
| CTAF | common traffic advisory frequency |
| DARP | disabled aircraft recovery plan |
| ERSA | En Route Supplement Australia |
| GIS | geographic information system |
| ICAO | International Civil Aviation Organization |
| MET | meteorological |
| MOS | Part 139 (Aerodromes) Manual of Standards |
| NEMA | National Emergency Management Agency (Australia) |
| OLS | obstacle limitation surface |
| PANS-OPS | Procedures for Air Navigation Services – Aircraft Operations |
| SMS | safety management system |
| TSIA | Transport Safety Investigation Act 2003 |

## 1.2 Definitions

Terms that have specific meaning within this AC are defined in the table below. Where definitions from the civil aviation legislation have been reproduced for ease of reference, these are identified by 'grey shading'. Should there be a discrepancy between a definition given in this AC and the civil aviation legislation, the definition in the legislation prevails.

**Table 3: Definitions**

| Term | Definition |
|---|---|
| aerodrome operator | means:<br>(a) for a certified aerodrome—the person who holds the aerodrome certificate for the aerodrome; or<br>(b) otherwise—the person who is responsible for the operation and maintenance of the aerodrome. |
| Air transport operation | A passenger transport operation, or a cargo transport operation, or a medical transport operation that:<br>(a) is conducted for hire or reward; or<br>(b) is prescribed by an instrument issued under regulation 201.025 of CASR.<br><br>However, an operation conducted for a purpose mentioned in paragraph 206(1)(a) of CAR is not an air transport operation. |
| air transport passenger | A passenger in an air transport operation. |
| air transport passenger movements | For an aerodrome, for a financial year, means the numbers, published by the Department, of air transport passenger movements at the aerodrome during the financial year, and any reference to air transport passenger movements is a reference to the movements compiled in these numbers. |
| aircraft movement | Is one of the following:<br>(a) the landing of an aircraft at an aerodrome;<br>(b) the take-off of an aircraft from an aerodrome;<br>(c) a touch-and-go manoeuvre at an aerodrome. |
| aircraft movements | When referred to numerically for an aerodrome, for a financial year, means the numbers of aircraft movements at the aerodrome during the financial year, as compiled by the aerodrome operator or the ATS provider. |
| assembly area | An area where response organisations, and support vehicles and equipment can be held in readiness for responding to an emergency |
| aviation accident | An occurrence associated with the operation of an aircraft, which takes place between the time any person boards the aircraft with the intention of flight until all such persons have disembarked, where a person is fatally or seriously injured, the aircraft sustains damage or structural failure or the aircraft is missing or is completely inaccessible. If the aircraft is destroyed or severely damaged to that it must be written off, it is further defined as a hull loss accident (ICAO Annex 13). |
| aviation incident | An occurrence, other than an accident, associated with the operation of an aircraft which effects or could affect the safety of operation (ICAO Annex 13). |
| common operating picture | A shared understanding, among the pilot in command, air traffic services, the aerodrome operator and responding organisations, of the incident conditions, hazards, response priorities and operational constraints. |
| declaration of an emergency | In relation to an aircraft: (a) a declaration by a flight crew member of the aircraft of an alert phase (PAN PAN) or a distress phase (MAYDAY); or (b) a declaration |

| Term | Definition |
|---|---|
| | by an air traffic service provider of a distress phase (DETRESFA) in relation to the aircraft (AIP Australia ENR 1.14, para 4.2). |
| Department | The Department of State of the Commonwealth that is administered by the Minister who, from time to time, administers CASR. At the date of review, this is the Department of Infrastructure, Transport, Regional Development, Communications, Sports and the Arts but may change from time to time in accordance with Administrative Arrangements Orders made by the Governor-General. |
| emergency response arrangements | The arrangements an aerodrome operator must have under section 24.03 of the Part 139 MOS where an AEP is not required, including the arrangements recorded in the applicable local, State or Territory emergency plan. |
| full emergency | Implemented when it is known that an aircraft approaching the airport is, or is suspected to be, in such trouble that there is danger of an accident. It involves the activation of both aerodrome and off-aerodrome responding agencies. |
| full-scale exercise | An exercise that tests the AEP by mobilising and deploying the organisations, personnel and resources that would be expected to respond to an actual emergency. |
| international air transport operation | An international air transport operation, whether or not it is conducted in accordance with a published schedule. |
| international aerodrome | An aerodrome:<br>(a) designated by the Department as an international airport in Australia (a designated international airport in Australia); and<br>(b) identified as a designated international airport in Australia on the Department's website. |
| local standby | Implemented when an aircraft approaching the airport is known or is suspected to have developed some defect or operational issue, but the problem is not such as would normally involve any serious difficulty in effecting a safe landing. This includes bomb threats and other incidents. It involves the activation of aerodrome-based response agencies; off-aerodrome services do not normally respond. |
| manoeuvring area | That part of the aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons. |
| MAYDAY | The radiotelephony distress signal, meaning ‘My aircraft and its occupants are threatened by grave and imminent danger and/or I require immediate assistance'. |
| modular test | A test of one or more individual elements of the AEP, conducted as part of a cycle of smaller exercises that together test all key elements of the plan. |
| PAN PAN | The radiotelephony urgency signal, meaning ‘I have an urgent message to transmit concerning the safety of my aircraft or other vehicle or of some person on board or within sight but I do not require immediate assistance'. |
| scheduled air transport operation | means an air transport operation, other than a medical transport operation, that is conducted:<br>(a) in accordance with fixed schedules to and from fixed terminals over specific routes with or without intermediate stopping places between terminals; and<br>(b) in circumstances in which the accommodation in the aircraft is available for use by persons generally. |

| Term | Definition |
|---|---|
| scheduled international air transport operation | An international air transport operation conducted in accordance with a published schedule. |
| tabletop exercise | A theoretical discussion in which an emergency event is simulated, and relevant persons verbally describe how they respond to the emergency but without any physical demonstration of the actual response. The exercise may take the form of a discussion exercise or a hypothetical exercise. |

# 1.3 References

## Legislation

Legislation is available on the Federal Register of Legislation website https://www.legislation.gov.au/

**Table 4: Legislation references**

| Document | Title |
|---|---|
| Part 139 of CASR | Aerodromes |
| Part 139 (Aerodromes) Manual of Standards 2019 | Aerodrome standards, including Chapter 24 (Aerodrome emergency planning and response) and section 11.12 (Aerodrome emergency response) |
| Transport Safety Investigation Act 2013 | Reportable occurrences |

## Advisory material

CASA's advisory materials are available at https://www.casa.gov.au/publications-and-resources/guidance-materials

**Table 5: Advisory material references**

| Document | Title |
|---|---|
| Multi-part AC 64.B-02, AC 91-35 and AC 172-05 | Radiotelephony manual for flight operations |
| AC 139.C-01 | Aerodrome manual |
| AC 139.A-03 | Application of aerodrome standards |

# International Civil Aviation Organization documents

International Civil Aviation Organization (ICAO) documents are available for purchase from http://store1.icao.int/

Many ICAO documents are also available for reading, but not purchase or downloading, from the ICAO eLibrary (https://elibrary.icao.int/home).

