This Aeronautical Information Circular (AIC) is issued for the information, guidance and compliance of all stakeholders.

Dr. Jabir K. Bakari
Director General

HOT AIR BALLOON OPERATIONS IN THE UNITED REPUBLIC OF TANZANIA

1. Purpose and Status

1.1. This Aeronautical Information Circular (AIC) provides proposed guidance for the safe operation of manned Hot Air Balloons in the United Republic of Tanzania, with particular emphasis on commercial passenger operations and associated ground activities.

1.2. Throughout this circular, "should" identifies proposed safety guidance. Any mandatory obligation arises from applicable Tanzanian legislation, an approval, an approved manual or a certificate condition, rather than from this unissued draft. In a conflict, the applicable law and approved limitations prevail.

2. Definitions

In this AIC, unless the context otherwise requires —

"Air Operator Certificate- Balloon (AOC)" means a certificate authorizing a Balloon operator to carry out specified commercial air transport operations;

"Air Traffic Control Service" means a service provided for the purpose of —

a) preventing collisions—

i) between aircraft; and

ii) on maneuvering area between aircraft and obstructions; and

b) expediting and maintaining an orderly flow of air traffic;

"Air Traffic Service" means a generic term meaning variously flight information service, alerting service, air traffic advisory service, or air traffic control service; (area control service, approach control service or aerodrome control service);

"Balloon" means a manned lighter-than-air aircraft which is not power-driven and sustains flight through the use of either a lighter-than-air gas or an airborne heater, including gas balloons, hot-air balloons, mixed balloons and, although power-driven, hot-air airships;

"Balloon Flight Manual (AFM)" means the document containing the applicable and approved operating limitations and information with respect to the balloon;

"Balloon Ground Crew" means personnel responsible for supporting the preparation, launch, recovery, and transportation of a hot-air balloon and its associated equipment before, during, and after a flight, under the direction of the pilot.

"Basket" means the container, suspended beneath the envelope for the balloon occupants;

"Classes and Groups of Balloons" for the purpose of this AIC, balloons shall be categorized in the following classes and groups:

a) Hot Air Balloons class
   I. group A: envelope capacity up to 3,400 m3 (120,069 ft3);
   II. group B: envelope capacity between 3,401 m3 (120,070 ft3) and 6,000 m3 (211,888 ft3);
   III. group C: envelope capacity between 6,001 m3 (211,889 ft3) and 10,500 m3 (370,804 ft3);
   IV. group D: envelope capacity of more than 10,500 m3 (370,804 ft3);

b) Gas Balloon class;

c) Mixed Balloon class;

d) Hot-Air Airship class.

"Competition Flight" means any air operation with a balloon performed for the purposes of participating in air races or contests, including practicing for such an operation and flying to and from air races or contests;

"Design Maximum Weight" means the maximum total weight of the balloon, less the air or lifting gas;

"Free Balloon" means a balloon that is not continuously anchored to a fixed-point during operation;

"Gas Balloon" means a free balloon that derives its lift from a lighter-than-air gas;

"Hot-Air Balloon" means a free balloon that derives its lift from heated air;

"Hot-Air Airship" means a power-driven hot-air balloon, whereby the engine does not create any portion of lift;

"Mixed Balloon" means a free balloon that derives its lift from a combination of heated air and a lighter-than-air, non-flammable gas;

"Tethered Balloon" means a balloon with a tether system that continuously anchors the balloon to a fixed point during operation;

"Tethered Flight" means a flight with a tether system that anchors the balloon to a fixed location during operation, with the exception of a tether which may be used as part of the take-off procedure;

3. Application

This AIC should apply —

a) to persons who hold or is required to hold a Hot Air Balloon Operator Certificate;

b) to persons employed or contracted by a Hot Air Balloon Operator Certificate holder conducting operations under this AIC including the maintenance, preventive maintenance and alteration of a hot air balloon;

c) to flights conducted in hot air balloons for hire and reward;

d) to any other balloon operation of any group within the Republic of Tanzania, except unmanned balloons under this AIC.

HOT AIR BALLOON OPERATOR CERTIFICATE (AOC)

4. Compliance with an AOC -Balloon Air Operator Certificate

4.1. An operator shall not engage in commercial air transport operations unless that operator holds a valid AOC issued by the Authority.

4.2. An AOC referred to in paragraph 4.1 shall authorize the operator to conduct commercial air transport operations in accordance with the conditions and limitations that may be specified in the AOC.

4.3. The issuance and continued validity of an AOC by the Authority shall be dependent upon the operator demonstrating an adequate organization, method of control and supervision of flight operations, training programme as well as ground handling and maintenance arrangements consistent with the nature and extent of the operations specified.

4.4. The Operator should develop, for use, policies and procedures to be used by contracted service providers.

5. Application for Balloon Air Operator Certificate

5.1. An operator applying to the Authority for an AOC shall submit an application —

a) in the specified form, paying the prescribed fees; and

b) containing any other information the Authority requires the applicant to submit.

5.2. An applicant shall make the application for an initial issue of an AOC at least ninety (90) days before the date of intended operation.

5.3. At the time of application, the applicant shall provide all information and manuals required by the Authority.

6. Issuance of Balloon Operator Certificate

6.1. The Authority may issue an AOC to an applicant if that applicant —

a) has its principal place of business and is registered in Tanzania;

b) meets the applicable regulations and standards for the holder of an AOC;

c) is properly qualified and adequately staffed and equipped to conduct safe operations in commercial balloon operations and maintenance of the balloon;

d) holds a valid air service license issued under the Civil Aviation (Licensing of Air Services) Regulations; and

e) has an approved balloon operator security programme in accordance with the Civil Aviation (Security) Regulations, and meets any other requirements as specified by the Authority.

6.2. The Authority may reject an application for an AOC if —

a) the applicant does not meet the requirements specified in paragraph 6.1;

b) the applicant previously held an AOC which was revoked;

c) the applicant is not suitable by reason of previous conduct and experience to properly maintain an AOC; or

d) an individual who has previously contributed to the circumstances that caused the revocation of an AOC obtains a substantial ownership in the applicant organization or is employed in a position specified by this AIC.

7. The Balloon Air Operator Certificate

7.1. An AOC shall consist of —

a) a certificate for public display issued by the Authority; and

b) operation specifications containing the terms and conditions applicable to the certificate.

7.2. The certificate mentioned in paragraph 7.1(a) shall contain —

a) the State of the Operator and the issuing authority;

b) the AOC number specifically assigned to the AOC and its expiration date;

c) the operator name, trading name (if different) and address of the principal place of business;

d) the date of issue and the name, signature and title of the authority representative;

e) the location, in a controlled document carried on board, where the contact details of operational management can be found; and

f) other special authorizations, approvals and limitations issued by the Authority in accordance with the standards which are applicable to the operations and maintenance conducted by the Operator.

7.3. The AOC shall be in the format that will be set out by the Authority.

7.4. The continued validity of a Balloon Operator Certificate shall depend upon the operator maintaining the requirements of paragraph 4.3 under the supervision of the Authority.

a) for each aircraft model in the operator's fleet, identified by aircraft make, model and series;

b) list of authorizations, conditions and limitations shall be included;

c) issuing authority contact details, operator name and AOC Number;

d) date of issue and signature of the authority representative, aircraft model, groups and area of operations; and

e) other special authorizations, approvals and limitations issued by the Authority in accordance with the standards which are applicable to the operations and maintenance conducted by the Operator.

7.5. The Authority shall establish a system for the certification and continued surveillance of operators in accordance with this AIC and any other regulations made under the Civil Aviation Act to ensure that the required standards of operations established in the regulations are maintained.

8. Validity and renewal of an AOC - Balloon Air Operator Certificate

8.1. An AOC issued by the Authority shall be valid for twelve months from the date of issue or renewal, unless a shorter period is specified by the Authority or —

a) the Authority amends, suspends, revokes or otherwise terminates the certificate;

b) an operator surrenders it to the Authority; and

c) the air operator has not conducted operations as specified by the Authority for a period exceeding 6 months.

