



International Civil Aviation Organization

Runway and Ground Safety Working Group

Fifth Meeting (RGS WG/5)
(Cairo, Egypt, 25 – 27 November 2018)

Agenda Item 3: Implementation of Aerodrome Safety Priorities and Objectives in the MID Region

RFF/AEP SURVEY

(Presented by Egypt.)

SUMMARY

This paper presents a Draft RFF/AEP Survey in support of Runway Safety (RS) Enhancement Initiative (SEI) Detailed Implementation Plan (DIP) deliverables of the Draft Conclusion 4/1: Survey On ARFF/AEP Level of Implementation

Action by the meeting is at paragraph 3.

REFERENCES

- RGS WG/4 Final Report 4/2

1. INTRODUCTION

1.1 It is agreed in the last meeting that some areas are considered part of the challenges faced during Certification of aerodromes such as ARFF and Emergency Planning at Aerodromes.

2. DISCUSSION

2.1 The required checklists is developed by the assigned group of experts from Egypt (Champion), UAE and Saudi Arabia volunteered to support

2.2 Checklists included :

- Fire Station details;
- ARFFs Truck Inspection; and
- ARFF Inspection.

2.3 Checklists was sent to ICA-MID and been circulated to states for revision and comments.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the content of the paper and progress to MID-RASG RGS SEIs further to the coordinating activities of Egypt; and
- b) further to discussion during the meeting, review and provide feedback to ICAO MID no later than 30 December 2018 regarding the content of ARFF and Emergency Planning at Aerodromes of the draft as included as **Appendix A** .

APPENDIX A

**RGS WG/4 Draft Conclusion 4/1
related to
Survey on ARFF Level of
Implementation**

REFERENCES:

- Annex 14 Vol.I
- Doc 9137-AN/898 Airport Services Manual Part 1 — Rescue and Firefighting Fourth Edition, 2015

No.	Questions	Yes	No	N/A	Remarks
<u>STATE REGULATION</u>					
1	Has the State promulgated aerodrome regulations to enable the State to implement the provisions of Annex 14 Vol.I Regarding to ARFF?				
2	Has the State promulgated aerodrome regulations to enable the State to implement the provisions of Annex 14 Vol.I regarding Aerodrome Emergency Planning?				
<u>AERODROME/SERVICE PROVIDER REQUIREMENTS</u>					
<u>ICAO Doc. 9137 - Chapter 2: Level of Protection to be provided</u>					
1	Is the Fire Service compliant with the aerodrome license?				
2	Is the minimum usable amount of water for fire extinguishment maintained?				
3	Is the minimum foam compound available for the depletion of two loads of water carried on the vehicles?				
4	Is the minimum required complementary agent available on the vehicles?				
5	Is the quantity of available foam compound, compliant with the level of foam used?				
6	Are the operations limited to the size of aircraft what the airport is licensed for?				
7	Does the airport have a fire-prevention program?				
8	<i>Does this programme include all areas of the aerodrome?</i>				
9	<i>Does the aerodrome ARFF make provision for rescue work in the event of an accident?</i>				
<u>ICAO Doc. 9137 - Chapter 3: Airport facilities affecting Rescue and Fire Fighting Services</u>					
1	Are there any Hydrants available on the Aerodrome?				
2	Are there adequate emergency access roads on the aerodrome?				
3	Are these roads maintained?				
4	<i>Are there any emergency gates on the aerodrome?</i>				
5	<i>Are these gates accessible to the emergency vehicles?</i>				

No.	Questions	Yes	No	N/A	Remarks
6	<i>Is there any additional water available for firefighting on the airport?</i>				
7	<i>Is the pressure in the hydrants sufficient to enable rapid filling of vehicles?</i>				
8	<i>Does the aerodrome have an appointed fire prevention officer/s?</i>				
9	<i>Does the aerodrome have a fire prevention program?</i>				
10	<i>Are there any records as required to this effect?</i>				
ICAO Doc. 9137 - Chapter 4: Communication and Alarm Requirements					
1	Are there any communication and alarm notification systems in place?				
2	<i>Is the alarm system tested regularly?</i>				
3	Are there any radios available for communication with ATC, Airport management, or airline?				
4	<i>Are these radios on the required frequency?</i>				
5	<i>Is the quantity sufficient to enable communication between vehicle operators, Control personnel and rescue operators?</i>				
6	<i>Has all personnel been properly trained in radiotelephony and licensed accordingly?</i>				
7	Are there any telephones or other type of system available to summon assisting parties to the aerodrome emergency procedure/ plan?				
8	<i>Are these equipment tested regularly?</i>				
9	<i>Is the result of these tests properly recorded?</i>				
ICAO Doc. 9137 - Chapter 5: Factors in the Specification process for Rescue and Fire Fighting Vehicles					
1	Does the vehicle/s have off road capability?				
2	Are the vehicle's tires of an off road type?				
3	Does the foam induction system work properly? (Provide proof of regular testing of induction system. At least two monthly)				
4	Is the available equipment as per ICAO requirement?				
5	<i>Do all the fire appliance valves operate properly?</i>				
6	Are the rescue equipment maintained?				
7	Are there any records available to substantiate the serviceability of the required pieces of equipment?				
8	Is the vehicle's foam carrying capacity as required to discharge two loads of water?				

