

Consolidation of Draft Emergency Planning and Rescue and Fire Fighting Service
AMC and GM

Note: These will be published at the same time as the Implementing Rules

Quick guide:

AR	Authority Requirements e.g. CAA
OR	Organisation Requirements e.g. aerodrome operator
OPS	Operational Requirements e.g. procedures, infrastructure, data
AMC	Acceptable Means of Compliance
CS	Certification Specifications
GM	Guidance Material – where appropriate

AMC/GM to Annex II – Part –OR
SUBPART D – MANAGEMENT (ADR.OR.D)

AMC1 ADR.OR.D.015(d) Personnel requirements

DETERMINATION OF PERSONNEL NEEDS AND QUALIFICATIONS

- (a) The aerodrome operator should determine the required personnel for the planned tasks.
- (b) The aerodrome operator should determine the required personnel qualifications, in accordance with the applicable requirements (and the national and European Union legislation where applicable), and include them in the aerodrome manual. A documented system with defined responsibilities should be in place, in order to identify any needs for changes with regard to personnel qualifications.

GM1 ADR. OR.D.015 (d) Personnel requirements

QUALIFICATION OF PERSONNEL

The term 'qualified' denotes fitness for the purpose. This may be achieved through fulfilment of the necessary conditions such as completion of required training, or acquisition of a diploma or degree, or through the gaining of suitable experience. It, also, includes the ability, capacity, knowledge, or skill that matches or suits an occasion, or makes someone eligible for a duty, office, position, privilege, or status.

Certain posts may, by nature, be associated with the possession of certain qualifications in a specific field (e.g. rescue and firefighting, civil, mechanical or electrical engineering, wildlife biology, etc.). In such cases, the person occupying such a post is expected to possess the necessary qualifications at a level that is in accordance with the applicable national or European Union legislation.

AMC1 ADR.OR.D.017(a) Personnel Requirements

TRAINING PROGRAMME — GENERAL

- (a) The training programme should cover all personnel:
 - (1) involved in the operation, rescue and firefighting, maintenance, and management of the aerodrome (supervisors, managers, senior managers, and the accountable manager); and
 - (2) those persons operating unescorted on the movement area, and other operational areas of the aerodrome, related to other organisations which operate or provide services at the aerodrome, regardless of their level in the organisation.
- (b) The training of persons mentioned in paragraph (a) should be completed prior to the initial performance of their duties, or allowing them unescorted access on the movement area and other operational areas of the aerodrome, as appropriate.

- (c) The training programme should include safety management system training whose level of detail should be appropriate to the individual's responsibility and involvement in the safety management system; for persons referred to in paragraph (a)(1), it should also include human and organisational factors; for those persons referred to in paragraph under (a)(2) employed by other organisations operating, or providing services at the aerodrome, the safety management system training may cover only the necessary elements (e.g. relevant procedures, safety reporting system, aerodrome safety programmes, etc.).
- (d) The training programme should consist of the following:
 - (1) a process to identify training standards, including syllabi, and frequency for each type of training and area of activity for the persons mentioned in paragraph (a), including for instructors and assessors, and track completion of required training;
 - (2) a validation process that measures the effectiveness of training;
 - (3) initial job-specific training;
 - (4) on-the-job training; and
 - (5) recurrent training.
- (e) The training programme should identify training responsibilities and contain procedures:
 - (1) for training and checking of the trainees;
 - (2) to be applied in the event that personnel do not achieve or maintain the required standards.
- (f) Training contents and syllabi should comply with the requirements prescribed in Part-ADR.OPS.
- (g) A training file should be developed for each employee, including management, to assist in identifying and tracking employee training requirements, and verifying that personnel have received the planned training.
- (h) Information related to paragraphs (d) and (e), including the identified training standards and the related syllabi and frequency, should be included in the aerodrome manual.

GM1 ADR.OR.D.017(a) Personnel requirements

TRAINING PROGRAMME — RECURRENT, REFRESHER, AND DIFFERENCES TRAINING

- (a) Recurrent training
 - (1) The initial training programme should be valid for a period not exceeding 12 months. Thereafter, the aerodrome operator should ensure that the persons mentioned under paragraph (a) of AMC1 ADR.OR.D.017(a) complete recurrent training at intervals not exceeding 12 months since the initial completion of their training programme.
 - (2) If the recurrent training is undertaken within the last 3 calendar months of the 12-month period, the new validity period should be counted from the original expiry date.
- (b) Refresher training

When a person mentioned under paragraph (a) of AMC1 ADR.OR.D.017(a) has not performed any duties for a significant period before the expiry date of its initial training programme, or its last recurrent training (as the case may be), the aerodrome operator should ensure that that person completes a relevant refresher training prior to:

 - (1) being assigned duties; or
 - (2) being allowed unescorted access on the movement area and other operational areas of the aerodrome, as appropriate.
- (c) Differences training — same aerodrome operator

The aerodrome operator should ensure that personnel mentioned under paragraph (a)(1) of AMC1 ADR.OR.D.017(a) who have already completed the necessary training programme,

and are to be assigned to different duties, complete an appropriate training which covers any differences between their previous and future duties. The differences training should be determined, as necessary, on the basis of a comparison of the required training programme with the training programme already completed by the relevant personnel, taking into account the personnel's previous training as documented in his/her training records.

(d) Differences training — other aerodrome operator

When a person mentioned under paragraph (a)(1) of AMC1 ADR.OR.D.017(a) who has already completed the necessary training programme, is employed by another aerodrome operator, the latter may establish a differences training for that person to complete. Such a differences training should be determined, as necessary, on the basis of a comparison of the training already completed by the relevant person, (taking into account its previous training as documented in his/her training records) with the training programme that is required for the post that the person will cover. In any case, such a differences programme should not give credit for training areas which are aerodrome specific.