8.2. An AOC which is suspended or revoked shall be surrendered to the Authority within fourteen (14) days.

8.3. An application for renewal of an AOC shall be made to the Authority in a specified format not later than sixty (60) days before its expiry.

8.4. An applicant who fails to comply with paragraph 8.3 shall be required to make an initial application as specified in item 5.

9. Amendment of an AOC- Balloon Air Operator Certificate

9.1. The Authority may amend an AOC if —

a) the amendment is necessary for safety in commercial operations;

b) the Operator applies for an amendment, and the Authority determines that the amendment is necessary for safety in commercial operations; or

c) it is in the public interest.

9.2. Where the Authority stipulates in writing that an emergency exists requiring the immediate amendment of the AOC in the public interest or with respect to safety in commercial operations, such an amendment is effective on the date the Operator receives notice of the amendment.

9.3. An Operator shall operate in accordance with the amendment unless it is subsequently withdrawn.

9.4. Amendments stipulated by the Authority, other than emergency amendments, shall become effective thirty days after notice is issued to the Operator.

9.5. Amendments proposed by the Operator shall be made at least thirty days prior to the intended date of any operation under that amendment.

9.6. A person shall not perform a commercial operation under an AOC for which an amendment is required, unless that person has received notice of the approval of the amendment or operation from the Authority.

10. Conducting tests and inspections

10.1. The Authority shall conduct surveillance on the Operator to ensure continued eligibility to hold an AOC and associated approvals.

10.2. An Operator shall allow the Authority to conduct tests and inspections, at any time or place, to determine whether the Operator is complying with the applicable laws, regulations and the terms and conditions of the AOC.

10.3. An Operator shall make available at its principal base of operations the current—

a) AOC and its operation specifications;

b) operations and Aircraft maintenance programs; and

c) a list that includes the location and individual positions responsible for each record, document and report required to be kept by the Operator under the applicable Regulations or standards.

10.4. Upon failure by an AOC holder to make available to the Authority upon request, any document, certificate or report, the Authority may suspend the AOC or any of its operation specifications.

FLIGHT OPERATIONS

11. Manuals requirements

11.1. A hot air balloon operator certificate holder shall prepare and maintain current manuals setting forth thehot air balloon operator certificate holder's procedures and policies acceptable to the Authority.

11.2. A hot air balloon operator certificate holder’s flight, ground, and maintenance personnel must use these manuals in conducting its operations.

11.3. Each hot air balloon operator certificate holder required to have a manual shall maintain at least one copy of the manuals at its principal base of operations and at other operations stations.

11.4. The manuals must not be contrary to any applicable Authority regulations or the Hot Air Balloon Operator Certificate.

11.5. A copy of the manuals, or appropriate portions of the manual (and amendments) shall be made available to ground and maintenance personnel by the hot air balloon operator certificate holder and furnished to—

a) the Operators' Pilots;

b) the Authority.

11.6. Each employee of the hot air balloon operator certificate holder to whom a manual or appropriate portion of it is furnished shall keep it up to date with the amendments furnished to them.

12. Company Operations Manual

12.1. A holder of a hot air balloon operator certificate shall ensure that the operation manuals—

a) have the date of the last revision on each revised page;

b) include the name and title of each person authorized to exercise operational control.

12.2. An Operator's Operation Manuals shall at least contain—

a) procedures acceptable to the Authority to ensure that the operational and emergency equipment necessary for an intended flight is serviceable, and that the certificate of airworthiness of each balloon they operate remains valid;

b) the procedures for monitoring, accessing, and reporting operational experience;

c) balloon groups, makes and models to which the manual applies;

d) the procedures for advising the Authority of significant operational occurrences;

e) procedures for ensuring that the balloon is operated within approved limits of lift and mass and balance;

f) balloon handling procedures;

g) procedures for complying with incident or accident notification requirements;

h) procedures for ensuring that the pilot knows that the required airworthiness inspections have been made and that the balloon has been approved for return to service in compliance with applicable maintenance requirements;

i) procedures for reporting and recording mechanical irregularities that come to the attention of the pilot in command before, during, and after completion of a flight;

j) procedures to be followed by the pilot for determining that mechanical irregularities or defects reported for previous flights have been corrected or that the correction has been deferred;

k) procedures for pre-flight briefing of ground crew;

l) procedures for briefing of passengers prior to and during the flight, emergency procedures and equipment, including (where appropriate) suitable clothing, protective headgear and passenger landing positions;

m) the responsibility for supervising refueling and for ensuring that tanks and hoses are secured and free of leaks;

n) the responsibility for checking the condition and security of fire, safety and first aid equipment;

o) the responsibility for ensuring the correct completion of the aircraft technical logbook, before and after flight;

p) the responsibility for supervising the loading and unloading of the balloon;

q) the operators' policy on the carriage of children and aged or infirm or handicapped passengers;

r) provisions and use of oxygen and associated equipment;

s) instructions on restricting operating altitudes must be included if oxygen is not carried, or if a balloon

is not correctly equipped either temporarily or permanently

t) procedures for normal, abnormal, or emergency conditions;

u) procedures on altimeter setting, particularly the use of QFE and QNH, and this policy must be clearly described in operation manuals to cover all phases of flight;

v) procedures for the evacuation of a balloon and for the care of passengers following a hard landing, ditching, power line contact or other emergency are to be specified;

w) other procedures and policy instructions regarding the hot air balloon operator certificate holder's operations;

x) any other information and instructions related to the hot air balloon operator certificate's safety program.

13. Operations manual

13.1. An operator shall issue to the crew members and persons assigned operational control functions an operation manual as specified by the Authority.

13.2. The Operations Manual referred to in paragraph 13.1 shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date, and all such amendments or revisions shall be issued to all personnel that are required to use the Operations Manual.

13.3. An Operator shall submit to the Authority a copy of the Operator’s entire operations manual for the time being in force or of such parts thereof as the Authority may specify.

13.4. An Operator shall make such amendments or additions to the operations manual as the Authority may require for the purpose of ensuring the safety and security of the aircraft or of persons or cargo carried therein, efficiency or regularity of air navigation.

13.5. The Operations Manual issued under paragraph 13.1 shall contain the Operator’s overall general policies and procedures regarding the flight operations it conducts.

13.6. An Operator shall prepare and keep current an operations manual which contains the Operator’s procedures and policies for the use and guidance of its personnel.

13.7. An Operator shall issue the Operations Manual, or pertinent portions, together with all amendments and revisions to all personnel that are required to use it.

13.8. An Operator shall not provide for use of its personnel in commercial air transport any Operations Manual or its part which has not been reviewed and found acceptable or approved for the Operator by the Authority.

13.9. Unless otherwise acceptable to the Authority, each Operator shall provide an Operations Manual containing information on operations administration and supervision, accident prevention and flight safety programs, personnel training, flight crew fatigue and flight and duty time limitations, flight operations including operational flight planning, balloon performance, routes, guides and charts, minimum flight altitudes, aerodrome operating minima, search and rescue, dangerous goods, navigation, communications, security, and human factors.

13.10. The Operations Manual may be published in parts, as a single document, or as a series of volumes.

13.11. An Operator may design an Operations Manual to be more restrictive than the Authority’s requirements.

13.12. An Operator shall establish and maintain a safety management system that is appropriate to the size and complexity of the operation in accordance with the Civil Aviation (Safety Management) Regulations.

14. Aircraft maintenance program

14.1. The Operator shall provide the Authority with a copy of its Aircraft maintenance program, together with all

amendments and/or revisions to it, and shall incorporate in its mandatory material the Authority may require.

