ADVISORY CIRCULAR

CAA-AC-OPS014
November 2022

EMERGENCY EVACUATION AND DITCHING DEMONSTRATIONS

1.0 PURPOSE.

1.0.1 This advisory circular (AC) provides guidance to operators for preparation and conduct of the emergency evacuation demonstration and is applicable to all operators of aircraft with more than 19 passenger capacity

1.**0.**2 This Advisory Circular (AC) is an initial issue dated November 2022.

2.0 REFERENCES.

I Regulation 30 of the civil Aviation (Air Operator Certification and Administration) Regulations 2022.

3.0 GENERAL

3.0.1 Operators are required to present evidence to substantiate that a successful full- capacity emergency evacuation of the aircraft type has been previously conducted.

3.0.2 Such evidence should substantiate that all occupants of the aircraft were able to exit the aircraft within 90 seconds using 1/2 of the aircraft exits in a controlled test by the manufacturer or another operator under the observation of the appropriate civil aviation authority.

Full-capacity emergency evacuations are generally only successful if the aircraft exits and exits are available for use within 15 seconds of the start of evacuation process.

Note:

- The 90-second standard for the full-capacity demonstration is an aircraft certification requirement.
- The 15-second standard is the time allotted for preparation of the exits for the evacuation to meet the 90-second standard.

4.0 DEFINITIONS & ABBREVIATIONS

4.0.1 For purposes of this advisory circular, these terms are defined as follows—

1) **Full-capacity demonstration.** An emergency evacuation conducted with all available passenger seats occupied to determine if the aircraft exits and escape provisions and the operator's crews and emergency procedures can affect the complete evacuation of the aircraft in 90 seconds.
2) **Night environment.** A level of illumination that approximates the natural illumination that occurs 90 minutes after official sunset under clear sky conditions.
3) **No-passengers ("partial") demonstration.** An emergency evacuation conducted with no passengers on the aircraft for the purpose of determining that the crew execution of the operator's emergency procedures and the functioning of the exits and escape provision can provide adequate in 15 seconds.
4) **Practice.** In reference to emergency evacuation demonstrations, this term is used when describing any training conducted outside of normally scheduled training programs.

4.0.2 The following acronyms and abbreviations are used in this advisory circular—

1) **AC** =Advisory Circular
2) **CCM** = Cabin Crew Member
3) **Demo** = Demonstration
4) **Evac** = Evacuation
5) **UCAA** = Uganda Civil Aviation Authority
6) **UCARs** = Uganda Civil Aviation Regulations

5.0 Demonstration – General

5.1 Full-Capacity or Partial Demonstration Required

5.1.1 **Full-Capacity Required**

If the operator cannot provide evidence of that a successful full-capacity emergency evacuation demonstration for the aircraft type and passenger capacity, this demonstration will be required.

- Operators should contact the aircraft manufacturer for evidence of the full- capacity demonstration.
- For older aircraft types, the operator should contact the civil aviation authorities of the State of Design to determine when full-capacity demonstrations of those aircraft have been conducted.
- Some manufacturers and operators have been able to demonstrate through technical engineering analysis that full-capacity evacuations are possible, especially when the total available exits vs passenger capacity have been previously demonstrated under controlled conditions to easily comply with the 90 second evacuation standard.

5.1.2 **ONLY A "PARTIAL" DEMONSTRATION IS REQUIRED**

If the operator can provide evidence of a previous full-capacity demonstration or an engineering analysis based on predictive factors, such as numbers and types of exits, cabin crew numbers and locations, seating arrangements, etc., the demonstration may be conducted with "no- passengers."

5.2 **OPERATOR RESPONSIBILITY**

5.2.1 The operator will be responsible for the conduct of the emergency evacuation.

5.2.2 The operator's demonstration coordinator will prepare the aircraft for the demonstration and ensure that the UCAA policies relating to the demonstration are followed.

5.2.3 The UCAA will observe the staging, procedures and time the opening of the exits and the deployment of the slides and determine if the demonstration was successful.

5.2.4 The assigned UCAA demonstration team leader will be liaison with the operator coordinator to answer any questions that the operator's team might have on the staging and conduct of the demonstration.