No.	Questions	Yes	No	N/A	Remarks
9	<i>Does all emergency lighting operate properly?</i>				
10	<i>Can the vehicles achieve the required speed within the prescribed time frame?</i>				
11	Can the vehicle reach the threshold of the furthest runway and discharge half of its contents within the required times?				
<u>ICAO Doc. 9137 - Chapter 5: Equipment for rescue operations Airport Category</u>					
1	Are there in place complete provision for the rescue equipment/tools as required by ICAO Doc. 9137 Chapter 5? (See attachment # 1)				
2	<i>Is it tested regularly?</i>				
<u>ICAO Doc. 9137 - Chapter 6: Protective Clothing and Respiratory Equipment</u>					
1	Is every individual fire fighter equipped with Protective clothing?				
2	<i>Does every fire fighter have protective gloves?</i>				
3	<i>Does every fire fighter have fire resistant boots?</i>				
4	<i>Does every fire fighter have fire hoods?</i>				
5	<i>Does the aerodrome have proximity suits?</i>				
6	<i>Are there sufficient Breathing apparatus sets?</i>				
7	<i>Are these sets tested regularly?</i>				
8	<i>Are there any records to substantiate the above?</i>				
9	<i>Have these Breathing apparatus sets been Subjected to pressure tests as required?</i>				
10	<i>Are there any records to substantiate this?</i>				
<u>ICAO Doc. 9137 - Chapter 7: Ambulance and Medical Service</u>					
1	Does the airport have a clinic or a first aid room as required?				
2	<i>Is the clinic or first aid room suitably equipped?</i>				
3	Are there any medical supplies or first aid kits available on the fire engines?				
4	Is there an ambulance available on the airport?				
5	If not, is there any agreement in place to have an ambulance be made available within reasonable time, if needed?				
6	<i>Is this agreement/s current?</i>				
7	<i>Are these ambulances suitable type and equipped to deal with aircraft disasters?</i>				

No.	Questions	Yes	No	N/A	Remarks
8	<i>If yes, is it regularly serviced and are there any records available?</i>				
9	<i>Are the medical supplies on the airport regularly checked for expiring dates?(Provide a list of medical supplies at airport)</i>				
ICAO Doc. 9137 - Chapter 8: Extinguishing Agent Characteristics					
1	<i>Is the complimentary agent compatible with the primary extinguishing agent? (Provide proof)</i>				
2	<i>What percentage foam concentrate is used? 3%, 6% or 9%</i>				
3	<i>Is the storage facility of the supplementary 200% extinguishing agent adequate? (Both primary and supplementary)</i>				
4	<i>Was the viscosity of the foam tested?</i>				
5	<i>Are there any records to this effect available?</i>				
6	<i>Was the type of foam used approved?(Is a copy of the certificate available?)</i>				
ICAO Doc. 9137 - Chapter 9: Fire Stations					
1	<i>Does the airport have a fire station?</i>				
2	<i>Can the fire station house all the vehicles?</i>				
3	<i>If not, how and where are the vehicles housed?</i>				
4	<i>Is sufficient accommodation available for the required level of personnel?</i>				
5	<i>Is there any accommodation available for the fire fighters?</i>				
ICAO Doc. 9137 - Chapter 10: Personnel					
1	<i>Are sufficient fire personnel available to utilize the fire vehicles effectively? Including the hand-lines.</i>				
2	<i>Are there personnel available to utilize the rescue equipments simultaneously with the firefighting process?</i>				
3	<i>Total number of firefighting personnel?</i>				
4	<i>Number of firefighting personnel per shift?</i>				
5	<i>Are these numbers published in the AIP?</i>				
6	<i>Has the personnel numbers been adjusted during the past twelve months?</i>				
7	<i>Was this done after consultation with the Director General of Civil Aviation?</i>				