14.2. A hot air balloon operator's Aircraft maintenance program shall contain —

a) descriptions as acceptable to the Authority, to ensure that —

i) the balloon operated is maintained in an airworthy condition;

ii) the operational and emergency equipment necessary for the intended flight are serviceable;

iii) the Certificate of Airworthiness of each balloon in operation remains valid;

b) the administrative arrangements and agreements between the operator and Approved Maintenance Organizations (AMO's);

c) names and duties of the person(s) required to ensure that all maintenance is carried out in accordance with the Aircraft Maintenance Program (AMP);

d) a reference to the maintenance program provided by the operator for the use and guidance of maintenance and operational personnel concerned, approved by the Authority, with human factors principles observed in its design;

e) instructions and procedures for maintenance, preventive maintenance and servicing;

f) procedures for accessing continuing airworthiness information and implementing any resulting actions;

g) procedures for implementing action resulting from mandatory continuing airworthiness information;

h) procedures for establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance program in order to correct any deficiencies in the program;

i) methods used for the completion and retention of the operator's maintenance records;

j) the Maintenance training program, curricula, instructors, procedures and description of training system and facilities;

k) procedures for changing and refueling Fuel Cylinders and Gas Bottles;

l) fire precaution procedures during changing and refueling Fuel Cylinders and Gas Bottles;

m) procedures for safe handling of Fuel Cylinders & Gas Bottles;

n) procedures for storage, labeling/tagging and release of balloon components and materials to Balloon maintenance;

o) a description of the procedure for receiving, amending, and distributing within the organization all necessary airworthiness data from the manufacturer, group certificate holder or group design organization;

p) a description of the maintenance procedures and the procedures for completing and signing of a maintenance release when maintenance is based on a system other than that of an approved maintenance organization; and

q) quality control procedures.

15. Training Manual

15.1. The Training Manual is regarded by the Authority as the primary indication of the standard of training and testing likely to be achieved by an applicant for, or holder of, a hot air balloon operator certificate.

15.2. One copy must be submitted to TCAA with the initial application for a hot air balloon operator certificate.

15.3. For balloon operations, the Training Manual may be a Part of the Operations Manual.

15.4. In addition to the more general matters of company training policy, the following must be included in the Manual—

a) the name of the person or Approved Organization responsible for the supervision of aircrew training and testing, and the name of the authorized company group rating examiner;

b) the Designated Check Pilot (DCP);

c) minimum standards of recency and of initial and periodic training to be met by pilots for each group of balloons used by the Operator;

d) specimen record forms in respect of all training and testing;

e) emergency and survival equipment training and testing as part of the Proficiency or Area check, company pilots have to demonstrate the relevant drills and procedures required in case of an emergency occurring with the balloon;

15.5. The following equipment must be included in the Training, if carried on board—

a) an adequate and suitable first aid kit;

b) suitable fire extinguishers.

15.6. Minimum syllabus items for emergency and survival equipment training that exist in this AIC.

15.7. Company personnel shall familiarize themselves with all equipment on a regular basis.

15.8. Company personnel shall have adequate training on firefighting.

16. Balloon requirements

16.1. A hot air balloon operator certificate holder shall not operate a balloon under this Part unless the balloon operator is —

a) registered in the Tanzania [lighter-than-air] aircraft register and carries an appropriate and current Certificate of Airworthiness;

b) in an airworthy condition and meets all applicable airworthiness requirements, including those relating to identification and equipment;

c) a group certified according to this AIC.

16.2. A hot air balloon operator certificate holder may operate a balloon if it is registered in a country which is a member of the International Civil Aviation Organization provided —

a) the balloon carries a valid Certificate of Airworthiness (CoA) issued by the country of registration and meets the registration and identification requirements of that country;

b) the balloon is operated by a properly certified crew member and licensed pilot as determined by the Authority; and

c) the Authority approves the operation.

17. Management personnel

17.1. A hot air balloon operator certificate holder must have enough qualified management personnel in the following or equivalent post holders to ensure safety of its operations.

The hot air balloon operator certificate must have qualified personnel serving as permanent or contract employees in the following or equivalent positions—

a) Accountable manager;

b) Director of Operations;

c) Chief Pilot;

d) Director of Maintenance;

e) Quality Manager; and

f) Director of Safety.

17.2. Upon application by the hot air balloon operator certificate holder, the Authority may approve combined positions and numbers of positions of those listed in paragraph(1) for a particular operation if the hot air balloon operator certificate holder shows that it can perform its operations safely under the direction of combined categories of management personnel.

17.3. A hot air balloon operator certificate holder shall —

a) set forth the duties, responsibilities, and authority of the personnel required by this section of the manual required by this Part;

b) list in the manual the name of the person or persons appointed to the position or positions; and

c) notify the Authority of any change made to the post holders in the listed positions within ten working days.

18. Management personnel qualifications

18.1. Accountable Manager, under item 17, must have authority to ensure all activities falling within the scope of this AIC shall be financed and carried out in accordance with essential requirements of the Authority, and managerial experience and understanding of how to establish and maintain an effective management system.

18.2. To serve as Director of Operations under this Part, a person must —

a) hold or have held a Commercial Pilot License Balloon (CPL-B) rating and the associated group ratings appropriate to the relevant group of operation;

b) hold or have held a commercial pilot license if the PIC requirements for the largest aircraft in the AOC operations require only a commercial pilot licence; or

c) at least have three years in the management of commercial air transport operations or successfully completed a management training recognized by the Authority.

18.3. To serve as Chief Pilot under this Part, a person must —

a) hold a valid Commercial Pilot License Balloon (CPL-B) rating for at least the last three (3);

b) hold appropriate ratings for the largest balloon group used in the AOC holder's operations;

c) have at least three years' experience in the management of commercial air transport operations or successfully completed a management training recognized by the Authority.

18.4. To serve as director of maintenance and to conduct Airworthiness Inspections under this AIC, a person must —

a) hold an Aircraft Maintenance License or a pilot license or an appropriate maintenance Authorization from the Authority with a valid manufacturer's maintenance certificate on the relevant Balloon category;

b) have a minimum experience of at least three years in maintenance of Balloons;

c) have a minimum of one (1) year of experience in a position responsible for returning/release of the Balloon to service.

18.5. To serve as Quality Manager under this Part, a person must—

a) be a technically qualified person in the field of hot air balloon maintenance, or flight or ground operations; with qualifications such as a degree, diploma in related field, or manufacturer's maintenance certificate or holds or have held a license issued by the Authority;

b) have three (3) years' experience in a comparable position or technical experience in another civil aviation field or military branch of service;

c) have successfully completed training in quality management recognized by the Authority.

18.6. To serve as Director of Safety under this Part, a person shall—

a) be a technically qualified person in the field of hot air balloon maintenance, or flight or ground operations, with qualifications such as a degree, diploma in a related field, or manufacturer's maintenance certificate or hold or have held a license issued by the Authority;

b) have three (3) years' experience in a comparable position or technical experience in another civil aviation field or military branch of service;

c) have successfully completed a training in safety management systems course recognized by the Authority.

18.7. A hot air balloon operator certificate holder may request a deviation to employ a person who does not meet the appropriate crew member, managerial, or supervisory experience requirements of this section if the Authority finds that the person has comparable experience and can effectively perform the functions associated with the position in accordance with the Civil Aviation Regulations and the procedures outlined in the hot air balloon operator certificate's manual.

18.8. The Authority may, at any time, terminate any grant of deviation authority issued under this AIC.

19. Adequacy and Supervision of Staff

19.1. Hot air balloon operator certificate holder shall, with regard to pilots —

a) satisfy the Authority that they have enough pilots for the operations to be undertaken;

b) ensure that all pilots are aware of their individual responsibilities in relation to the legality and currency of any Flight Crew Licenses and associated ratings and certificates held and noting that flying with an applicable element of a license out of date is illegal and may invalidate insurance cover;

c) where the Authority has accepted, employs part-time or 'Contract' pilots and ensures that company indoctrination training, initial ground and flight training, and proficiency checks are carried out to establish their competence for flight irrespective of whether pilots are part-time or full-time employees as per the Operator's Operations Manuals

d) ensure that check flights conducted on behalf of another Operator may be accepted under arrangements set out in the company's Training Manual and further that the pilot is a Designated Check Pilot approved and monitored by the Authority and is competent to perform all the duties and responsibilities laid upon him by the Operator.

