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Delegations will find attached document D051664/02 - ANNEXES 1 to 2.

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ANNEXES 1 to 2

ANNEXES

to the

Commission Regulation (EU) No.../...

**laying down detailed rules for the operation of balloons pursuant to Regulation (EC) No
216/2008 of the European Parliament and of the Council**

ANNEXES

to the

Commission Regulation (EU) No.../...

laying down detailed rules for the operation of balloons pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

ANNEX I

DEFINITIONS

[PART-DEF]

For the purposes of Annex II, the following definitions shall apply:

1. 'acceptable means of compliance (AMC)' means non-binding standards adopted by the Agency to illustrate means to establish compliance with Regulation (EC) No 216/2008 and its implementing rules;
2. 'alternative means of compliance (AltMoC)' means those means that propose an alternative to an existing AMC or those that propose new means to establish compliance with Regulation (EC) No 216/2008 and its implementing rules for which no associated AMC have been adopted by the Agency;
3. 'pilot-in-command' means the pilot designated as being in command and charged with the safe conduct of the flight;
4. 'crew member' means a person assigned by an operator to perform duties on board the balloon or, where the duties are directly related to the operation of the balloon, on the ground;
5. 'flight crew member' means a licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period;
6. 'psychoactive substances' means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens and volatile solvents, excluding coffee and tobacco;
7. 'accident' means an occurrence associated with the operation of a balloon which takes place between the moment of the commencement of the inflation of the balloon and the moment of complete deflation of the balloon, in which:
 - (a) a person suffers fatal or serious injuries as a result of being in the balloon or as a result of direct contact with any part of the balloon, including parts which have become detached from the balloon, but excluding any injuries arising from natural causes or which are self-inflicted or inflicted by other persons;
 - (b) the balloon sustains damage or structural failure which adversely affects its structural strength, performance or flight characteristics and requires major repair or replacement of the affected component; or
 - (c) the balloon is missing or is completely inaccessible;
8. 'incident' means an occurrence, other than an accident, associated with the operation of a balloon which affects or could affect the safety of its operation;

9. 'serious incident' means an occurrence associated with the operation of the balloon which takes place between the moment of the commencement of the inflation of the balloon and the moment of complete deflation of the balloon, in which there was a high probability of an accident;
10. 'critical phases of flight' means take-off, final approach, missed approach, landing and any other phases of a flight which the pilot-in-command determines as critical for the safe operation of the balloon;
11. 'aircraft flight manual (AFM)' means the document containing the applicable and approved operating limitations and information with respect to the balloon;
12. 'dangerous goods' means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the technical instructions or which are to be classified as such in accordance with those instructions;
13. 'technical instructions' means the latest applicable edition of the 'Technical instructions for the safe transport of dangerous goods by air', including the supplement and any addenda, published by ICAO in document 9284-AN/905;
14. 'operating site' means a site selected by the pilot-in-command or the operator for landing, take-off or external load operations;
15. 'refuelling' means the refilling of fuel cylinders or fuel tanks from an external source, excluding the replacement of fuel cylinders;
16. 'night' means the period between the end of evening civil twilight and the beginning of morning civil twilight. Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon;
17. 'balloon specialised operation' means any operation, which can be commercial or non-commercial, with a balloon the main purpose of which is not the carriage of passengers for sightseeing or experience flights, but parachute operations, hang-gliding dropping, flying displays, competition flights or similar specialised activities;
18. 'traffic load' means the total mass of passengers, baggage and carry-on specialist equipment;
19. 'balloon empty mass' means the mass determined by weighing the balloon with all the installed equipment as specified in the AFM';
20. 'wet lease agreement' means an agreement between operators pursuant to which the balloon is operated under the responsibility of the lessor;
21. 'commercial passenger ballooning' (CPB) means a form of commercial air transport operation with a balloon whereby passengers are carried on sightseeing or experience flights for remuneration or other valuable consideration;
22. 'commercial air transport (CAT) operation' means an aircraft operation to transport passengers, cargo or mail for remuneration or other valuable consideration.

ANNEX II
BALLOON AIR OPERATIONS
[PART-BOP]

SUBPART BAS
BASIC OPERATIONAL REQUIREMENTS

SECTION 1
General requirements

BOP.BAS.001 Scope

In accordance with Article 3, this Subpart establishes the requirements to be met by any operator of balloons, other than the design or production organisations referred to in the second subparagraph of Article 3(1).

BOP.BAS.005 Competent authority

The competent authority shall be the authority designated by the Member State where the operator has its principal place of business or, where the operator has no principal place of business, the place where the operator is established or resides. That authority shall be subject to the requirements of Article 3 of Regulation (EU) No 965/2012 in accordance with Article 1(7) of that Regulation.

BOP.BAS.010 Demonstration of compliance

- (a) An operator shall, when so requested by the competent authority which is verifying continued compliance by the operator in accordance with point ARO.GEN.300(a)(2) of Annex II to Regulation (EU) No 965/2012, demonstrate compliance with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of this Regulation.
- (b) The operator shall use either of the following means to demonstrate such compliance:
 - (1) acceptable means of compliance (AMC);
 - (2) alternative means of compliance (AltMoC).

BOP.BAS.015 Introductory flights

Introductory flights shall be:

- (a) operated under visual flight rules (VFR) by day; and
- (b) overseen as regards their safety by a person who has been nominated by the organisation performing the introductory flights.

BOP.BAS.020 Immediate reaction to a safety problem

The operator shall implement:

- (a) safety measures mandated by the competent authority in accordance with point (c) of point ARO.GEN.135 of Annex II to Regulation (EU) No 965/2012; and
- (b) airworthiness directives and other mandatory information issued by the Agency in accordance with point (j) of Article 20(1) of Regulation (EC) No 216/2008.