AMC2 ADR.OR.D.017(a) Personnel requirements

TRAINING PROGRAMME — CHECKING OF TRAINEES

- (a) Checking required for each training course should be accomplished by the method appropriate to the training element to be checked.
- (b) Training elements that require individual practical participation may be combined with practical checks.

GM2 ADR.OR.D.017(a) Personnel requirements

TRAINING PROGRAMME — CHECKING OF TRAINEES

The methods to be used for the checking of the trainees could include:

- (a) practical demonstration,
- (b) computer-based assessment,
- (c) oral or written tests,

or combinations of such methods, as appropriate.

AMC1 ADR.OR.D.017(b) Personnel requirements

INSTRUCTORS — ASSESSORS

- (a) The aerodrome operator should nominate instructors and assessors to be used for the implementation of the training and proficiency check programmes. The personnel to be nominated may also include contracted instructors for individual subjects.
The aerodrome operator may also nominate personnel proposed by organisations operating or providing services at the aerodrome to be used as instructors and assessors for the implementation of the respective part of the training and proficiency check programmes of these organisations' personnel. In any case, the responsibility to ensure the proper implementation of the programme is with the aerodrome operator.
- (b) A person may be qualified and nominated both as an instructor and as an assessor by the aerodrome operator. However, such a person may not provide assessment for own instruction, courses, or material.
- (c) Instructors
 - (1) Theoretical instruction should be given by appropriately qualified instructors. They should have:
 - (i) appropriate level and depth of knowledge in the field where instruction is to be given;

- (ii) documented ability to use appropriate instructional techniques; and
 - (iii) adequate experience in the subject where instruction is to be given.
- (2) Instruction on practical skills should be given by appropriately qualified instructors who:
- (i) meet the theoretical knowledge, and the working experience requirements appropriate to the instruction being given;
 - (ii) have demonstrated the ability to instruct, and to use appropriate instructional techniques;
 - (iii) are proficient in instructional techniques in the areas in which it is intended to provide instruction; and
 - (iv) receive regular refresher training to ensure that the instructional competences are maintained.
- (d) Assessors

The persons who are responsible for assessing the competence and skills of the personnel should:

- (1) have demonstrated the ability to assess the performance of, and conduct tests and checks in the areas covered by the training;
- (2) receive regular refresher training to ensure that the assessment standards are maintained up to date; and
- (3) meet the theoretical knowledge requirements appropriate to the instruction being given and have adequate working experience in the area of instruction.

AMC1 ADR.OR.D.017(c)(1) Personnel requirements

DISTRIBUTION OF RULES AND PROCEDURES

- (a) The aerodrome operator should have a system in place to distribute the rules and procedures to personnel to exercise their duties.
- (b) Proficiency checks should verify that personnel are aware of the rules and procedures relevant to their duties.

GM1 ADR.OR.D.015(c)(1) Personnel requirements

DISTRIBUTION MEANS OF RULES AND PROCEDURES

The aerodrome operator may use electronic means, or conventional means to distribute rules and procedures to personnel. The method used should verify that the information reached the intended recipient.

GM1 ADR.OR.D.017(c)(3) Personnel requirements

PROFICIENCY CHECKS

- (a) Proficiency checks should be conducted by nominated assessors in accordance with AMC1 ADR.OR.D.017(b).
- (b) The maximum interval between two proficiency checks should not exceed:
 - (1) 12 calendar months for rescue and firefighting personnel; and
 - (2) 24 months for all other personnel.

The first proficiency check should be completed within:

- (1) the first year since the completion of the initial training programme, for rescue and firefighting personnel;
 - (2) two years since the completion of the initial training programme, for all other personnel.
- (c) The proficiency check programme should include a validation process that measures the effectiveness of the programme.
 - (d) The proficiency check programme should identify checking responsibilities and relevant checking methods, including procedures to be applied in the event that personnel do not achieve the required standards.
 - (e) Information related to the proficiency check programme should be included in the aerodrome manual.

GM2 ADR.OR.D.017(c)(3) Personnel requirements

PROFICIENCY CHECKS

The purpose of the proficiency check is to establish the ability of an individual to perform satisfactorily, in accordance with applicable requirements and the content of the aerodrome manual. To this end, the elements that each proficiency check should cover should be identified.

A proficiency check does not need to cover all associated elements at the same time; however, all elements of a proficiency check should be covered within the period specified in GM1 ADR.OR.D.017(c)(3).

The person(s) to be checked should be aware about the relevant procedure. Proficiency checks may be conducted during normal and/or abnormal/emergency conditions depending on the situation and the specialty of the person being checked.

AMC1 ADR.OR.D.017(d) Personnel requirements

PERSONNEL RECORDS

- (a) The aerodrome operator should use its record keeping system (see AMC1 ADR.OR.D.035) to record the following information for each person:
 - (1) starting date of employment/ending date of employment (if applicable);
 - (2) area of activity;
 - (3) previous working experience;
 - (4) qualifications;
 - (5) training (before entry and subsequent); and
 - (6) proficiency checks, including language proficiency as appropriate;
- (b) Latest changes should be reflected into personnel records.

GM1 ADR.OR.D.017(d) Personnel requirements

TRAINING RECORDS

- (a) Training programme — general

The aerodrome operator should maintain records of the training sessions that it has provided, including as a minimum the following:

- (1) area of training and subjects covered;
- (2) names of participants;
- (3) date and duration of training; and

- (4) name of the instructor.
- (b) Training records of individuals

The training records maintained for each individual should include as a minimum:

- (1) the name of the trainee;
- (2) the date(s) and the duration of the training;
- (3) the place where the training was received;
- (4) the name of the organisation that provided the training;
- (5) the subjects covered, and the methodology of the course;
- (6) any comments made by the instructor if applicable;
- (7) the performance evaluation of the trainee if applicable; and
- (8) the name and signature of the instructor.

