

AFKONDIGINGSBLAD VAN SINT MAARTEN

Jaargang 2014

No. 79

Regeling van de Minister van Toerisme, Economische zaken, Verkeer en Telecommunicatie van 28 november 2014, houdende maatregelen voor een doelmatige bestrijding van ongevallen die zich kunnen voordoen op het luchtvaartterrein (Regeling ongevallenbestrijding luchtvaartterrein)

De Minister van Toerisme, Economische Zaken, Verkeer en Telecommunicatie,

In overweging genomen hebbende:

Dat het wenselijk is regels vast te stellen voor het doelmatig bestrijden van ongevallen die zich kunnen voordoen op het luchtvaartterrein Princes Juliana International airport;

Gelet op artikel 155, vijfde lid van het Landsbesluit toezicht luchtvaart;

BESLUIT:

Artikel 1

De Princess Juliana International Airport Operating Company N.V. neemt de voorschriften in acht voor de doelmatige bestrijding van ongevallen die zich kunnen voordoen op het luchtvaartterrein, zoals opgenomen in de bij deze regeling behorende bijlage.

Artikel 2

1. Deze regeling treedt, zodra deze in het Afkondigingsblad is geplaatst, in werking met ingang van de eerste dag van de zevende week na de datum van bekrachtiging.

2. In afwijking van het eerste lid, treedt deze regeling:

a. in werking met ingang van de eerste dag van de derde week na de beslissing van het Constitutioneel Hof indien de Ombudsman een zaak aanhangig heeft gemaakt als bedoeld in artikel 127, derde lid, van de Staatsregeling; of,

b. niet in werking indien het Constitutioneel Hof oordeelt dat deze regeling niet verenigbaar is met de Staatsregeling.

Artikel 3

Deze regeling wordt aangehaald als: Regeling ongevallenbestrijding luchtvaartterrein.

Deze regeling wordt met de toelichting in het Afkondigingsblad geplaatst.

Achtentwintigste november 2014 De Minister van Toerisme, Economische Zaken, Verkeer en Telecommunicatie

> Uitgegeven de *vierde* december 2014; De Minister van Algemene Zaken Namens deze, Hoofd Afdeling Juridische Zaken & Wetgeving

TOELICHTING

Algemeen deel

In 2008 heeft de Internationale burgerluchtvaart organisatie (ICAO) een audit uitgevoerd naar de toepassing van de internationale luchtvaart regelgeving in het Koninkrijk der Nederlanden. Een belangrijke uitkomst uit deze audit was dat de regelgeving van de Nederlandse Antillen sterk verouderd was. Daardoor kwam de aansluiting bij de internationale regelgeving onder druk te staan. De burgerluchtvaartwetgeving is overal ter wereld zoveel mogelijk uniform vanwege het sterke internationale karakter van de burgerluchtvaart.

Streven is dan ook om alle wettelijke regelingen op het gebied van luchtvaart aan te passen aan de internationale standaarden, beginnende met de regelgeving inzake de veiligheid van de burgerluchtvaart. Ook is aanleiding geweest dat de Amerikaanse luchtvaartautoriteit, de "Federal Aviation Administration" (FAA), van 12 tot en met 16 september 2011 in het kader van het "International Aviation Safety Assessment" (IASA) programma een audit bij de "Curaçao Civil Aviation Authority" (CCAA) heeft uitgevoerd, waar de Sint Maarten Civil Aviation Authority (SMCAA) bij betrokken was. De uitslag van deze audit was onder meer dat de regelgeving, de "Civil Aviation Regulations", voorheen "Civil Aviation Regulations Netherlands Antilles" (CARNA), niet actueel was. De audit betrof vooral de regelgeving omtrent de veiligheid van de luchtvaart.

Bij het opstellen van de bijlage bij deze regeling is deel 140 van de Britse "Oversees territory aviation requirements (OTARs)" overgenomen; bij andere regelingen zijn de "FAA Model Regulations" overgenomen, maar die bevatten geen model voor regelingen betreffende ongevallenbestrijding. De tekst van deel 140 van de OTARs is aangepast aan de staatkundige situatie in Sint Maarten en aan de actueel geldende wetgeving in Sint Maarten. Het resultaat, de "Sint Maarten Civil Aviation Regulations Part 12 Rescue and Fire Fighting Services" is als bijlage bij deze regeling gevoegd.

De bijlagen zijn opgesteld in de Engelse taal, dat is normaal gesproken niet wenselijk bij wetgeving. Echter, dat is gewoonte in de luchtvaart gezien het internationale karakter daarvan.

Financiële paragraaf

Er zijn geen financiële gevolgen voorzien.

Artikelsgewijs deel

Artikel 1

Op het luchtvaartterrein moeten voldoende materieel en middelen alsmede voldoende deskundig en bedreven personeel aanwezig zijn voor het redden van mensenlevens en voor het voorkomen, beperken en bestrijden van brand ten gevolge van ongevallen met luchtvaartuigen op of in de onmiddellijke omgeving van het luchtvaartterrein. De maatregelen voor een doelmatige bestrijding van ongevallen die zich kunnen voordoen op het luchtvaartterrein Princess Juliana International Airport zijn geregeld in de bijlage behorende bij deze regeling. De regeling maakt de "Princess Juliana International Airport Operating Company N.V. (PJIAE)" verantwoordelijk voor de nauwkeurige uitvoering ervan.