BOP.BAS.025 Designation as pilot-in-command

The operator shall designate a pilot-in-command who is qualified to act as pilot-in-command in accordance with Annex I to Regulation (EU) No 1178/2011.

BOP.BAS.030 Responsibilities of the pilot-in-command

- (a) The pilot-in-command shall:
 - (1) be responsible for the safety of the balloon and of any person or property carried therein during balloon operations;
 - (2) be responsible for the initiation, continuation or termination of a flight in the interest of safety;
 - (3) ensure that all applicable operational procedures and checklists are complied with;
 - (4) only commence a flight if he or she is satisfied that all operational limitations are complied with, as follows:
 - (i) the balloon is airworthy;
 - (ii) the balloon is duly registered;
 - (iii) instruments and equipment required for the execution of the flight are carried on board the balloon and are operative;
 - (iv) the mass of the balloon is such that the flight can be conducted within the limits defined by the AFM;
 - (v) all equipment and baggage are properly loaded and secured; and
 - (vi) the operating limitations of the balloon as specified in the AFM will not be exceeded at any time during the flight;
 - (5) ensure that the pre-flight inspection has been carried out as required by Annex I to Commission Regulation (EU) No 1321/2014¹;
 - (6) be responsible for the pre-flight briefing of persons assisting in the inflation and deflation of the envelope;
 - (7) ensure that persons assisting in the inflation and deflation of the envelope wear appropriate protective clothing;
 - (8) be satisfied that relevant emergency equipment remains easily accessible for immediate use;
 - (9) ensure that no person is smoking on board or within the direct vicinity of the balloon;

¹ Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1).

- (10) 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;
 - (11) remain during flight in control of the balloon at all times except if another pilot is taking the controls;
 - (12) take any action in an emergency situation that requires immediate decision and action which he or she considers necessary under the circumstances. In such cases he or she may deviate from rules, operational procedures and methods to the extent necessary in the interest of safety;
 - (13) not continue a flight beyond the nearest weather-permissible operating site when his or her capacity to perform his or her duties is significantly reduced because of sickness, fatigue, lack of oxygen or any other cause;
 - (14) record utilisation data and all known or suspected defects in the balloon at the termination of the flight, or series of flights, in the balloon logbook;
 - (15) notify the safety investigation authority of the State in the territory of which the occurrence took place and the emergency services of that State without delay by the quickest available means of any serious incident or accident involving the balloon;
 - (16) submit a report of an act of unlawful interference without delay to the competent authority and inform the local authority designated by the State in the territory of which the unlawful interference took place; and
 - (17) report to the appropriate air traffic services (ATS) unit, without delay, any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.
- (b) The pilot-in-command shall not perform duties on a balloon in one of the following situations:
- (1) when he or she is incapacitated from performing his or her duties by any cause, including injury, sickness, medication, fatigue or the effects of any psychoactive substance, or feels otherwise unfit;
 - (2) if applicable medical requirements are not fulfilled.
- (c) Whenever crew members are involved in the operation of the balloon, the pilot-in-command shall:
- (1) ensure that during critical phases of flight or whenever deemed necessary in the interest of safety, all crew members are at their assigned stations and do not perform any activities other than those required for the safe operation of the balloon;
 - (2) not commence a flight if any crew member is incapacitated from performing his or her duties by any cause, including injury, sickness, medication, fatigue or the effects of any psychoactive substance, or feels otherwise unfit;
 - (3) not continue a flight beyond the nearest weather-permissible operating site when any crew member's capacity to perform duties is significantly reduced because of sickness, fatigue or lack of oxygen or any other cause; and
 - (4) ensure that all crew members can communicate with each other in a common language.

BOP.BAS.035 Authority of the pilot-in-command

The pilot-in-command shall have the authority to:

- (a) 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; and
- (b) refuse embarkation or carriage of any person or baggage that may represent a potential hazard to the safety of the balloon or of any person or property carried therein.

BOP.BAS.040 Responsibilities of crew members

- (a) Any crew member shall be responsible for the proper execution of his or her duties in respect of the operation of the balloon.
- (b) Crew members shall not perform duties on a balloon when incapacitated by any cause, including injury, sickness, medication, fatigue or the effects of any psychoactive substance, or if he or she feels otherwise unfit.
- (c) Crew members shall report to the pilot-in-command both of the following:
 - (1) any fault, failure, malfunction or defect, which he or she believes may affect the airworthiness or safe operation of the balloon, including emergency systems;
 - (2) any incident.
- (d) Any flight crew member who undertakes duties for more than one operator shall:
 - (1) maintain his or her individual records regarding flight times and rest periods, if applicable; and
 - (2) provide each operator with the data needed to schedule activities in accordance with the applicable flight and duty time limitations and rest requirements.

BOP.BAS.045 Compliance with laws, regulations and procedures

- (a) The pilot-in-command and all other crew members shall comply with the laws, regulations and procedures of those States where operations are conducted.
- (b) The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his or her duties, prescribed for the areas to be traversed, the operating sites to be used and the related air navigation facilities.

BOP.BAS.050 Documents, manuals and information to be carried

- (a) All of the following documents, manuals and information shall be carried on each flight, as originals or copies:
 - (1) the operating limitations, normal, abnormal and emergency procedures and other relevant information specific to the balloon's operating characteristics;
 - (2) details of the filed ATS flight plan, when required in accordance with Section 4 of the Annex to Implementing Regulation (EU) No 923/2012²;

² Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 (OJ L 281, 13.10.2012, p. 1).