SUBPART B — AERODROME OPERATIONAL SERVICES, EQUIPMENT, AND INSTALLATIONS **(ADR.OPS.B)**

AMC1 ADR.OPS.B.005 Aerodrome Emergency Planning

GENERAL

- (a) The aerodrome operator should ensure that the plan includes the ready availability of, and coordination with, appropriate specialist rescue services to be able to respond to emergencies where an aerodrome is located close to water and/or swampy areas, and where a significant portion of approach or departure operations takes place over these areas.
- (b) The aerodrome operator should ensure that an assessment of the approach and departure areas within 1000 m of the runway threshold is carried out to determine the options available for intervention.

AMC2 ADR.OPS.B.005 Aerodrome Emergency Planning

AERODROME EMERGENCY PLAN DOCUMENT

The aerodrome operator should include, at least, the following in the aerodrome emergency plan document:

- (a) Types of emergencies planned for;
- (b) Agencies involved in the plan, and details of the aerodrome and local emergency planning arrangements and forums;
- (c) Responsibility and role of each agency, the emergency operations centre, and the command post for each type of emergency;
- (d) Information on names and telephone numbers of offices or people to be contacted in the case of a particular emergency; and
- (e) A grid map of the aerodrome and its immediate surroundings, approximately at a distance of 5 nautical miles (8 km) from the centre of the aerodrome.

AMC3 ADR.OPS.B.005 Aerodrome emergency planning

AERODROME EMERGENCY EXERCISE

The aerodrome operator should ensure that the emergency plan is tested with:

- (a) a full-scale aerodrome emergency exercise at intervals not exceeding two years; and
- (b) partial emergency exercises in the intervening year to ensure that any deficiencies found during the full-scale aerodrome emergency exercise have been corrected

and reviewed thereafter, or after an actual emergency, so as to correct any deficiency found during such exercises or actual emergency.

GM1 ADR.OPS.B.005 Aerodrome emergency planning

PURPOSE OF THE AERODROME EMERGENCY PLAN

- (a) In many cases the aerodrome emergency plan is part of a National or Local Emergency Plan, and the responsibility for its development is assigned to another entity, different from the aerodrome operator. However, this does not prevent the aerodrome operator from preparing its own plan describing the actions that should be taken during an emergency, in cooperation with the authorities which are responsible for the National or Local Emergency Plan.
- (b) The aerodrome emergency plan should cover an area of approximately 5 nautical miles (8 km) from the centre of the aerodrome.
- (c) Irrespective of whose responsibility is the establishment and implementation of an emergency plan covering emergencies at or in the surroundings of an aerodrome, the emergency plan should ensure that there are provisions for:
 - (1) orderly and efficient transition from normal to emergency operations;
 - (2) delegation of authority;
 - (3) assignment of emergency responsibilities;
 - (4) authorising key personnel for actions contained in the plan;
 - (5) coordination of efforts to cope with the emergency; and
 - (6) safe continuation of aircraft operations or return to normal operations as soon as possible.

GM2 ADR.OPS.B.005 Aerodrome emergency planning

COORDINATION WITH OTHER AGENCIES/ORGANISATIONS

- (a) The aerodrome emergency plan should describe the procedures for coordinating the response of different aerodrome agencies organisations or services (e.g. ground handlers, airlines, security services) and those agencies in the surrounding community that could be of assistance in responding to an emergency.
- (b) If the aerodrome emergency plan is not part of a National or Local Emergency Plan, then it should be coordinated as required.
- (c) Emergency mutual aid agreements should be established to define responsibilities and/or liabilities of each external agency responding to an emergency. These agreements should include the following:
 - (1) clarification of the political and jurisdictional responsibilities of the several agencies (e.g. police, local fire fighting services, local authorities, accident investigation bodies, etc.) that could be involved in order to avoid problems when an emergency occurs;
 - (2) establishment of the command authority; i.e. a single on-the-scene commander (with designated alternates if necessary);
 - (3) designation of communication priorities at the accident site;
 - (4) organisation of emergency transportation facilities under (a) pre-designated coordinator(s);

- (5) predetermination of the legal authorities and liabilities of all cooperating emergency personnel; and
 - (6) pre-arrangements for use of portable and heavy rescue equipment from available sources.
- (d) The aerodrome emergency plan should be implemented similarly whether it is an on-airport or an off-airport aircraft accident/incident.
 - (e) Rendezvous signs and directional arrows should be consistent, and conform to national standards.
 - (f) The aerodrome operator should assess the level of medical supplies to be held on the aerodrome for emergency purposes.

GM3 ADR.OPS.B.005 Aerodrome emergency planning

AERODROME EMERGENCY PLAN DOCUMENT

- a) The aerodrome emergency plan of the aerodrome operator should observe human factors principles to ensure optimum response in emergency operations.
- (b) In order to ensure that the aerodrome emergency plan document fully serves its purpose, it should include the following:
 - (1) plans for dealing with emergencies occurring at the aerodrome or in its surroundings, including the malfunction of aircraft in flight; structural fires; sabotage, including bomb threats (aircraft or structure); unlawful seizure of aircraft; and incidents on the airport covering 'during the emergency' and 'after the emergency' considerations;
 - (2) details of tests for aerodrome facilities and equipment to be used in emergencies such as emergency operations centre, mobile command post, fire fighting vehicles and equipment, communication means, first aid medical supplies, etc., including the frequency of those tests;
 - (3) details of exercises to test emergency plans, including the frequency of those exercises;
 - (4) a list of organisations, agencies, and persons of authority, both on and off-airport, for site roles; their telephone and fax numbers, e-mail and SITA addresses, and the radio frequencies of their offices;
 - (5) the establishment of an aerodrome emergency committee to organise training and other preparations for dealing with emergencies;
 - (6) the appointment of an on-the-scene commander for the overall emergency operation; and
 - (7) Details of the off aerodrome areas for which the aerodrome RFFS will provide a response, and the size and nature of the response.