### Table 6: ICAO references

| Document | Title |
|---|---|
| International Civil Aviation Organization (ICAO) Annex 9 | Facilitation |
| ICAO Annex 13 | Aircraft accident and incident investigation |
| ICAO Annex 14, Volume I | Aerodromes - Aerodrome Design and Operations |
| ICAO Doc 9137, Part 1 | ICAO Airport services manual – 1 Rescue and Firefighting |

# Other reference material

### Table 7: Other reference material

| Document | Title |
|---|---|
| Managing Exercises Handbook | Australian Institute of Disaster Resilience knowledge hub |
| AIP Australia (Aeronautical Information Publication) | • GEN 2.2 (emergency phases)<br>• GEN 3.6, para 5.1 (pilot notification)<br>• ENR 1.1, para 10.9 (minimum and emergency fuel)<br>• ENR 1.14 (reportable matters)<br>• AD 1.2, section 1 (rescue and firefighting services and levels of emergency response) |

# 2 Aerodrome emergency planning

## 2.1 Introduction

2.1.1 Section 9.1 of Annex 14 to the Chicago Convention (Aerodromes), states:

*"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 effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations."*

2.1.2 The *Civil Aviation Safety Regulations 1998* (CASR) and the Part 139 Manual of Standards (MOS) require all certified aerodromes to have emergency response arrangements, the extent of which are determined by:

- air transport passenger numbers
- aircraft movement numbers
- whether the aerodrome has scheduled international air transport operations.

2.1.3 When planning for emergencies, aerodrome operators should consider:

- complexity of the aerodrome operations
- geographical location
- aircraft types
- credible emergency scenarios
- hazards
- response resources
- training requirements.

2.1.4 As an aerodrome may not have enough resources to manage the response to every emergency, the aerodrome operator should engage with other organisations required to assist when preparing a response plan. The organisations may include:

- Air Traffic Control (ATC)
- Aerodrome Rescue and Firefighting Service (ARFFS) or other fire department
- ambulance and other medical/health services (i.e. hospitals)
- aircraft operators
- ground handling organisations
- police
- Australian Border Force
- Australian Defence Force
- State Emergency Service
- Royal Flying Doctor Service
- local emergency management groups/committees.

2.1.5 It is important that all persons who are likely to assist in an emergency have a general awareness of potential emergencies that could occur and how they may respond.

2.1.6 Human factors should be considered when developing response procedures. Considerations may include:

- checklists
- decision making tools
- clear signage
- standard terminology.

2.1.7 For those aerodromes with a Safety Management System (SMS), emergency response should be integrated into the SMS.

2.1.8 Aerodrome operators should align their emergency management processes with their local, State or Territory emergency management legislation that applies to them to ensure a consistent and coordinated response.

## 2.2 Emergency response principles

2.2.1 Emergency response arrangements should be based on six principles: safety first, timely activation, proportional response, information sharing, a common operating picture, and continuous reassessment. Each principle is explained where it applies in this AC.

2.2.2 The activation, escalation and continuation of emergency response arrangements should be based solely on safety and operational risk considerations.

2.2.3 Concerns relating to operational disruption, resource mobilisation, commercial impacts, aerodrome capacity, scheduling or reputation should not inhibit or delay the activation or escalation of emergency response arrangements.

2.2.4 A precautionary approach to emergency preparedness supports aviation safety and promotes effective emergency response outcomes.

2.2.5 A commensurate response is one that matches the credible level of risk indicated by the information available at the time.

2.2.6 The safety-first principle applies to decisions to activate and escalate emergency response arrangements. Operational and commercial considerations remain relevant to recovery and to returning the aerodrome to operational status, once safety has been assured.

## 2.3 Early activation of emergency response arrangements

2.3.1 Emergency preparedness is generally enhanced through the early activation of response arrangements based on information available at the time, even where subsequent events demonstrate that the response was not ultimately required.

2.3.2 Delayed activation of emergency response arrangements may reduce the effectiveness of emergency response activities and should be avoided where practicable.

2.3.3 Where there is doubt about the appropriate level of response, the higher level should be activated. It can be stood down once the situation is confirmed.

2.3.4 An activation that is later stood down is an appropriate outcome, not a false alarm. Aerodrome operators should not discourage, question or penalise a pilot's emergency declaration or a decision to activate the plan. Where activations are reviewed under the SMS, the review should follow just culture principles.

# 2.4 Australian federal, state, territory and local government emergency arrangements

## 2.4.1 Emergency plans

2.4.1.1 The National Emergency Management Agency (NEMA) has published the Australian Government Aviation Disaster Response Plan (AUSAVPLAN). It explains how national, state/territory, and local governments work together to respond to an actual or pending aviation accident or disaster.

2.4.1.2 Australian states and territories supported by NEMA, have a responsibility to develop and manage their own emergency plans.

2.4.1.3 Relative to their districts, local governments produce emergency response plans that complement the state, territory and national plans.

## 2.4.2 Emergency committees

2.4.2.1 State, territory and local government emergency committees bring different organisations together to ensure response and recovery arrangements are coordinated in their approach.

2.4.2.2 An aerodrome operator who is not required to have an aerodrome emergency committee (AEC) should take part in the local emergency management committee. Doing so helps the operator to:

- connect with local emergency services and community groups
- understand what resources are available during an emergency
- ensure aviation emergency procedures are included in local emergency planning
- improve coordination with organisations that may respond to an emergency at or near the aerodrome.

# 2.5 Australian Transport Safety Bureau

2.5.1 The International Civil Aviation Organization (ICAO) Annex 13 sets out the rules and principles for investigating aircraft accidents and incidents.

2.5.2 In Australia, the Australian Transport Safety Bureau (ATSB) is responsible for investigating aircraft accidents and incidents.

2.5.3 The Transport Safety Investigation Act 2003 (TSIA) requires certain aviation events to be reported. These include:

- immediately reportable matters (accidents and serious incidents)
- routine reportable matters (incidents).

2.5.4 Aerodrome operators should understand their reporting obligations and report notifiable events as required.

2.5.5 A declaration of an emergency in relation to an aircraft (a PAN PAN or MAYDAY call, or an ATS declaration of a distress phase) is one of the types of occurrences that may be a reportable matter (AIP Australia ENR 1.14, paras 3.1.2 and 4.2).

# 3 Legislative obligations

## 3.1 Requirements that apply at all certified aerodromes

3.1.1 The operator of a certified aerodrome must:

- record (or reference), in their aerodrome manual, the aerodrome emergency response procedures outlined in section 11.12 of the Part 139 MOS[1].
- provide to emergency organisations the location details, or maps, of the aerodrome and its immediate vicinity[2].

3.1.2 Additional requirements (as outlined below) are dependent on the type and frequency of aircraft operations occurring at the aerodrome.

3.1.3 To demonstrate compliance, aerodrome operators should monitor aircraft movement activity and passenger movement data. Guidance on monitoring and calculating air transport passenger/aircraft movement numbers, is contained AC 139.A-03 'Application of aerodrome standards'.

3.1.4 An aerodrome designated only as an alternate aerodrome for international operations is not required to comply with scheduled international air transport operations requirements. The scheduled international air transport operations trigger does not apply to such aerodromes.

## 3.2 Does my aerodrome require an aerodrome emergency plan?

3.2.1 In addition to the requirements in paragraph 3.1.1, an aerodrome must have an AEP that meets section 24.02 of the Part 139 MOS if it has:

- scheduled international air transport operations
- 50 000 or more air transport passenger movements in a financial year
- 100 000 or more aircraft movements in a financial year.

3.2.2 Aerodromes that have an AEP must comply with the testing and review requirements stated in section 24.05 of the Part 139 MOS.

3.2.3 Chapter 6 of this AC gives guidance on developing, testing and reviewing the AEP.

## 3.3 Aerodromes that do not require an aerodrome emergency plan

3.3.1 If an aerodrome does not meet the requirements for an aerodrome emergency plan (AEP), the operator must still meet the requirements in paragraph 3.1.1, and:

- have emergency response arrangements that address section 24.03 of the Part 139 MOS
- ensure that those emergency response arrangements are reflected in the applicable local, state or territory emergency response plans.