5.3 **OPERATOR EMERGENCY EVACUATION PLAN**

5.3.1 The operator must provide a plan for the staging of the aircraft, briefing of the crews, blocking of the exits and conduct of the demonstration.

5.3.2 The operator should submit the plan as far in advance as possible but at least;

- 30 working days in advance of a full-capacity demonstration' and
- 15 working days in advance of a partial demonstration.

5.3.3 The operator's plan shall contain the following information—

1. A letter of request which states the following—
   (a) The applicable regulation which requires a full-capacity or partial emergency evacuation demonstration be conducted.
   (b) The aircraft type and model and full seating capacity (including crew members) to be demonstrated.
   (c) The number of cabin crew members and their duty assignment positions to be used during the demonstration.
   (d) The proposed date, time, and location of the evacuation demonstration.
2. The name of the operator coordinator (spokesman) for the demonstration.
3. A clear description of how the operator proposes to initiate the demonstration (the signal to be used for the purpose of timing has to be given to both cabin and ground personnel simultaneously to initiate the demonstration)
4. A description of how the operator intends to indicate the exits that the CCMs must open;

5. A description of how the operator intends to block exits which are not to be used, must also be in the plan (The operator is responsible for developing the initiation procedure and the method for blocking exits);
6. A diagram, representative of the aircraft to be demonstrated, which includes the following—
   a) The location and designation of all exits by type and the designated exit pairs.
   b) The assigned seating location of each required crew member during takeoff.
   c) The interior cabin configuration showing the location of each passenger seat, the galleys, aisles, lavatories, and passenger compartment partitions and bulkheads.
   d) The location and type of emergency and safety equipment on the aircraft including, but not limited to—
      - ♦ Fire extinguishers
      - ♦ Portable oxygen bottles/masks
      - ♦ Megaphones
      - ♦ Crash axes
      - ♦ Emergency ropes/tapes
      - ♦ Life rafts/slide rafts/emergency stairs
      - ♦ Individual flotation devices or life preservers
      - ♦ First aid and emergency medical kits and protective gloves
      - ♦ Protective Breathing Equipment
      - ♦ Automated External Defibrillator (if applicable)
      - ♦ Enhanced Emergency Medical Kits (if applicable)
      - ♦ Survival Kits (if applicable)
      - ♦ Flashlights
      - ♦ Door Warning Flag (door arm strap, if applicable)
      - ♦ Signaling Devices (overwater)
      - ♦ Survival Radios (overwater)
      - ♦ Door Restraining/Barrier Strap (if applicable)
   e) Copies of the appropriate crew member manual pages describing emergency evacuation duties and responsibilities.
   f) A copy of the passenger safety information briefing card which will be used on the aircraft during revenue operations.
   g) A description of the emergency equipment installed on the aircraft including at least the type and model of each item of equipment, as applicable.

   h) A list of crew members (both flight deck and cabin), who are or will be qualified to participate in the demonstration must be in the operator's plan (The flight crew may not take any active role in assisting the CCMs inside the cabin during the demonstration)

   i) A description must be in the plan of how the operator will ensure the demonstration is conducted in conditions which simulate the "dark of the night."

5.4 PRE-DEMONSTRATION MEETING (UCAA & OPERATOR)

5.4.1 After reviewing the operator's plan, the UCAA team leader will meet with the operator's evacuation demonstration coordinator for discussions to ensure that both parties understand how the demonstration will be conducted.

5.4.2 The subjects that will be addressed include—

a) How the operator is responsible for the setup and safe conduct of the demonstration;
b) The staging of the aircraft (simulation of night, ensure that the operator is aware of its responsibilities regarding participant safety including provisions for safety observers, stands, ramps, padding, and ambulance coordination, as applicable.
c) The blocking of exits;
d) The required crew events and timing criteria;
e) Review the method and signals for initiating the demonstration and timing criteria.
f) The initiation signal for the start of timing.
g) The termination signal and need for an advance test;
   - ♦ Experience has demonstrated that a whistle blast may not be adequate.
   - ♦ A suitable device should be agreed upon as early as possible in the planning stage, and tested to assure its adequacy.
h) Participant safety provisions, including observers, stands, ramps, padding, and ambulance coordination, as applicable (These will be especially important in full-capacity demonstrations)
i) All questions and issues the operator may have regarding the demonstration

6.0 STAGING OF THE AIRCRAFT

6.1 LIMIT THE PARTICIPANTS

6.1.1 LIMIT THE OBSERVERS

Due to the complexity involved in conducting an emergency evacuation demonstration, only those individuals who have a genuine need or concern should be present during the demonstration.