19.2. Hot air balloon operator certificate holder shall, with regard to the Chief Pilot —

a) ensure the appointment of a Chief Pilot that shall be made for the supervision of pilots by a person with the experience and qualifications necessary to ensure the oversight and maintenance of professional standards;

b) ensure that the duties and responsibilities of the Chief Pilot are clearly defined. The Authority will require verification that arrangements for the professional supervision and experience levels of balloon pilots are properly related to the Operations Specifications of the hot air balloon operator

certificate.

19.3. Hot air balloon operator certificate holder shall ensure that all certifying staff shall be appropriately certified maintenance personnel or other person approved by the Authority.

19.4. Hot air balloon operator certificate holder shall, with regard to ground crew —

a) ensure that the sufficient number of ground crew for the operation is determined by the nature and the scale of operations and available as needed and the Authority shall take full account of an Operator's particular circumstances;

b) ensure that the operations staff are suitably trained personnel who have a complete understanding of the nature of their duties and responsibilities; and

c) ensure that the Ground/Retrieve crews are trained for, and experienced in, all aspects of normal and emergency procedures. Note: Responsibility for the training and supervision of ground staff rests with the company Director of Operations.

20. Safety Management Systems

Hot air balloon operator certificate holder shall establish, implement, maintain, and adhere to a safety and quality assurance management system that is appropriate to the size, nature and complexity of all activities authorized and stipulated in the Operational Specifications of the hot air balloon operator certificate and as provided for under the Civil Aviation (Safety Management) Regulations.

21. Facilities

21.1. Hot air balloon operator certificate holder shall ensure that —

a) the nature and scale of the main Base office services required (clerical staff and equipment) are related to the number of other staff employed;

b) the base of operations and support services are sufficient to ensure that all operational functions, systems and instructions are produced and circulated to all concerned without delay. Note: Radios and telephones shall be manned or recorded while operations are in progress;

c) the office space at the Base of Operations is sufficient to provide a suitable working environment for air and ground crew for all operations;

d) there is adequate provision made for operational planning and for the display and storage of essential records and for Pre- and Post-flight planning;

e) the storage facilities —

i) provide for parts, equipment, tools and materials;

ii) provide security and record-keeping for serviceable parts, unserviceable parts, segregation of serviceable from unserviceable parts, and prevent deterioration of and damage to stored items; and

iii) provide for the fuel and gas cylinders' store, which are separated from other stores.

22. Inspection by the Authority

22.1. A balloon operator certificate holder (or applicant for a hot air balloon operator certificate) shall grant unrestricted and unlimited access for the Authority inspectors to inspect its personnel, facilities, equipment, documents and records to determine —

a) eligibility to continue to hold the hot air balloon operator certificate;

b) compliance with Civil Aviation Regulations.

22.2. Failure to comply with paragraph 22.1 shall be a basis to suspend, withdraw or revoke any certificate

issued under this AIC.

23. Operations Library

23.1. Hot air balloon operator certificate holder shall, at the operating base—

a) maintain an adequate library of Operations Manuals, maps, charts, aircraft manuals, flight guides and other documents needed for reference and planning purposes or for use in flight;

b) ensure that the library is kept in an orderly fashion with responsibility for its maintenance clearly defined; and

c) ensure that arrangements are made for the amendment of manuals, flight guides and for bringing the amendments to the notice of pilots and other operations staff and a record shall be maintained of the distribution of manuals and amendments.

24. Occurrence Reports

24.1. The hot air balloon operator certificate holder shall assign responsibility for issuing occurrence reports to a suitably qualified safety officer appointed for the purpose.

24.2. Reports shall be made to the Authority through the official Occurrence Report Form.

24.3. Where appropriate, the circumstances of an incident shall be made generally known within the hot air balloon operator certificate holder.

24.4. The originators of occurrence reports shall be informed of the outcome of any subsequent investigations and full use shall be made of the facilities provided by the Authority for the exchange of information on incidents and accidents.

24.5. Hot air balloon operator certificate holder shall report to the Authority any occurrence interpreted as being within the guidance in the mandatory occurrence reporting form.

25. Record keeping requirements

Hot air balloon operator certificate holder shall keep at its Operating Base and principal business office or at other places approved by the Authority, and shall make available for inspection by the Authority the following —

a) the air operator’s certificate and associated operations specifications certificate;

b) an individual record of each pilot used in operations under this AIC, including the following information—

i) the full name of the pilot;

ii) the pilot’s licence (by group and number) and ratings held;

iii) the pilot's aeronautical experience in sufficient detail to determine the pilot's qualifications as PIC on balloons in operation under this AIC;

iv) the class and validity of the medical certificate that the pilot holds;

v) the English level of proficiency and validity for a flight radio operator’s licence;

vi) any action taken concerning the pilot's release from employment for physical or professional disqualification;

vii) training records of requisite courses and their validity; and

viii) a hot air balloon operator certificate holder shall keep all records required by this section for at least twenty-four months.

26. Crew Member: Limitations on use of services

26.1. No hot air balloon operator certificate holder may use the services of any person as an air crew member unless the person performing those services —

a) holds a current Commercial Balloon Pilots Licence CPL(B) and appropriate medical certification;

b) is qualified, under this AIC for the operation; and

c) has received sufficient ground and flight training to be familiar with the operator's policies and procedures, area of operation and local weather conditions.

Note: *Familiarization flight training shall consist of at least two flights at the operator's area of operation. The operator shall record, for ground training, the subject and time in hours of that training, and for flight training, the hours and number of flights in that pilot's training record. The training record must also state that the operator considers that the pilot is competent to perform the assigned duties and the date of assignment to those duties.*

26.2. The pilot-in-command shall —

a) be responsible for the safety of the balloon and of any person or property carried therein during balloon operations;

b) be responsible for the initiation, continuation or termination of a flight in the interest of safety;

c) ensure that all applicable operational procedures and checklists are complied with;

d) only commence a flight if he or she is satisfied that all operational limitations are complied with, as follows—

i) be responsible for the pre-flight briefing of persons assisting in the inflation and deflation of the envelope;

ii) be satisfied that relevant emergency equipment remains easily accessible for immediate use;

iii) ensure that no person is smoking on board or within the direct vicinity of the balloon;

iv) not allow a person to be carried in the balloon who appears to be under the influence of psychoactive substances to the extent that the safety of the balloon or of any person or property carried therein is likely to be endangered;

v) remain during flight in control of the balloon at all times except if another pilot is taking the controls;

vi) give all commands and take any appropriate actions for the purpose of ensuring the safety of the balloon and of any person or property carried therein;

vii) take any action in an emergency situation that requires immediate decision and action which he or she considers necessary under the circumstances and in such cases he or she may deviate from rules, operational procedures and methods to the extent necessary in the interest of safety;

viii) submit a report of an act of unlawful interference without delay to the competent authority and inform the local authority where the unlawful interference took place; and

ix) take all reasonable measures to prevent dangerous goods from being carried on board the balloon inadvertently.

26.3. The pilot-in-command shall not release dangerous goods when operating a balloon over congested areas of cities, towns or settlements or over an open-air assembly of persons.

26.4. Notwithstanding paragraph 26.3, parachutists may exit the balloon for the purpose of parachute display over those congested areas or over that open-air assembly of persons whilst carrying smoke trail devices

that were manufactured for that purpose.

26.5. The hot air balloon operator certificate holder shall issue instructions concerning the consumption of alcohol by the pilot-in-command and the crew members.

26.6. The instructions on alcohol consumption shall not be less restrictive than the following —

a) no alcohol shall be consumed less than eight hours prior to an operation;

b) the blood alcohol level shall not exceed the lower of the national requirements or 0.2 grams of alcohol in 1 litre of blood at the start of an operation; and

c) no alcohol shall be consumed during the operation.

27. Airworthiness checks

The Pilot-in-Command shall not begin a flight unless the pilot determines that all required pre-flight airworthiness inspections have been made and that the balloon is in condition for safe flight with all required instruments and equipment in working order.