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1 For further guidance refer AC 139.C-01 'Aerodrome manual'

2 Refer section 24.04 of the Part 139 MOS.

3.3.2 Local emergency responders should be familiar with the emergency preparedness and response arrangements.

## 3.4 Requirement to establish an aerodrome emergency committee

3.4.1 Not all aerodromes that require an AEP are required to establish an aerodrome emergency committee (AEC). An AEC is only required for aerodromes that have:

- scheduled international air transport operations
- 350 000 or more air transport passenger movements in a financial year.

3.4.2 For an aerodrome that has scheduled international operations, the AEC must be established prior to the first scheduled international service.

3.4.3 For an aerodrome that requires the establishment of an AEC due to the number of air transport passengers, the committee must be established[3] within 3 months of the passenger movement numbers being published by the Department.

[3] Guidance on establishing an AEC and the committee's obligations is contained in Chapter 5 of this AC.

# 4 Aerodrome location details and maps

## 4.1 Information required to be provided to emergency organisations

4.1.1 The Part 139 MOS requires the operator of a certified aerodrome to prepare location details, or maps, of the aerodrome site and surrounding area and to give them to emergency response organisations.

4.1.2 Maps help emergency responders quickly identify locations and access routes. As maps may be used by first responders who may not be familiar with the aerodrome site, they should be of a size and a level of detail that is easy to read and clearly identify:

- access routes to and from the aerodrome
- emergency access points for entry into the aerodrome
- assembly areas and staging locations
- fire hydrants suitable for replenishing fire fighting vehicles
- hazards
- available support facilities
- the location of hospitals and medical centres near the aerodrome.

4.1.3 To assist in defining the emergency response area, aerodrome operators should consider producing a grid map. A grid map provides a view of the aerodrome and surrounds using a system of numbered and lettered squares superimposed over an aerodrome diagram, providing an unambiguous reference system.

4.1.4 Geographic Information Systems (GIS) can provide a common operating picture of the aerodrome and its surrounding area through the use of geographic coordinates and associated mapping data. While data-sharing through GIS may be used to meet this requirement, CASA recommends that such information be supported by the provision of maps in a format readily accessible to emergency response organisations.

4.1.5 CASA may require an aerodrome operator to demonstrate how location details or maps are provided to emergency response organisations that may respond to an emergency. Aerodrome operators should also check that those organisations hold current and accurate information.

4.1.6 The aerodrome operator should ensure that the emergency response organisations can readily access the location details or maps provided.

4.1.7 Maps should also be made available at locations where emergency responders are likely to assemble or coordinate a response, such as:

- an emergency operations centre
- a mobile command post
- designated staging area(s).

# 5 Aerodrome emergency committee

## 5.1 Establishing an aerodrome emergency committee

5.1.1 The aerodrome emergency committee (AEC) should be administered by the aerodrome operator.

5.1.2 At aerodromes with scheduled international air transport operations, the AEC must be in place prior to the first scheduled international air transport service.

5.1.3 For an aerodrome that is required to establish an AEC because it has reached or exceeded the threshold of 350,000 air transport passenger movements in a financial year, the AEC must be established within 3 months of the Department publishing the relevant passenger movement data.

5.1.4 As the aerodrome operator is responsible for complying with the *Civil Aviation Safety Regulations 1998* (CASR) and the Part 139 MOS, the operator should:

- monitor air transport passenger movement data published by the Department
- retain evidence, such as AEC meeting minutes, demonstrating that the AEC was established within the required timeframe and operates in accordance with the aerodrome manual. Depending on the complexity of the aerodrome and the emergency services available, the operator may establish subcommittees. These may include:
- an exercise committee
- a welfare committee.

## 5.2 Responsibilities of the AEC

5.2.1 The AEC is primarily responsible for assisting the aerodrome operator in:

- preparing, accepting, and maintaining the AEP for the aerodrome
- developing emergency response arrangements based on the identification and availability of emergency resources at, and near the aerodrome
- establishing an exercise program to periodically test the AEP
- revising and updating the AEP.

## 5.3 Representation on the AEC

5.3.1 The AEC should include representation from:

- police
- fire
- ambulance
- air traffic control
- other organisations that may be required to assist in an emergency, as appropriate.

5.3.2 Airlines and other support organisations should also be considered for inclusion on the AEC.

## 5.4 Frequency of AEC meetings

5.4.1 The AEC should meet at least once each year to review the adequacy of the AEP and should also meet after any of the following:

- activation of the AEP
- the conduct of a test or exercise

  or

- any event or circumstance that requires the currency or procedural validity of the AEP to be reviewed.

5.4.2 The AEC should also establish and maintain appropriate Terms of Reference to ensure committee members have a common understanding of their roles and responsibilities.

5.4.3 The aerodrome operator should chair the AEC meetings. They should prepare and retain an agenda and a record of meeting minutes for each AEC meeting held. These records should be kept for a minimum period of 3 years.

# 6 Aerodrome emergency plan

## 6.1 Introduction

6.1.1 This Chapter provides guidance on developing, implementing and maintaining the emergency planning document that an aerodrome is required to have.

6.1.2 It covers both of the documents required by Chapter 24 of the Part 139 MOS, being either:

- an aerodrome emergency plan (AEP), required by section 24.02 for the aerodromes listed in paragraph 3.2.1

or

- emergency response arrangements, required by section 24.03 for all other certified aerodromes.

6.1.3 Most of the guidance in this Chapter applies equally to both documents. Where guidance applies to only one of them, the heading or the paragraph says so.

6.1.4 In this Chapter, 'the plan' means the AEP or the emergency response arrangements, whichever the specific aerodrome is required to have. A plan is required at an aerodrome:

- with scheduled international air transport operations, the AEP must be in place before the commencement of the first scheduled international air transport service
- that reaches or exceeds 50 000 air transport passengers in a financial year, the AEP must be in place within six (6) months of the Department publishing evidence that the criteria have been met
- that reaches or exceeds 100 000 aircraft movements in a financial year, the AEP is required to be in place within six (6) months of the aerodrome operator becoming aware of the movement numbers.

6.1.5 The aerodrome operator is responsible for complying with the CASR 1998 (CASR) and Part 139 MOS. To do this, the operator should monitor:

- air transport passenger numbers published by the Department
- aircraft arriving at and departing from their aerodrome.

6.1.6 Effective emergency preparedness depends upon timely, accurate and unambiguous information sharing among all participating organisations. The guidance in this Chapter should be read with that principle in mind.

## 6.2 Developing and maintaining the plan

6.2.1 The aerodrome operator is responsible for developing and maintaining the plan.

6.2.2 If the emergency procedures are clearly referenced in the aerodrome manual, the plan may be treated as a subsidiary document to the manual.

6.2.3 There is no prescribed format for the plan. Documented control procedures should be in place to ensure that:

- a current version is available to all organisations and personnel with responsibilities under the plan
- the current version is clearly identifiable to prevent the use of superseded information
- superseded versions are promptly withdrawn from circulation.

6.2.4 The plan should give clear guidance on the notifying responding organisations. Contact people and telephone numbers change over time, so contact information should be checked and confirmed regularly.

6.2.5 Where an AEC is not required, the aerodrome operator should engage directly with the relevant emergency response organisations so that they take part in developing, maintaining and reviewing the plan. A committee made up of those organisations is the most effective way to agree coordinated response procedures and the roles and responsibilities of each party.

6.2.6 For an aerodrome that has a shoreline boundary or direct access to an open body of water, the AEP must include arrangements for water rescue operations.