- (3) current and suitable aeronautical charts for the area of the intended flight.
- (b) All of the following documents, manuals and information shall be carried on each flight or shall be stowed in the retrieve vehicle, as originals or copies:
 - (1) the certificate of registration;
 - (2) the certificate of airworthiness, including the annexes;
 - (3) the AFM or equivalent document(s);
 - (4) the aircraft radio licence, where the balloon is equipped with radio communication equipment in accordance with point (a) of point BOP.BAS.355;
 - (5) the third party liability insurance certificate(s);
 - (6) the balloon logbook or equivalent document(s);
 - (7) any other documentation that may be pertinent to the flight or is required by the State or States concerned with the flight.
- (c) When requested by the competent authority, the pilot-in-command or the operator shall make available to that authority the original documentation within the time period specified by the authority which shall not be less than 24 hours.

BOP.BAS.055 Dangerous goods

- (a) The transport of dangerous goods on board the balloon shall be conducted in accordance with the requirements set out in Annex 18 to the Chicago Convention, as last amended and amplified by the technical instructions.
- (b) The pilot-in-command shall take all reasonable measures to prevent dangerous goods from being carried on board the balloon inadvertently.
- (c) Reasonable quantities of articles and substances that would otherwise be classified as dangerous goods and that are used to facilitate flight safety, where carriage on board the balloon is advisable to ensure their timely availability for operational purposes, shall be considered authorised under point 2.2.1(a) of Part 1 of the technical instructions, regardless of whether or not such articles and substances are required to be carried or intended to be used in connection with a particular flight. The pilot-in-command shall ensure that the packing and loading on board the balloon of those articles and substances is performed in such a way as to minimise the risks posed to crew members, passengers and the balloon during operation.
- (d) The pilot-in-command or, when the pilot-in-command is incapacitated, the operator shall report without delay any accidents or incidents involving dangerous goods to the safety investigation authority of the State in the territory of which the occurrence took place, the emergency services of that State, any other authority designated by that State and the competent authority.

BOP.BAS.060 Release of dangerous goods

- (a) 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.
- (b) Notwithstanding point (a), 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.

BOP.BAS.065 Balloon logbook

For each flight, or series of flights, particulars of the balloon, its crew and each journey shall be retained in the form of a balloon logbook or an equivalent document.

SECTION 2

Operating procedures

BOP.BAS.100 Use of operating sites

The pilot-in-command shall only use operating sites that are adequate for the type of balloon and operation concerned.

BOP.BAS.105 Noise abatement procedures

The pilot-in-command shall take into account operating procedures to minimise the effect of heating-system noise, while ensuring however that safety has priority over noise abatement.

BOP.BAS.110 Fuel and ballast supply and planning

The pilot-in-command shall only commence a flight if the reserve fuel or ballast carried on board the balloon is sufficient to ensure a safe landing.

BOP.BAS.115 Passenger briefing

The pilot-in-command shall ensure that before and, when appropriate, during the flight passengers are given a briefing on normal, abnormal and emergency procedures.

BOP.BAS.120 Carriage of special categories of passengers

The pilot-in-command shall ensure that persons requiring special conditions, assistance or devices when carried on board a balloon are carried under conditions that ensure the safety of the balloon and of any persons or property carried therein.

BOP.BAS.125 Submission of the air traffic service flight plan

- (a) If an air traffic service (ATS) flight plan is not submitted because it is not required in accordance with point (b) of point SERA.4001 of the Annex to Implementing Regulation (EU) No 923/2012, the pilot-in-command shall submit adequate information in order to permit alerting services to be activated if required.
- (b) When operating from an operating site where it is impossible to submit an ATS flight plan, although required in accordance with point (b) of point SERA.4001 of the Annex to Implementing Regulation (EU) No 923/2012, the pilot-in-command shall submit the ATS flight plan after take-off.

BOP.BAS.130 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.

BOP.BAS.135 Smoking on board

No person shall smoke on board a balloon during any phase of flight or within the direct vicinity of a balloon.

BOP.BAS.140 Carriage and use of weapons

- (a) The pilot-in-command shall ensure that no person carries and uses a weapon on board the balloon.
- (b) By way of derogation from point (a), the pilot-in-command may permit the carriage and use of weapons on board the balloon when required for the safety of the crew members or the passengers. In such cases the pilot-in-command shall ensure that the weapons are secured when not in use.

BOP.BAS.145 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.

BOP.BAS.150 Take-off conditions

The pilot-in-command shall be satisfied before commencing take-off of the balloon that, according to the latest available information, the weather at the operating site permits a safe take-off and departure.

BOP.BAS.155 Approach and landing conditions

Except in emergency situations, 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.

BOP.BAS.160 Simulated situations in flight

- (a) The pilot-in-command shall not simulate situations that require the application of abnormal or emergency procedures when carrying passengers.
- (b) By way of derogation from point (a), the pilot-in-command may simulate such situations, during operations other than commercial operations of the balloon, when conducting training flights either with student pilots or with passengers, provided that the passengers have been duly informed and agreed to the simulation in advance.

BOP.BAS.165 In-flight fuel management

The pilot-in-command shall check at regular intervals during the flight that the amount of usable fuel or ballast remaining in flight is not less than the fuel or ballast needed to complete the intended flight and the reserve planned for landing.

BOP.BAS.170 Refuelling with persons on board

- (a) Refuelling of balloons shall not be conducted when persons are on board.
- (b) By derogation from point (a), refuelling the engine of hot-air airships may be conducted with the pilot-in-command on board.