De Minister van Toerisme, Economische Zaken, Verkeer en Telecommunicatie



Sint Maarten Civil Aviation Authority

Ministry of Tourism, Economic Affairs, Traffic and Telecommunication

Bijlage behorende bij de Regeling ongevallenbestrijding luchtvaartterrein

SINT MAARTEN CIVIL AVIATION REGULATIONS

PART 12- RESCUE AND FIRE FIGHTING SERVICES (RFFS)

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MINISTERIËLE REGELING

Nr.

Regeling van de Minister van Toerisme, Economische zaken, Verkeer en Telecommunicatie van , houdende maatregelen voor een doelmatige bestrijding van ongevallen die zich kunnen voordoen op het luchtvaartterrein (Regeling ongevallenbestrijding luchtvaartterrein)

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In overweging genomen hebbende:

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Gelet op artikel 155, vijfde lid van het Landsbesluit toezicht luchtvaart;

BESLUIT:

Artikel 1

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- In afwijking van het eerste lid, treedt deze regeling:
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 - niet in werking indien het Constitutioneel Hof oordeelt dat deze regeling niet verenigbaar is met de Staatsregeling.

Artikel 3

Deze regeling wordt aangehaald als: Regeling ongevallenbestrijding luchtvaartterrein.

Deze regeling wordt met de toelichting in het Afkondigingsblad geplaatst.

De Minister van Toerisme, Economische Zaken, Verkeer en Telecommunicatie d.d.



MINISTERIËLE REGELING

Nr.

Toelichting

Algemeen Deel

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Bij het opstellen van de bijlage bij deze regeling is deel 140 van de Britse "Oversees territory aviation requirements (OTARs)" overgenomen; bij andere regelingen zijn de "FAA Model Regulations" overgenomen, maar die bevatten geen model voor regelingen betreffende ongevallenbestrijding. De tekst van deel 140 van de OTARs is aangepast aan de staatkundige situatie in Sint Maarten en aan de actueel geldende wetgeving in Sint Maarten. Het resultaat, de "Sint Maarten Civil Aviation Regulations Part 12 Rescue and Fire Fighting Services" is als bijlage bij deze regeling gevoegd.

De bijlagen zijn opgesteld in de Engelse taal, dat is normaal gesproken niet wenselijk bij wetgeving. Echter, dat is gewoonte in de luchtvaart gezien het internationale karakter daarvan.

Financiële paragraaf

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Definitions

The definitions used throughout this part are in accordance with the definitions of Annex 14 Volume 1 and 2,additionally and more relevant in this part:

Aerodrome - A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome certificate - A certificate issued by the appropriate authority under applicable regulations for the operation of an aerodrome.

ATS - Air traffic services

AIS - Aeronautical Information Service

AIP - Aeronautical Information Publication

Final approach and take-off area (FATO) - A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by helicopters operated in performance class 1, the defined area includes the rejected take-off area available.

Fire-fighting Response Area - means the area including any point of each operational runway, and all other areas of the aerodrome where aircraft park or taxi immediately prior to, or following any flight and an area that extends at least 1000 meters from the approach and departure ends of the operational runway(s).

Heliport - An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

Hazard Zone - means the area immediately surrounding an incident accident where access is unsafe for personnel other than the RFFS.

Minister- means the Minister of Tourism, Economic Affairs, Traffic and Telecommunication

Monitor - means a device for generating, directing and controlling a stream of water, foam, powder, or other fire-extinguishing substance. It may also be referred to as a turret.

NOTAM - Notice to airmen

SMCAA - Sint Maarten Civil Aviation Authority

SMCAR - Sint Maarten Civil Aviation Regulations

CHAPTER 1 - General

1.1 Purpose

- (a) The requirements of SMCAR Part 12 Sint Maarten Civil Aviation Regulations Rescue Fire Fighting cover the management, operation and maintenance of any Rescue and Fire Fighting Service (RFFS) provided at a certificated aerodrome and at such non-certificated aerodromes as the Minister shall direct
- (b) Failure to comply with these Regulations may:
 - (1) Constitute a breach of the law (article 155 of the National Decree on Aviation Oversight); and
 - (2) Result in proceedings of the enforcement policy; or
 - (3) Result in the refusal of an application for renewal of a Aerodrome Certificate or license; or
 - (4) Result in action to suspend or revoke a certificate or license.
- (c) The Regulations are the means by which an aerodrome operator will be able to satisfy the Minister through the SMCAA as to the fulfillment of the obligations in respect to the provision of an RFFS for the aerodrome, or the entitlement of the holder to hold and exercise the privileges of a Aerodrome Certificate.
- (d) The issue of an Aerodrome Certificate indicates only that the holder is considered competent to secure the safe operation of an Aerodrome (including RFFS) in accordance with the Aerodrome Manual. The Aerodrome Certificate holder or aerodrome operator shall be responsible for compliance with the SMCAR Part 12 and any other legislation in force and shall have responsibility for oversight of any service provider contracted to meet the requirements imposed.
- (e) References to the Minister in this part means the regulator designated by the Minister of Tourism, Economic Affairs, Transport and Telecommunication to exercise his functions under, namely Sint Maarten Civil Aviation Authority.

1.2 Laws, requirements and procedures

Each aerodrome operator shall take reasonable care to ensure that all persons employed, engaged, or contracted by the operator to perform safety-related activities, are familiar with the appropriate sections of legislation, the SMCAR 14, any applicable conditions on the aerodrome certificate and the procedures specified in the certificate holder's manual(s).

1.3 Procedure compliance

Each person performing duties in relation to aerodrome operations shall conform to the applicable procedures specified in the Aerodrome and RFFS Manual.