6.2.7 Where an aerodrome is not required to have an AEP, the operator must also ensure that the emergency response arrangements are incorporated into the local emergency plan administered under the applicable State or Territory emergency management arrangements (section 24.03 of the Part 139 MOS)

# 6.3 AEP content

## 6.3.1 Composition of the AEC (if established)

6.3.1.1 An operator required to establish an AEC must maintain a list of committee members.

6.3.1.2 The plan should either:

- record the position title and contact details of each Aerodrome Emergency Committee (AEC) representative

or

- reference the location where the position title and contact details of each AEC representative are maintained.

## 6.3.2 Public health plans (international aerodromes)

6.3.2.1 ICAO requires States to have measures for managing public health emergencies of international concern, including communicable disease outbreaks and pandemics. Because international aerodromes are points of entry to and exit from Australia, the AEP for an international aerodrome must include arrangements for managing public health emergencies. These arrangements should ensure the aerodrome is prepared to respond to a communicable disease outbreak.

6.3.2.2 Guidance on the development of aerodrome public health emergency plans is available on the ICAO website.

## 6.3.3 Procedures for liaison with emergency response organisations

6.3.3.1 As communication and coordination are critical during an emergency, a current list of interorganisational contact details should be maintained to support the timely notification of responding organisations. This may include emergency service contact numbers, including the national emergency number (000), where appropriate.

6.3.3.2 For each identified emergency scenario, the plan should clearly define the processes for alerting, notifying, updating and standing down personnel and organisations involved in the response. Flowcharts may be used to provide a concise reference for notification, escalation and stand-down arrangements.

6.3.3.3 The aerodrome operator should have a communication system that provides a prompt link between aerodrome personnel and emergency response organisations.

6.3.3.4 Telephone communications networks may become saturated (overloaded) during an emergency event. Contingency or fall-back systems should be considered where appropriate and may include:

- two-way radio systems
- a satellite phone system
- microwave link allowing direct data messaging.

6.3.3.5 Aerodrome operators should consider using an automated emergency notification system, which can send an emergency message to several organisations at the same time. These systems can still be affected by network congestion during a major emergency.

6.3.3.6 On the arrival of emergency services, a control organisation should be identified in accordance with the nature of the incident and the applicable emergency management arrangements. Where the incident controller is unfamiliar with the aerodrome, the aerodrome operator should consider assigning a suitably qualified aerodrome representative to assist the incident controller and provide local knowledge of the aerodrome environment.

6.3.3.7 Briefings should be provided when:

- new information becomes available
- there is a change to known information
- new hazards or risks are identified.

6.3.3.8 Emergency plans should establish arrangements for the continuous exchange of information between:

- the pilot in command of relevant aircraft (normally through ATS)
- air traffic services
- the aerodrome operator
- aircraft operators
- rescue and firefighting services
- other responding organisations, as applicable.

6.3.3.9 Information sharing arrangements should support the development and maintenance of a common operating picture throughout all phases of an emergency response.

6.3.3.10 Procedures should identify:

- information required by responding agencies
- communication pathways
- responsibilities for disseminating information
- arrangements for communicating updated information as circumstances evolve.

6.3.3.11 At aerodromes identified in ERSA, the RFFS emergency frequency 131.0 MHz may be used for direct communication between the Fire Commander and the flight crew. ATC must be advised before the frequency is used, and communication with ATC continues on the normal ATC frequencies. Where the frequency is used, the plan should state how information obtained on it is passed to other responding organisations.

## 6.3.4 Notification procedures to initiate an emergency response

6.3.4.1 The plan must include the procedures for notifying people and organisations when an emergency response needs to start.

6.3.4.2 The emergency notification process should clearly explain:

- when the emergency plan must be activated
- who is responsible for starting the notification process (at a controlled aerodrome, this may be Air Traffic Control (ATC) or Aviation Rescue and Fire Fighting Services (ARFFS))
- how notifications will be sent (for example, by crash alarm, radio, or telephone)
- what backup communication method will be used if the main system fails
- how all relevant stakeholders will be alerted.

6.3.4.3 Notifications must be made without delay. In almost all cases, state or territory arrangements require the first notification to be made via the national emergency number (000).

6.3.4.4 The emergency notification system should be tested regularly to confirm that it works and that telephone numbers are correct. Testing at varying times of the day confirms that the system works under different operating conditions.

6.3.4.5 To ensure organisations respond appropriately, it is important that all known information about the emergency is relayed as accurately as possible.

6.3.4.6 The information provided should include (wherever relevant):

- exact location of the incident (including location details and map references etc)
- the emergency declaration made (PAN PAN or MAYDAY) and the response level initiated (local standby or full emergency)
- nature of the incident (for example, full emergency, aircraft crash, fire etc.)
- type of aircraft
- estimated time of arrival of the aircraft involved and runway to be used (if applicable)
- number of persons on board
- presence of hazardous materials including dangerous goods
- the pilot's intentions and any services requested or declined
- fuel remaining or endurance, where known
- the time the information was received, so that later updates can be identified
- any other relevant information.

## 6.3.5 Ongoing information updates

6.3.5.1 Information about an emergency may change throughout the course of an emergency, for example as aircraft systems are assessed, conditions evolve or additional information becomes available.

6.3.5.2 Emergency response procedures should accommodate the progressive receipt of updated information and enable emergency response organisations to reassess operational risk and preparedness requirements throughout the event.

6.3.5.3 Aerodrome operators should establish procedures to ensure revised information received from flight crews or air traffic services is communicated to all relevant responding organisations as soon as practicable.

6.3.5.4 At a controlled aerodrome, information from the flight crew will normally reach the aerodrome through ATS. Where ATS is not available, the plan should identify how information will be obtained, for example by monitoring the common traffic advisory frequency (CTAF) or through contact with the aircraft operator.

## 6.3.6 Emergency declarations and response levels

6.3.6.1 Flight crews may use internationally recognised radiotelephony emergency declarations to communicate the severity of an abnormal or emergency situation.

6.3.6.2 A PAN PAN declaration indicates an urgency condition concerning the safety of an aircraft or of some person on board or within sight, where immediate assistance is not required.[4]

6.3.6.3 A MAYDAY declaration indicates a distress condition where an aircraft and its occupants are threatened by grave and imminent danger and/or immediate assistance is required[5]. A MAYDAY FUEL declaration is also a distress message.

6.3.6.4 Aerodrome operators should understand that emergency declarations made by flight crews provide important information regarding the severity of an occurrence and should be considered when determining appropriate preparedness measures.

6.3.6.5 AIP Australia AD 1.2, para 1.2 sets out the response that will normally be initiated for each declaration. The plan should be consistent with it. The default response levels are summarised in the table below.

**Table 8: Default response levels (AIP Australia AD 1.2)**

| Situation | Declaration | Default aerodrome response | Agencies activated | AIP Australia reference |
|---|---|---|---|---|
| Urgency condition | PAN PAN (alert phase) | At least a local standby, unless the pilot requests otherwise | Aerodrome-based agencies; off-aerodrome services do not normally respond | AD 1.2, paras 1.2.2.1 to 1.2.2.3 |
| Distress condition | MAYDAY, including MAYDAY FUEL (distress phase) | Full emergency, unless the pilot requests otherwise | Aerodrome and off-aerodrome agencies | AD 1.2, paras 1.2.3.1 to 1.2.3.3; ENR 1.1, para 10.9.3 |
| Aircraft crash on the aerodrome | Not applicable | Full emergency | Aerodrome and off-aerodrome agencies | AD 1.2, para 1.2.3.4 |
| No ARFFS provided, or ARFFS stood down | Any declaration | ATS asks the pilot to advise the services required on arrival, then activates the AEP at the appropriate level | As set out in the plan | AD 1.2, para 1.2.4.1 |
| Minimum fuel state | MINIMUM FUEL | Not an emergency; no response level is initiated | None | ENR 1.1, para 10.9.2 |

6.3.6.6 The declaration sets the minimum response. The plan may provide for a higher level of response where other information indicates greater risk. A lower level for an aircraft-related

[4] Refer Multi-part AC 64.B-02, AC 91-35 and AC 172-05 Radiotelephony manual for flight operations.