No.	Questions	Yes	No	N/A	Remarks
8	<i>Was this adjustment done in accordance with re-categorization of the aerodrome? Up or down?</i>				
<u>ICAO Doc. 9137 - Chapter 11: Emergency Organizations</u>					
1	Does the airport have an emergency manual?				
2	<i>Was this Manual submitted to and Approved by the CAA?</i>				
3	Is a copy of this manual available to all firemen?				
4	Does this manual contain a grid reference chart, which includes 8-kilometers radius from the aerodrome?				
5	Is a grid reference chart available on each fire-fighting vehicle?				
6	Did the prescribed annual emergency exercise take place?				
7	Can rescue & firefighting operations be performed up to the 8kilometers radius from the airport?				
<u>ICAO Doc. 9137 - Chapter 12: Aircraft FireFighting and Rescue Procedures</u>					
1	Doesthefirefighting personnel knowthe appropriatetechniques to enter or break into an aircraft structure?				
2	<i>Did all fire personnel receive aircraft construction for firefighters?</i>				
3	<i>Is all the fire fighters certified in aircraft construction for firefighters?</i>				
4	Do all personnel know how to initiate the appropriate firefighting techniques for an aircraft wheel fire?				
5	Doall firemen know how to position the fireappliances toachieve the best possible firefighting capability at a potential aircraft accident?				
6	<i>Are clearly defined instructions available for immediatereaction to an aircraft accident?</i>				
7	<i>Are these instructions clearly depicted on the daily duty roster?</i>				
8	<i>Is there any documentation to substantiate the above?</i>				

No.	Questions	Yes	No	N/A	Remarks
ICAO Doc. 9137 - Chapter 13: Rescue Operations in Difficult Environment					
1	Is a process defined to address possible unforeseen scenarios such as swampy areas, large masses of water or a possible accident at sea?				
2	<i>If not self-provided for, does the airport have agreements with the other bodies such as the National Search & Rescue?</i>				
3	<i>Is a copy of such agreement available?</i>				
4	Is a process defined to address possible unforeseen scenarios such as deserts or mountainous areas? or any other type of area unique to your specific aerodrome?				
5	<i>Is there any proof of agreements available?</i>				
ICAO Doc. 9137 - Chapter 14: Training					
1	<i>Did all the fire personnel receive ongoing/ refresher aircraft construction related training?</i>				
2	Is individual records kept of all fire related training?				
3	<i>Does the personnel periodically have live/hot fire drills? At what frequency? Months.....weeks.....</i>				
4	Are these training records available?				
5	Is all fire fighting vehicle drivers certified as competent on the vehicle entrusted to them?				
6	<i>How frequently are these personnel subjected to Re-testing? Annually.....: Bi-Annually</i>				
ICAO Doc. 9137 - Chapter 15: Aircraft Fuelling Practices					
1	Does the fire-crew do periodic inspection on the aircraft fuelling processes?				
2	<i>Is the bonding of aircraft and vehicles monitored?</i>				
3	<i>Does the refuelling personnel offload the fire extinguishers during refuelling and placing the strategically?</i>				
4	<i>Are all refuelling personnel adequately trained?</i>				
5	<i>Does the Airport Management have copies of the refuelling personnel's competency certificates?</i>				
6	<i>Are all the refuelling vehicles inspected periodically and certified as safe?</i>				
7	<i>Does Airport Management monitor the above?</i>				

No.	Questions	Yes	No	N/A	Remarks
8	<i>Is record thereof available?</i>				
9	<i>Is all fuel on the aerodrome stored in appropriate containers or storage facilities</i>				
ICAO Doc. 9137 - Chapter 16: Availability of Rescue and Fire Fighting Information					
1	Is all the relevant information pertaining to the fire services as required in paragraph 2.6, published in the Aeronautical Information Publication (AIP)?				
2	<i>Does this information contain the number of personnel per shift during hours of operation?</i>				
3	<i>Is the ATC and airlines notified of deviations from the published personnel strength?</i>				
4	Is there any objection to the CAA publishing this Information?				
ICAO Doc. 9137 - Chapter 17: Preventive maintenance of vehicles and rescue equipment					
1	Does the airport have a Preventive maintenance?				
2	Does the airport have a Maintenance procedure?				
3	Does the airport have a Maintenance work areas / special tools?				
4	Does the airport have a Performance testing — fire vehicles & Rescue equipment requirements?				
5	Does the airport have a Maintenance documentation & Maintenance record keeping?				
ICAO Doc. 9137 Chapter 18 Human Factors Principles					
1	Does the the Airport management & ARFF services aware with Human Factors specific to RFF services from training and operations to station routine and audits, to achieve a higher level of professionalism, a higher state of operational effectiveness and a higher standard for safety?				
2	Does the Human Factors include Interactions between people and the other elements of the SHELL model are at the heart of Human Factors, which involve the interfaces between: Software: plans, procedures, documentation, etc.; Hardware: machine, equipment, etc.; Environment: internal (e.g. workplace), external				

No.	Questions	Yes	No	N/A	Remarks
	(e.g. surroundings), etc.;; Liveware: the human factor.				

REFERENCES:

- Annex 14 Vol.I
- Doc 9137-AN/898 Airport Services Manual Part 1 — Rescue and Firefighting Fourth Edition, 2015

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