1.4 Power to inspect

- (a) Each aerodrome certificate holder or operator of an aerodrome shall ensure that any person authorized by the Ministers allowed access to an aerodrome or place where an aircraft has taken off or landed.
- (b) Each aerodrome certificate holder or operator of an aerodrome shall ensure that any person authorized by the Minister has access to all documentation relating to RFFS operations at an aerodrome within a reasonable period of time of the request from that person.

1.5 Applicability

The requirements of SMCAR Part 12 shall apply to all certificated aerodromes. At non-certificated aerodromes where the Minister requires an RFFS to be provided, the Minister will decide in each case to what extent SMCAR Part 12 will apply.

1.6 Annex 14 compliance

- (a) The operator of a certificated aerodrome shall comply with the relevant ICAO Standards and Recommended Practices relating to aerodromes and the requirements contained in this SMCAR Part 12.
- (b) An alternative means of compliance to that specified in paragraph 1.7(a) may be proposed through submission to the Minister of an aeronautical study.
- (c) Any agreement or contract between an aerodrome operator and any service provider or sub-contractor providing services to the certificate holder shall include the specific requirement for compliance with ICAO Annex 14.

1.7 Safety Management System

- (a) An RFFS provider shall establish a safety management system appropriate to the size and complexity of the operation, for the proactive management of safety, that integrates the management of operations and technical systems with financial and human resource management, and that reflects quality assurance principles.
- (b) The safety management system shall include policy and objectives for continuous improvement to the organization's overall safety performance.

- (c) The safety management system shall clearly define lines of safety accountability throughout the operator's organization, including a direct accountability for safety on the part of senior management.
- (d) The safety management system shall include, as a minimum, the following:
 - processes to identify actual and potential safety hazards and assess the associated risks; and
 - (2) processes to develop and implement remedial action necessary to maintain agreed safety performance; and
 - (3) provision for continuous monitoring and regular assessment of the safety performance; and
 - (4) recurring processes for continuous improvement of the performance of the safety management system; and
 - (5) quality assurance processes to:
 - (i) identify applicable requirements, regulations and standards and demonstrate compliance with them; and
 - ensure technical manuals, checklists and other documentation are appropriately maintained and incorporate the latest amendments; and
 - (iii) ensure that training programmes maintain staff proficiency and competency.
- (e) The safety management system shall be described in relevant documentation, and shall be acceptable to the Minister.

CHAPTER 2 – RFFS Provision

2.1 Provision of RFFS

- (a) The operator of a certificated aerodrome shall ensure that an RFFS:
 - is provided at an aerodrome; and
 - (2) is organized, equipped, staffed, trained and operated to meet its proper functions; and
 - (3) is located on the aerodrome, or an off-aerodrome location where the Minister is satisfied that the response time and minimum discharge rate can be met.
- (b) Where an aerodrome is located close to water/swampy areas or difficult terrain, and where a significant portion of approach or departure operations takes place over these

- areas, specialist rescue services and fire-fighting equipment appropriate to the risk shall be made available.
- (c) Any change to the category and availability of the RFFS as promulgated for an aerodrome shall be notified to the appropriate ATS and AIS units.
- (d) Policies and procedures relating to the provision and management of the RFFS shall be described in the Manual of RFFS as detailed in Appendix A.

2.2 Requirement for the provision of RFFS at non-certificated aerodromes

- (a) The Minister will determine those non-certificated aerodromes at which an RFFS will be provided.
- (b) The establishment and designation of RFFS shall be in accordance with the principles of Annex 14 Volume 1.
- (c) The RFFS shall be established at a level commensurate with the size of aircraft using the aerodrome and organized, equipped, staffed and trained to ensure rapid and effective deployment in the event of an accident.
- (d) Policies and procedures relating to the provision and management of the RFFS shall be described in the Manual of RFFS as detailed in Appendix A to this SMCAR Part 12.

2.3 Hours of service

An RFFS provider shall provide, for each aerodrome covered by its RFFS, a schedule of the intended hours of service.

2.4 Level of protection to be provided

- (a) An RFFS provider shall establish systems and procedures to ensure that:
 - (1) the level of protection provided at an aerodrome for rescue and fire-fighting is appropriate to the aerodrome category as determined from ICAO Annex 14, Volume I, Table 9-1, and for heliports from ICAO Annex 14 Volume 2 Table 6-1, and based on the longest aircraft planned to use the aerodrome and its fuselage width.
 - during anticipated periods of reduced activity, the level of protection available is not less than that needed for the highest category of aircraft planned to use the aerodrome during that time.
- (b) For any heliport RFFS provision shall be in accordance with ICAO Annex 14 Volume 2.

2.5 Notification of facility status

- (a) An RFFS provider shall establish systems and procedures with the aerodrome operator to notify changes in the operational status or availability of each facility or service listed in the RFFS manual.
- (b) The procedures shall ensure that:
 - (1) operational information for each of the provider's RFFS is forwarded to the aeronautical information service responsible for the AIP; and
 - (2) the users of a certificated aerodrome are notified without delay of any change in operational status of the facility or service that may affect the RFF category and information concerning any change in operational status is forwarded to the aeronautical information service for promulgation by NOTAM.