GM4 ADR.OPS.B.005 Aerodrome emergency planning

CONTENTS OF AN AERODROME EMERGENCY PLAN DOCUMENT

The purpose of the aerodrome Emergency Plan Document is to provide all the required information to agencies and staff involved in an emergency. The document should be structured in such a manner, that the required information is easily identifiable. For that purpose, the structure of the aerodrome emergency plan should be as follows:

Section 1 — Emergency telephone numbers

This section should be limited to essential telephone, numbers according to the aerodrome needs, including:

- (a) air traffic services unit;
- (b) rescue and firefighting services (fire departments);
- (c) airfield operations department;
- (d) police and security;
- (e) medical services:
 - (1) hospitals;
 - (2) ambulances; and
 - (3) doctors — business/residence;
- (f) aircraft operators;
- (g) ground handling agencies;
- (h) government authorities;
- (i) civil defence; and
- (j) others.

Section 2 — Aircraft accident on the airport

- (a) Action by air traffic services unit;
- (b) Action by rescue and firefighting services;
- (c) Action by police and security services;
- (d) Action by the aerodrome operator:
 - (1) vehicle escort; and
 - (2) maintenance;
- (e) Action by medical services:
 - (1) hospitals;
 - (2) ambulances;
 - (3) doctors; and
 - (4) medical personnel.
- (f) Action by aircraft operator involved;
- (g) Action by emergency operations centre and mobile command post;
- (h) Action by government authorities;
- (i) Communication network (emergency operations centre and mobile command post);
- (j) Action by agencies organisations involved in mutual aid emergency agreements;
- (k) Action by transportation authorities (land, sea, air);
- (l) Action by public information officer(s);
- (m) Action by local fire departments when structures involved; and
- (n) Action by all other agencies.

Section 3 — Aircraft accident off the airport

- (a) Action by air traffic services unit;

- (b) Action by rescue and firefighting services;
- (c) Action by local fire departments;
- (d) Action by police and security services;
- (e) Action by aerodrome operator;
- (f) Action by medical services;
 - (i) hospitals;
 - (ii) ambulances;
 - (iii) doctors; and
 - (iv) medical personnel.
- (g) Action by agencies involved in mutual aid emergency agreements;
- (h) Action by aircraft operator involved;
- (i) Action by emergency operations centre and mobile command post;
- (j) Action by government authorities;
- (k) Action by communication networks (emergency operations centre and mobile command post);
- (l) Action by transportation authorities (land, sea, air);
- (m) Action by public information officer; and
- (n) Action by all other agencies.

Section 4 — Malfunction of aircraft in flight (Full emergency or local standby)

- (a) Action by air traffic services unit;
- (b) Action by airport rescue and firefighting services;
- (c) Action by police and security services;
- (d) Action by the aerodrome operator;
- (e) Action by medical services:
 - (1) hospitals;
 - (2) ambulances;
 - (3) doctors; and
 - (4) medical personnel.
- (f) Action by aircraft operator involved;
- (g) Action by emergency operations centre and mobile command post; and
- (h) Action by all other agencies.

Section 5 — Structural fires

- (a) Action by air traffic services unit;
- (b) Action by rescue and firefighting services (local fire department);
- (c) Action by police and security services;
- (d) Action by airport authority;

- (e) Evacuation of structure;
- (f) Action by medical services:
 - (1) hospitals;
 - (2) ambulances;
 - (3) doctors; and
 - (4) medical personnel.

- (g) Action by emergency operations centre and mobile command post;
- (h) Action by public information officer; and
- (i) Action by all other agencies.

Section 6 — Sabotage including bomb threat (aircraft or structure)

- (a) Action by air traffic services unit;
- (b) Action by emergency operations centre and mobile command post;
- (c) Action by police and security services;
- (d) Action by the aerodrome operator;
- (e) Action by rescue and firefighting services;
- (f) Action by medical services:
 - (1) hospitals;
 - (2) ambulances;
 - (3) doctors; and
 - (4) medical personnel.
- (g) Action by aircraft operator involved;
- (h) Action by government authorities;
- (i) Isolated aircraft parking position;
- (j) Evacuation;
- (k) Searches by dogs and trained personnel;
- (l) Handling and identification of luggage and cargo on board aircraft;
- (m) Handling and disposal of suspected bomb;
- (n) Action by public information officer; and
- (o) Action by all other agencies.

Section 7 — Unlawful seizure of aircraft

- (a) Action by air traffic services unit;
- (b) Action by rescue and firefighting services;
- (c) Action by police and security services;
- (d) Action by the aerodrome operator;
- (e) Action by medical services;

- (1) hospitals;
 - (2) ambulances;
 - (3) doctors; and
 - (4) medical personnel.
- (f) Action by aircraft operator involved;
 - (g) Action by government authorities;
 - (h) Action by emergency operations centre and mobile command post;
 - (i) Isolated aircraft parking position;
 - (j) Action by public information officer; and
 - (k) Action by all other agencies.