[5] Refer Multi-part AC 64.B-02, AC 91-35 and AC 172-05 Radiotelephony manual for flight operations.

declaration should apply only where the pilot in command advises that emergency services are not required.

6.3.6.7 Pilots declare an urgency or distress condition; they do not declare a local standby or full emergency. At a controlled aerodrome, ATS initiates the response level and notifies the aerodrome-based agencies. The plan should state who initiates the response level at aerodromes where ATS is not available.

6.3.6.8 Emergency response actions should remain proportionate to the assessed level of operational risk and the information available at the time.

6.3.6.9 Effective emergency response depends upon maintaining a common operating picture between relevant parties, for example the pilot in command, air traffic services, the aerodrome operator and all responding agencies.

## 6.3.7 Changes in response level

6.3.7.1 Emergency plans should include arrangements for reassessing the level of response as additional information becomes available.

6.3.7.2 Emergency plans should recognise that the severity of an occurrence may increase or decrease throughout the event and that preparedness levels may require adjustment accordingly.

6.3.7.3 Response arrangements should remain subject to continual reassessment throughout a local standby or full emergency. As additional information becomes available, the aerodrome operator should consider whether the response remains appropriate to the assessed level of risk and whether it requires escalation, modification or stand-down.

6.3.7.4 Procedures should identify:

- triggers for escalation, for example: a PAN PAN upgraded to MAYDAY, a fire or smoke indication, a confirmed landing gear problem, notified dangerous goods, or loss of communication with the aircraft
- escalation from a full emergency to an aircraft accident response
- de-escalation where the pilot in command cancels a distress condition (CANCEL DISTRESS) or advises that emergency services are not required
- personnel authorised to initiate escalation or de-escalation
- methods for communicating changes in response level
- arrangements for notifying responding organisations, including off-aerodrome agencies
- processes for disseminating revised operational information
- stand-down of all notified organisations when no further action is required.

6.3.7.5 Relevant agencies should be advised promptly of significant changes in emergency conditions.

6.3.7.6 Activation of local standby arrangements should not preclude subsequent activation of full emergency arrangements where changing circumstances justify a higher level of preparedness.

## 6.3.8 Role and function of aerodrome personnel during an emergency

6.3.8.1 The plan must record the roles and responsibilities of aerodrome personnel during an emergency.

6.3.8.2 Role-specific response cards can help by giving clear, timely prompts for the correct action to take during a response. Where they are used, they should be maintained and kept readily available.

6.3.8.3 The aerodrome operator may be responsible for:

- notifying emergency services and other relevant organisations
- keeping the movement area safe, which may include:
  - stopping aircraft and vehicle movements in affected areas
  - issuing safety information, including NOTAMs
- changing or turning off aerodrome visual aids if needed
- setting up the initial command post
- opening emergency access gates
- providing briefings and updates to emergency responders
- establishing and managing staging areas
- escorting personnel and vehicles
- operating aerodrome communication and emergency response equipment
- setting up and managing emergency facilities, such as reception centres
- monitoring aviation radio frequencies
- providing public information through announcements, flight displays, websites, and social media
- arranging support from local service providers.

6.3.8.4 The aerodrome operator should maintain a chronological log of all events and observations. This information will be valuable when conducting a debrief and may be pertinent in an investigation.

## 6.3.9 Emergency facilities / equipment and keeping them in readiness

6.3.9.1 The availability and location of emergency facilities and equipment are to be recorded in the plan. Procedures to ensure the identified facilities and equipment are maintained in a serviceable condition are also to be recorded.

6.3.9.2 Emergency equipment may consist of the following:

- emergency vehicles
- protective clothing
- tents / portable shade structures
- portable lighting towers
- fire extinguishers
- first aid equipment
- drench showers
- spill kits
- radios / mobile phones
- boats / inflatable rafts.

6.3.9.3 Emergency facilities and equipment should be

- identifiable
- accessible

- serviceable
- available when needed.

6.3.9.4 The aerodrome operator should consider such matters as their:

- safe and accessible location
- ability to be moved to areas as intended
- readiness for use and ease of use
- training requirements to effect safe use.

6.3.9.5 For ease of identification, equipment locations may be sign-posted, including directions from areas where they cannot be seen.

6.3.9.6 Emergency facilities and equipment should be inspected and maintained regularly so that they remain serviceable and ready for use. The outcome of each inspection should be recorded using an inspection check sheet.

6.3.9.7 In addition, equipment and facilities available for responding to an aerodrome emergency are to be reviewed as part of the annual Aerodrome Technical Inspection (ATI) program.

6.3.9.8 All records of inspections should be retained for at least 3 years.

## 6.3.10 Aerodrome operator's procedures in response to an emergency

6.3.10.1 The aerodrome operator is always responsible for ensuring the safe operation of the aerodrome and its facilities. After an accident or a significant incident that affects or is likely to affect safe aircraft operations or public safety, the aerodrome operator should consider closing the aerodrome or restricting aircraft operations.

6.3.10.2 While the responsibility for closing and reopening an aerodrome, or any part of an aerodrome, rests with the aerodrome operator, the nature and rapid development of an accident or incident may mean that the operator is not best placed to immediately assess the situation and determine whether operations should continue.

6.3.10.3 To ensure a timely operational response, procedures may be established with ATC to delegate authority for the closure of the aerodrome under defined circumstances.

6.3.10.4 Such arrangements should be documented in a formal Letter of Agreement (LOA).

6.3.10.5 The aerodrome or affected parts of the movement area should not be reopened until the aerodrome operator has confirmed that:

- the movement area is safe, secure and suitable for the intended aircraft operations
- response, investigation or recovery activities will not be adversely affected by resuming operations
- the event does not pose a hazard to the resumption of airfield operations
- the movement areas proposed for reopening have been inspected and no unacceptable risk to aircraft operations has been identified
- public safety is assured
- the Police, Coroner or ATSB have no further requirements.

6.3.10.6 The safe and orderly movement of vehicles and pedestrians is an essential part of emergency planning. Wherever possible, access to the aerodrome should be controlled and supervised to prevent entry by onlookers, media and others who have no role in the response. An assembly area allows responders to be registered and moved airside in a staged and coordinated way.

6.3.10.7 Where available a forward command post that is clearly identifiable and preferably sheltered from the weather should be established outside the present and any potential hazard zone.

Ideally it should be positioned away from public access, general noise and confusion associated with the incident.

6.3.10.8 When developing procedures, consideration should also be given to:

- the provision of emergency response outside of the core operating hours for the aerodrome
- local weather conditions and night operations
- maintaining continuity should the incident be protracted.

## 6.3.11 Aerodrome access and escorting

6.3.11.1 The plan should document the aerodrome access points, access routes and access procedures to be used in an emergency.

6.3.11.2 Aerodrome location details and maps should be made available to all emergency response organisations that may be required to attend an emergency. Chapter 4 of this AC gives guidance on those details and maps.

6.3.11.3 The plan should document the procedures for escorting external vehicles and personnel on the aerodrome.

6.3.11.4 People who drive vehicles airside should be trained and familiar with aerodrome operating procedures, because inadequate training creates significant safety risks.

