

(2) Prevent incapacitation of any of the flight crew in the event of loss of cabin pressure.

§ 460.13 Smoke detection and fire suppression.

An operator or crew must have the ability to detect smoke and suppress a cabin fire to prevent incapacitation of the flight crew.

§ 460.15 Human factors.

An operator must take the precautions necessary to account for human factors that can affect a crew's ability to perform safety-critical roles, including in the following safety critical areas—

- (a) Design and layout of displays and controls;
- (b) Mission planning, which includes analyzing tasks and allocating functions between humans and equipment;
- (c) Restraint or stowage of all individuals and objects in a vehicle; and
- (d) Vehicle operation, so that the vehicle will be operated in a manner that flight crew can withstand any physical stress factors, such as acceleration, vibration, and noise.

§ 460.17 Verification program.

An operator must successfully verify the integrated performance of a vehicle's hardware and any software in an operational flight environment before allowing any space flight participant on board during a flight. Verification must include flight testing.

§ 460.19 Crew waiver of claims against U.S. Government.

Each member of a flight crew and any remote operator must execute a reciprocal waiver of claims with the Federal Aviation Administration of the Department of Transportation in accordance with the requirements of part 440.

§§ 460.20–460.40 [Reserved]

Subpart B—Launch and Reentry with a Space Flight participant

§ 460.41 Scope.

This subpart establishes requirements for space flight participants on

board a vehicle whose operator is licensed or permitted under this chapter.

§ 460.43 Applicability.

This subpart applies to:

- (a) An applicant for a license or permit under this chapter who proposes to have a space flight participant on board a vehicle;
- (b) An operator licensed or permitted under this chapter who has a space flight participant on board a vehicle; and
- (c) A space flight participant in an activity authorized under this chapter.

§ 460.45 Operator informing space flight participant of risk.

(a) Before receiving compensation or making an agreement to fly a space flight participant, an operator must satisfy the requirements of this section. An operator must inform each space flight participant in writing about the risks of the launch and reentry, including the safety record of the launch or reentry vehicle type. An operator must present this information in a manner that can be readily understood by a space flight participant with no specialized education or training, and must disclose in writing—

- (1) For each mission, each known hazard and risk that could result in a serious injury, death, disability, or total or partial loss of physical and mental function;
- (2) That there are hazards that are not known; and
- (3) That participation in space flight may result in death, serious injury, or total or partial loss of physical or mental function.

(b) An operator must inform each space flight participant that the United States Government has not certified the launch vehicle and any reentry vehicle as safe for carrying crew or space flight participants.

(c) An operator must inform each space flight participant of the safety record of all launch or reentry vehicles that have carried one or more persons on board, including both U.S. government and private sector vehicles. This information must include—

- (1) The total number of people who have been on a suborbital or orbital space flight and the total number of