BOP.BAS.175 Use of restraint system

When a restraint system is required in accordance with point BOP.BAS.320, the pilot-in-command shall wear the system at least during landing.

BOP.BAS.180 Use of supplemental oxygen

The pilot-in-command shall ensure that:

- (a) all crew members engaged in performing duties essential to the safe operation of the balloon use supplemental oxygen continuously whenever he or she determines that, at the altitude of the intended flight, the lack of oxygen might result in impairment of the faculties of crew members; and
- (b) supplemental oxygen is available to passengers when lack of oxygen might harmfully affect them.

BOP.BAS.185 Operational limitations at night

- (a) Hot-air balloons:
 - (1) shall not land during night, except in emergency situations; and
 - (2) may take off during night, provided that sufficient fuel or ballast is carried for a landing during day.
- (b) Gas balloons and mixed balloons:
 - (1) shall not land during night, except in emergency situations or as a precautionary landing; and
 - (2) may take off during night, provided that sufficient fuel or ballast is carried for a landing during day.
- (c) Hot-air airships shall be operated in accordance with their approved VFR night operating limitations and information.

BOP.BAS.190 Balloon specialised operations — Risk assessment and checklist

- (a) Before commencing a balloon specialised operation, the pilot-in-command shall conduct a risk assessment, assessing the complexity of the activity in order to determine the hazards and associated risks of the intended operation and establish mitigating measures where necessary.
- (b) A balloon specialised operation shall be performed in accordance with a checklist. The pilot-in-command shall establish that checklist and ensure that it is appropriate to the specialised activity and balloon used, based on the risk assessment and taking account of all requirements set out in this Subpart. The checklist shall be readily accessible on each flight to the pilot-in-command and other crew members, where it is relevant for the performance of their duties.

- (c) The pilot-in-command shall regularly review and update the checklist where necessary in order to adequately take account of the risk assessment.

SECTION 3

Performance and operating limitations

BOP.BAS.200 Operating limitations

The pilot-in-command shall ensure that, during any phase of operation, the balloon is not exceeding any of the limitations set out in the AFM or equivalent document(s).

BOP.BAS.205 Weighing

- (a) The weighing of the balloon shall be accomplished by the manufacturer of the balloon or in accordance with Annex I to Regulation (EU) No 1321/2014.
- (b) The operator shall ensure that the mass of the balloon has been established by actual weighing prior to its initial entry into service. The accumulated effects of modifications and repairs on the mass shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The balloon shall be reweighed if the effects of modifications or repairs on the mass are not known.

BOP.BAS.210 Performance — General

The pilot-in-command shall only operate the balloon if the performance of the balloon is adequate to comply with the requirements set out in the Annex to Implementing Regulation (EU) No 923/2012 and any other restrictions applicable to the flight, the airspace or operating sites used, ensuring that any charts or maps used are the latest available edition.

SECTION 4

Instruments and equipment

BOP.BAS.300 Instruments and equipment — General

- (a) Instruments and equipment required by this Section shall be approved in accordance with Annex I to Commission Regulation (EU) No 748/2012 if one of the following conditions is fulfilled:
- (1) they are used to comply with points BOP.BAS.355 and BOP.BAS.360;
 - (2) they are permanently installed in the balloon.
- (b) By way of derogation from point (a), all of the following instruments or equipment, when required by this Section, shall not need an approval:
- (1) instruments or equipment used by the flight crew to determine the flight path;
 - (2) independent portable lights;
 - (3) an accurate time piece;
 - (4) first-aid kit;
 - (5) survival and signalling equipment;

- (6) supplemental oxygen storage and dispensing apparatus;
 - (7) alternative source of ignition;
 - (8) fire blanket or fire-resistant cover;
 - (9) hand fire extinguisher;
 - (10) drop line;
 - (11) knife.
- (c) Instruments and equipment not required by this Section, as well as any other equipment that is not required by this Annex but is carried on board a balloon during a flight, shall comply with both of the following conditions:
- (1) the information provided by those instruments or equipment shall not be used by the flight crew to comply with the essential requirements for airworthiness set out in Annex I to Regulation (EC) No 216/2008;
 - (2) the instruments and equipment shall not affect the airworthiness of the balloon, even in the case of failures or malfunction.
- (d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is assigned.
- (e) All required emergency equipment shall be easily accessible for immediate use.

BOP.BAS.305 Minimum instruments and equipment for flight

A balloon flight shall not be commenced when any of the instruments and equipment required for the intended flight with the balloon are missing, inoperative or do not fulfil the required functions.

BOP.BAS.310 Operating lights

Balloons operated at night shall be equipped with all of the following:

- (a) an anti-collision light;
- (b) a means to provide adequate illumination for all instruments and equipment essential to the safe operation of the balloon;
- (c) an independent portable light.

BOP.BAS.315 Flight and navigational instruments and equipment

Balloons operated under VFR by day shall be equipped with both of the following:

- (a) a means of displaying drift direction;
- (b) a means of measuring and displaying:
 - (1) time in hours, minutes and seconds;
 - (2) vertical speed, if required by the AFM; and
 - (3) pressure altitude, if required by the AFM, when required by airspace requirements or when the altitude needs to be known for the use of oxygen.

BOP.BAS.320 Restraint systems

Balloons shall be equipped with a restraint system for the pilot-in-command when the balloon is equipped with one of the following:

- (a) a separate compartment for the pilot-in-command;
- (b) turning vent(s).

