

# RFFS: Response Time & Operational Objective

AMC5 ADR.OPS.B010(a)(2)

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# Outline

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## 1. Context

- Regulatory Background and « pain points »
- NCAs' Interpretation

## 2. Airports' views

- Airports Survey
- Airport's Regulatory Understanding

## 3. Way Forward

- Regulatory evolution proposal (IR/AMC – GM)

# RFFS Response Times should be Clarified

## Background and Painpoints

### ADR.OPS.B.010 Recue and firefighting services

- (a) The aerodrome operator shall ensure that
- (1) aerodrome rescue and firefighting facilities, equipment and services are provided;
  - (2) adequate equipment, fire extinguishing agents and sufficient personnel are available in a timely manner;...

### AMC 5 ADR.OPS.B.010 (a) (2) Rescue and firefighting services: RESPONSE TIME

The aerodrome operator should ensure that:

- (a) <sup>1</sup>rescue and firefighting service achieves a **response time not exceeding three minutes** with an <sup>2</sup>**operational objective of not exceeding two minutes** from the initial call to the rescue and firefighting services, 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 1;
- (b) <sup>3</sup>**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 no more than one minute after the first responding vehicle(s); and
- (d) suitable guidance, equipment and/or procedures for rescue and firefighting services are provided, <sup>4</sup>**to meet the operational objective, as nearly as possible, in less than optimum conditions of visibility,** especially during low visibility operations.

### ACI-E Painpoints

- **Need for requirements and meanings clarifications:**
    - Two response times defined for runways with introduction of notion „Operational Objective“ ->(1) & (2)
    - Introduction of operational objective for less than optimum conditions -> (4)
  - **Differences with ICAO SARPs** ->(3)
- ⇒ **Leaving room for different interpretation of the requirements by NCAs**

# RFFS Response Times should be Clarified

## Context: NCA's Interpretation

### ▪ AMC 5 ADR.OPS.B.010 (a) (2) (a): RT Runways (FR)

#### > 2 min Operational Objective:

- RT below 2 min → Compliant
- Theoretical calculation RT below 2 min → Compliant
- Or: action plan required leading in the end to demonstrate RT below 2 min

### ▪ AMC 5 ADR.OPS.B.010 (a) (2) (b) / Annex 14 9.2.29 Recommendation: RT Movement Area (DE, NO)

#### > Calculation of response time

- Following ICAO Recommendation: ensuring RT below 3 min → Requirement

**9.2.29 Recommendation.**— *The operational objective of the rescue and firefighting service should be to achieve a response time not exceeding three minutes to any other part of the movement area, in optimum visibility and surface conditions.* (cf. ICAO Annex 14, 8<sup>th</sup> edition, July 2018)

### ▪ AMC 5 ADR.OPS.B.010 (a) (2) (d) RT not optimal conditions (potential interpretation)

- > 3 min RT in less than optimum conditions of visibility: hard requirement



# RFFS Response Times should be Clarified Airport's Regulatory Interpretation

- **Results of an ACI Europe survey NCAs compliance requirements RT for Runways** (AMC5 ADR.OPS.B.010 (a)(2)(a))

- > 23 airports participated to the survey (including some non-European)
- > Compliance requirement Response Time of 3 min
- > Operational objective = ideal target « if feasible » and not a requirement

- **Airport's views**

- ☐ **Operational Objective**

- > Not a requirement leading to ensure RT below X min
- > Considered as **an ideal objective** and an aim as far as it is reasonably possible and feasible to achieve under optimum/ideal conditions

- ☐ **Compliance**

- > Ensuring proactive approach towards decreasing the Response Time:
  - Operational processes (readiness personnel & equipment, routings, training...)
  - Managerial processes (infrastructure, vehicles...)