2.6 Withdrawal or transfer of service

- (a) The provider of an RFFS who wishes permanently to withdraw an RFFS shall give the aerodrome certificate holder or operator at least 90 days notice of the proposal and include in that notice a summary of factors considered in arriving at the decision to withdraw the service.
- (b) An RFFS provider who intends permanently to reduce the hours of operation of an RFFS shall provide to the aerodrome certificate holder or operator advance notice of, and the reasons for, the proposed reduction.
- (c) An RFFS provider who is the outgoing provider of an RFFS shall make available all necessary assistance in the preparation and execution of the transitional arrangements required by paragraph 2.6(b).
- (d) An RFFS provider intending to assume responsibility for providing any RFFS from an existing provider shall make available to the Minister full details of transitional arrangements endorsed by the RFFS Manager and the Aerodrome Certificate holder or Airport Manger concerned

CHAPTER 3 – RFFS Objectives

3.1 Objectives of the RFFS

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The objectives of the RFFS shall be to:

- (a) save lives during an aircraft accident or incident occurring at, or in the immediate vicinity of an aerodrome.
- (b) respond to the aircraft accident or incident within the Fire-fighting Response Area in accordance with paragraph 3.2; and

- assume command and control of the Hazard Zone the accident or incident site in an effective and efficient manner; and
- (d) preserve the accident or incident site for aircraft investigation.

3.2 Response time objective

An RFFS provider shall establish systems and procedures to ensure that:

- (a) from the initial call the operational objective of the RFFS is to achieve the best possible response time, which shall not exceed:
 - (1) two minutes to any point of each operational runway or for an heliport, FATOs, in optimum visibility and surface conditions; and
 - (2) three minutes to any point of the movement area in optimum visibility and surface conditions; and

this shall be the time when the first responding vehicle(s) is (are) in position to apply foam at a rate of at least 50% of the discharge rate as specified in ICAO Annex 14, Volume 1, Table 9-2, for surface level heliports, ICAO Annex 14 Volume 2 Table 6-2; and

- (b) any other vehicles required to deliver the amounts of extinguishing agents specified in Table 9-2 for aerodromes, or Table 6-2 for heliports, shall arrive no more than four minutes from the initial call so as to provide continuous agent application; and
- (c) in order to meet the operational objective as nearly as possible in less than optimum conditions of visibility, suitable guidance, equipment and/or procedures for rescue and fire-fighting services is provided; and
- (d) the procedures for the RFFS to respond to areas outside the movement area to reach all areas of the Rescue and Fire-fighting response area are tested and the achieved response time documented.

<u> CHAPTER 4 – Personnel</u>

4.1 Personnel

An RFFS provider shall establish systems and procedures to ensure that:

- (a) personnel selected for operational rescue and fire-fighting duties are assessed as medically fit, both initially and on a recurring basis, and capable of their duties; and
- (b) all RFF personnel forming part of the minimum staffing level are trained and assessed to an appropriate standard of competence as applicable to their role and task; and

- during flight operations, sufficient trained and competent personnel are rostered and readily available to ride the rescue and fire-fighting vehicles and to operate the equipment at maximum capacity. These trained personnel shall be deployed in a way that ensures that the required response times can be achieved and that continuous agent application at the appropriate rate can be maintained. Consideration should also be given for personnel to use hand lines, ladders and other rescue and fire-fighting equipment normally associated with aircraft rescue and fire-fighting operations; and
- (e) minimum staffing levels for all RFF Categories provided at an aerodrome are promulgated and notified to the Minister or referred to in the Aerodrome Manual (if any). The minimum level of staffing shall include an adequate number of competent supervisors/managers, according to the RFF Category of the aerodrome. The promulgated minimum staffing level shall not be reduced without an assessment being conducted and forwarded by the aerodrome operator, in writing, to the Minister; and
- (f) a system to determine the minimum number of RFFS personnel required is established.

Note: It is recommended that a Task and Resource Analysis (TRA) is carried out to reach this determination; and

- (g) all responding rescue and fire-fighting personnel are provided with protective clothing and respiratory equipment to enable them to perform their duties in an effective manner; and
- (h) all rescue and fire-fighting personnel participate in live fire drills commensurate with their role and task, types of aircraft and type of rescue and fire-fighting equipment in use at the aerodrome, including pressure-fed fuel fires ("pressure-fed fuel fires" are defined as fires associated with fuel discharged under very high pressure from a ruptured fuel tank); and
- (i) the rescue and fire-fighting personnel training programme includes training in human performance, including team co-ordination; and
- (j) all personnel involved in rescue and fire-fighting duties receive appropriate initial and recurrent comprehensive training to maintain their competence in skills, knowledge and understanding commensurate with the types of aircraft and type of rescue and firefighting equipment in use at the aerodrome; and
- (k) practical training facilities commensurate with the aerodrome operation and suitable for initial and ongoing maintenance of competence are available or sourced externally and documented, or referred to, in the Aerodrome Manual.
- (I) training records for all staff are kept up to date and, on request, made available to the aerodrome certificate holder or operator and any authorized person.

4.2 RFFS Manager

An RFFS provider shall nominate a senior person identified as the RFFS Manager who has the authority within the organization to ensure that the RFFS:

- (a) can be adequately financed and resourced; and
- (b) is provided in accordance with the requirements prescribed by this part; and
- (c) complies with the requirements of this part; and
- (d) has sufficient personnel to manage, support and provide the RFFS with any associated training or assessment listed in the RFFS Manual.

CHAPTER 5 – Extraneous Duties

5.1 Extraneous Duties

- (a) No extraneous duty shall create conditions likely to compromise individual or crew performance or introduce additional hazards.
- (b) RFFS personnel designated as part of the minimum level for response, and who are engaged on extraneous duties, shall be capable of meeting the response time objective whilst carrying out those duties.
- (c) Other than routine refueling of fire-fighting equipment, personnel designated as part of the minimum riding strength shall not be engaged on duties involving the handling of fuel.

Note: Personnel must ensure clothing and equipment used for fire-fighting tasks is not contaminated with any kind of fuel.

