

# GCAA ADVISORY CIRCULAR

# **GUYANA CIVIL AVIATION AUTHORITY**

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SUBJECT:

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AERODROMES
AC No.: GCAA AC/AGA/06

**APRON MANAGEMENT** 

DATE INITIATED:

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INITIATED BY:

DIRECTOR – AVIATION SAFETY REGULATION

## 1. PURPOSE

1.1 This Advisory Circular (AC) provides guidance for aerodrome operators to ensure that all users and activities of the Apron remain safe.

#### 2. REFERENCES

2.1 Standards and Recommended Practice, Chapter 9 Aerodrome Operational Services, Equipment, and Installations, 9.5 Apron Management Services.

## 3. APRON EQUIPMENT

- 3.1 Aprons are generally congested with expedient activities which creates a high potential for accidents or incidents that can result in injuries to personnel and aircraft damage.
- 3.2 The responsibility of ensuring safety on an apron is vested to the aerodrome operator; as such, clear guidelines should be developed and provided to all third parties conducting activities on the apron to ensure that their operation remains safe and efficient.
- 3.3 For continuous improvement in apron safety, all stakeholders should readily report potential hazards to the aerodrome operator.
- 3.4 The aerodrome operator should identify hazard, collect potential hazard reports and, when necessary, mitigate hazards using its Safety Management System (SMS).
- 3.5 Part of the mitigation measures is to ensure all persons are trained in apron safety, including mitigation measures, and potential hazard identification and reporting. For continuous improvement in apron safety, all stakeholders should readily report potential hazards.
- 3.6 Apron management efficiency and effectiveness relies heavily on close coordination between aerodrome operators, aircraft operators and air traffic service. The development and coordination of safety procedures should include:
  - a. Aircraft stand allocation.
  - b. Marshalling service.

- c. Follow-me (leader vehicle).
- d. Blast precautions.
- e. Apron cleaning.
- f. Aircraft pushbacks
- g. Operation of air bridges.
- h. Vehicle movements.
- i. Apron discipline; and
- i. Dissemination of information.
- 3.7 All safety procedures must be shared by the aerodrome operator to the users of the apron.

# 4. AIRCRAFT STAND ALLOCATION

- 4.1 In assigning aircraft to a stand, the aerodrome operator is required to ensure there is sufficient clearance between the aircraft, equipment and/or buildings.
- 4.2 The procedures must be developed and must clearly identify the optimum (largest aircraft) that can be accommodated at each stand allowing for the required clearances; or for the appropriate configuration which would allow for the required clearances to be established.

## 5. MARSHALLING SERVICE

- 5.1 Procedures for marshalling should be developed and must include the arrangement for the provision of marshalling service where Surface Movement Guidance and Control System (SMGCS) are not provided or are unserviceable.
- 5.2 Aerodrome operators are to ensure that Marshallers are adequately trained in accordance with the standard global signals for both fix and rotor wing aircraft.
- 5.3 The marshalling procedures should include:
  - a. Action to be taken by Marshallers when obstructions are observed on aircraft stand.
  - b. Actions to be taken when incident or accident occurs.
- 5.4 A distinctive high-visibility jacket or vest should be worn by the marshaller to easily distinguish them from other apron personnel.

## 6. FOLLOW-ME (LEADER VEHICLE)

- 6.1 Aerodrome operators should provide a follow-me (leader vehicle) service to lead aircraft when requested. This is especially relevant when flight operations occur at night or in low visibility conditions.
- 6.2 Follow-me vehicles should be easily identified either by a distinct marking and/or colour and must be adequately equipped.

# 7. BLAST PRECAUTIONS

- 7.1 The aerodrome operator shall ensure that all apron users are made aware of the hazards arising from jet blast and propeller slipstream.
- 7.2 The aerodrome operator should ensure procedures are developed and in place for:
  - a. All vehicles and wheeled equipment which must be left properly braked; and equipment must be left on jacks or chocked to minimize the risk of movement when subjected to jet blast or propeller slipstream.
  - b. Where practicable, equipment should be parked in areas where the risk of jet blast is minimized.
  - c. Care should be exercised with apron equipment having a large flat side surface area.
  - d. Foreign object debris (FOD) may be moved by jet blast, creating additional hazards and it is thus necessary to ensure that aprons are kept clean.
  - e. The responsibility for the safety of passengers walking across aprons. The aircraft operator or its handling agent can have separate procedures to guide or inform passengers and users of the apron; however, this must not contradict the aerodrome operator's criteria.
  - f. Actions to be taken when there is a potential for passengers to be exposed to jet blast, propeller slipstream and rotor wash.
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- 7.3 Actions to be taken when there is a potential for passengers to be exposed to jet blast, propeller slipstream and rotor wash.

#### 8. APRON CLEANING

- 8.1 The aerodrome operator should ensure that at regular intervals, aircraft stands, and adjacent areas should be cleaned to remove oil, grease, and rubber marks.
- 8.2 Spillages may occur involving fuel, oil, hydraulic fluids, water, toilet waste and other contaminants. The aerodrome operators shall ensure that procedures are established to contain, remove, and correctly dispose of such spillage.
- 8.3 Aircraft pushbacks aerodrome operators shall establish procedures or ensure that procedures are in place to ensure aircraft pushbacks are conducted safely. The following shall be included in the procedures:
  - a. Ensure that there are no conflicts with other pushbacks in progress or with an aircraft that is ready to taxi, as well as with other traffic on the apron, are avoided.