- ●Examples of persons who have a genuine need or concern would be representatives from the airline's training department, aircraft manufacturer, or slide manufacturer.
- ●Interested but unessential personnel may present hazards, interfere, or in other ways affect the outcome of the demonstration.

6.1.2 OPERATOR IS RESPONSIBLE FOR THE OBSERVERS

The operator is responsible for all non-UCAA personnel who observe the demonstration.

- Those not directly involved in the demonstration should be kept at a reasonable distance from the aircraft by some means such as ropes or lines.

6.1.3 **TEAM LEADER IS RESPONSIBLE FOR UCAA PERSONNEL**

a) The UCAA team leader is responsible for UCAA personnel who observe the demonstration.

b) UCAA observers will be limited to those who are required to evaluate the conduct of the demonstrations or need to be involved for specific reasons.

6.2 CONFIGURATION

6.2.1 The aircraft must be configured and equipped for takeoff in accordance with the operator's manuals and procedures.

6.2.2 The aircraft must be configured in the proposed full passenger seating configuration with all appropriate emergency and safety equipment installed.

6.2.3 Safety provisions for participants (mats, stands, ramps) must be in place.

6.3 NIGHT ENVIRONMENT

6.3.1 For the purpose of emergency evacuation demonstrations, a "night environment" means a level of illumination that approximates the natural illumination that occurs 90 minutes after official sunset under clear sky conditions.

6.3.2 This lower level of illumination is needed to properly evaluate the aircraft's emergency lighting system and passenger and crew member performance in darkened conditions.

- Levels of illumination significantly darker can interfere with a proper evaluation of the demonstration.
- Therefore, this approximate level of illumination should be maintained by natural or artificial means.
- The most effective way of controlling the level of illumination is to conduct the demonstration in a darkened hangar.

6.3.3 The use of window shades in the down or partially lowered position could also be effective in achieving the objective of "dark of the night" in the cabin by preventing exterior lighting from entering the cabin.

- The combination of the interior cabin lights set to simulate a night-time departure in conjunction with the window shades in the down or partially lowered position may provide a more definitive indication of the activation of the cabin interior emergency lights and the commencement of the demonstration drill.
- Additionally, window shades in the down or partially lowered position could focus cabin crew member concentration inside the aircraft and be prevented from observing pre demonstration activities occurring outside the aircraft.

6.3.4 The use of window shades in the or partially lowered position should not conflict with established operator procedures on the position of window shades for the demonstration drill.

- For example, if there are no windows at the exit and the operator has established a procedure of having window shades in the open or up position for takeoff and landing

because that cabin configuration is needed to provide a means for cabin crew member assessment duties.

- In that case the demonstration drill should replicate that cabin configuration.

6.4 BLOCKING OF THE EXITS

6.4.1 OPERATOR METHODOLOGY

a) The operator should propose the method for blocking exits (The method that is selected for blocking of exits must require CCMs to assess the exterior for usability before opening the exit)

b) The UCAA will review the proposal to determine its acceptability.

c) When the methodology is approved, the operator will provide the required maintenance and logistical support to prepare the exit blocking methods.

6.4.2 UCAA WILL EVALUATE METHOD

a) Prior to the demonstration, the UCAA will determine what conditions/visual signals the CCMs will see during their assessment of the exit that will indicate that the exit is blocked or usable.

b) If the method is acceptable, the UCAA team leader must notify the company's project coordinator of UCAA concurrence with the method.