Section 8 — Incident on the airport

An incident on the airport could require any, or all of the actions detailed in Section 2, 'Aircraft accident on the airport'. Examples of incidents the aerodrome operator should consider to include: fuel spills at the ramp, passenger loading bridge, and fuel storage area; dangerous goods occurrences at freight handling areas; collapse of structures; vehicle/aircraft collisions; etc.

Section 9 — Persons of authority — site roles

To include, but not limited to, the following, according to local requirements:

- (a) On-airport:
 - (1) Aerodrome chief fire officer;
 - (2) Airport authority;
 - (3) Police and security — Officer-in-charge; and
 - (4) Medical coordinator.
- (b) Off-airport:
 - (1) Local chief fire officer;
 - (2) Government authority; and
 - (3) Police and security — officer-in-charge.

The on-the-scene commander will be designated as required from within the pre-arranged mutual aid emergency agreement.

GM5 ADR.OPS.B.005 Aerodrome Emergency Planning

TYPES OF EMERGENCIES

- (a) At least the following types of emergencies may be included in the aerodrome emergency plan:
 - (1) Aircraft emergencies;
 - (2) Aircraft ground incidents, where an aircraft on the ground is known to have an emergency situation other than an accident, requiring the attendance of emergency services;
 - (3) Sabotage, including bomb threats;
 - (4) Unlawfully seized aircraft;

- (5) Dangerous goods occurrences;
- (6) Building fires;
- (7) Natural disasters; and
- (8) Public health emergencies.

(b) The aircraft emergencies for which services may be required are generally classified as:

- (1) 'aircraft accident': an aircraft accident which has occurred on or in the vicinity of the airport;
- (2) 'full emergency': an aircraft approaching the airport is, or is suspected to be, in such trouble that there is imminent danger of an accident; and
- (3) 'local standby': an aircraft approaching the airport is known, or is suspected to have developed some defect, but the trouble is not such as would normally involve any serious difficulty in effecting a safe landing.

GM6 ADR.OPS.B.005 Aerodrome emergency planning

INVOLVED AGENCIES IN EMERGENCIES

The following agencies could participate in response to an emergency, depending on the type of emergency and local arrangements:

(a) On the aerodrome:

- (1) Air Traffic Control Unit;
- (2) Rescue and firefighting services;
- (3) Aerodrome administration;
- (4) Medical and ambulance services;
- (5) Aircraft operators;
- (6) Ground handling agencies;
- (7) Security services; and
- (8) Police.

(b) Off the aerodrome:

- (1) Fire departments;
- (2) Police;
- (3) Health authorities (including medical, ambulance, hospital and public health services);
- (4) Military; and
- (5) Harbour or coast guard, if applicable.

GM7 ADR.OPS.B.005 Aerodrome emergency planning

EMERGENCY OPERATIONS CENTRE

- (a) The practice had shown that emergencies are handled more efficiently centrally through an emergency operations centre and a command post.
- (b) The emergency operations centre could be a part of the aerodrome facilities, and responsible for the overall coordination and general direction of the response to an emergency. Depending on the size of the aerodrome and local procedures, more than one emergency

centres could be established, but within the aerodrome emergency plan should be identified which of them has the overall responsibility for coordination.

- (c) A person should be assigned to assume control of the emergency operations centre and, when appropriate, another person the command post.
- (d) The role of the emergency operations centre should be to support the on-the-scene commander in the mobile command post for aircraft accidents/incidents.
- (e) The emergency operations centre, depending on relevant security plans and local procedures could be the command, coordination, and communication centre for unlawful seizure of aircraft and bomb threats.
- (f) The emergency operations centre should be operationally available 24 hours a day, or during the aerodrome's hours of operation, and procedures should be established for notifying its staff.
- (g) The location of the emergency operation centre is very important for its efficiency. Consideration should be given to establish its location having a clear view of the movement area and isolated aircraft parking position, wherever possible.
- (h) Adequate equipment and personnel should be available in order to communicate with the appropriate agencies involved in the emergency, including the mobile post, when this is deployed. The communication and electronic devices should be checked regularly, to identify any malfunctions.

GM8 ADR.OPS.B.005 Aerodrome emergency planning

MOBILE COMMAND POST

- (a) The command post should be a facility capable of being moved rapidly to the site of an emergency, when required, and should undertake the local coordination of those agencies responding to the emergency.
- (b) The mobile command post, when established, should contain the necessary equipment and personnel to communicate with all agencies involved in the emergency, including the emergency operations centre. The communication and electronic devices should be checked regularly, in order to identify any malfunctions.
- (c) Maps, charts, and other relevant equipment and information should be available at the mobile command post.

GM9 ADR.OPS.B.005 Aerodrome emergency planning

COMMUNICATION SYSTEMS USED FOR EMERGENCIES

- (a) When established, adequate communication systems linking the command post and the emergency operations centre with each other and with the participating agencies should be provided in accordance with the plan. and consistent with the particular requirements of the aerodrome.
- (b) The communication systems used should include a sufficient number of radio transceivers, telephones, and other communication devices to establish and maintain a primary, and a secondary means of communication;
- (c) The role of the communication systems is to provide a primary, and, where necessary, an alternate means for effective direct communications between the following, as applicable:
 - (1) the alerting authority and the rescue and firefighting (RFF) units serving the airport;
 - (2) air traffic services unit, the appropriate fire department alarm room/dispatch centre(s) and the firefighting and rescue crews en route to an aircraft emergency and at the accident/incident site;
 - (3) appropriate mutual aid agencies located on or off the airport, including an alert procedure for all auxiliary personnel expected to respond; and

- (4) the RFF vehicles, including a communication capability between crew members on each RFF vehicle.
- (d) A communications system should be established in order to provide rapid response of the emergency equipment to accidents and incidents occurring in the terminal areas, and at the apron. Apron accidents include aircraft cabin fires, refuelling spills and fires, aircraft and vehicle collisions, and medical emergencies.
- (e) Communication systems used during emergencies should be tested regularly to verify the operability of all radio and telephone networks.
- (f) A complete and current list of interagency telephone numbers should be available to all agencies and to personnel responsible for the aerodrome emergency plan, to ensure rapid notification in case of emergencies. These phone numbers should be verified frequently to ensure they are correct. Updated lists should be distributed to all emergency plan participants on a continual basis.