6.3.11.5 At an aerodrome with a simple layout, temporary markers such as traffic cones may be used to mark routes so that unescorted responders can reach the incident site safely.

## 6.3.12 Procedures for a local standby (controlled aerodrome)

6.3.12.1 At a controlled aerodrome, the procedures for a local stand-by are to be recorded in the AEP.

6.3.12.2 A local standby is initiated when an aircraft approaching the aerodrome is known or suspected to have developed some defect or operational issue, but the issue is not such as would normally prevent a safe landing.

6.3.12.3 ATC is responsible for communicating with the flight crew of an aircraft for which a local standby has been initiated.

6.3.12.4 A local standby requires the alerting of aerodrome-based emergency services to a state of readiness. ARFFS (where provided) may be required to attend a pre-determined ready position. Off-aerodrome services do not normally respond to a local standby but may be notified and remain on standby at their respective bases.

6.3.12.5 When the aircraft has landed safely, the procedure is to include the process to stand down all persons notified when no further action is required.

6.3.12.6 At an aerodrome that is not controlled, or where no ARFFS is provided, the plan should state what response (if any) will follow a local standby.

6.3.12.7 Arrangements for escalation, de-escalation and stand-down are set out in subsection 6.3.6.

## 6.3.13 Return the aerodrome to an operational status after an emergency

6.3.13.1 The plan is to include procedures for returning the aerodrome to normal or restricted operations after an emergency.

6.3.13.2 Aircraft operations should be resumed only when:

- circumstances permit aircraft to operate safely
- the aerodrome movement area is inspected and secured

- adequate aerodrome personnel are available to support the resumption of operations
- there is no interference to, or caused by, emergency response activities
- authorised by the lead organisation, Coroner or ATSB.

6.3.13.3 After any response, including a local standby, the serviceability of the movement area must be confirmed. If the aerodrome has been closed, or operations suspended, normal aircraft operations should not resume until competent aerodrome personnel have:

- inspected the movement area and confirmed that runways, taxiways and associated operational areas are free from hazards that could affect aircraft safety
- provided confirmation that the movement area is serviceable and safe to resume normal aircraft operations
- ensured that any areas which remain closed are suitably marked and lit to clearly indicate their unserviceable status
- assessed whether equipment, vehicles or temporary obstructions associated with the emergency response infringe the prescribed airspace, including the obstacle limitation surface (OLS) or PANS-OPS surfaces
- verified the accuracy of all information published by NOTAM.

6.3.13.4 Depending on the circumstances the aerodrome operator, in consultation with the emergency/incident management team, may be able to re-open parts of the manoeuvring area that were not impacted by the emergency, or have subsequently been cleared. A staged re-opening of the manoeuvring area may be required.

6.3.13.5 Where the emergency is contained and operations may resume under restricted conditions, the aerodrome operator must ensure all hazards are identified, assessed and appropriately controlled prior to the commencement of restricted operations.

6.3.13.6 In completing this assessment, the aerodrome operator should consult appropriately qualified specialists to confirm that communication, navigation, surveillance (CNS) and meteorological (MET) equipment is working correctly and can support the intended level of operations.

6.3.13.7 Depending on the nature and severity of the occurrence, the ATSB may conduct a formal investigation. The aerodrome operator must contact and consult the ATSB, which may require evidence to be preserved. This may restrict access to part or all of the movement area.

## 6.3.14 Arrangements for periodic review of the AEP

6.3.14.1 Arrangements for periodic review must be documented in the plan.

6.3.14.2 The plan must be reviewed at least once a year, and within 30 days of any following:

- a test or exercise of the AEP

or

- the occurrence of a real emergency that required activation of the AEP.

6.3.14.3 Where an AEC has not been established, the review should be in consultation with local emergency responders.

6.3.14.4 As the AEP is a subsidiary document to the aerodrome manual, it must also be reviewed annually as part of the ATI.

6.3.14.5 The aerodrome operator must maintain records (evidence) demonstrating that each review has been completed. These records must be retained for at least 3 years.

6.3.14.6 Upon written request, records of AEP reviews must be provided to CASA.

# 6.4 Emergency scenarios to be considered in the AEP (aerodromes with an AEP)

## 6.4.1 Introduction

6.4.1.1 The AEP must coordinate organisations responding to any emergency that can reasonably be anticipated to occur at the aerodrome or within the aerodrome vicinity.

6.4.1.2 Each of the emergency scenarios listed below must be addressed in the AEP. For each type of emergency scenario, the AEP should include procedures for:

- contacting and alerting the responding organisations, including the information to be provided
- clearly defining the roles and responsibilities of each person/organisation in terms of their involvement and actions.

6.4.1.3 Each responding organisation should maintain detailed procedures and processes under its control to support the performance of its emergency response responsibilities.

## 6.4.2 Aircraft crash

6.4.2.1 An aircraft crash may occur on or in the vicinity of the aerodrome. The response to a crash will vary depending upon the location and circumstances of the crash site.

6.4.2.2 A crash on the aerodrome will initiate a full emergency response.

6.4.2.3 The aerodrome operator's main role is to provide access to the incident site and to coordinate planning, response and recovery with the local emergency response organisations.

6.4.2.4 An aircraft crash site should be treated as a potential hazardous material incident until it has been determined that the accident site does not pose a fire, hazardous materials or other safety risk to responding personnel.

6.4.2.5 In the event of an aircraft crash, consideration should be given to the following:

- activation of the notification system to ensure that appropriate emergency response organisations have been advised
- provision of emergency support services as required
- control of aircraft and ground vehicle operations on the aerodrome in support of the emergency response
- traffic management, access control and escort arrangements
- designating hangars or other key buildings on the aerodrome to accommodate uninjured, injured and deceased persons
- supporting the movement of casualties to appropriate treatment facilities as expeditiously as possible.

## 6.4.3 A full emergency

6.4.3.1 A full emergency is initiated when an aircraft approaching the aerodrome is, or is suspected to be, in such trouble that there is danger of an accident.

6.4.3.2 At a controlled aerodrome, ATS will normally initiate a full emergency in response to a MAYDAY call, unless the pilot requests otherwise. Arrangements for changes in response level are set out in subsection 6.3.6.

6.4.3.3 The declaration of a full emergency must trigger emergency response organisations on and off the aerodrome and require them to assemble at a nominated assembly or staging area.

6.4.3.4 The declaration of a full emergency should also:

- alert hospitals to prepare for the arrival of casualties
- initiate traffic management measures to help the movement of emergency vehicles.

## 6.4.4 A disabled aircraft

6.4.4.1 Aircraft may become immobilised on the manoeuvring area for a variety of reasons, including:

- an accident
- a runway or taxiway excursion

or

- a mechanical failure.

6.4.4.2 A disabled aircraft recovery plan (DARP) supports the safe and timely removal of the aircraft, minimises the risk of further damage and allows the affected area to return to normal operations as soon as practicable. Section 11.13 of the Part 139 MOS requires the aerodrome manual to include disabled aircraft removal procedures.

6.4.4.3 Responsibility for the removal of the disabled aircraft rests with the aircraft operator.

6.4.4.4 The roles and responsibilities of organisations responsible for coordinating the removal of disabled aircraft and communications arrangements for activating the plan must be clearly documented.

6.4.4.5 Organisations that may be involved in the recovery and removal of a disabled aircraft include:

- aerodrome operator
- aircraft owner or operator
- aviation fuel companies
- ARFFS
- ground handlers (maintenance personnel).

6.4.4.6 The plan should include a list of locally available resources, or the location of specialist aircraft recovery equipment, together with current contact details for relevant personnel.