CHAPTER 6 – Equipment

6.1 Rescue equipment and medical supplies

An RFFS provider shall establish systems and procedures to ensure that rescue equipment and medical supplies commensurate with the level of aircraft operations is provided on the rescue and fire-fighting vehicle(s).

Note: ICAO Airport Services Manual (Doc 9137), Part 1 – Rescue and Fire-Fighting provides guidance.

CHAPTER 7 – Appliances

7.1 Fire-fighting vehicles

An RFFS provider shall establish systems and procedures to ensure that the minimum number of rescue and fire-fighting vehicles provided at an aerodrome is in accordance (a) with the following table:

Table 1

able 1	Rescue and Fire Fighting Vehicles
Aerodrome category	1
1	
2	
3	1
4	11
5	1
<u> </u>	2
	2
7	3
	3
9	3
10	

All rescue and fire-fighting vehicles shall be operationally fit for purpose on or off the (b) aerodrome within the response area.

Note: Guidance on minimum characteristics of RFFS vehicles is given in the ICAO Airport Services Manual Part 1. The Manual also gives guidance on vehicle procurement.

- All vehicles shall be capable of carrying their full load with maximum traction and mobility (d) on and off paved surfaces in optimum weather conditions. They shall be able to operate over all types of terrain on or around the aerodrome, at a speed commensurate with safety.
- Vehicles shall be capable of continuous agent application for a range appropriate to the (e) longest aircraft operating at the aerodrome, measured using aspirated foam as provided for in ICAO Annex 14, Volume 1, Chapter 9, Table 9-1.
- Vehicles equipped with foam monitors shall be able to produce foam whilst on the move (f) at slow speeds (8 - 10 km/hr, 5 - 6 miles/hr). Monitors shall be capable of at least 50% of the discharge rate required for the RFF Category. Monitors shall be capable of producing foam in a jet or dispersed pattern with fully variable selections throughout the range.
- For aerodromes which operate during the hours of darkness, vehicles shall be fitted with (g) portable/fixed lighting equipment sufficient to illuminate the incident/accident site.

- (h) All rescue and fire-fighting vehicles shall normally be housed in a fire station. Satellite fire stations shall be provided whenever the response time cannot be achieved from a single fire station.
- All rescue and fire-fighting vehicles shall have a flashing or rotating beacon and be marked in a single conspicuous color of red or yellowish green.
- (j) For heliports, the vehicle requirements do not apply if the operational objectives of the rescue and fire-fighting services can be met through other means.

CHAPTER 8 – Extinguishing Agents

8.1 Extinguishing agents

An RFFS provider shall establish systems and procedures to ensure that:

- (a) both principal and complementary agents are provided at an aerodrome; and
- (b) the principal extinguishing agent is a foam meeting performance level B or C; or
- (c) for aerodrome categories 1 and 2 and heliports, up to 100 per cent of the water may be substituted with complementary agent; and
- (d) the complementary extinguishing agent is a dry chemical powder suitable for extinguishing hydrocarbon fires, or an alternative complementary agent having equivalent fire-fighting capability. Complementary agents shall comply with the appropriate specifications of the International Organization for Standardization (ISO) and that the discharge rate of complementary agents are selected for optimum effectiveness of the agent; and
- the amounts of water for foam production, foam concentrate and the complementary agents to be provided on the rescue and fire-fighting vehicles are in accordance with the aerodrome category determined by ICAO Annex 14, Volume 1, Chapter 9, Table 9-2 and the discharge rate of the foam solution is not less than the rates shown in Table 9-2; or for heliports in accordance with ICAO Annex 14 Volume 2 Table 6-2 and 6-3 respectively; and
- (f) the quantity of foam concentrates provided separately on vehicles for foam production are in proportion to the quantity of water provided and sufficient to produce at least two loads of foam solution; and
- (g) supplementary water supplies are provided for the expeditious replenishment of rescue and fire-fighting vehicles at the scene of an aircraft accident.

8.2 Reserve supply agents

(a) A reserve supply of foam concentrate and complementary agent with propellant system, equivalent to 200 per cent of the quantities of these agents to be provided in the rescue and fire-fighting vehicles, shall be maintained on the aerodrome for vehicle replenishment purposes.

Note: Foam concentrate carried on fire vehicles in excess of the quantity identified in ICAO Annex 14, Volume 1, Chapter 9, Table 9-2 can contribute to the reserve.

- (b) A reserve supply of complementary agent, equivalent to 100 per cent of the quantity identified in ICAO Annex 14, Volume 1, Chapter 9, Table 9-2, shall be maintained on the aerodrome for vehicle replenishment purposes. Sufficient propellant gas shall be included to utilize this reserve complementary agent.
- (c) Category 1 and 2 aerodromes that have replaced up to 100 per cent of the water with complementary agent shall hold a reserve supply of complementary agent of 200 per cent.
- (d) Where a major delay in the replenishment of this supply is anticipated, the amount of reserve supply shall be increased to a suitable level.
- (e) In the case of an heliport, the amount of water does not need to be stored at the heliport provided there is a suitable pressurized water main system capable of sustaining the required discharge rate.

CHAPTER 9 – Additional Water Supplies

9.1 Additional water supplies

An RFFS provider shall establish systems and procedures to ensure that additional water supplies at adequate pressure and flow are provided to ensure rapid replenishment of RFFS vehicles. The objective shall be to support the principle of continuous application of principal fire extinguishing agent (foam) to maintain a survivable environment around the immediate vicinity of an aircraft accident for longer than that provided for by the minimum quantities of water for foam production set out in ICAO Annex 14, Volume 1, Chapter 9, Table 9-2.