28. Minimum altitudes

Except when necessary for takeoff and landing, no person may operate a balloon at an altitude less than 500 feet above the surface unless they have a valid Low Flying Authorization or Approval from the Authority.

29. Operating Limitations

29.1. The operation shall be conducted from a suitable, level launching area free of obstacles that may cause damage to the balloon.

29.2. The operator shall provide an area for occupants and spectators located at a distance equal to the height of the balloon from the location of balloon inflation and launching.

29.3. The operator shall ensure that occupants are briefed to board the basket only when directed to do so by the pilot and that they must remain in their places during the flight as instructed by the pilot.

29.4. The pilot or qualified ground crew shall be assigned to direct to oversee all necessary precautions during refueling, such as prevention of smoking and prevention of static electricity in the area of fueling.

29.5. The pilot shall be responsible for obtaining all necessary information for the safety of the flight, including the suitability of weather and wind conditions for the operation, emergency procedures and alternate landing areas.

29.6. The pilots shall use a pilot restraint harness fitted to all public transport balloons.

29.7. The pilot shall ensure that the harness is worn and attached before the balloon ground restraint is released, worn throughout the flight, and not released until the end of the flight and the balloon has come to a complete and final stop.

29.8. The pilot shall ensure that all passengers wear harnesses and are attached before the balloon ground restraint is released, worn throughout the flight and not released until the end of the flight and the balloon have come to a complete and final stop

29.9. The operator shall ensure that the location or design of the handholds protects the hands from impact during a landing.

30. Performance: Climb

30.1. All balloons must be operated within the climb and descent limitations as per the manufacturer's flight manual.

30.2. The Aircraft Flight Manual must show compliance with the requirements of this section by performance

charts or graphs at each altitude and ambient temperature for which the balloon is to be operated.

31. Instruments and equipment

In addition to any equipment required by the Authority for a specific group of operation, the following equipment is required —

a) protective gloves for the pilot (made of natural fibers and provide heat protection);

b) secondary source of ignition

c) a variometer (vertical speed indicator);

d) altimeter;

e) watch (timepiece);

f) one suitable first aid kit;

g) one fire extinguisher with a minimum capacity of 2 kg when using dry powder, or when the extinguishing means is other than dry powder, be at least of comparable effect and capacity;

h) a fuel gauge or other means which indicate the remaining fuel quantity;

i) envelope temperature indicators, which may be of the continuous reading group or a group which gives a warning signal;

j) appropriate means of VHF communications between the balloon and other balloons and aircraft; and

k) appropriate means of two-way communications between the balloon and the ground crew.

l) Handheld GPS for situation awareness

32. Weather reporting facilities

32.1. Hot air balloon operator certificate holder must show that adequate weather reporting services are available to ensure forecasts necessary for the operation at the launch site and expected landing site.

32.2. The hot air balloon operator certificate holder shall adopt and put into use a system for obtaining weather reports and forecasts acceptable to the Authority.

CONTINUING AIRWORTHINESS REQUIREMENTS

33. Requirements for maintenance, inspections and appropriately rated personnel

33.1. The owner shall ensure that all maintenance and inspections performed on balloons registered in Tanzania shall be conducted in accordance with the Aircraft maintenance programme (AMP) approved by the Authority.

33.2. The AMP shall contain information and be in a format that will be set by the Authority.

33.3. The aircraft maintenance program shall contain a detailed description of the balloon and its components shall include for each balloon—

a) a description of the systems including the assembly and disassembly instructions;

b) a parts list covering all construction and equipment components and the assemblies and, where applicable, individual parts shall be numbered to relate to the different assemblies and that their number corresponds to the group plate of the assembly; and

c) a summary of the materials and consumables used with procurement details.

33.4. All major repairs or modifications shall be conducted by an approved maintenance authorization holder, approved repair station, or by the balloon manufacturer.

33.5. Repairs or modifications not contained in the manufacturer's aircraft maintenance program shall be considered major and shall require approval by the Authority prior to such repairs or modifications being performed.

33.6. The owner shall provide two copies of the aircraft maintenance program (AMP) and any subsequent amendments or changes to the Authority for approval.

33.7. An appropriately certified person or organization performing maintenance of aircraft and components shall be responsible for the maintenance tasks being performed.

33.8. The owner shall grant the Authority access to the aircraft and the aircraft records, for the Authority to determine compliance with the requirements of this AIC.

34. Responsibility for airworthiness

34.1. The balloon owner shall be responsible for —

a) the airworthiness of its balloons; and

b) the performance of the maintenance, preventive maintenance, and alteration of its balloons, including appliances, emergency equipment, and parts thereof, in accordance with its manual and the Regulations of this Part.

34.2. The balloon owner may make arrangements with or contract externally for the performance of any maintenance, preventive maintenance, or alterations; however, this does not relieve the owner of the responsibility specified in paragraph 34.1.

35. Maintenance Support Arrangements

35.1. The owner shall demonstrate to the Authority that maintenance is carried out to a satisfactory standard.

35.2. The owner may contract out his or her maintenance in full or part to another company approved by the Authority.

35.3. The owner remains responsible for the safe operation of his or her balloon when maintenance is contracted out and shall therefore be satisfied with the standards of airworthiness achieved by the contractor.

35.4. The owner shall monitor the contractor’s response to the provisions of the maintenance agreement, employing such technical resources as are necessary to achieve this task.

36. Owner’s responsibilities

36.1. The owner shall establish procedures to ensure —

a) that all appropriate Aircraft maintenance programs, Service Bulletins, the regulatory requirements or foreign mandatory inspections, modification publications and any other supporting information necessary for the maintenance of a particular balloon are available to personnel working on the balloon;

b) that all such publications are kept up-to-date and that the Approved Maintenance Schedule is regularly reviewed to reflect the maintenance requirements of the balloon;

c) if applicable, the maintenance schedule shall include instructions for continued airworthiness (e.g., recommended inspections or mandatory replacement of parts) to ensure the suitable protection of parts against deterioration or loss of strength, objective pass or fail criteria e.g., applicable wear tolerances should be provided;

d) that all manufacturer’s service information is evaluated and appropriate action taken as considered necessary;

e) that all required scheduled maintenance, mandatory inspection modifications and defect

rectifications are carried out;

f) that all technical documentation such as log books and work sheets are maintained in a complete and up-to-date manner;

g) that defects are rectified before the next flight endorsed in the Technical Log Book; and

h) that the organization responsible for group certification of each balloon group (usually the manufacturer) receives adequate reports of all airworthiness occurrences to that group, to enable the issue of appropriate service instructions and recommendations to all operators.

36.2. The owner shall ensure that a procedure acceptable to the Authority to ensure that—

a) all routine servicing or maintenance is carried out including pre- and post-flight checks;

b) the defects affecting airworthiness, or the safe operation of the balloon are recorded in the appropriate Sector Record Page of the Technical Log Book; and

c) defects are rectified before flight by appropriately qualified and authorized persons.

36.3. The owner shall establish procedures to ensure that the Approved Maintenance Program (AMP) is reviewed periodically to ensure that the schedule requirements continue to have practical applicability in the light of experience, utilization and age and adequately meet the maintenance requirements of the balloon if continuing airworthiness is to be ensured.

37. Contracted-Out Maintenance

37.1. Contracted arrangements for engineering support and maintenance do not absolve an owner from the overall responsibility for ensuring the safe operation and continuing airworthiness of the balloon.

37.2. There shall be an agreement in force between the owner and the nominated outstanding maintenance company giving full details of the division of responsibilities for maintenance control.

37.3. An owner shall nominate a person for liaison purposes on all matters relating to the maintenance agreement and for airworthiness matters affecting the safe operation of the balloon, and this person shall be responsible to the owner for planning the timely presentation of the balloon to the maintenance organization for all contracted maintenance.

37.4. To be able to discharge its responsibilities for continued airworthiness and to issue a Maintenance Release, the nominated maintenance organization shall satisfy itself continually that the requirements of the Approved Maintenance Program are being complied with.