BOP.BAS.325 Supplemental oxygen

Balloons operated when an oxygen supply is required in accordance with point BOP.BAS.180 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

BOP.BAS.330 First-aid kit

- (a) Balloons shall be equipped with a first-aid kit.
- (b) The first-aid kit shall be:
 - (1) readily accessible for use; and
 - (2) kept up-to-date.

BOP.BAS.335 Hand fire extinguishers

Except for gas balloons, balloons shall be equipped with at least one hand fire extinguisher.

BOP.BAS.340 Life-saving and signalling equipment – Flights over water

The pilot-in-command of a balloon operated over water shall determine, before commencing the flight, the risks to survival of the persons carried in the balloon in the event of ditching. In light of those risks, he or she shall determine whether there is need to carry life-saving and signalling equipment.

BOP.BAS.345 Life-saving and signalling equipment – Search and rescue difficulties

Balloons operated over areas in which search and rescue (SAR) would be especially difficult shall be equipped with such life-saving and signalling equipment as appropriate to the area overflown.

BOP.BAS.350 Miscellaneous equipment

- (a) Balloons shall be equipped with protective gloves for each crew member.
- (b) Mixed balloons, hot-air balloons and hot-air airships shall be equipped with all of the following:
 - (1) an alternative and independent source of ignition;
 - (2) a means of measuring and indicating fuel quantity;
 - (3) a fire blanket or fire-resistant cover;
 - (4) a drop line of at least 25 m in length.
- (c) Gas balloons shall be equipped with both of the following:

- (1) a knife;
- (2) a trail rope of at least 20 m in length made of natural fibre or electrostatic, conductive material.

BOP.BAS.355 Radio communication equipment

- (a) Balloons shall have radio communication equipment to allow for the communication required in accordance with appendix 4 to the Annex to Implementing Regulation (EU) No 923/2012 and, if the flight takes place in the airspace of a third country, the law of that third country.
- (b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

BOP.BAS.360 Transponder

Balloons shall have a secondary surveillance radar (SSR) transponder with all the capabilities required in accordance with point (b) of point SERA.6005 of the Annex to Implementing Regulation (EU) No 923/2012 and, if the flight takes places in airspace of a third country, the law of that third country.

SUBPART ADD

ADDITIONAL REQUIREMENTS FOR COMMERCIAL OPERATIONS

SECTION 1

General organisation requirements

BOP.ADD.001 Scope

In accordance with Article 3, this Subpart establishes the requirements to be met, in addition to the requirements of Subpart BAS, by any operator engaged in commercial operations with balloons, other than the operators referred to in the last subparagraph Article 3(2).

BOP.ADD.005 Responsibilities of the operator

- (a) The operator shall be responsible for the operation of the balloon in accordance with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008, with the requirements of this Subpart and with its declaration.
- (b) Every flight shall be conducted in accordance with the provisions of the operations manual.
- (c) The operator shall ensure that the balloon is equipped and all crew members are qualified as required for the area and type of operation.
- (d) The operator shall ensure that all crew members assigned to, or directly involved in, flight operations comply with all of the following conditions:
 - (1) they are properly trained and instructed;
 - (2) they are aware of the rules and procedures relevant to their particular duties;
 - (3) they have demonstrated their abilities in their particular duties;

- (4) they are aware of their responsibilities and the relationship of such duties to the operation of the balloon as a whole.
- (e) The operator shall establish procedures and instructions for the safe operation of each balloon type, containing duties and responsibilities of the crew members, for all types of operations. Those procedures and instructions shall not require crew members to perform any activity during critical phases of flight other than those required for the safe operation of the balloon.
- (f) The operator shall make arrangements for the supervision of crew members and personnel involved in the operation of the balloon by individuals with adequate experience and skills in order to ensure the attainment of the standards specified in the operations manual.
- (g) The operator shall ensure that all crew members and personnel involved in the operation of the balloon are made aware that they are to comply with the laws, regulations and procedures of the States in which operations are conducted that are pertinent to the performance of their duties.
- (h) The operator shall specify flight planning procedures to provide for the safe conduct of the flight, based on considerations of balloon performance, other operating limitations and relevant expected conditions on the route to be followed and at the operating sites concerned. Those procedures shall be included in the operations manual.

BOP.ADD.010 Notification of alternative means of compliance

The operator shall, when making the declaration in accordance with point BOP.ADD.100, notify to the competent authority the list of alternative means of compliance (AltMoC), where it intends to use AltMoC to demonstrate compliance when so requested in accordance with point BOP.BAS.010. That list shall contain references to the acceptable means of compliance (AMC) which they replace in case associated AMC have been adopted by the Agency.

BOP.ADD.015 Access

- (a) For the purpose of determining compliance with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of this Regulation, the operator shall grant access to any person authorised by the competent authority at any time to any facility, balloon, document, records, data, procedures or any other material relevant to the operator's activity falling within the scope of this Regulation, irrespective of whether the activity is contracted or not.
- (b) Access to the balloon shall, in the case of commercial passenger ballooning, include the possibility to enter and remain in the balloon during flight operations, unless to do so would endanger the flight.

BOP.ADD.020 Findings

After receipt of the notification of findings raised by the competent authority in accordance with points ARO.GEN.350, ARO.GEN.355 and ARO.GEN.360 of Annex II to Regulation (EU) No 965/2012, the operator shall do all of the following:

- (a) identify the root cause of the non-compliance;
- (b) define a corrective action plan;

- (c) demonstrate implementation of the corrective action plan to the satisfaction of the competent authority within the time period specified by that authority in accordance with point ARO.GEN.350 of Annex II to Regulation (EU) No 965/2012.