CHAPTER 10 – Performance Testing

10.1 Commissioning, maintenance, test and Inspection

An RFFS provider shall establish systems and procedures to ensure that:

- (a) immediately prior to, or on receipt of new or replacement vehicles, equipment, facility, plant or untested supplies appropriate commissioning is carried out to ensure compliance with specification, and to verify function according to the design objectives or specifications; and
 - (b) in order to ensure that foam production by an RFFS vehicle is of an acceptable standard a Foam Production Performance Test (i.e. an "Acceptance Test") is carried out:
 - (1) when an RFFS vehicle is first acquired by the certificate holder for operational use at an aerodrome.

Note: Acquisition may mean the new or second-hand purchase, leasing or hire of a RFFS Vehicle.

- when significant maintenance, refurbishment or component replacement has been undertaken on an RFFS vehicle that could cause a change in the foam quality or production performance of the foam-making System. This includes a change of foam-making branches, nozzles or monitors. Only those parts of the system that could have been affected by the work undertaken or the component change need to be tested.
- a system of preventive maintenance of rescue and fire-fighting vehicles is employed to ensure effectiveness of the equipment and compliance with the specified response time throughout the life of the vehicle; and
- (d) all equipment and supplies are regularly inspected, tested and undergo structured maintenance to assure reliability; and

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- (e) consequential action is taken where an inspection has revealed a defect or deficiency;
 and
- (f) all RFF vehicles equipped with foam-making equipment are formally tested at least once a year to ensure that the quality of foam production is maintained; and
- (g) foam proportioning systems are subjected to regular quality testing based on a recognized standard and checked for induction accuracy.

10.2 Foam production performance testing

- (a) The foam produced by an RFFS vehicle, or other such appliance, shall be of an acceptable quality and the delivery parameters such as monitor jet range and pattern are met and are maintained to the appropriate operational requirement.
- (b) Once the Foam Production System has been fully tested, and assuming no changes have been made, the in-service testing shall consist of periodic checks to ensure proportioning accuracy.
- (c) The Foam Production Performance Test shall confirm the following:
 - (1) the induction percentage for all foam-making devices; and
 - (2) the ongoing capability of the foam production system; and
 - (3) the jet range of the main monitor; and
 - (4) the spray pattern of the main monitor.

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- (d) The test shall be carried out to confirm the performance against a specification based on ICAO Airport Services Manual (Doc 9137), Part 1 – Rescue and Fire-fighting, Chapter 8, and conducted to an appropriate standard.
- (e) The frequency of the in-service tests shall be determined and conducted in conjunction with the vehicle maintenance provider. The foam specimen for checking the proportioning percentage can be collected during normal procedural "spot" tests or training.

Note: The most common method of conducting such a test is by using a refractometer. However, other methods are available.

- (f) For vehicles equipped with foam monitors capable of producing foam whilst on the move, the tests shall include an assessment of this capability. Where both a high and low discharge capability has been provided on larger monitors, this provision shall be tested in line with manufacturer's guidance.
- (g) The upper and lower rates for induction at 6%, 3% and 1% are set out in Table 2. Premixed foam systems shall have foam concentrate introduced to within a tolerance of 1.0 to 1.1 times the manufacturer's desired induction rate.

Table 2

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Induction Rate	Inductio	n Range
(%)	Lower (%)	Higher (%)
6	5.5	7
3	3	4
1	1	1.1

- (h) Pre-mixed foam units shall be maintained and hydraulically pressure tested in accordance with the intervals set by manufacturer's guidance. Only foam concentrates suitable for use in pre-mixed form shall be used in these kinds of pressure vessels.
- (i) Care shall be taken in the use of freeze point depressants where pre-mixed foam systems are exposed to low temperatures, since excessive amounts of additives may have adverse effects on fire extinguishing performance.

CHAPTER 11 – Foam Performance Levels and Specifications

11.1 Certification of foam specification

- (a) Foam concentrates used to provide the extinguishing agents quantities listed in ICAO Annex 14 Table 9-2 shall meet either Performance Level B or C as designated by ICAO in the Airport Services Manual (Doc 9137), Part I Rescue and Fire Fighting, Chapter 8. The performance level is to be determined and certificated by the manufacturer carrying out either of the tests described in the ICAO specification.
- (b) Where individual users do not have the facilities for conducting the tests which will establish the specified properties and performances, certification of the qualification of a concentrate shall be obtained from the manufacturer or supplier.

CHAPTER 12 – Facilities

12.1 Facility requirements

An RFFS provider shall establish suitable facilities, including training and assessment facilities, appropriate to the RFFS listed in the provider's manual(s).

12.2 Fire station(s)

- (a) An RFFS provider shall establish and ensure that the location of the airport fire station and vehicle positioning are based on minimizing response times to areas where aircraft accidents and incidents may occur and have a maximum opportunity for monitoring the movement area. The location shall be free of obstructions or interference from facilities or uses, such as access roads, fuelling areas, and aircraft taxiing operations/parking areas.
- (b) The fire station should be located so that the access for rescue and fire fighting vehicles into the runway area is direct and clear, requiring a minimum number of turns.

CHAPTER 13 – Alerting and Communications

13.1 Alerting system

An RFFS provider shall establish:

- (a) an audible alerting system for rescue and fire-fighting personnel, capable of being operated from that station, at the fire station, any other fire station on the aerodrome and the aerodrome control tower.
- (b) a discrete communication system linking a fire station with the control tower, any other fire station on the aerodrome and the rescue and fire-fighting vehicles.

