



Schweizerische Eidgenossenschaft
Confédération suisse
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Federal Office of Civil Aviation FOCA
Safety Infrastructure
Aerodromes and Air Navigation Obstacles

CTIF Commission “Rescue and Fire Fighting at Airports”

Reduction of ARFF personnel

7.10.2021, Florian Monthoux



Background

- Gstaad Airport in the Swiss Alps
- Mixed traffic with small aircrafts, gliders, helicopters and business aircrafts like PC12, PC24 and exceptionally Falcon
- Total of 7 aerodrome employees and 2 employees on site at a time
- For RFF category 3 to 5, external RFFS needed
- Request to reduce the category from 3 to 2?



Aerodrome category	2017	2018	2019	2020
2	22	16	11	30
3	68	46	111	106
4	23	7	47	30
5	0	0	7	8



Reduction of the aerodrome category?

ICAO, Annex 14, Vol. I, 9.2.3: The level of protection provided at an aerodrome for rescue and firefighting shall be appropriate to the aerodrome category [...], except that, where the number of movements of the aeroplanes in the highest category normally using the aerodrome is less than 700 in the busiest consecutive three months, the level of protection provided shall be not less than one category below the determined category.

Aircraft movements (CAT) by aerodrome category for 2017-2020:

Aerodrome category	2017	2018	2019	2020
2	22	16	11	30
3	68	46	111	106
4	23	7	47	30
5	0	0	7	8

Highest category normally using the aerodrome?
FOCA's position: Aerodrome category 4, but proposal to reduce RFF staff for category 3 (2 instead of 3 firefighters)



Reduction of ARFF personnel for category 3?

- Documented in the TRA
- *Safety Assessment* required for the change
- Main hazard:
 - Delayed evacuation and fire extinguishing in case of accident with fully loaded category 3 aircraft due to coverage of RFF category 3 with 2 instead of 3 firefighters

Why did we approve?

- Immediate alarm for the external fire brigade (community fire brigade)
- RFF vehicle meets category 3 requirements
- *Safety Assessment* does not indicate any residual risk that has been classified as not tolerable
- Change approved by the airport manager



Open questions

- Would you have done the same?
- What is the highest category normally using the aerodrome in your opinion?
- What if the airport asks for category 3 with only one firefighter?



Thanks for your attention





Other topics: AD-ELT




- *Automatic Deployable Emergency Locator Transmitter (AD-ELT)*
- Powered with a spring
- Activation due to:
 - Integrated G-sensor
 - Water contact
 - Manual
- Possible non-intentional activation of the AD-ELT due to structural deformation or due to water from the fire brigade
- What precautions should the rescue team (fire brigade, paramedics) take to protect themselves? (safety distance? deactivation of the AD-ELT?)





Other topics: ARFF emergency hand signals

- EASA, SERA.3301 General:
 - *(a) Upon observing or receiving any of the signals given in Appendix 1, aircraft shall take such action as may be required by the interpretation of the signal given in that Appendix.*
- Appendix 1 Signals:
 - *The following hand signals are established as the minimum required for emergency communication between the ARFF firefighters and the cockpit and/or cabin.*
- A small survey in Switzerland showed that RFFS did not know the emergency hand signals.
- What is the situation in your country?

	<p>1. Recommend evacuation</p> <p>Evacuation recommended based on aircraft rescue and fire-fighting and Incident Commander's assessment of external situation.</p> <p>Arm extended from body, and held horizontal with hand upraised at eye level. Execute beckoning arm motion angled backward. Non-beckoning arm held against body.</p> <p>Night — same with wands.</p>
	<p>2. Recommend stop</p> <p>Recommend evacuation in progress be halted. Stop aircraft movement or other activity in progress.</p> <p>Arms in front of head — Crossed at wrists</p> <p>Night — same with wands.</p>
	<p>3. Emergency contained</p> <p>No outside evidence of dangerous conditions or 'all-clear.'</p> <p>Arms extended outward and down at a 45 degree angle. Arms moved inward below waistline simultaneously until wrists crossed, then extended outward to starting position.</p> <p>Night — same with wands.</p>