37.5. The agreement shall clearly define the responsibilities for the assessment and incorporation of manufacturer's Service Information.

37.6. In its assessment of the overall maintenance support arrangements provided by the Operator, the Authority shall examine and may require to hold copies of all agreements, including side letters and addenda, between the parties concerned.

37.7. Any proposal to change the maintenance arrangements shall be notified to the Authority.

37.8. Arrangements other than in accordance with this AIC shall need to be specifically agreed with the Authority.

37.9. The owner shall ensure that the nominated maintenance company competently discharges its responsibilities under the agreement to its satisfaction and is also responsible for demonstrating to the Authority that the maintenance organization meets its responsibilities, in so far as they relate to the contracted work.

37.10. Whenever a balloon is presented for scheduled or unscheduled maintenance, it is essential that a precise indication is given of the inspections required, all defects known to exist on the balloon, plus any additional

work required to be carried out.

37.11. In exercising its responsibilities for the overall control of maintenance, the owner must be satisfied with the completion and certification of all tasks performed by the nominated maintenance organization.

37.12. The owner shall have a procedure to ensure that the necessary components or parts are made available or ordered on a priority basis, and that they are fitted on the balloon before the next flight.

38. Technical Records

38.1. The owner shall ensure that the completion of the balloon technical records and—

a) that it is its responsibility to ensure that the hours of service or elapsed times quoted in the approved maintenance program are not exceeded with regard to components and structural assemblies, and that scheduled maintenance periods are adhered to;

b) to record the number of hours or flights, when this information is specified in the approved maintenance program or manufacturer's manuals as a basis for inspection or other necessary action; and

c) to process the foregoing information into the appropriate logbooks or equivalent records, to maintain the records and documents concerning overhaul and repair work, component changes, mandatory modifications and inspections.

38.2. An approved electronic database program may be used as part of a technical records system with the authorization of the Authority.

38.3. Procedures shall be instituted to ensure that the electronic records provide storage, preservation and retrieval to the same level as would have been achieved by hard copy records.

38.4. The Authority's acceptance of electronic recording shall not exempt the operator or his or her contracted maintenance company from the keeping and retention of records.

39. Airworthiness Directives and Manufacturers' Technical Information

39.1. The owner shall have procedures to ensure that Airworthiness Directives (AD's) are complied with as required.

39.2. When the manufacturer's service information is received, an immediate assessment shall be made to establish the applicability.

39.3. A record of all Airworthiness Directives and non-mandatory modifications is to be kept.

39.4. The record in paragraph 39.3 shall list all AD's generally applicable to the group, including those not specifically applicable to the individual balloon, including the reason for non- applicability.

39.5. The Operator shall ensure that the relevant balloon manufacturer is aware that they are users of the balloon equipment so that all relevant service information, details of in-service experience of the balloon and amendments to manuals, including the Flight Manual, are received and embodied on time.

39.6. The owner shall hold and make available to personnel concerned the necessary technical data, including the Civil Aviation Regulations, manufacturer's manuals, any relevant service information, any other related literature appropriate to the balloon groups operated by the owner, certificates and copies of appropriate company manuals, procedures and instructions. Note: A person shall be appointed to be responsible for the technical library.

39.7. Arrangements shall be made for the supply of amendments, so that all publications are kept up-to-date, and of any additional technical information relevant to the work undertaken.

39.8. Arrangements shall be made for manuals or sections of manuals, schedules, service information, appropriate to the work undertaken, to be made available and a suitable procedure maintained to ensure

that such information is kept up to date.

40. Preparation of Balloon for Flight

40.1. The pilot-in-command of the aircraft shall be responsible for the satisfactory accomplishment of the preflight inspection and the inspection shall be carried out by the pilot or another qualified person but need not be carried out by an approved maintenance organization or by certifying staff.

40.2. In respect of the maintenance of the Balloon, the owner shall have procedures to —

a) ensure that the operations manual and maintenance program contain the Authority's approved pre-flight inspection checklist to be completed by certified personnel, with which to verify that the balloon continues to be serviceable;

b) provide information in the Technical Log to advise the commander when the next Scheduled Maintenance Inspection (SMI) is due, by flying hours and calendar time;

c) ensure that a procedure acceptable to the Authority exists for the control of maintenance actions necessary between Scheduled Maintenance Inspections where it may not be practicable to include full details in the Technical Log and in such cases, it should be possible for flight crew to verify that no maintenance task is due or will become overdue before the end of the intended flight;

d) provide any other information to the crew concerning the balloon and its systems, including changes resulting from modifications, which may affect the operation of the balloon; and

e) have procedures which will ensure that —

i) fuel uplifted prior to flight is free from contamination;

ii) refueling of the balloon is carried out in a controlled manner considering essential safety measures for fire prevention and that refueling is carried out a reasonable distance from the balloon storage area;

iii) proper attention is given to the rectification of recorded defects;

iv) the balloon is serviced and inspected as required by the approved maintenance schedule; and

v) all emergency and survival equipment within the balloon is serviced and inspected as required by the approved maintenance schedule.

41. Technical Log, Sector Record Page

41.1. A Technical Log shall be kept for any balloon with a Certificate of Airworthiness and filled in at the beginning and at the end of every flight.

41.2. The balloon commander shall enter the following details —

a) the times when the balloon took off and landed;

b) particulars of any defect known if it affects the airworthiness or safe operation of the balloon;

c) any other particulars required by the Authority;

d) the Commander's signature and the date; and

e) maintenance control and Flight Crew advisory information in the Technical Log for use during the routine operation of the balloon between scheduled maintenance inputs.

41.3. Each sector record page shall include provision to record —

a) the balloon group and registration;

b) the date, place and times of take-off and landing;

c) the name and address of the owner (the address may be omitted if it is printed on the title page to the log);

d) particulars of defects and rectification action taken;

e) the completion of the pre-flight inspection;

f) the fuel state at departure;

g) a pre-printed Maintenance Release with provision for a signature, date and authority for issue, in such a position as to be readily identifiable with the defect entry to which it relates;

h) the running total of flying hours so that the flying hours remaining to the next inspection can be readily determined, and the date of such inspection;

i) the post-flight signature of the balloon commander and the date; and

j) the Sector Record Page layout which shall be divided to show clearly what is required to be completed after flight and what is required to be completed in preparation for the next flight.

42. Retention of Records

42.1. All entries made in a Technical Logbook Sector Record Page shall be made in triplicate with provision for one copy to be removed from the Technical Log and retained on the ground before the flight commences.

42.2. The Technical Log shall be carried within the recovery vehicle, where it is not reasonably practicable for the Technical Log to be carried on the balloon flight.

42.3. Arrangements shall be made to extract information recorded in the Sector Record Page for use by the maintenance crew and additional copies of the page may be necessary for this purpose.

42.4. All entries made on a Technical Logbook shall be retained by the owner for a period of not less than two years after the particular balloon has been destroyed or permanently withdrawn from service, unless the Authority specifies a different retention period in a particular case.

42.5. If the certificate owner ceases to be the owner of the balloon, he or she remains responsible for the transfer of the balloon records to the new operator.

TETHERED OR MOORED BALLOONS

43. Applicability

This Part shall apply to a balloon that is tethered or moored to the surface of the earth or an object thereon, and that has a diameter of more than 6 feet or a gas capacity of more than 115 cubic feet.

44. Operating limitations

44.1. A person shall not operate a tethered or moored balloon—

a) less than 500 feet from the base of any cloud;

b) more than 500 feet above the ground;

c) from an area where the ground visibility is less than three miles.

44.2. paragraph 44.1 shall not apply to the operation of a tethered balloon below the top of any structure and within 250 feet of it, if that shielded operation does not obscure any lighting on the structure.

45. Notice requirements

A person shall not operate an unshielded tethered or moored balloon more than 150 feet above the surface of the earth unless, at least 24 hours before beginning the operation, he gives the following information to the Air Traffic Control (ATC) facility that is nearest to the place of intended operation—

a) the names and addresses of the owners and operators;

b) the size of the balloon;

c) the location of the operation;

d) the height above the surface of the ground at which the balloon is to be operated; and

e) the date, time and duration of the operation.