# RFFS Response Times should be Clarified Way Forward

## ACI's proposal

- The existing IR and/or AMC should be clarified
  - > **Ensuring compliance to corresponding ICAO SARP;**
  - > **Avoiding room for interpretation and inconsistencies;**
  - > **Increasing the level playing field;**
  - > **Leaving adequate flexibility for authorities and aerodromes.**
- Adding a new GM as an interpretation aid for NSA and aerodromes
  - > **Detailing meaning of wording: « Operational Objective »;**
  - > **Clarifying wording: « Initial Call »;**
  - > **Ensuring existing safety level.**
- In Europe NCA's should apply EASA ADR Regulation which ensures compliance to ICAO SARP

## ACI's request to EASA:

- Setting up a Task Force with industry and NCAs to work on RFFs requirements
- Link the work to Opinion RMT 0591 (to be published by Q1 2023)



# RFFS Response Times should be Clarified

## Way Forward: Proposed Amendment to AMC

### AMC5 ADR.OPS.B.010 (a) (2) Rescue and firefighting 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 ~~from the initial call to the rescue and firefighting service es,~~ 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 1;~~
- b) the response time to ~~any other~~ part of the movement area ~~other than operational runway(s), in optimum visibility and surface conditions, are~~ is calculated and included in the aerodrome emergency plan;
- c) the response times referred to in points a) and b) are considered to be the time between the initial call to the rescue and firefighting service, and the time when the first responding vehicle(s) is (are) in a position to apply foam at a rate at least 50% of the discharge rate specified in Table 1 of AMC4 to ADR.OPS.B.010 under optimum visibility and surface conditions;
- d) 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 to ADR.OPS.B.010 arrives no more than one minute after the first responding vehicle(s); and
- e) suitable guidance, equipment and/or procedures for rescue and firefighting service are provided, to meet the ~~operational objective,~~ response times under points a) and b), as nearly as possible in less than optimum conditions of visibility, especially during low visibility operations.”





# RFFS Response Times should be Clarified Way Forward: New Interpretational GM

## GM7 ADR.OPS.B.010 (a) (2) Rescue and firefighting services

### **CALCULATION OF RESPONSE TIMES AND OPERATIONAL OBJECTIVE**

Response times may be calculated considering optimum visibility and surface conditions. The calculation may follow a theoretical transparent approach starting with the initial call (i.e. as soon as the RFFS is informed about the incident's location by the alerting entity) to the rescue and firefighting service, and the time when the first responding vehicle(s) is (are) in a position to apply foam at a rate at least 50% of the discharge rate specified in Table 1 of AMC4 to ADR.OPS.B.010 under optimum visibility and surface conditions.

Optimum visibility and surface conditions are defined as daytime, good visibility, no precipitation with normal response route (free of surface contaminations, e.g. water, ice or snow). The normal response route is defined as optimum pre-defined route under normal circumstances not considering temporary closures due to maintenance or construction works.

The principal objective of rescue and firefighting services is to save lives in the event of an aircraft accident or incident occurring at, or in the immediate surroundings of, the aerodrome. In the scope of rescue and firefighting and to fulfill RFFS principal objective, the operational objective defines an ideal goal to which to aim at, provided it is reasonably feasible without putting the environment, equipment, infrastructure or people (operating at the aerodrome or responding to the incident) at risk. It may consider the existing aerodrome infrastructure and equipment and may not consider human errors or communication failures between the alerting entity and the rescue and firefighting service.

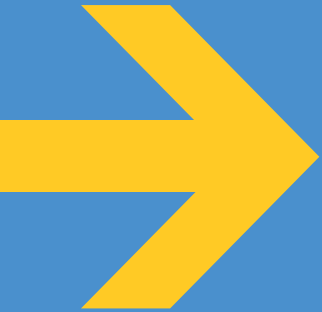
Therefore, rescue and firefighting service should organize means and processes to achieve the response time and consider the following aspects to respond as nearly as possible to the defined operational objectives:

- provision of adequate alerting system equipment
- future vehicle fleet and maintenance
- suitable guidance
- access road
- Procedure
- training
- definition of target areas with increased likelihood for an incident/accident based on local experience or prior occurrences

The aerodrome operator may wish to organise exercises in optimum visibility and surface conditions to verify its procedures and analyse them against the response times. Serious attention should be paid on safety and environmental aspects when performing these exercises. Achievement of an operational objective shall not be at any cost and potentially leading to accidents resulting in loss of truck or injury to personnel.