- b. Prior to pushback, ensure that the area behind the aircraft is clear of obstacles; and
- c. After pushback, ensure that the aircraft is positioned in such a way so as to avoid concentrating break-away blast at buildings, parked or taxiing aircraft, vehicles and/or persons on the apron.
- 8.4 In some cases, aircraft operators may request to "power-back" from an aircraft stand. Given the potential hazards created by power-back operations, a safety assessment shall be carried out prior to approval of the procedure. The safety assessment shall include the following factors, at the minimum:
  - a. Jet blast or propwash.
  - b. Surface conditions.
  - c. Noise levels.
  - d. Communication with other apron users that a power-back is about to take place (especially if there is a rear of stand road).
  - e. Manoeuvring space.
  - f. Conflict with other traffic (pushback, power-back or taxiing); and
  - g. Effect on pedestrians, buildings, vehicles, mobile equipment, and other aircraft.

## 9. OPERATING OF AIR BRIDGES

- 9.1 The area used for the movement of the air bridge should be kept free of vehicles and/or equipment to ensure its safe operation. Operators of air bridges should do a visual check (camera, mirrors or looking out the window) before moving the air bridge to ensure that there are no obstructions.
- 9.2 When not in use, the air bridge should be parked with the wheelbase in the designated position.

## 10. VEHICLE MOVEMENTS

- 10.1 The aerodrome operator shall ensure that the movement of vehicles on the apron is safely managed through:
  - a. The establishment and implementation of driving rules, and the monitoring and enforcement of their application; and
  - b. The establishment of vehicle driving routes, as appropriate, and the installation and maintenance of proper signs and markings.
- 10.2 Drivers must be appropriately trained at the minimum to observe:
  - a. Speed limits.
  - b. Right of way.
  - c. Driving routes.
  - Vehicle condition requirements.
  - e. Use of vehicle lights.

- f. Low visibility procedures.
- g. Signs, markings, lights on the apron; and
- Procedures for the entry to/exit from the apron areas in which aircraft and vehicle movements are combined.

## 11. APRON DICIPLINE

- 11.1 The aerodrome operator, either through its own means or through arrangements with other parties, should monitor activities and act when deviations from the established rules are observed.
- 11.2 If the designated party for monitoring apron discipline is different from the aerodrome operator, the aerodrome operator should be informed of any deviations observed.
- 11.3 The aerodrome operator should establish enforcement measures, or ensure that such measures are established and implemented, to manage any violation of the apron safety rules.

## 12. DIVERSIONS

- 12.1 Contingency arrangements should be made at each airport to deal with the possibility of apron congestion due to a large influx of diverted aircraft. These arrangements should include the setting up of a liaison committee of all parties concerned to enable quick decisions to be made.
- 12.2 Warning arrangements should be made to alert operators to any approaching saturation of apron or terminal facilities.

## 13. AIRLINE AND FUEL

- 13.1 The aerodrome operator shall require airlines and fuel companies are responsible for the observance of safety procedures during the fuelling and/or refuelling of aircraft.
- 13.2 All personnel working on aprons should be made aware of the major safety precautions and should report any apparent breach to the person in charge of the fuelling operations, the fuelling overseer. The main points to be observed are:
  - a. No smoking or naked lights within the fuelling zone.
  - b. Auxiliary power units and ground power units shall not be started during the fuelling operation.
  - c. A clear exit path maintained to and from the aircraft to allow the quick removal of fuelling equipment and persons in an emergency.
  - d. Aircraft and supply sources shall be correctly bonded and the correct earthing procedures employed.
  - e. Fire extinguishers of a suitable type should be readily available; and
  - f. Fuel spillage should he immediately brought to the attention of the fuelling overseer.
- 13.3 Detailed instructions should be laid down for dealing with fuel spillage. When necessary, aircraft fuelling companies should be given instructions with respect to the acceptable positioning of vehicles relative to the aircraft.

## 14. DISSEMINATION OF INFORMATION

- 14.1 The aerodrome operator shall establish a process to disseminate relevant information in a timely manner on limitations to operations on the apron.
- 14.2 The information to be provided to apron users may include the following:
  - a. The type of operating restriction.
  - b. The duration of the operating restriction, if known.
  - c. Mitigation measures to be applied.
  - d. The operational impact of the operating restriction.
  - e. Availability of aircraft parking stands.
  - f. Restrictions on aircraft parking stands.
  - g. Availability of fixed installations at aircraft parking stands.
  - h. Special parking procedures.
  - i. Temporary change of driving routes.
  - j. Work in progress; and
  - k. Any other information that has operational significance to the apron users.
- 14.3 The dissemination of operational information does not necessarily require a technical system to be developed. The methods and the means to be used will depend on the complexity of the aerodrome, in particular, the number of organizations or apron users needing to be informed.

Approved by:

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Director-General TION AUT

**Guyana Civil Aviation Authority**