BOP.ADD.025 Occurrence reporting

- (a) The operator shall implement, as part of its management system, an occurrence reporting scheme which is to provide for mandatory and voluntary reporting in accordance with Regulation (EU) No 376/2014³.
- (b) Without prejudice to point (a), the operator shall report to the competent authority and to the organisation responsible for the design of the balloon any malfunction, technical defect, exceeding of technical limitations or occurrence that would highlight inaccurate, incomplete or ambiguous information contained in data established in accordance with Annex I to Regulation (EU) No 748/2012 and any other occurrence which constitutes an incident but not an accident or serious incident.
- (c) The operator shall take the necessary measures to ensure compliance with Article 9 of Regulation (EU) No 996/2010⁴ by the pilot-in-command, any other crew member and all its personnel in respect of any serious incident or accident associated with the operation of a balloon.

BOP.ADD.030 Management system

- (a) The operator shall establish, implement and maintain a management system that includes all of the following:
- (1) clearly defined lines of responsibility and accountability throughout the organisation of the operator, including a direct safety accountability of the accountable manager;
 - (2) a description of the overall philosophies and principles of the operator with regard to safety, which shall be known as the safety policy;
 - (3) the identification of aviation safety hazards entailed by the activities of the operator, the evaluation of those hazards and the management of associated risks, including by taking actions to mitigate those risks where necessary and verifying the effectiveness of those actions;
 - (4) maintaining personnel trained and competent to perform their tasks;
 - (5) documentation of all key processes of the management system, including a process for making personnel aware of their responsibilities and the procedure for amending that documentation;
 - (6) a function to monitor compliance of the operator with the requirements of this Annex. Such compliance monitoring shall include a feedback system of findings

³ Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/2007 (OJ L 122, 24.4.14, p.18).

⁴ Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.10, p.35).

to the accountable manager of the operator to ensure effective implementation of corrective actions as necessary;

- (7) the processes necessary to ensure compliance with the requirements of Articles 4, 5, 6 and 13 of Regulation (EU) No 376/2014.
- (b) The management system shall correspond to the size of the operator and the nature and complexity of its activities, taking into account the hazards and associated risks of those activities.

BOP.ADD.035 Contracted activities

When contracting any part of its activity falling within the scope of this Regulation, the operator shall be responsible for ensuring that the contracted organisation carries out the activity in accordance with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of this Regulation. The operator shall also ensure that the competent authority is given access to the contracted organisation in order to determine that the operator is compliant with those requirements.

BOP.ADD.040 Personnel requirements

- (a) The operator shall appoint an accountable manager who has the authority to ensure that all activities falling within the scope of this Regulation can be financed and carried out in accordance with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of this Regulation. The accountable manager shall be responsible for establishing and maintaining an effective management system.
- (b) The operator shall:
 - (1) identify the responsibilities of its personnel for all tasks and activities to be performed;
 - (2) have sufficient qualified personnel to carry out those tasks and activities; and
 - (3) maintain appropriate experience, qualification and training records of its personnel.
- (c) The operator shall nominate one or more persons responsible for the management and supervision of all of the following areas:
 - (1) flight operations;
 - (2) ground operations;
 - (3) continuing airworthiness, in accordance with Regulation (EU) No 1321/2014.

BOP.ADD.045 Facility requirements

The operator shall have facilities that are sufficient to allow for the performance and management of all tasks and activities required to ensure compliance with the essential requirements set out in Annex IV to Regulation (EC) 216/2008 and with the requirements of this Regulation.

SECTION 2

Declaration, airworthiness and wet and dry lease

BOP.ADD.100 Declaration

- (a) In the declaration referred to in the second subparagraph of Article 3(2) the operator shall confirm that the operator complies and will continue to comply with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of this Regulation.
- (b) The operator shall include in the declaration all of the following information:
 - (1) the name of the operator;
 - (2) the place where the operator has its principal place of business;
 - (3) the name and contact details of the accountable manager of the operator;
 - (4) the starting date of the commercial operation and, where relevant, the date at which the change to an existing commercial operation takes effect;
 - (5) in respect of all balloons used for the commercial operation, the balloon type, registration, main base, type of operation and continuing airworthiness management organisation.
- (c) Where applicable, the operator shall annex to the declaration the list of alternative means of compliance (AltMoC), in accordance with point BOP.ADD.010.
- (d) When making the declaration, the operator shall use the form contained in the Appendix to this Annex.

BOP.ADD.105 Changes to the declaration and cessation of commercial operations

- (a) The operator shall notify the competent authority without delay of any changes in circumstances affecting its compliance with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of this Regulation, as declared to the competent authority, and of any changes in respect of the information referred to in point BOP.ADD.100(b) and the list of AltMoC referred to in point BOP.ADD.100(c), as included in or annexed to the declaration.
- (b) The operator shall notify the competent authority without delay when it is no longer engaged in commercial operations with balloons.

BOP.ADD.110 Airworthiness requirements

Balloons shall have a certificate of airworthiness issued in accordance with Regulation (EU) No 748/2012 or, in the case of a balloon registered in a third country, shall be subject to either a wet lease agreement or a dry lease agreement in accordance with point BOP.ADD.115.

BOP.ADD.115 Wet lease and dry lease of a balloon registered in a third country

- (a) The operator shall notify to the competent authority any wet lease agreement or dry lease agreement concerning a balloon registered in a third country

- (b) Where a balloon registered in a third country is subject to a wet lease agreement, the operator shall ensure that the level of safety resulting from the application of the safety standards with regard to continuing airworthiness and air operations to which the third country operator of the balloon is subject, is at least equivalent to that resulting from the application of the requirements of Annex I to Regulation (EU) No 1321/2014 and of this Regulation.
- (c) Where a balloon registered in a third country is subject to a dry lease agreement, the operator shall ensure compliance with the essential requirements relating to continuing airworthiness set out in Annexes I and IV to Regulation (EC) No 216/2008 and with the requirements of this Regulation.