6.4.3 POSSIBLE METHODOLOGY

The following are examples of acceptable methods of blocking exits during an emergency evacuation demonstration—

- To simulate a fire at blocked exits, secure a chemical luminary stick (glow stick) to the exterior of each exit so that it is visible to a CCM who is assessing the exit. (The method selected must ensure that CCMs have no indication of which exits will be blocked and which exits will be usable, prior to the initiation signal)
- At the initiation signal, designated company personnel will pull lines attached to the glow sticks to remove them from the exits which are to be used and leave the glow sticks on the exits which are not to be used.
- Secure red lights to the exterior of each exit so that when illuminated, they are visible to a CCM who is assessing the exit.
- At the initiation signal, the lights at exits which are not to be used will be illuminated to simulate fire at blocked exits.
- Secure a visual indicator to the interior side of each exit.
- Position a flashlight on the exterior of each exit so that when it is illuminated, it is visible to a CCM who is assessing the exit. At the initiation signal, designated company personnel will illuminate the flashlights to simulate fire at the exits which are not to be used.

6.4.4 **EXTERIOR SAFETY PROVISIONS**

a) The operator should consider the use of safety equipment such as mats may be placed on the ground to protect participants in reaching the ground.
b) For full-capacity demonstrations, stands or ramps may be appropriately placed for use by evacuees to descend from the wing to the ground. These should be inspected for structural integrity and security because of the numbers of persons moving rapidly.
c) If stands or ramps are to be used, they must be appropriately placed at both overwing exits because at the time of their placement the company will not know which exits will be used or blocked.

7.0 DEMONSTRATION SIGNALS & TIMING

7.0.1 **CREW MEMBERS AWARENESS OF SIGNALS**

a) Ensure the crew members are briefed and aware of the initiation and blocking signals.
b) It is particularly important for the CCMs to be familiar with the blocking signals.
c) The blocking signal must be clear, specific, and unambiguous and placed in the same location and position as they will find during the evacuation demonstration.

7.0.2 **INCLUDE SIGNAL EXAMPLES IN BRIEFING**

a) The crew members should see the blocking signal on the aircraft in the same ambient conditions that will be present during the demonstration.
b) This could be in addition to a video, a photo, or a demonstration of the signal in a briefing room.

Note: It is very important that the CCMs have the opportunity to see exactly what they will be seeing on the aircraft during the evacuation demonstration.
Crew members should be allowed to see and/or hear the initiation signal and the exit blocked signal on the aircraft in the same ambient conditions that will be present during the emergency evacuation demonstration.
It is permissible for CCMs to assess their exits for familiarity with the blocking signal.

7.0.3 **INITIATION SIGNAL**

a) Timing of the emergency evacuation demonstration is very important. Fifteen seconds is allowed for the completion of a successful demonstration.
   - Fifty percent of the floor level exits must be opened within 15 seconds and the slide or slide rafts are deployed and ready for use.
   - The timing should start at a prearranged signal. The signal should be agreed upon by the UCAA and the operator.
b) The operator should propose a method which provides the same initiation signal for participants inside the aircraft and UCAA team members outside the aircraft. (It is essential that UCAA team members be aware of the demonstration initiation signal)

c) The preferred method is for a company employee to interrupt the aircraft's normal source of power by power interruption from the cockpit at the moment the flight crew keys the microphone to notify the cabin crew to evacuate. (A different signaling method must have prior approval of the UCAA team leader.)

d) Alternative methods include—
   - Disconnecting or turning off an external source of power or a ground power unit (GPU), or
   - Disconnecting or turning off the auxiliary power unit (APU).

e) These methods of initiating the demonstration provides a clear initiation signal in the following ways—
   - Inside the aircraft, the CCMs and UCAA team members will observe the normal cabin lighting extinguish followed by the illumination of the emergency lighting system as their signal to commence the evacuation demonstration.
   - It should be noted that these are not simultaneous events and there could be a second or two delay between the cabin lights extinguishing and the illumination of the emergency lighting system.