GM10 ADR.OPS.B.005 Aerodrome emergency planning

EMERGENCIES IN DIFFICULT ENVIRONMENT

At those aerodromes located close to water and/or swampy areas, or difficult terrain, the aerodrome emergency plan should include the establishment, testing, and assessment at regular intervals of a predetermined response for the specialist rescue services.

GM11 ADR.OPS.B.005 Aerodrome emergency planning

EMERGENCY EXERCISES

- (a) Full-scale exercises
 - (1) The purpose of a full-scale exercise is to ensure the adequacy of the plan to cope with different types of emergencies.
 - (2) Full-scale emergency exercises should be supported by all aerodrome and community authorities concerned.
 - (3) Objectives of the exercise should be defined.
 - (4) Involved departments and agencies should be thoroughly familiar with the airport emergency plan, and develop individual plans in coordination with the general plan.
 - (5) The emergency exercises should be held in locations which will provide maximum realism while ensuring minimum disruption of the airport operations. Different scenarios, as described in the aerodrome emergency plan document, should be used. The exercise could be held either during the day or at night on the airport, and at different times of the year when seasonal changes may present additional challenges. Exercises may take place both on or near the aerodrome to test different scenarios.
 - (6) In order to obtain the maximum benefit from a full-scale emergency exercise, the entire proceedings should be reviewed. An observer critique team should be organised, comprised of members who are familiar with mass casualty accident proceedings. Each member of the critique team should observe the entire exercise, and complete the appropriate emergency drill critique forms. As soon as convenient after the exercise, a critique meeting should be held so members of the team can present their observations and recommendations for improvement of the airport emergency plan procedures and associated airport emergency plan document.
 - (7) The exercise should be followed by a full debriefing, critique, and analysis. It is important that representatives of all organisations which participate in the exercise actively participate in the critique.
- (b) Partial emergency exercises

- (1) The purpose of a partial exercise is to ensure the adequacy of the response to individual participating agencies and components of the plan.
 - (2) Partial emergency exercises should involve, at least, one unit, such as rescue and firefighting services, or medical, or combination of several units, as appropriate.
 - (3) Partial emergency exercises should ensure that any deficiencies found during the full-scale airport emergency exercise have been corrected.
- (c) Tabletop exercises

Tabletop exercises should be held at regular intervals. The aim of these exercises should be to verify that roles and procedures are clear and understood. These exercises offer a good opportunity to test new or revised procedures, before implementation, or preparation for a full-scale emergency exercise.

GM12 ADR.OPS.B.005 Aerodrome emergency planning

DISABLED AIRCRAFT REMOVAL

- (a) The aerodrome operator should establish a plan for the removal of an aircraft disabled on, or adjacent to, the movement area, and a coordinator designated to implement the plan, when necessary.
- (b) The disabled aircraft removal plan should be based on the characteristics of the aircraft that may normally be expected to operate at the aerodrome, and include among other things:
 - (1) a list of equipment and personnel on, or in the vicinity of, the aerodrome which would be available for such purpose; and
 - (2) arrangements for the rapid receipt of aircraft recovery equipment kits available from other aerodromes;

AMC1 ADR.OPS.B.010 Rescue and fire fighting services

COMMUNICATION AND ALERTING SYSTEMS

The aerodrome operator should ensure that:

- (a) a discrete communication system is provided linking a fire station with the control tower, any other fire station on the aerodrome, and the rescue and firefighting vehicles;
- (b) an alerting system for rescue and firefighting personnel, capable of being operated from that station, is provided at the fire station, any other fire station on the aerodrome, and the aerodrome control tower;
- (c) communication means are provided for direct communication between the rescue and firefighting service and the flight crew of an aircraft in emergency;
- (d) communication means are provided to ensure the immediate summoning of designated personnel not on standby duty;
- (e) communication means are provided to ensure two-way communication with the rescue and firefighting vehicles in attendance at an aircraft accident or incident.
- (f) communications during emergencies should be recorded;
- (g) communication means are provided between rescue and firefighting crew members; and
- (h) a system for monitoring the movement area for incidents is provided.

AMC2 ADR.OPS.B.010 Rescue and fire-fighting services

RFFS LEVEL OF PROTECTION

(a) The aerodrome operator should ensure that:

- (1) the level of protection normally available at an aerodrome is determined and expressed in terms of the category of the rescue and firefighting services (RFF aerodrome category) as described in (2), (3), and (4) below and in accordance with the types, amounts, and discharge rates of extinguishing agents normally available at the aerodrome; and
- (2) the RFF aerodrome category is determined according to the Table 1, based on the longest aeroplanes normally using the aerodrome and their fuselage width. If, after selecting the category appropriate to the longest aeroplane's overall length, that aeroplane's fuselage width is greater than the maximum width in Table 1, column 3, for that category, then the category for that aeroplane should actually be one category higher.