SECTION 3

Manuals and records

BOP.ADD.200 Operations manual

- (a) The operator shall establish an operations manual.
- (b) The content of the operations manual shall reflect the requirements set out in this Annex and shall not contravene any information contained in the operator's declaration.
- (c) The operations manual may be established as separate parts.
- (d) All personnel of the operator shall have easy access to the portions of the operations manual that are relevant to their duties.
- (e) The operations manual shall be kept up-to-date. All personnel of the operator shall be made aware of any amendment of the operations manual that are relevant to the performance of their duties.
- (f) The operator shall ensure that any information used as the basis for the content of the operations manual and any amendment thereof is correctly reflected in the operations manual.
- (g) The operator shall ensure that all personnel are able to understand the language in which those parts of the operations manual which are relevant to their duties are written. The content of the operations manual shall be presented in a form that can be used without difficulty.

BOP.ADD.205 Record-keeping

- (a) The operator shall establish a system of record-keeping that allows adequate storage and reliable traceability of its activities.
- (b) The format of the records shall be specified in the operator's procedures or manuals.

SECTION 4

Flight crew

BOP.ADD.300 Composition of flight crew

- (a) The composition of the flight crew shall be, as a minimum, as specified in the AFM or operating limitations prescribed for the balloon.
- (b) The flight crew shall include additional flight crew members when required by the type of operation. The number of the flight crew shall not be lower than the number specified in the operations manual.
- (c) All flight crew members shall hold a licence and ratings issued or accepted in accordance with Annex I to Regulation (EU) No 1178/2011 and appropriate to the duties assigned to them.
- (d) Flight crew members may be relieved during the flight of their duties at the controls by another suitably qualified flight crew member.
- (e) When engaging the services of flight crew members who are working on a freelance or part-time basis, the operator shall verify that all of the following requirements are complied with:
 - (1) the requirements of this Subpart;
 - (2) Annex I to Regulation (EU) No 1178/2011, including the requirements on recent experience;
 - (3) the flight and duty time limitations and rest requirements in accordance with the national law of the Member State where the operator has its principal place of business, taking into account all services rendered by the flight crew member to other operators.

BOP.ADD.305 Designation as pilot-in-command

- (a) The operator shall designate one pilot amongst the flight crew as pilot-in-command.
- (b) The operator shall only designate a pilot to act as pilot-in-command if he or she:
 - (1) is qualified to act as pilot-in-command in accordance with Annex I to Regulation (EU) No 1178/2011;
 - (2) has the minimum level of experience specified in the operations manual; and
 - (3) has adequate knowledge of the area to be flown.

BOP.ADD.310 Provision of training and checking

All training and checking of flight crew members required pursuant to point BOP.ADD.315 shall be provided as follows:

- (a) in accordance with the training programmes and syllabi established by the operator in the operations manual;
- (b) by appropriately qualified persons and, as regards flight training and checking, by persons qualified in accordance with Annex I to Regulation (EU) No 1178/2011.

BOP.ADD.315 Recurrent training and checking

- (a) Each flight crew member shall complete every 2 years recurrent flight and ground training relevant to the class of balloon on which he or she operates, including training on the location and use of all emergency and safety equipment carried.

- (b) Each flight crew member shall complete operator proficiency checks to demonstrate his or her competence in carrying out normal, abnormal and emergency procedures, covering the relevant aspects associated with the specialised tasks described in the operations manual. When carrying out those checks, due account shall be taken of crew members who undertake operations under VFR at night.
- (c) The operator proficiency check shall be valid for 24 calendar months, counting from the end of the month during which the check was carried out or, in case the check is carried out within the last 3 months of the validity period of the previous check, from the last day of the validity period of that previous check.

SECTION 5

General operating requirements

BOP.ADD.400 Responsibilities of the pilot-in-command

The pilot-in-command shall comply with both of the following:

- (a) the relevant requirements of the operator's occurrence reporting scheme referred to in point BOP.ADD.025;
- (b) all flight and duty time limitations and rest requirements applicable to his or her activities in accordance with the national law of the Member State where the operator has its principal place of business.

BOP.ADD.405 Authority of the pilot-in-command

Notwithstanding point BOP.BAS.035, the operator shall take all reasonable measures to ensure that all persons carried in the balloon obey all lawful commands given by the pilot-in-command for the purpose of ensuring the safety of the balloon, of any person or property carried therein or of any person or property on the ground.

BOP.ADD.410 Additional balloon crew member

When a balloon carries more than 19 passengers, at least one additional crew member shall be present on board the balloon in addition to the flight crew as required pursuant to points (a) and (b) of point BOP.ADD.300 to assist passengers in the event of an emergency. That additional crew member shall be appropriately experienced and trained.

BOP.ADD.415 Fitness relating to deep water diving and blood donation

Crew members shall not perform any duties on the balloon where their fitness might be impaired after deep water diving or following blood donation.

BOP.ADD.420 Common language

The operator shall ensure that all crew members can communicate with each other in a common language.

BOP.ADD.425 Psychoactive substances

The operator shall take all reasonable measures to ensure that no person enters or is in a balloon when under the influence of psychoactive substances to the extent that the safety of the balloon, of any person or property carried therein or of any person or property on the ground is likely to be endangered by the presence of that person.