7.0.4 **TERMINATION SIGNAL**

a) The termination signal (air horn is recommended) will normally be sounded by the UCAA team leader—
   - For a "no-passengers" demonstration, 15 seconds after the initiation signal.
   - For a "full-capacity" demonstration, 90 seconds after the initiation signal.

b) When the termination signal is sounded, all emergency procedures still in progress must be terminated.
   - In a "no-passengers" demonstration, all crew members should stay in the aircraft until released by the operator coordinator.
   - It is also possible that, for safety reasons, the UCAA may elect to terminate the demonstration at any point in the timing.
   - In a full-capacity demo, all passengers and crew not off the aircraft should "freeze" in their location until authorization is given for them to deplane.

7.1 **TIMING**

7.1.1 **LOCATION OF TIMING OBSERVERS**

Those UCAA observers with timing assignments will be—
- The team leader will be outside near the anti-collision light.
- An observer outside each exit with slide or stairs to be used.
- Observers inside the aircraft for exits that are not equipped with an escape means.

7.1.2 **TIMING START**

a) For timing purposes by cabin observers, the demonstration commences when the cabin lights are extinguished.
b) Outside of the aircraft, the timing will start when the anti-collision light extinguishes.
c) It is essential that UCAA team members be aware of the demonstration initiation signal.

7.1.3 **STOP TIMING**

Each observer assigned to time the opening of the exits will stop that timing when one of the following is noted.

- For exits with slides, the slide and/or slide raft is ready for use.
- For exits with stairs, Timing for stair readiness should be done from outside the aircraft and should stop when the stairs are fully extended and the bottom is within six inches of the ground.

7.1.4 **ADDITIONAL DEMONSTRATION TIMING**

When there is no crew member assignment to open an exit, the team leader may still require a crew member (either a CCM or a flight deck crew member) to open these exits. This should not be a considered to be a part of the timed evacuation demonstration. This should be considered to determine with if the operator's training and procedures included these types of exit and are adequate.

- This demonstration should be considered when the aircraft is equipped with stairs, gull wings, overwing exits with slides, tailcones, or when the opening mechanism is new.
- The team leader could establish a time limit for opening these "unassigned" exits.
- Where the operator has approved simulation devices for these exits, this requirement may be accomplished using these devices.

8.0 AIRCRAFT & CREW READINESS

8.1 EQUIPPED & READY AIRCRAFT

a) Before the demonstration, the UCAA team will inspect the aircraft, emergency and safety equipment.
b) The UCAA team will also review the staging and configuration of the aircraft for the demonstration following this inspection.

8.2 QUALIFIED CREWS

8.2.1 **SELECTION OF CREW FOR DEMONSTRATION**

a) The UCAA will conduct records inspections of all crew member that will be assigned to the aircraft.
   - Cabin crew members' records must show that they have completed all approved qualification requirements including the competency check.
   - Flight crew members' records must show that they have completed all approved qualification requirements including the aircraft proficiency check.

- If any crew members have completed training that is not recorded, the demo will not be con- ducted until the records are updated.

b) The team leader should select "typical" crew members to be used in the demonstration from the list provided by the operator.

- Typical cabin crew members should normally not include emergency procedures instructors, supervisors, check airmen, union safety representatives, or others who may have an above average level of experience or exposure to emergency evacuation requirements.
- The qualifications of the cabin crew members used in the evacuation demonstrations should be consistent with qualifications of line crew members.
- In addition, whenever possible crew members should not have been used in a demonstration within the last six months. There are smaller airlines where this may not be possible.
- Cabin crew members used in these demonstrations should have completed training and competency checks recently. Ideally, cabin crew members used in full-capacity demonstration should have been line crew members for the last two years.

8.2.2 **PRACTISING NOT ACCEPTABLE**

When the UCAA determines that crew members to be used in the evacuation demonstrations have been allowed to "practice" opening the doors/exits—

- These crew members should not be allowed to participate in the evacuation demonstration, unless the operator's UCAA- approved training program includes this additional training.
- The airline should present a minimum of two complete crews for the demonstration(s). that is required as a result of two demonstration failures, the lack of trained crew members for future demonstrations should be discussed.
- It is possible that in the case of equipment failures that are not related to airline training or procedures, such as a slide that failed to inflate due to an equipment malfunction.

Note: "Practice" is considered any training conducted outside of normally scheduled training programs.

8.2.3 **"BACK-UP" CREW MEMBERS**

It is very important that the "back-up" crew members that may be used if the first demonstration fails are not given any information about the first demonstration.