6.4.4.7 Considerations should include:

- specialist equipment for moving or towing aircraft
- facilities for de-fuelling the aircraft
- cranes or other lifting equipment
- lighting for removal during hours of darkness.

6.4.4.8 The plan should give indicative timeframes for the mobilisation and arrival of recovery equipment to assist with planning and management of the recovery process.

6.4.4.9 Where a separate recovery plan has been established, the AEP should include a reference to that document.

## 6.4.5 Health or medical emergency response - multiple casualties in an aircraft

6.4.5.1 The AEP would not normally be activated for routine medical emergencies involving individual persons such as heart attacks, collapse, respiratory distress or air sickness. However, consideration should be given to medical emergencies involving multiple persons, particularly where the scale of the incident exceeds the response capability of aerodrome personnel.

6.4.5.2 A medical emergency involving passengers or other persons displaying symptoms of a communicable disease may require the implementation of special precautions such as quarantine measures or isolating the passenger.

6.4.5.3 Where a pilot suspects that passengers are affected by a communicable disease, notification will normally be provided prior to landing. Relevant public health authorities should be notified for advice and assistance. Activation of the AEP may be necessary where quarantine, isolation, or a coordinated multi organisational response is required.

## 6.4.6 Hazardous material incidents

6.4.6.1 Hazardous materials are defined as any substance or material that, when released in sufficient quantities, may present a risk to the health and safety of persons, property or the environment.

6.4.6.2 Defence force aircraft carry hazardous goods, munitions, ejection seats or explosives which may present significant risks to responding personnel. Appropriate precautions should be taken until the nature of any hazards has been identified and assessed.

6.4.6.3 Hazardous material incidents can occur without warning, and the nature, severity and extent of their effects will vary depending on the circumstances of the incident.

6.4.6.4 A hazardous materials incident may require the evacuation of a small number of people, part of a passenger terminal or the entire aerodrome precinct.

6.4.6.5 Hazardous substances may include:

- explosives
- compressed or liquefied gases
- flammable liquids or solids
- poisonous substances
- infectious substances
- radioactive material
- corrosive materials.

6.4.6.6 Dangerous goods and hazardous materials may be present within aerodrome buildings, aircraft cargo compartments, cargo storage areas or on aircraft parking stands.

6.4.6.7 When developing emergency procedures for dangerous goods incidents, consideration should be given to the properties of the hazardous materials involved and their potential impact on people, property and the environment. The following actions should be considered:

- raise the alarm
- isolate/evacuate the immediate area
- use of appropriate protective equipment
- isolate the source of release
- contain the spill
- waste control and disposal.

6.4.6.8 It is important that people understand the potential risks associated with hazardous materials. This understanding supports informed decision making during the initial stages of an incident and assists in the accurate communication of information to emergency response organisations. The AEP should identify the organisation responsible for coordinating the hazardous materials response.

6.4.6.9 Personnel who are likely to witness or discover a hazardous materials incident should be trained to initiate an emergency response. This response should include measures to protect nearby persons, property, or the environment against the effects of the release.

6.4.6.10 Accidents involving aircraft carrying dangerous goods present further problems as the existence of cargo may not be immediately known. For emergency response purposes, each aircraft accident should be considered a potential hazardous materials incident until known to be otherwise.

6.4.6.11 Aircraft operators should notify emergency response organisations of the presence, or the possible presence, of dangerous goods on board an aircraft.

6.4.6.12 Emergency planning procedures should include provisions for decontaminating responding personnel, equipment and any other affected persons.

6.4.6.13 The aerodrome operator should have a register of the hazardous materials (fuel storage areas, cargo, chemicals etc) stored at their aerodrome.

## 6.4.7 Aircraft fire in a location likely to affect safety of other aircraft

6.4.7.1 The severity and extent of an aircraft fire on an apron is likely to be influenced by the quantity and type of fuel carried by the aircraft or refuelling equipment, the location of other aircraft, vehicles, infrastructure and structures nearby.

6.4.7.2 Responding personnel should be familiar with safe evacuation routes and assembly areas.

6.4.7.3 Procedures should be established in consultation with airline operators, aircraft operators and ground handlers, and should ensure:

- declaration of an emergency is understood
- identification and establishment of an adequate exclusion zone
- emergency fuel shut-off systems are activated immediately, where fitted or available
- equipment and aircraft power supply in the vicinity are switched off
- all vehicle movements in the exclusion area (with the exception of emergency responders) to be prohibited
- arriving aircraft that may introduce danger to the apron and passenger terminal are directed to a remote parking location
- that means of communicating with crew on board the aircraft are quickly established.

6.4.7.4 Multiple aircraft may need to be evacuated. The decision and method of evacuation will be dependent on the circumstances. Personnel working airside should also be moved clear of the incident.

## 6.4.8 Aircraft fire on the movement area

6.4.8.1 An aircraft fire may occur on the movement area for a variety of reasons, including overheated brakes, engine malfunctions, fuel leaks or collisions.

6.4.8.2 Procedures should be developed with airline operators and the relevant fire response organisation, and may include:

- declaration of an emergency
- immediate shut down of the aircraft
- evacuation of passengers and crew, where required
- identification and establishment of an adequate exclusion zone
- managing aircraft, vehicle and personnel movements in the affected area

- evacuation of passengers and crew.

6.4.8.3 Once the emergency has been controlled and there is no further risk, the DARP may be activated to remove the immobilised aircraft and enable the affected movement area to be returned to service as soon as practicable.

## 6.4.9 Other emergencies likely to present a hazard to aircraft

6.4.9.1 Every aerodrome operating environment is different. The aerodrome operator should identify and plan for other emergencies that could occur at or near the aerodrome. Examples include severe storms, bushfires, floods, earthquakes and other hazards relevant to the local environment.

## 6.4.10 Water rescue

6.4.10.1 Land rescue vehicles cannot cross open water. An aerodrome with direct access to, or bordering on, a shoreline must therefore include arrangements in the AEP for rescuing aircraft passengers and crew . If water rescue is exclusively provided by the ARFFS that is stationed at the aerodrome, a reference to their procedures is sufficient.

6.4.10.2 An aerodrome operator should also consider access to marshlands and mud flats located in an area beneath the approach and departure paths. These areas may also provide unique challenges in emergency response.

6.4.10.3 The primary objective of water rescue is to quickly locate and rescue survivors and transport them to the shoreline so that they can receive assistance.

6.4.10.4 An aircraft making an emergency landing on water may leak fuel, creating a risk of fire, pollution and environmental contamination. Emergency planning should take these risks into account and include appropriate response measures to protect persons, property and the environment.

6.4.10.5 In developing procedures for water rescue, consideration should be given to:

- the number of persons that the largest aircraft can carry
- local hazards (water temperatures, wildlife)
- availability of rescue boats (shallow water/surface considerations)
- availability of flotation equipment, rafts
- availability of thermal blankets
- providing adequate two-way radio equipment in all rescue boats in order to maintain communication
- availability of flood lighting for night operations
- establishing a command post and casualty areas at a safe location on adjacent land.

6.4.10.6 The AEP should include an inventory of all emergency response equipment available at the aerodrome and identify:

- the location of the equipment
- the quantity available
- applicable maintenance and inspection requirements.

6.4.10.7 The aerodrome operator should ensure:

- the water rescue component of the AEP is periodically evaluated as part of the testing requirements
- equipment is regularly inspected and tested to ensure it remains serviceable
- personnel are appropriately trained.

# 6.5 Support plans

6.5.1 Depending on the complexity of the aerodrome, the following optional support plans may be considered:

- welfare plan (care of the uninjured and care of relatives)
- media
- terminal evacuation.