BOP.ADD.430 Endangering

The operator shall take all reasonable measures to ensure that no person, intentionally, recklessly or negligently, acts or omits to act with one of the following consequences:

- (a) endanger a balloon or person therein or on the ground;
- (b) cause or permit a balloon to endanger any person or property.

BOP.ADD.435 Documents, manuals and information to be carried

- (a) All of the following documents, manuals and information shall be carried on each flight as originals or copies:
 - (1) the declaration made by the operator;
 - (2) information concerning search and rescue services for the area of the intended flight;
 - (3) the operational flight plan.
- (b) All of the following documents, manuals and information shall be stowed at a safe place, not on board the balloon during a flight, as originals:
 - (1) the documents, manuals and information referred to in point (a), when copies thereof are carried on board the balloon during a flight;
 - (2) the current parts of the operations manual or the standard operating procedures (SOPs) that are relevant to the duties of crew members, which shall be easily accessible to them;
 - (3) passenger lists, when passengers are carried;
 - (4) the mass documentation referred to in point (c) of point BOP.ADD.600.
- (c) When requested by the competent authority, the pilot-in-command or the operator shall make available to that authority the original documents, manuals and information within the time period specified by the authority which shall not be less than 24 hours.

BOP.ADD.440 Dangerous goods

The operator shall:

- (a) establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board the balloon inadvertently; and
- (b) provide crew members with the necessary information enabling them to adequately carry out their duties in respect of any dangerous goods carried or intended to be carried on board the balloon.

SECTION 6
Operating procedures

BOP.ADD.500 Fuel or ballast calculations

The operator shall ensure that the calculations as regards reserve fuel or ballast are documented in an operational flight plan.

BOP.ADD.505 Carriage of special categories of passengers

The operator shall establish procedures for carrying persons requiring special conditions, assistance or devices when carried on board a balloon under conditions that ensure the safety of the balloon and of any person or property carried therein.

BOP.ADD.510 Commercial balloon specialised operations — Standard operating procedures

Notwithstanding point BOP.BAS.190:

- (a) Before commencing a commercial balloon specialised operation, the operator shall conduct a risk assessment, assessing the complexity of the intended operation in order to determine the hazards and associated risks of the operation and to establish mitigating measures where necessary.
- (b) Based on the risk assessment, the operator shall, before commencing the commercial balloon specialised operation, establish standard operating procedures (SOPs) appropriate to the intended operation and the balloon used. The SOPs shall either be part of the operations manual or be laid down in a separate document. The operator shall regularly review and update the SOPs where necessary in order to adequately take account of the risk assessment.
- (c) The operator shall ensure that commercial balloon specialised operations are performed in accordance with the SOPs.

SECTION 7
Performance and operating limitations

BOP.ADD.600 System for determining the mass

- (a) The operator shall establish a system specifying how all of the following items are accurately determined for each flight, so as to enable the pilot-in-command to verify that the limitations of the AFM are complied with:
 - (1) balloon empty mass;
 - (2) mass of the traffic load;
 - (3) mass of the fuel or ballast load;
 - (4) take-off mass;
 - (5) loading of the balloon performed under the supervision of the pilot-in-command or qualified personnel;

- (6) preparation and disposition of all documentation.
- (b) The mass computation based on electronic calculations shall be replicable by the pilot-in-command.
- (c) The mass documentation, specifying the items listed in point (a), shall be prepared prior to each flight and documented in an operational flight plan.

APPENDIX

DECLARATION
in accordance with Commission Regulation (EU) .../...

Operator

Name:

Place where the operator has its principal place of business.

Name and contact details of the accountable manager:

Balloon operation

Starting date of commercial operation and, where relevant, date of change to existing commercial operation.

Information on balloon(s) used, commercial operation(s) and continuing airworthiness management:¹

Balloon type	Balloon registration	Main base	Type(s) of operation²	Continuing airworthiness management organisation³

Where applicable, list of AltMoC with references to the associated AMC (annex to this declaration):

Statements

The operator complies, and will continue to comply, with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of Regulation (EU) .../....

In particular, the operator conducts its commercial operations in accordance with the following requirements of Subpart ADD of Annex II to Regulation (EU) .../.....:

The management system documentation, including the operations manual, comply with the requirements of Subpart ADD and all flights will be carried out in accordance with the provisions of the operations manual as required by point BOP.ADD.005(b) of Subpart ADD.

All balloons operated either have a certificate of airworthiness issued in accordance with Regulation (EU) No 748/2012 or meet the specific airworthiness requirements applicable to balloons registered in a third country and subject to a wet lease agreement or a dry lease agreement, as required by points BOP.ADD.110 and BOP.ADD.115(b) and (c) of Subpart ADD.

All flight crew members hold a license and ratings issued or accepted in accordance with Annex I to Regulation (EU) No 1178/2011, as required by point BOP.ADD.300(c) of Subpart ADD.

The operator will notify to the competent authority any changes in circumstances affecting its compliance with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008 and with the requirements of Regulation (EU) .../.... as declared to the competent authority through this declaration and any changes to the information and lists of AltMoC included in and annexed to this declaration, as required by point BOP.ADD.105(a) of Subpart ADD.

The operator confirms that all information included in this declaration, including its annexes, is complete and correct.

Date, name and signature of the accountable manager

1. Complete the table. If there is not enough space to list the information, it shall be listed in a separate annex. The annex shall be dated and signed.
2. 'Type(s) of operation' refers to the type of commercial operation conducted with the balloon.
3. Information about the organisation responsible for the continuing airworthiness management shall include the name of the organisation, the address and the approval reference.