Aerodrome category for rescue and fire fighting		
Aerodrome Category (1)	Aeroplane overall length (2)	Maximum fuselage width (3)
1	0 m up to but not including 9 m	2 m
2	9 m up to but not including 12 m	2 m
3	12 m up to but not including 18 m	3 m
4	18 m up to but not including 24 m	4 m
5	24 m up to but not including 28 m	4 m
6	28 m up to but not including 39 m	5 m
7	39 m up to but not including 49 m	5 m
8	49 m up to but not including 61 m	7 m
9	61 m up to but not including 76 m	7 m
10	76 m up to but not including 90 m	8 m

Table 1

- (b) The aerodrome operator should ensure that during anticipated periods of reduced activity, the level of protection available is no less than that needed for the highest category of aeroplane planned to use the aerodrome during that time, irrespective of the number of movements.

AMC3 ADR.OPS.B.010 Rescue and fire fighting services

NUMBER OF RFFS VEHICLES AND RESCUE EQUIPMENT

(a) The aerodrome operator should ensure that:

- (1) the minimum number of rescue and firefighting vehicles at the aerodrome will be in accordance with the following table; and

Aerodrome category	Rescue and firefighting vehicles
1	1
2	1
3	1
4	1
5	1
6	2
7	2
8	3
9	3
10	3

Table 1

- (2) rescue equipment commensurate with the level of aircraft operations is provided on the rescue and firefighting vehicles.
- (b) If the aerodrome is located near a water/swampy area, or other difficult environment, or a significant portion of the approach/departure operations takes over these areas, the aerodrome operator should coordinate the availability of suitable rescue equipment and services.

AMC4 ADR.OPS.B.010 Rescue and fire fighting services

EXTINGUISHING AGENTS

The aerodrome operator should ensure that:

- (a) both principal and complementary extinguishing agents are provided at the aerodrome;
- (b) principal extinguishing agent includes:
- (1) a foam meeting the minimum performance level A; or
 - (2) a foam meeting the minimum performance level B; or
 - (3) a combination of these agents;
- except for aerodromes in categories 1 to 3, where it should preferably meet the minimum performance level B;
- (c) the complementary extinguishing agent is a dry chemical powder suitable for extinguishing hydrocarbon fires, or any other alternate agent having equivalent firefighting capability;
- (d) the amounts of water for foam production, and of the complementary agents provided on the rescue and firefighting vehicles are in accordance with the determined aerodrome category and Table 1,

Aerodrome category (1)	Foam meeting performance level A		Foam meeting performance level B		Complementary agents	
	Water (L) (2)	Discharge rate foam solution/minute (L) (3)	Water (L) (4)	Discharge rate foam solution/minute (L) (5)	Dry chemical powders (kg) (8)	Discharge Rate (kg/sec) (9)
1	350	350	230	230	45	2.25
2	1 000	800	670	550	90	2.25
3	1 800	1 300	1 200	900	135	2.25
4	3 600	2 600	2 400	1800	135	2.25
5	8 100	4 500	5 400	3 000	180	2.25
6	11 800	6 000	7 900	4 000	225	2.25
7	18 200	7 900	12 100	5 300	225	2.25
8	27 300	10 800	18 200	7 200	450	4.5
9	36 400	13 500	24 300	9 000	450	4.5
10	48 200	16 600	32 300	11 200	450	4.5

Table 1

except that for aerodrome categories 1 and 2, up to 100 % of the water may be replaced by complementary agent, or for aerodrome categories 3 to 10 when a foam meeting performance level A is used, up to 30 % of the water may be replaced by complementary agent.

For the purpose of agent substitution, 1 kg of complementary agent is equivalent if to 1 L of water for production of a foam meeting performance level A and 0.66 L of water for production of a foam meeting performance level B.

Note 1: The amounts of water specified for foam production are predicated on an application rate of 8.2 L/min/m² for a foam meeting performance level A, or 5.5 L/min/m² for a foam meeting performance level B.

Note 2: When any other complementary agent is used, the substitution ratios need to be checked.

- (e) the amount of foam concentrate provided on a vehicle should be sufficient to produce, at least, two loads of foam solution;
- (f) when different performance level foams are provided at an aerodrome, the conversion ratio should be calculated, documented for each rescue and firefighting vehicle and applied to the overall rescue and firefighting requirement;
- (g) the discharge rate of the foam solution is not less than the rates shown in Table 3;
- (h) the complementary agents comply with the appropriate specifications of the International Organisation for Standardisation (ISO);
- (i) the discharge rate of complementary agents is not less than the values shown in Table 1;
- (j) a reserve supply of foam concentrate and complementary agent, equivalent to 200 % of the quantities of these agents to be provided in the rescue and fire fighting vehicles, is maintained on the aerodrome for vehicle replenishment purposes. Where a major delay in the replenishment of this supply is anticipated, the amount of reserve supply should be increased;
- (k) a water need analysis is conducted to determine the availability of sufficient quantities of water for fire fighting;

- (l) quantities of water are recalculated and the amount of water for foam production and the discharge rates for foam solution are increased accordingly, where operations by aeroplanes larger than the average size in a given category are planned; and
- (m) arrangements are in place to manage extinguishing agents in terms of selection, storage, maintenance, and testing.

AMC5 ADR.OPS.B.010 Rescue and fire fighting services

RESPONSE TIME

The aerodrome operator should ensure that:

- (a) rescue and firefighting service achieves a response time not exceeding three minutes with an operational objective of not exceeding two minutes, to any point of each operational runway, in optimum visibility and surface conditions, and be in a position to apply foam at a rate of, at least, 50 % of the discharge rate specified in AMC4 ADR.OPS.B.010 Table 3;
- (b) response times to any other part of the movement area, in optimum visibility and surface conditions, are calculated and included in the Aerodrome Emergency Plan;
- (c) any vehicle, other than the first responding vehicle(s), required to achieve continuous agent application of the amount of extinguishing agents specified in Table 1 of AMC4 ADR.OPS.B.010 arrives one minute after the first responding vehicle(s); and
- (d) suitable guidance, equipment and/or procedures for rescue and firefighting services are provided, to meet the operational objective, as nearly as possible, in less than optimum conditions of visibility, especially during low visibility operations.