- This is best accomplished by having these crew members isolated in an area which is physically removed from the first evacuation demonstration.

- They should stay in a group with an UCAA inspector present so the inspector can ensure they are not given any information about the first demonstration.

8.2.4 **INITIAL CADRE OF CREW MEMBERS**

When an airline is new, typical line crew members may not be available. When this is the case, the airline must train the first cadre of cabin crew members (CCM); it is quite possible that these CCMs will also be instructors.

- Nevertheless, they should not be given instruction or experience that will not be given to CCMs who will be expected to serve as CCMs on this aircraft on the line.
- For example, they should not have had "train the trainer" training until after their participation in the evacuation demonstration.
- Chief CCMs or CCM managers who are in charge of the airlines over all CCM programs should not be used as crew members during evacuation and ditching demonstrations, unless no other CCMs have been hired.

8.2.5 **POOL OF CREW MEMBERS**

a) The UCAA encourages whenever possible the use of separate crew members for the emergency evacuation demonstration and the ditching demonstration.
   - Some new entrant airlines may not be aware of the stress level the crews are facing by participating in these types of demonstrations.
   - Additionally, by providing separate crew members for each demonstration, it provides the UCAA with a better assessment of the training program.

b) In the event of a non-CCM demonstration failure (e.g., equipment failure), it is recommended that a new CCM crew be selected from the remaining CCM group.

8.2.6 **OPERATOR MEETING WITH COMPANY PARTICIPANTS**

The operator should have a meeting with the participants and address at least the following—

1) The purpose of the demonstration;
2) The crew location assignments;
3) The importance of conforming to the operator's emergency procedures;
4) When the emergency evacuation procedures should be initiated (initiation signal);
5) How the exits will be blocked for use (provide an example);
6) How to identify the exits to open (provide an example);
7) The signal for termination of the demonstration (let crew see or hear signal);
8) The events that will follow the completion of the demonstration
9) The questions of all participants should be addressed.

9.0 FLIGHT CREW FUNCTIONS

9.0.1 UCAA PRESENCE IN COCKPIT

a) A UCAA inspector and the operator's coordinator will be in the cockpit observing the functioning of the flight crew.

b) The aircraft will be powered, but it will not be moved during the demonstration. The flight crew may run checklists for aircraft setup, BUT WILL NOT START ENGINES.

9.0.2 CABIN NOTIFICATION REQUIRED

a) When the cabin crew notifies the flight crew that they are completing their pre-departure duties and are being seated for takeoff, the flight crew will give the cabin crew not less than a 3-minute period of time to be seated.

b) During this time, the PIC will advise the UCAA team leader that the interior preparations have been completed.

c) Shortly after that notification, the flight crew will hear the warning signal that the demonstration is about to start.

d) After that warning signal, the flight crew's role will be to follow the ad-hoc guidance of the operator's coordinator to set up the scenario that results in the flight deck announcement (or signal, depending on the operator procedures) that will start the emergency evacuation process.

e) The flight crew may be asked to role-play they are aborting a takeoff and follow their emergency procedures regarding configuration and contacts with the cabin.

f) The timing of the contacts with the cabin may be spaced to keep a measured pace of action.

9.0.3 OPERATOR'S COORDINATOR ACTIVATES INITIATION SIGNAL

When the flight crew actually keys the microphone (or other signal) to initiate the evacuation, the operator's coordinator will trip the aircraft external power off. This signal will be the start of the timing by the UCAA observers.

9.0.4 FLIGHT CREW

a) For no-passenger demonstrations, the flight crew must not open the cockpit door until the Stop signal has been given.

b) For full-capacity demonstrations, the flight may open the cockpit door after the cabin crew has opened the exits, deployed the slides and begun their verbal instructions.

10.0 CABIN CREW FUNCTIONING

10.0.1 UCAA PRESENCE

10.0.2 UCAA OBSERVERS IN CABIN

a) A UCAA inspector/observer will be located in the cabin near the floor level emergency exits to observe the execution of the emergency evacuation duties and functioning of the safety equipment.

b) The cabin crew members should not have conversation with the UCAA observers until the demonstration has been completed.

c) Immediately after the demonstration, these observers will go to participate in a UCAA meeting.