46. Lighting and marking requirements

46.1. A person shall not operate a tethered or moored balloon between sunset and sunrise unless the balloon, and its mooring lines, are lighted so as to give a visual warning equal to that required for obstructions to air navigation by the Authority.

46.2. A person shall not operate a tethered or moored balloon between sunrise and sunset unless its mooring lines have colored pennants or streamers attached at not more than 50 feet intervals beginning at 150 feet above the surface of the ground and visible for at least one mile.

47. Operations in prohibited or restricted areas

A person shall not operate a tethered or moored balloon, kite, or unmanned free balloon in a prohibited or restricted area without permission from the controlling agency, as appropriate

48. Hazardous operations

48.1. A person shall not operate a tethered or moored balloon or unmanned free balloon in a manner that creates a hazard to other persons or their property.

48.2. A person operating a tethered or moored balloon shall not allow an object to be dropped therefrom if such action creates a hazard to other persons or their property.

49. Rapid deflation device

A person shall not operate a tethered or moored balloon unless it has a device that will automatically and rapidly deflate the balloon if it disconnects from its moorings and if the device does not function properly, the operator shall immediately notify the nearest ATC facility of the location and time of the tether break and the estimated direction of flight path of the balloon.

50. Waivers

A person shall not conduct operations that require a deviation from this AIC except under an exemption issued by the Authority.

FLIGHT CREW REQUIREMENTS

51. Composition of the flight crew

The flight crew shall be as specified in the operations manual or other documents associated with the certificate of airworthiness, when necessitated by considerations related to the group of balloons used, group of operation involved, and the duration of the flight.

52. Flight Crew Member Emergency Duties

The balloon operator shall assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation, and annual training in accomplishing these functions shall be contained in the operator's training programme and shall include instruction in the use of all emergency and life-saving equipment required to be carried, and drills in the emergency evacuation of the balloon.

53. Flight Crew Member Training Programmes

53.1. The operator shall establish and maintain a ground and flight training programme, approved by the Authority, which ensures that all flight crew members are adequately trained to perform their assigned duties and the training programme shall —

a) include ground and flight training facilities and properly qualified instructors as determined by the Authority;

b) consist of ground and flight training for the group (s) of balloons on which the flight crew member serves;

c) include proper flight crew coordination and training for all groups of emergency and abnormal situations or procedures caused by envelope, fuel systems malfunctions, fire or other abnormalities;

d) include training in knowledge and skills related to the flight procedures for the intended area of operation, human performance and threat error management and, where applicable, procedures specific to the environment in which the balloon is to be operated;

e) ensure that all flight crew members know the functions for which they are responsible and the relation of these functions to the functions of other crew members, particularly concerning abnormal or emergency procedures;

f) include company indoctrination training, crew resource management, and security training; and

g) be given on a recurrent basis, as determined by the Authority, and shall include an assessment of competence.

53.2. The requirement for recurrent flight training in a particular group of balloon shall be considered fulfilled by the completion of the proficiency check required by this AIC in any balloon of the same or bigger group within the appropriate period.

54. Recent Experience: Pilot in Command

The operator shall not assign a pilot-in-command to operate at the flight controls of a balloon during take-off and landing unless that pilot-in-command has operated the flight controls group during at least 3 take-offs and landings within the preceding 6 months on a balloon of the same or bigger balloon group.

55. Pilot in Command operational qualification

55.1. The operator shall not utilize a pilot as pilot-in-command of a balloon on an operation for which that pilot is not currently qualified until such pilot has complied with paragraph 55.2 and 55.3.

55.2. Each such pilot shall demonstrate to the operator an adequate knowledge of the operation to be flown, and this shall include knowledge of —

a) the terrain and minimum safe altitudes;

b) the seasonal meteorological conditions;

c) the meteorological, communication and air traffic facilities, services and procedures;

d) the search and rescue procedures; and

e) the navigation facilities and procedures associated with the route the route or area in which the flight is to take place.

55.3. A pilot-in-command shall have made two (2) flights, representative of the operation with which the pilot is to be engaged, which shall include a landing at a representative landing site, as a member of the flight crew and accompanied by a pilot who is qualified for the operation.

55.4. The operator shall maintain a record, sufficient to satisfy the Authority of the qualification of the pilot and

of the manner in which such qualification has been achieved.

55.5. The operator shall not continue to utilize a pilot as a pilot-in-command on an operation in an area specified by the operator and approved by the Authority unless, within the preceding six months, the pilot has made at least one representative flight as a pilot member of the flight crew, or as a check pilot.

55.6. If more than six months elapse in which a pilot has not made such a representative flight, prior to again serving as a pilot-in-command on that operation, that pilot must re-qualify in accordance with paragraph 55.2 and 55.3.

56. Pilot Proficiency Checks

56.1. An operator shall ensure that piloting technique and the ability to execute emergency procedures are checked every 12 months in such a way as to demonstrate the pilot's competence on the biggest group of balloons the pilot shall be assigned to operate.

56.2. A person shall not serve nor shall any Operator use a person as a pilot flight crew member unless that person has passed the proficiency check prescribed by the Authority on the biggest group of balloons on which their services are required.

57. Flight time, flight duty periods and rest periods

57.1. The operator shall establish policies and procedures specifying the limitations applicable to the flight time and flight duty periods for flight crew members, and these policies and procedures shall also make provision for adequate rest periods and shall be such as to ensure that fatigue occurring either in a flight or successive flights or accumulated over a period of time due to these and other tasks does not endanger the safety of a flight

57.2. The operator shall formulate rules to limit flight time and flight duty periods and for the provision of adequate rest periods for all its crew members, and these rules shall be in accordance with the Regulations established by the Authority and included in the operations manual.

57.3. The operator shall maintain current records of the flight time, flight duty periods and rest periods of all its crew members.

CREW MEMBERS QUALIFICATIONS

58. Company procedures indoctrination

58.1. A person shall not serve, nor shall a Balloon Operator Certificate (AOC) holder use a person as a crew member or flight operations officer unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of operations manual procedures pertinent to the crew member or flight operations officer's duties.

58.2. An Operator shall ensure that all operations personnel are provided with company indoctrination training that covers the following areas —

a) operator's organization, scope of operation, and administrative practices as applicable to crew member assignments and duties;

b) appropriate provisions of the Civil Aviation Regulations and other applicable Regulations and guidance materials;

c) AOC holder policies and procedures;

d) applicable crew member manuals; and

e) appropriate portions of the AOC holder's operations manual.

58.3. An Operator shall provide a minimum of eight programmed hours of instruction for basic indoctrination

training unless a reduction of the hours of instruction is approved by the Authority.

59. Dangerous goods training

A balloon operator shall establish and maintain approved staff training programmes as required by the Technical Instructions.

60. Crew resource management training

60.1. A person shall not serve, nor shall any Operator use a person as a crew member or flight operations officer unless that person has completed the initial crew resource management (CRM) curriculum approved by the Authority.

60.2. An AOC holder shall ensure that all crew members have crew resource management training as part of their initial and recurrent training requirements.

60.3. A crew resource management training program shall include —

a) an initial indoctrination segment; or awareness

b) a method to provide recurrent practice and feedback; and

c) a method of providing continuing reinforcement.

60.4. Curriculum topics to be contained in an initial crew resource management training course include—

a) communication processes, behavior, and decision-making

b) internal and external influences on interpersonal communications;

c) barriers to communication;

d) listening skills;

e) decision-making skills;

f) effective briefings;

g) developing open communications;

h) inquiry, advocacy, and assertion training;

i) crew self-critique;

j) conflict resolution;

k) team building and maintenance;

l) leadership and fellowship training;

m) individual factors;

n) stress reduction;

o) threat and error management overview;

p) fitness and health including use of psychoactive substances;

q) interpersonal relationships;

r) workload management;

s) situational awareness;

t) how to prepare, plan and monitor task completions;

u) workload distribution; and

v) distraction avoidance.