# 6.6 Emergency preparedness

## 6.6.1 AEP testing and exercise requirements

6.6.1.1 Section 24.05 of the Part 139 MOS provides for three exercise methods:

- full-scale exercise
- tabletop exercise
- modular testing.

6.6.1.2 Conducting exercises and tests will allow an aerodrome operator to evaluate the effectiveness of their AEP. When conducted at regular intervals, exercises and tests also provide an opportunity to:

- train and evaluate the knowledge and skill of personnel
- clarify roles and responsibilities
- enhance and reinforce knowledge of procedures, facilities, systems and equipment
- improve coordination and communication between internal and external personnel
- identify weaknesses and recommendations for improvement
- review the effectiveness of the content of the AEP.

6.6.1.3 Where an AEC has been established, the AEC should assist in determining the aerodrome's exercise and testing schedule. Where an AEC has not been established, the aerodrome operator should consult with all organisations required to participate.

6.6.1.4 An exercise schedule should be developed well in advance to ensure the minimum testing/exercise requirements can be achieved and that participating organisations are able to commit the necessary resources.

6.6.1.5 A full-scale exercise is mandatory. An aerodrome operator may also conduct tabletop exercises or modular tests. The mix of exercises chosen determines how often a full-scale exercise must be held.

6.6.1.6 In the event a full activation of the AEP occurs, an aerodrome operator may apply to defer completion of a full-scale exercise for a maximum period of 24 months. Formal approval from CASA will be dependent on the presentation of supporting information and evidence necessary to satisfy subsection 24.05(4)(b) of the Part 139 MOS.

## 6.6.2 Full-scale exercise

6.6.2.1 The purpose of a full-scale exercise is to test and evaluate the effectiveness of the AEP in responding to a range of emergency scenarios. A full-scale exercise requires the mobilisation and deployment of the organisations, personnel, and resources that would be expected to respond in an actual emergency.

6.6.2.2 A full-scale exercise must be conducted at intervals not exceeding:

- 2 years, provided a tabletop exercise is conducted in the intervening year
- 3 years, provided a series of modular tests are conducted at regular intervals during the intervening period.

6.6.2.3 The full-scale exercise must be carefully planned, coordinated and managed to minimise the risks of accidents, injuries or disruption to normal aircraft operations.

6.6.2.4 Measurable objectives should be clearly defined to enable the effectiveness of the exercise to be evaluated.

6.6.2.5 So far as practicable, the exercise should be held in an environment that replicates where an accident or incident is most likely to occur, while avoiding disruption to aerodrome operations. At an aerodrome with regular scheduled night operations, exercises should be held at varying times, including both day and night, and in different seasons, so that the AEP is assessed under a range of operating and environmental conditions.

6.6.2.6 Full-scale emergency exercises are highly visible events that are likely to attract significant public attention. To prevent alarm or undue concern, aerodrome operators should consider:

- notifying the local community in advance of the planned exercise
- issuing a NOTAM and, where applicable, requesting ATC to include information on the ATIS to ensure that arriving and departing flight crews are aware of the exercise
- making periodic public announcements within the terminal facilities during the exercise, particularly where the exercise activities are visible to passengers and other members of the public
- using variable message boards on access roads and other locations where members of the public are likely to observe the exercise
- avoiding the names of actual aircraft operators or current aircraft registrations.

6.6.2.7 A team of observers familiar with the response procedures should be positioned to allow the entire exercise to be viewed.

6.6.2.8 A post exercise debrief and report is required[6].

## 6.6.3 Tabletop exercise

6.6.3.1 The aim of a tabletop exercise is to assess the integration, coordination and effectiveness of the emergency response arrangements without the operational disruption associated with a full-scale exercise.

6.6.3.2 A tabletop exercise is typically conducted in a room using an aerodrome diagram, maps, plans, or other visual aids to help discussion of a defined emergency scenario.

6.6.3.3 Prior to the commencement of the exercise, the elements of the AEP to be assessed should be clearly identified.

6.6.3.4 Measurable objectives should be clearly defined to enable the effectiveness of the exercise to be evaluated.

6.6.3.5 A debrief must be conducted to review participants feedback and advice, and an evaluation of the response procedures is to occur in accordance with section 6.6.5 of this AC.

## 6.6.4 Modular exercises

6.6.4.1 Modular exercises provide for a comprehensive cycle of testing of all key elements of the AEP by conducting a number of smaller, more detailed exercises conducted over shorter intervals.

[6] Refer section 6.6.5 of this AC.

6.6.4.2 Modular testing does not involve the full activation of on-aerodrome and off-aerodrome emergency personnel and facilities.

6.6.4.3 Careful consideration should be given to the scheduling of modular exercises, as all elements of AEP are required to be completed within a three-year cycle that culminates in a full-scale exercise.

6.6.4.4 Prior to the exercise the elements of the AEP to be tested, should be clearly identified.

6.6.4.5 Measurable objectives should be clearly defined.

6.6.4.6 A debrief must be conducted to review participants feedback and advice, and an evaluation of the response procedures is to occur in accordance with section 6.6.5 of this AC.

## 6.6.5 Post exercise debrief

6.6.5.1 Where volunteers take part, they often provide valuable insight into their experience of the exercise, including how they were rescued and how well they were managed.

6.6.5.2 Observers may assist in determining:

- whether the objectives of the exercise were achieved
- what aspects of the exercise were effective
- what aspects could be improved.

6.6.5.3 Participating organisations should be encouraged to prepare and submit a report outlining their involvement in the exercise and any observations arising from their participation.

6.6.5.4 A formal debrief must be held within 30 days and should include representatives from all lead organisations that participated in the exercise. The debrief should enable participating organisations to discuss the exercise to determine:

- whether the AEP is effective
- recommendations for improvement.

6.6.5.5 Where areas for improvement are identified, the participants must discuss and determine required actions. The aerodrome operator must develop a corrective action that records the agreed actions, the responsible persons for each action and target completion dates.

6.6.5.6 Additional review meetings should be conducted as necessary until all corrective actions have been completed and are closed.

6.6.5.7 The aerodrome operator must maintain records demonstrating a review of each exercise was completed. These records must be retained for a at least 3 years.

6.6.5.8 The aerodrome operator must provide records of exercise reviews to CASA upon written request.

## 6.6.6 Familiarisation with local emergency responders

6.6.6.1 Aerodrome personnel should:

- be familiar with the location of the communication equipment used to contact aerodrome personnel, emergency responders and other participating organisations
- understand the procedures and protocols for using the communications systems effectively
- know the location of the specialised emergency equipment
- conduct regular inspections to verify that emergency equipment is serviceable and ready for use.

6.6.6.2 The aerodrome operator should ensure that local emergency response organisations are familiar with the aerodrome layout, the location of hazardous material storage areas and facilities, and the applicable emergency response procedures.

6.6.6.3 Familiarisation activities with local emergency responders should be conducted at least once every 2 years. During these activities, responders should be shown the location and operation of:

- aerodrome access points
- assembly and staging areas
- facilities and equipment available for use in an emergency.

6.6.6.4 Records of familiarisation activities should be kept for at least 3 years and should include the date of the activity, the names of the participating organisations and a register of the personnel who attended.

## 6.6.7 Review of emergency response procedures (aerodromes without an AEP)

6.6.7.1 Where an aerodrome is not required to have an AEP, section 24.06 of the Part 139 MOS applies. Emergency response procedures should be reviewed with local emergency responders at least once every 2 years to confirm that they remain suitable, effective and current.

6.6.7.2 The aerodrome operator should keep records demonstrating that each review has been conducted. These records must be kept for at least 3 years and must be provided to CASA on written request.