Annex 6

Part 139.H Aerodrome Rescue and Fire Fighting Services (ARFFS) Providers

Version 5.1 - January 2023

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Civil Aviation Safety Authority

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Introduction

This annex is an integral part of the CASA Surveillance Manual (CSM), which should be always referenced. To allow for more frequent revisions, this annex can be updated independent of the CSM and other annexes. The process of updating this annex requires verification and approval from its owners and sponsors, as well as from Coordination and Safety Systems (CSS). An updated version can only be published once CSS has finalised the format, with the latest revision history data included in the revision table.

Revision history

Revisions to this annex are recorded below in order of the most recent first.

Version Nº.	Date	Parts / sections	Details
5.1	January 2023	Section 2	Updates to CSM references
5.0	December 2019	Section 2.1	Change of where to locate Health Check mandatory elements
4.0	April 2019	Inclusion of Introduction and Revision history.	These inclusions allow for updates and revisions independent of the CSM and other annexes.
4.0	April 2019	Section 2.1	Removal of recommended Health Check timeframes.
4.0	April 2019	Section 3	Removal of recommended surveillance intervals.
4.0	April 2019	Section 4	Addition of third-party audits.

1   Overview

This Annex provides instructions for conducting surveillance of CASR Part 139 H Aerodrome Aviation Rescue and Fire Fighting Services and contains information relating to the following:

- Systems and Elements
- Systems and Elements – Health Checks
- Surveillance Currency Guide
- Information Sources.

2   Systems and Elements: ARFFS Providers

The audit technique involves assessing the documented system, comparing it against the actual system processes. The system is assessed for compliance and sampling conducted as appropriate. The assessment of the system is achieved by a questioning technique using the four attributes (12 components) of the Management System Model (MSM), see CSM Sections on System attributes – Management System Model and Systems attributes (table).

The CASA description of ARFFS consists of four systems incorporating 14 elements.

Table 1: System and Elements

Systems		Elements
Maintenance		Maintenance System
		Maintenance Process
		Maintenance Assurance
Operations		ARFFS Operations
		Emergency Response
		Data and Documents
		Support Systems
		Communications
Personnel		Personnel Standards
		Personnel Rostering
Safety Management		Safety Policy and Objectives
		Safety Risk Management
		Safety Assurance
		Safety Promotion

Table 2: Maintenance Elements

SYSTEM: Maintenance	
ELEMENT: Maintenance System	
The maintenance system element describes the systems and the processes for achieving the 'What" maintenance activities are required to be done and 'When' the maintenance activities are to be completed.	
Prompts:	
Regulatory requirements	Facility and maintenance plan
Service and facility management requirements	Vehicle performance
Test equipment performance criteria	Ancillary equipment
ELEMENT: Maintenance Process	
The works control element describes the systems and the processes for achieving the 'How' works activities are conducted and 'Who' completes the works activities.	
Prompts:	
Mechanical workshops	Firefighting personnel
Emergency Vehicle Technicians (EVT)	
ELEMENT: Maintenance Assurance	
The maintenance assurance element describes the systems and the processes for ensuring the ARFFS systems are fit for service. This is accomplished primarily through the authorisation holder's internal audit processes and closes the loop on the entire maintenance system.	
Prompts:	
Quality assurance processes and/or activities, must include internal audit processes but may also include external or third-party review	

Table 3: Operations Elements

SYSTEM: Operations	
ELEMENT: ARFFS Operations	
The ARFFS Operations element addresses the systems that ensure the Authorisation holder contains its operations to those authorised by legislation. This is primarily achieved using a properly structured organisation with appropriate communication channels. Appropriate key personnel are a key link in ensuring ARFFS' operations are not only contained but are appropriately controlled. Examples include the Officer in Charge.	
Prompts:	
Fire station facilities	Fire vehicles
Fire fighters	Fire Station Control Centre (FSCC)
Operational Structure	Operational Procedures
ELEMENT: Emergency Response	
The emergency response element describes the systems that make up the control of all aspects associated with provision of a timely emergency response. The documented system should address but not be limited to response times, location matters, third party providers and issues of security aspects relating to personnel, vehicles, equipment of any sort within the confines of the ARFFS area of responsibility.	
Prompts:	
Response times	ASICs
State or Territory Fire Brigades	Aviation fire vehicles
Operational Procedures	Sufficient trained/qualified operational firefighters and supervisors
ELEMENT: Data and Documents	
The data and documents element addresses all technical data, design drawings, regulatory documentation and quality/procedures manuals used in the course of carrying out ARFFS operations.	
Prompts:	
Operations Manual	Documentation and data control
Change management	Aviation Fire Fighting Manuals (AFFM)
Records	DAMP documentation
ELEMENT: Support Systems	

