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STATUTORY INSTRUMENTS

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**2021 No. 792**

**The Space Industry Regulations 2021**

**PART 4**

**Grant of a spaceflight operator licence: risk**

**CHAPTER 2**

**Risks to persons who are not crew or spaceflight participants**

*SECTION 1*

*Steps applicant must take to ensure that risks are as low as reasonably practicable*

**Flight safety analysis**

- 26.**—(1) An applicant must carry out a flight safety analysis in which the applicant—
- (a) identifies the major accident hazards that could, whether or not the launch vehicle malfunctions—
    - (i) arise from, or cause a major accident during, the proposed spaceflight activities, or
    - (ii) arise from the launch vehicle, or any part of it, during the proposed spaceflight activities,
  - (b) completes the steps listed in regulation 28(1) for each hazard identified under sub-paragraph (a), and
  - (c) estimates numerically the risk of death or serious injury arising from the hazards mentioned in sub-paragraph (a) to persons who are not human occupants.
- (2) When identifying hazards under paragraph (1)(a), the applicant must consider the hazards referred to in paragraph 18(1) of Schedule 1.
- (3) In carrying out the flight safety analysis the applicant must take into account the matters listed in paragraph 18(2) of Schedule 1.

**Ground safety analysis**

- 27.**—(1) An applicant for a launch operator licence must carry out a ground safety analysis in which the applicant identifies the major accident hazards that could arise—
- (a) during, or cause a major accident during, preparations for the launch from the time when the launch vehicle or its components arrive at the spaceport or other place from which the launch is to take place, or
  - (b) from the launch vehicle, or any part of it, or from a payload, upon or after landing, whether or not the launch vehicle malfunctions.
- (2) “Preparations for the launch” in paragraph (1)(a) includes each of the following that are applicable—

- (a) transporting, handling and storing of any hazardous material in relation to the launch vehicle;
- (b) preparing or testing a payload that will be integrated with the launch vehicle;
- (c) integration of a payload with the launch vehicle;
- (d) integration of a carrier aircraft with the launch vehicle;
- (e) testing of—
  - (i) the launch vehicle;
  - (ii) systems on board the launch vehicle;
  - (iii) ground support equipment;
  - (iv) other systems to be used in the proposed spaceflight activities.

(3) An applicant for a return operator licence must carry out a ground safety analysis that identifies the major accident hazards that could arise from the launch vehicle, or any part of it, upon or after landing, whether or not the launch vehicle malfunctions.

(4) In the ground safety analysis, the applicant must complete the steps listed in regulation 28(1) for each hazard identified under paragraph (1) or (3).

(5) When identifying hazards under paragraph (1) or (3), the applicant must consider the hazards referred to in paragraph 19 of Schedule 1.

(6) In carrying out the ground safety analysis the applicant must take into account any existing legal requirements relevant to safety.

#### **Steps to be taken for each identified hazard**

**28.—**(1) The steps mentioned in regulations 26(1)(b) and 27(4) which the applicant must complete for each major accident hazard identified are to—

- (a) identify the conditions under which it could occur;
- (b) identify what could cause it or contribute to it;
- (c) assess the likelihood of it arising;
- (d) assess its foreseeable consequences;
- (e) use the assessments required by sub-paragraphs (c) and (d) to evaluate the risk of a major accident;
- (f) define any appropriate measures to take to—
  - (i) prevent a major accident from occurring, and
  - (ii) mitigate the consequences if a major accident does occur.

(2) An applicant must—

- (a) define appropriate performance standards for the measures mentioned in paragraph (1)(f);
- (b) decide what mechanisms to use for reviewing—
  - (i) the flight safety analysis required by regulation 26(1),
  - (ii) the ground safety analysis required by regulation 27, and
  - (iii) the measures mentioned in paragraph (1)(f).

(3) An applicant must produce a safety operations manual that fulfils the requirements of regulation 90 and Schedule 5.

(4) When producing the safety operations manual, the applicant must—

- (a) take into account the outcomes of the steps taken under paragraph (1);

- (b) consult any proposed spaceport licensee;
- (c) consult any proposed range control service provider.

## SECTION 2

### *Information to be provided to the regulator*

#### **Contents of the safety case**

**29.**—(1) On making an application for a launch operator licence or a return operator licence, an applicant must give the regulator a safety case that includes—

- (a) the information about the applicant and the applicant’s proposed spaceflight activities listed in paragraphs 1 to 10 of Schedule 1;
- (b) the technical particulars listed in paragraphs 11 to 17 of Schedule 1;
- (c) the outcomes of each of the steps taken as part of the flight safety analysis required by regulation 26(1);
- (d) the outcomes of each of the steps taken as part of the ground safety analysis required by regulation 27;
- (e) any measures that the applicant considered but does not intend to implement to prevent, or to control or mitigate the consequences of, an identified hazard, and an explanation of why it was not reasonably practicable to implement those measures;
- (f) a description of any consultation with, or involvement in the preparation of the safety case of—
  - (i) representatives of the applicant’s workforce;
  - (ii) a proposed spaceport licensee;
  - (iii) proposed range control service providers.

(2) If the applicant revises the safety case after giving it to the regulator, the applicant must give the regulator the revised safety case without delay.

#### **Applicant to provide safety operations manual to regulator**

**30.**—(1) On making an application for a launch operator licence or a return operator licence, an applicant must give the regulator a copy of the safety operations manual required by regulation 28(3).

(2) If the applicant revises the safety operations manual after giving it to the regulator, the applicant must give the regulator the revised safety operations manual without delay.