13.2 Radio communications

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An RFFS provider shall establish systems and procedures to ensure that:

- radio communication is provided in all areas where discernible benefits can be achieved;
 and
- (b) the RFFS personnel have the ability to communicate with:
 - (1) ATS; and
 - (2) the flight deck crew whilst the aircraft is on the ground; and
 - (3) responding external emergency services; and

- (4) incident commanders; and
- (5) (if applicable) other fire-fighting vehicles.

13.3 Vehicle radio communications

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- (a) All RFF vehicles shall be provided with adequate and effective communication equipment.
- (b) Where more than one RFF vehicle has radio equipment there shall be a facility for twoway communication between vehicles.
- (c) All rescue and fire-fighting vehicles shall be provided with:
 - (1) adequate and effective fixed or portable communication equipment; and
 - (2) an effective range which will ensure reception within all areas that the fire service may be required to operate; and
 - (3) the ability to communicate with the following:
 - (i) Air Traffic Control; and
 - (ii) the flight deck crew whilst on the ground; and
 - (iii) responding external emergency services; and
 - (iv) incident commanders; and
 - (v) other fire-fighting vehicles.

CHAPTER 14 – RFFS Training Exercises

14.1 Purpose

- (a) An element of the RFFS training programme, in addition to the aerodrome's obligation for regular airport emergency exercises as set out in Annex 14, shall include exercises to practice the initial emergency response.
- (b) In addition to testing the RFFS internal responses, some exercise shall also be planned to involve external agencies, such as the municipal or domestic fire service, ambulance service and police to ensure the adequacy of the following:
 - (1) co-ordination and communication; and
 - (2) response of all personnel involved; and
 - (3) emergency plans and procedures; and
 - (4) inter-agency co-ordination; and
 - (5) emergency equipment.

CHAPTER 15 – Documentation and Records

15.1 Documentation

(a) An RFFS provider shall have immediate access to current copies of the relevant technical manuals and any other document necessary for the provision and operation of the services listed in its RFFS Manual.

Note: Documents may be in hardcopy or electronic. Electronic documents must be accessible to all staff requiring access.

- (b) The provider shall establish a procedure to control all the documentation required by paragraph (a) which shall ensure that:
 - all incoming documentation, including amendments, are reviewed and actions taken as required by authorized personnel; and
 - (2) all documentation is reviewed and authorized before issue; and

- (3) current issues of all relevant documentation are available to personnel at all locations where they need access to such documentation for the provision and operation of RFFS; and
- (4) all obsolete documentation is removed promptly from all points of issue or use;
 and
- any obsolete documents retained as archives are suitably identified as obsolete; and
- (6) changes to documentation are reviewed and approved by authorized personnel who shall have access to pertinent background information upon which to base their review and approval; and
- safety-significant changes are assessed in accordance with the safety management system; and
- (8) the current version of each item of documentation can be identified to preclude the use of out-of-date editions.

15.2 Requirement for an RFFS Manual

- (a) The RFFS provider shall ensure that there is an RFFS Manual which shall:
 - (1) be typewritten or printed, and signed by the RFFS manager; and
 - (2) be in a format that is easy to revise; and
 - (3) have a system for recording the currency of pages and amendments, including a page for logging revisions; and
 - (4) be organized in a manner that will facilitate preparation, review and amendment processes; and
 - (5) be in accordance with Appendix A of this SMCAR Part 12.
- (b) The RFFS provider shall provide the aerodrome certificate holder or operator with a complete and current copy of the RFFS Manual.
- (c) The RFFS provider shall make available sufficient copies of the RFFS Manual for one to be readily accessible by all personnel who may need to refer to it.

- (d) The RFFS provider shall take all reasonable steps to ensure that each member of the RFFS staff:
 - is aware of the contents of every part of the RFFS Manual which is relevant to his/her duties as such; and
 - (2) undertakes his/her duties in conformity with the relevant provisions of the Manual.
- (e) Where the Minister grants the aerodrome certificate holder/aerodrome operator a deviation from complying with any requirement set out in this part, the RFFS Manual shall show the identifying reference given to that deviation by the Minister, the date that the deviation came into effect and any conditions or procedures under which the deviation was granted.
- (f) If any prescribed subject is not included in the RFFS Manual because it is not applicable to the RFFS at an aerodrome, the RFFS provider shall state in the Manual the reason for non-applicability of that subject.
- (g) The RFFS provider shall alter or amend the RFFS Manual, whenever necessary, in order to maintain the accuracy of the information in it.
- (h) The RFFS provider shall notify the aerodrome certificate holder or operator as soon as practicable of any significant changes that the RFFS provider wishes to make to the RFFS Manual.
- (i) The RFFS provider shall comply with any directive issued by the Minister to the aerodrome certificate holder or operator requiring alteration or amendment of the RFFS Manual.

15.3 Watch room log

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- (a) An RFFS provider shall ensure that a logbook, with sequentially numbered pages, is kept at each RFFS station.
- (b) The procedure shall ensure that:
 - (1) the logbook is maintained by the senior person on duty, or the person on watch at a nominated operating position; and
 - (2) the logbook is maintained throughout the hours of watch of the station; and
 - (3) all entries include the time of entry; and

- (4) the person responsible for maintaining the logbook signs On Watch, and effects transfer of responsibility by successive On Watch entries; and
- (5) logbook entries are:
 - (i) in chronological sequence and in ink; and
 - (ii) without erasure, defacement, or obliteration; and
 - (iii) corrected by drawing a single line through the erroneous information and initialing the correction.
- (6) actual times of opening and closing watch are recorded in the logbook, together with the reason for every variation from published hours of service; and
- (7) the operational scale of service is stated at the beginning of each watch and any changes in the operational status recorded and that the operational status and any changes to it is confirmed by the senior officer in-charge of the watch signing the log; and
- (8) logbooks are retained for a period of 5 years from the date of final entry.