61. Initial emergency equipment drills

61.1. A person shall not serve, nor shall any Balloon Operator Certificate (AOC) holder use a person as a crew member unless that person has completed the appropriate initial emergency equipment curriculum and drills for the crew member position approved by the Authority for the emergency equipment available on the aircraft to be operated.

61.2. A crew member shall accomplish complete emergency training during the specified training periods, using all the items of emergency equipment installed in the company balloons.

62. Initial, transition, and upgrade balloon ground training: Flight Crew

62.1. A PIC upgrading to a new balloon group shall complete a minimum of five (5) training flights including take-offs and landings performing the duties of a PIC under the supervision of a pilot qualified to act as pilot in command on that balloon group.

62.2. In the case of an upgrading PIC, the check pilot serving as PIC shall ensure the transitioning pilot has satisfactorily demonstrated to the authorized instructor that he is qualified to perform the duties of a PIC for that group of balloons in all phases of a flight, including take-off and landing.

63. Route and area checks: Pilot qualification

63.1. A person shall not serve nor shall any Operator use a person as a pilot unless, within the preceding twelve (12) months, that person has passed a route check in which the person satisfactorily performed assigned duties in one of the groups of balloons to be flown.

63.2. A PIC of a balloon shall demonstrate special operational competency by navigation over the area as PIC under the supervision of a check pilot on an annual basis by demonstrating a knowledge of —

a) the terrain and minimum safe altitudes;

b) the seasonal meteorological conditions;

c) the search and rescue procedures;

d) procedures applicable to flight paths over heavily populated areas of high air traffic density, obstructions, physical layout, and applicable operating minima; and

e) the meteorological, communication and air traffic facilities, services and procedures.

63.3. An Area check may be combined with a proficiency check, if the check is conducted on the biggest group of balloons the pilot will be assigned to serve as pilot in command.

64. Recurrent, requalification training and checking: Flight Crew Members

64.1. An operator shall ensure that —

a) a flight crew member undergoes recurrent training listed in paragraph 64.2 and checking in paragraph 64.3 and that all such training and checking is relevant to the group of balloons on which the flight crew member operates; and

b) a recurrent training and checking programme is established in the operations manual and approved by the Authority.

64.2. Recurrent training referred to in paragraph 64.1 shall be conducted by the following personnel —

a) ground and refresher training: by suitably qualified personnel;

b) emergency and safety equipment training: by suitably qualified personnel;

c) crew resource management training: by suitably qualified personnel to integrate elements of crew

resource management into all phases of recurrent training; and

d) modular crew resource management training: by at least one Crew Resource Management (CRM) trainer acceptable to the Authority who may be assisted by experts to address specific areas.

64.3. The recurrent checking referred to in paragraph 64.1 shall be conducted for the operator proficiency checks by a check pilot authorized by the AOC holder and accepted by the Authority.

64.4. The period of validity of an operator proficiency check shall be —

a) twelve months in addition to the remainder of the month of issue; or

b) if issued within the final three months of validity of a previous operator proficiency check, extended from the date of issue until twelve months from the expiry date of that previous operator proficiency check.

64.5. An operator shall ensure that each flight crew member undergoes training on the location and use of emergency and safety equipment carried.

64.6. The period of validity of an emergency and safety equipment check referred to in paragraph 64.5 shall be —

a) twelve months in addition to the remainder of the month of issue;

b) if issued within the final three months of validity of a previous emergency and safety check, extended from the date of issue until twelve months from the expiry date of the previous emergency and safety equipment check.

64.7. An operator shall ensure that —

a) elements of CRM are integrated into all appropriate phases of the recurrent training; and

b) a flight crew member undergoes specific modular CRM training and all major topics of CRM training shall be covered over a period not exceeding three years.

64.8. An Operator shall establish and maintain a requalification curriculum that covers the requirements for requalifying a flight crew member, or an instructor who has not maintained continuing qualification.

64.9. The requalification curriculum outlined in paragraph 64.8 shall be approved by the Authority and contained in the operations manual.

INSTRUCTOR AND CHECK PERSONNEL QUALIFICATIONS AND TRAINING

65. Authorized Instructor qualifications- flight crew

An operator shall not use a person as a flight instructor in an established flight training programme unless, with respect to the balloon group involved, that person —

a) holds the personnel licenses and ratings required to serve as a PIC;

b) has satisfactorily completed the appropriate training phases for the balloon, including recurrent training, that are required to serve as a PIC;

c) has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC;

d) has satisfactorily completed the applicable training requirements and the Authority-observed in-flight competency check; and

e) holds the appropriate medical certificate for service as a required crew member.

66. Personnel approved to conduct checks

66.1. The Authority may approve the following operator personnel to conduct checks when such personnel meet the requirements for the authorized responsibilities, as check pilots.

66.2. The authorized duties of check personnel are to —

a) conduct initial and recurrent proficiency or area checks for flight crew;

b) certify as satisfactory the knowledge and proficiency of the flight crew; and

c) for all check personnel, supervise Operating Experience (OE).

66.3. A person shall not serve as check personnel under the operator's crew member checking and training programme unless that person—

a) has been identified by name and function and approved in writing by the Authority; and

b) has successfully completed the operator's curricula approved by the Authority for those functions for which he or she is to serve.

66.4. Once approved, no person may serve nor may any operator use a person as a check personnel for any flight crew checks unless that person has demonstrated, initially and at least every twelve months to the Authority inspector, the ability to conduct a check for which he or she is approved.

67. Check personnel qualifications-flight crew training

An operator shall not use a person as check personnel in an established flight crew training programme unless, with respect to the balloon group involved, that person —

a) holds the personnel licenses and ratings required to serve as a PIC;

b) has satisfactorily completed the appropriate training phases for the balloon, including recurrent training, that are required to serve as a PIC;

c) has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC;

d) has satisfactorily completed the applicable training requirements and the Authority-observed in-flight competency check for check personnel duties;

e) holds the appropriate medical certificate if serving as a required flight crew member; and

f) has been approved by the Authority for the check personnel duties involved.

68. Check personnel training

68.1. An operator shall not use a person for checks unless that person has completed the curricula approved by the Authority for those functions for which they are to serve.

68.2. Specific training programme requirements for check personnel shall be as specified by the Authority.

69. Monitoring of training and checking activities

69.1. To enable adequate supervision of its training and checking activities, the operator shall forward to the Authority at least ten working days before the scheduled activity the dates, report times and report location of all —

a) training for which a curriculum is approved in the Operator's training programme; and

b) proficiency, competency and line checks.

69.2. Failure to provide the information required under paragraph 69.1 may invalidate the training or check, and the Authority may require that it be repeated for observation purposes.

70. Termination of a proficiency, competency or line check

If it is necessary to terminate a check for any reason, the Operator may not use the crew member in commercial air transport operations until the completion of a satisfactory recheck.

71. Carriage of children and persons with reduced mobility

The pilot-in-command may exclude children or persons with reduced mobility from transportation in a balloon when: -

a) their presence may impede:

i) the crew in their duties;

ii) access to emergency equipment; or

iii) the emergency evacuation of the balloon; or

b) those persons are:

i) unable to take a proper brace position;

ii) smaller than the inner height of the basket wall; or

iii) unable to understand the passenger briefing.

72. Meteorological conditions

The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use are as follows:

a) at or above the applicable VFR operating minima; and

b) within the meteorological limitations specified in the AFM

73. Facilities at the take-off and landing site

At the balloon take-off and landing site, a means of assessing wind direction and wind speed should be available to the pilot-in-command. Except in emergencies, the pilot-in-command shall be satisfied before commencing an approach to land that, according to the latest available information, the conditions at the intended operating site permit a safe approach and landing.

74. Flight preparation

Before commencing the flight, the pilot-in-command shall be familiar with the available meteorological and aeronautical information appropriate to the intended flight, which includes both of the following: -

a) a study of available current weather reports and forecasts;

b) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned.