10.0.3 SEPARATE INSPECTION

The cabin crew members should remain on the aircraft for an inspection of the emergency equipment that was not directly related to the demonstration.

- During this inspection, the cabin crew members may be asked to open sealed medical/first aid kits or check equipment for the proper functioning.
- This inspection is not related to the success of the demonstration. It is performed at this time as because the timing is convenient.

10.0.4 MINIMUM CABIN CREW MEMBERS

The cabin crew member complement must consist of the minimum number of cabin crew members which the operator proposes to use on the aircraft during commercial air transport and in no case shall the minimum number be less than that specified in the UCARs.

11.0 DAY OF DEMONSTRATION

11.0.1 COMPANY PERSONNEL

Company officials, such as directors of operations and maintenance or their representatives, must be available at the site for either a full-capacity or no-passenger's demonstration.

- These individuals must have authority to direct modifications to the emergency evacuation demonstration plan at the time of the demonstration.
- Additionally, they must be able to respond to UCAA requirements for specific corrective actions due to deficiencies which occur during the demonstration.

11.0.2 **INITIAL INSPECTIONS & PREPARATION**

The following events will occur first—

1) Inspection of flight and cabin crew member records to ensure qualifications (Inspection & Demonstration)
2) Pre-demo meeting between UCAA team leader and operator coordinator to agree on the arrangements for conduct of the demonstration.
3) Operator staging of the aircraft for the demonstration (including exit blocking method and safety precautions;
4) UCAA team review of the staging;
5) UCAA team inspection of aircraft;
6) UCAA team briefing and assignments;
7) UCAA team selection of the participating crew members;
8) Reserve crew members now isolated from the proceedings;

11.0.3 **DEMONSTRATION**

The following events will occur after the crew member selection by UCAA—

1) Reserve crew members now isolated from the proceedings;
2) Operator briefing of all operator personnel of process, including the warning signal, initiation signal and termination signal (observed by UCAA);
3) Crew members board aircraft to go through the pre-takeoff routines (with UCAA observers);
4) UCAA team leader identifies the exits that are to remain blocked and those to be opened;
5) UCAA team members on exterior take up positions to view/time the exit opening and slide deployment;
6) All crew members seated for takeoff;
7) Team leader advised that the flight and cabin crew are seated and ready;
8) Team leader sounds the warning signal to start the countdown;
9) Rotating beacon is illuminated by flight crew;
10) Thirty seconds later, PIC is advised to start the evacuation
11) As notification of cabin crew is started, all aircraft power is switched off (extinguishing the anti-collision light);
12) UCAA team starts exterior timing is started when anti-collision light extinguishes;
13) Cabin crew follows company procedures for checking exterior for fire and exit usability;
14) Cabin crew opens the correct emergency exits and ensure the start of slide deployment;

15) Cabin crew assumes the correct position and make the required verbal call-outs directing occupants to exits;
16) UCAA stops timing at each exit as the slide reaches the ground fully inflated;
17) UCAA sounds termination signal at the 15 second after anti-collision was extinguished;

11.0.4 **POST-DEMONSTRATION ASSESSMENT**

The UCAA will conduct the following events;

1) UCAA team meets in separate location to review consolidated results and complete related job aids;
2) All crew members will remain in position;
3) If demonstration was successful, the UCAA team advises operator demonstration coordinator and provides any additional guidance regarding possible corrective actions;
4) UCAA returns to the aircraft with crew to inspect functioning of other emergency equipment;

11.0.5 **UNSATISFACTORY PERFORMANCE**

a) The reasons that operators have not completed no-passenger emergency evacuation demonstrations within the 15 seconds are—
   1) Cabin crew member selection of an exit that was blocked (generally the result of haste or mis-understanding of the "blocking" method);
   2) Cabin crew member failure to open an exit that should be been opened;
   3) Cabin crew member difficulty opening the door and/or deploying the slide;
   4) Failure of the slide to properly inflate to a pressure acceptable for use;

b) Other performance issues involve—
   1) Cabin crew members not following the operator's approved emergency procedures;
   2) Safety equipment on the aircraft that is not in conformance with operator guidance.

c) Full-capacity demonstrations require more planning because of the numbers of occupants that must be discharged during the demo. Reasons for failure to complete in the 90-second period can be—
   1) Too many passengers for the available exits and type of exits;
   2) Width of aisles and seat pitch;
   3) Difficulty with over-wing exits;

d) The UCAA and the operator will review the issues and determine the next action in the process. This determination may not occur immediately after the unsuccessful demonstration.