SYSTEM: Operations	
The support system element addresses all aspect of operations that go into supporting the objectives of the authorisation holder. This may include but is not limited aspects such as managing the use of computer systems, providing resources for travel and appropriate support facilities.	
Prompts:	
Transportation	Computers
Portable electronic devices	Facilities
Third party and/or service agreements	
ELEMENT: Communications	
The communications element addresses aspects of the authorisation holders operation related to internal and external communications and includes but is not limited to, communications with staff while in the field, use of obsolete or damaged equipment and communication links with other relevant parties.	
Prompts:	
Fire station communication systems	Organisational intranet systems
Fire vehicle and/or handheld communication systems	Arrangements with aerodrome operators, for example, Aerodrome Emergency Plan

Table 4: Personnel Elements

SYSTEM: Personnel	
ELEMENT: Personnel Standards	
The ARFFS authorisation holder is required to establish and maintain an appropriate organisation, with sound and effective management structure that incorporates a safety management system. The standards of personnel, including third party providers is required to be documented detailing induction training, periodic recurrent training/checking and any required upgrade training. A process for dealing with unsatisfactory performance should also be documented.	
Prompts:	
Recruitment	Medical/Physical fitness
Staffing and training requirements	Protective clothing
Competency	Training facilities and/or provider
Qualifications	DAMP education and testing
DAMP supervision	
ELEMENT: Personnel Rostering	
Personnel rostering plays a significant role in achieving safe operations for it is through rostering that the authorisation holder ensures that required tasks are carried out with appropriate personnel that have appropriate qualifications, operate in accordance with legislative requirements, approval and have appropriate recency (if applicable) to safely conduct the task from the start of the duty period until completion. Rostering should take into consideration fatigue factors associated with long duty days or late-night duty. The roster should, where appropriate, be published and displayed in a prominent position.	
Prompts:	
Roster production/Business hours of operation	Qualifications
Approval	Competency
Roster periods cover advertised hours of ARFF service delivery	

Table 5: Safety Management Elements

SYSTEM: Safety Management	
ELEMENT: Safety Policy and Objectives	
The element contains the systems and processes that ensure effective governance to support the safety management system are in place, this will include processes for the review and update of the authorisation holder's management and commitment (through Safety Policy, Just Culture and Safety Objectives), the appointment of key personnel, the accountabilities of management and Safety Management System (SMS) documentation.	
Prompts:	
Management commitment and responsibility – safety policy	Appointment of key personnel
Management commitment and responsibility – just culture	Relevant third-party relationships and interactions
Management commitment and responsibility – safety objectives	SMS documentation
Safety accountabilities of managers and staff	
ELEMENT: Safety Risk Management	
This element contains the systems and processes to ensure investigation, and analysis, of the safety risks associated with identified hazards resulting in the implementation of effective safety risk controls.	
Prompts:	
Hazard identification processes - reactive	Operational risk assessment and mitigation strategies that assure an appropriate response to aerodrome hazards
Hazard identification processes - proactive	DAMP supervision
ELEMENT: Safety Assurance	
This element contains the systems and processes for setting, recording and evaluating system performance, conformance with regulations and company procedures, a process for the conduct of internal safety investigations, effectively manage change across the aviation activities conducted and drive continuous improvement of the SMS.	
Prompts:	
Safety performance monitoring and assessment – system performance	Internal safety investigation
Safety performance monitoring and assessment – assurance	Management of change

SYSTEM: Safety Management	
Safety performance monitoring and assessment – flight data analysis	Continuous improvement of SMS
Establishment/Disestablishment of ARFFS	Accident/Incident Reports
Determining Category	Quality Control
Interpretation or Change of Level of Operational Service	Contingency Plans
DAMP supervision	
ELEMENT: Safety Promotion	
This element contains the systems and processes for ensuring personnel are appropriately trained, are aware of the SMS to a degree commensurate with their positions that conveys safety-critical information, explains why particular safety actions are taken, and explains why safety procedures are introduced or changed must be evident.	
Prompts:	
Training and education	Safety communication
DAMP education and testing	

2.1   Health Check

Health Check mandatory elements are available on the CASA Intranet. Details of the current mandatory elements for each authorisation type are published separately to the CASA website.

3   Surveillance Currency Guide: ARFFS Providers

Surveillance level		Type	Elements
Level 1		Systems Audit	Systems and Compliance
		Health Check	Specific Elements and Compliance
		Post-authorisation Review	Entry Control Elements
Level 2		Operational Check	e.g. Response capability, training delivery
Note: Surveillance intervals are determined by the National Surveillance Selection Process (NSSP). Refer to the NSSP planned surveillance schedule for further information regarding surveillance intervals.			

4 Information Sources

The following is a non-exhaustive list of information sources that can be accessed to support the assessment:

- past Surveillance Reports in Sky Sentinel
- surveys
- third-party audits
- regulatory history, findings (Safety Findings and Safety Observations)
- past Surveillance Reports and findings (Safety Findings and Safety Observations)
- EAP information
- Defect Report Service (DRS)
- Regulatory Service activity
- information gathered by the authorisation holder
- external information gathered from industry or other government agencies
- Enforcement action
- past accident/incident history
- risk management plans provided by the authorisation holder.
- Safety Plans and Safety Cases

A large portion of this information is available to the surveillance team and authorisation management team via the Data Warehouse using the Power BI application.

Note: For advice on where and how to access required information refer to the CSM – Information Capture and Access.

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