15.4 Watch administration

An RFFS provider shall establish a procedure to ensure that adequate time is provided at the beginning of each watch, to ensure that the RFF facilities are fully serviceable and staff fully prepared for operational duties.

15.5 Records

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- (a) An RFFS provider shall establish systems and procedures to identify, collect, file, store securely, maintain for at least 5 years, access and dispose of records necessary for:
 - (1) the operational provision of RFFS; and
 - (2) the purpose of assisting with any accident or incident investigation.
- (b) An RFFS provider shall compile, maintain and retain records in the following areas, but not limited to:

- (1) staff training, competency and performance; and
- (2) maintenance; and
- (3) inspections; and
- (4) tests; and
- (5) activity (logbook); and
- (6) incidents/accidents; and
- (7) any other record required by the RFFS provider and/or aerodrome operator.

APPENDIX A – Content of the RFFS Manual

Paragraph
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2.4, 2.5
2.5, 2.6
3.1, 3.2

(8) a statement describing the process by which the provider initially selects RFF personnel, as required by paragraph 4.1; and	4.1
(9) the process by which RFF personnel selected for operational duties are assessed as medically fit and capable of their duties, as required by paragraph 4.1(b); and	
(10) the processes by which the provider ensures initial and continued maintenance of competence of their RFF personnel according to role and task, including First-Aid training, as required by paragraph 4.1(h); and	4.1(h)
(11) details of the practical training facilities available for initial and recurrent maintenance of competence on the aerodrome or sourced externally, as required by paragraph 4.1(k); and	4.1(k)
(12) details of the specific requirements and assessment to determine the provision of personal and respiratory protective equipment required by paragraph 4.1(g); and	
(13) the RFFS Manager or designated watch officer's safety accountabilities required by paragraph 4.2 which shall also be promulgated or referred to in the Aerodrome Manual; and	
(14) details of the type and operational capability of the fire vehicles employed for each RFF category required by paragraph 7.1; and	
(15) details of specialist equipment such as rescue craft, emergency appliances, hose layers, appliances with aerial capability, etc , where the RFFS provides these, and procedures to be followed if these facilities are temporarily unavailable, as required by paragraph 6.1; and	6.1
(16) policies or letters of agreement, where the RFFS is reliant upon other organizations to provide equipment which is essential for ensuring safe operation of the aerodrome (such as water rescue) and contingency plans in the event of non-availability shall be described, as required by paragraph 6.1; and	
(17) details of the rescue and medical equipment to be stowed on the fire vehicles and where rescue and medical equipment is held other than on the RFF vehicles a statement indicating its location and how it is to be transported to an incident site, as required by paragraph 6.1; and	6.1
(18) details of both the principal and complementary	

extinguishing agent to be provided, as required by paragraph 8.1; and	8.1
(19) the availability of additional water supplies following an aircraft accident and details of the policy and procedures to be followed in the event of contractual work which requires isolation or depletion of supplies, as required by paragraph 9.1; and.	9.1
(20) details of the radio communication system to be provided, as required by paragraph 13.2, 13.3; and	13.2, 13.3
(21) a statement describing the process for the testing, inspecting and maintenance of extinguishing media, rescue and medical equipment, specialist equipment, vehicles and radio communication systems, as required by paragraph 10.1, 10.3; and	10.1, 10.3
(22) details of the fire station(s) facilities and location, as required by paragraph 12.1; and	12.1
(23) details of the crash maps to be used by the RFFS, external emergency services and ATS in the event of an aircraft accident or incident on or in the vicinity of the aerodrome; and	
(24) a procedure for monitoring the aircraft movement areas for the purpose of alerting RFF personnel, as required by paragraph 13.1, including:	
(i) how RFF personnel are alerted throughout the range of functions (training, extraneous duties, etc.) and geographical locations from where they may be expected to respond; and	13.1
(ii) how the adequacy of the response time capability throughout their functions and locations is tested, monitored and maintained; and	3.2(d)
(iii) how RFF personnel engaged in extraneous duties are managed to ensure that response capability is not affected; and	5.1
(25) where a provider expects the RFFS to respond to aircraft accidents landside, the policy and procedures which shall include management of the effects on continued aircraft operations; and	3.2(e)
(26) procedures indicating how accidents within 1,000 meters of the threshold of each runway, and other difficult environs	3.2

where they exist, are to be accessed; and	
(27) where a provider expects the RFFS to respond to domestic fires or special services, procedures for managing the impact of this upon the normal aircraft RFF response; and	5.1
(28) where an aerodrome accepts freight aircraft, ambulance flights or movements not required to use a certificated aerodrome, company objectives regarding RFF category; and	2.1
(29) the provider's arrangements for ensuring the adequacy of responses in abnormal conditions i.e. Limited Visibility Procedures; and	3.2(c)
(30) procedures to notify changes in operational status with the aeronautical information services responsible for the AIP and the aerodrome certificate holder or operator, as required by paragraph 2.6; and	2.6
(31) the procedures required by paragraph 15.3 regarding the keeping of a watchroom log; and	15.3
(32) details of the emergency access roads and gates provided, as required by Annex 14; and	
(33) details of the procedures required by paragraph 15.1 regarding the control of documentation; and	15.1
(34) details of the systems, procedures, and programmes required by paragraph 1.7 regarding the safety management system; and	1.7
(35) procedures to control, amend and distribute the manual.	
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