12.0 ADDITIONAL POLICY FOR FULL-CAPACITY DEMOS

12.1 COMPANY AUTHORIZED PERSONNEL

12.1.1 COMPANY PARTICIPATION

a) It is very important that the company management representative for the full-capacity demonstration be fully authorized to make decisions on behalf of the company.

b) It is recommended company personnel present at the demonstration site should there to function in a direct role in conducting the demonstration.

12.1.2 NON-PARTICIPATING ROLES

Although other company personnel may observe the demonstration, it is the company's responsibility to ensure that these persons do not pose a distraction or affect the demonstration's outcome.

12.1.3 SAFETY PERSONNEL

a) The company should provide safety personnel at strategic locations around the aircraft to protect passenger participant evacuees in a full-capacity evacuation demonstration.

b) Safety personnel shall not provide any assistance to crew members such as positioning slides, assisting evacuees through exits, or in any manner that contributes to the efficiency of the evacuation.

c) Safety personnel are used only to ensure passengers are not injured from accidents such as slipping off wings or falling from exits.

12.1.4 NON-COMPANY PERSONNEL

a) Non-company personnel, who are not UCAA personnel, must have specific reasons to observe the emergency evacuation demonstration.

b) Usually these individuals will be representatives of the aircraft manufacturer, manufacturers of other items of equipment used during the demonstration, or other such organizations which have a direct interest in aviation safety.

12.2 PASSENGER CABIN PREPARATION

12.2.1 PROHIBITIONS REGARDING PASSENGER SELECTION

The following restrictive guidelines apply—

- None of the passengers may be crew members, mechanics, or training personnel who maintain or operate the aircraft.
- No employee of the certificate holder or manufacturer may be seated next to an exit.
- The operator may not practice, rehearse, or describe the demonstration for the passengers nor may any participant have taken part in this type of demonstration within the preceding six months.

12.2.2 PASSENGERS SHOULD BE ESCORTED

a) The team leader will advise the operator to board the passengers, as routinely as possible, and prepare for departure.

b) The maximum number of participants for which approval is requested should be escorted into the aircraft such that they cannot see the exterior to determine which exits are to be inoperable during the timed evacuation.

c) No passenger may be assigned a specific seat unless the UCAA team determines such assignments are in accordance with the operator's normal boarding procedures.

12.2.3 TWO BRIEFINGS

a) After the participants are seated in the aircraft and with safety belts and shoulder harnesses fastened, if required, they will receive an oral briefing by test personnel or participants acting as crew members.

b) The company's evacuation demonstration coordinator should provide passenger participants with the following information before the demonstration—

1) The purpose of the demonstration is to evaluate how quickly the aircraft can be safely evacuated.
2) Passenger participants must be attentive to the cabin crew member's instructions.
3) Individual safety is not to be compromised at any time during the demonstration.

c) The briefing should be equivalent to the briefing required by the UCARs on the location and means for opening the passenger entry door and emergency exits.

12.2.4 **TIME TO ACCLIMATE**

Before the evacuation begins, reasonable time should be allowed for the participants to become adjusted to the subdued lighting of the normal night lighting environment of the aircraft.

12.3 DISTRIBUTION OF OBSTRUCTIONS

a) Immediately prior to the timed demonstration, blankets, pillows, and carry-on type baggage should be randomly distributed at locations in the aisles and in all emergency exits access ways to create minor obstructions simulating a minor crash environment within the passenger compartment.

b) One piece of carry-on type baggage for each three participants and one blanket and pillow for each five participants is acceptable for use as minor obstructions for evacuation demonstration purposes.