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# RFFS Response Times should be Clarified ICAO ANNEX 14 SARPs

## *Response time*

9.2.27 The **operational objective** of the rescue and firefighting service shall be to achieve a response time not exceeding three minutes to any point of each operational runway, in optimum visibility and surface conditions.

9.2.28 **Recommendation.**— *The operational objective of the rescue and firefighting service should be to achieve a response time not exceeding two minutes to any point of each operational runway, in optimum visibility and surface conditions.*

9.2.29 **Recommendation.**— *The operational objective of the rescue and firefighting service should be to achieve a response time not exceeding three minutes to any other part of the movement area, in optimum visibility and surface conditions.*

*Note 1.— Response time is considered to be the time between the initial call to the rescue and firefighting service, and the time when the first responding vehicle(s) is (are) in position to apply foam at a rate of at least 50 per cent of the discharge rate specified in Table 9-2.*

*Note 2.— Optimum visibility and surface conditions are defined as daytime, good visibility, no precipitation with normal response route free of surface contamination, e.g. water, ice or snow.*

9.2.30 **Recommendation.**— *To meet the operational objective as nearly as possible in less than optimum conditions of visibility, especially during low visibility operations, suitable guidance, equipment and/or procedures for rescue and firefighting services should be provided.*

# → Comparison ICAO SARP & EASA AMC

9.2.27 The operational objective of the rescue and firefighting service shall be to achieve a response time not exceeding three minutes to any point of each operational runway, in optimum visibility and surface conditions.

9.2.28 *The operational objective of the rescue and firefighting service should be to achieve a response time not exceeding two minutes to any point of each operational runway, in optimum visibility and surface conditions.*

9.2.29 *The operational objective of the rescue and firefighting service should be to achieve a response time not exceeding three minutes to any other part of the movement area, in optimum visibility and surface conditions.*

Note 1. – Response time is considered to be the time between the initial call to the rescue and firefighting service, and the time when the first responding vehicle(s) is (are) in a position to apply foam at a rate of at least 50% of the discharge rate specified.

Note 2. – Optimum visibility and surface conditions are defined as daytime, no precipitation with normal response route free of surface contamination, e.g. water, ice or snow.

9.2.30 *To meet the operational objective as nearly as possible in less than optimum conditions of visibility, especially during low visibility operations, suitable guidance, equipment and/or procedures for rescue and firefighting services should be provided.*

9.2.31 Any vehicle, other than the first responding vehicle(s), required to deliver the amounts of extinguishing agents specified in Table 9-2 shall ensure continuous application and shall arrive no more than four minutes from the initial call.

9.2.32 *Any vehicles, other than the first responding vehicle(s), required to deliver the amounts of agents specified in Table 9-2 should ensure continuous application and should arrive no more than three minutes from the initial call.*

9.2.33 *A system of preventive maintenance of rescue and firefighting vehicles should be employed to ensure effectiveness of the equipment and compliance with the specified response time throughout the life of the vehicle.*

AMC5 a) rescue and firefighting service achieves a response time not exceeding three minutes with an operational objective of not exceeding two minutes from the initial call to the rescue and firefighting services, 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 1;

Combination of Standard 9.2.27 and Recommendation 9.2.28; wording of AMC5 a) subsentence 1 reflecting Standard 9.2.27 is stricter than corresponding standard

AMC5 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; AMC offers more flexibility than ICAO Recommendation 9.2.29

Explanatory notes partially covered under point a); whereas it should also be applicable for AMC5, lit. b).

AMC5 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.

Similar wording, whereas AMC only referring to 'operational objective' and not to fixed 3min.

AMC5 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 no more than one minute after the first responding vehicle(s);

AMC5 c) reflects an 'older' version of the corresponding ICAO standard, whereas to EASA wording is also reflecting the possibility for calculation of response times for movement areas what would be limited by transferring the standard 1:1 and is more risk adverse as the continuous delivery of agents is ensured.

Covered in ADR.OPS.C.007 b) ; AMC1 lit. a)

EASA AMC are covering all vehicles and include some special rules for RFFS vehicles, reflecting the corresponding ICAO standard 9.2.3.3.