AMC6 ADR.OPS.B.010 Rescue and fire fighting services

PERSONNEL

The aerodrome operator should ensure that:

- (a) during flight operations and, at least, 15 minutes after the departure of last flight, sufficient trained personnel is detailed and readily available to ride the rescue and firefighting vehicles, and to operate the equipment at maximum capacity;
- (b) personnel is deployed in a way that ensures the minimum response times can be achieved, and continuous agent application at the appropriate rate can be fully maintained considering also the use of hand lines, ladders, and other rescue and firefighting equipment normally associated with aircraft rescue and firefighting operations;
- (c) all responding rescue and firefighting personnel are provided with protective clothing and respiratory equipment to enable them to perform their duties in an effective manner; and
- (d) any other duties carried out by rescue and firefighting personnel do not compromise the response, or their safety.

AMC7 ADR.OPS.B.010 Rescue and fire fighting services

TRAINING OF RFFS PERSONNEL

The aerodrome operator should ensure that:

- (a) the rescue and firefighting personnel are properly trained to perform their duties in an efficient manner, and actively participate in live fire drills commensurate with the types of aircraft, and type of rescue and firefighting equipment in use at the aerodrome, including pressure-fed fuel fires drills; and
- (b) the rescue and firefighting personnel training programme includes training in human performance, including team coordination.

AMC8 ADR.OPS.B.010 Rescue and fire fighting services

MEDICAL STANDARDS FOR RFFS PERSONNEL

The aerodrome operator should ensure that appropriate medical standards are met by RFFS personnel.

GM1 ADR.OPS.B.010 Rescue and fire fighting services

AVAILABILITY AND SCOPE OF RESCUE AND FIRE FIGHTING SERVICES

Public or private organisations, suitably located and equipped, could be designated to provide the rescue and firefighting service. The fire station housing these organisations should normally be located on the aerodrome, although an off-aerodrome location is not precluded, provided that the response time can be met. The scope of the rescue and fire fighting services is to save lives in the event of an aircraft accident or incident occurring at, or in the immediate surroundings of, the aerodrome. The operational objective is to create and maintain survivable conditions, to provide egress routes for occupants, and to initiate the rescue of those occupants unable to make their escape without direct aid.

GM2 ADR.OPS.B.010 Rescue and fire fighting services

NUMBER OF RFFS PERSONNEL

In determining the number of personnel required to provide for rescue and fire fighting, a Task and Resource Analysis should be performed, taking into consideration the types of aircraft operating at the aerodrome, the available rescue and fire fighting vehicles and equipment, any other duties required from RFFS personnel, etc.

GM3 ADR.OPS.B.010 Rescue and fire fighting services

TRAINING OF RESCUE AND FIRE FIGHTING PERSONNEL

The training of rescue and firefighting personnel may include initial and recurrent training in, at least, the following areas:

- (a) airport familiarisation;
- (b) aircraft familiarisation;
- (c) rescue and firefighting personnel safety;
- (d) emergency communications systems on the aerodrome, including aircraft fire-related alarms;
- (e) use of the fire hoses, nozzles, turrets, and other appliances;
- (f) application of the types of extinguishing agents required;
- (g) emergency aircraft evacuation assistance;
- (h) firefighting operations;
- (i) adaptation and use of structural rescue and firefighting equipment for aircraft rescue and firefighting;
- (j) dangerous goods;
- (k) familiarisation with fire fighters' duties under the aerodrome emergency plan;
- (l) low visibility procedures;
- (m) human performance, including team coordination;
- (n) protective clothing and respiratory protection;
- (o) composite materials; and
- (p) recognition of aircraft ballistic parachute systems during emergency operations.

GM4 ADR.OPS.B.010 Rescue and firefighting services

NUMBER OF RFFS VEHICLES AND RESCUE EQUIPMENT

Special fire fighting equipment may not be provided for water areas; this does not prevent the provision of such equipment if it would be of practical use, such as when the areas concerned include reefs or islands. The objective should be to plan and deploy the necessary life-saving flotation equipment, as expeditiously as possible, in a number commensurate with the largest aeroplane normally using the aerodrome.

GM5 ADR.OPS.B.010 Rescue and fire fighting services REDUCTION OF RFFS AERODROME CATEGORY

- (a) The level of protection could be one category below the determined category if the number of movements of the aeroplanes in the highest RFF aerodrome category normally using the aerodrome is less than 700 in the busiest consecutive three months.
- (b) The level of protection should be equal to the determined category if the number of movements of the aeroplanes in the highest RFF aerodrome category normally using the aerodrome is equal or above 700 in the busiest consecutive three months.
- (c) For aerodromes serving exclusively all-cargo aircraft operations, the RFF aerodrome category could be adjusted to a category lower than the one for passenger aircraft operations, provided that the principal objective, to save lives in the event of an aircraft accident or incident, is met and such reduction is approved by the Competent Authority.
- (d) Unforeseen circumstances leading to temporary reduction of the level of protection of the aerodrome rescue and fire fighting services are considered any unplanned events that lead to unavailability of facilities, equipment, and resources, such as:
 - (1) breakdown of RFFS vehicles;
 - (2) staff shortage;
 - (3) unavailability of extinguishing agents;
 - (4) RFFS response to an accident;
 - (5) Etc.

Other rules applicable to RFFS:

Airside Driving rules
LVP
Vehicle maintenance