

§ 415.37 Flight readiness and communications plan.

(a) *Flight readiness requirements.* An applicant shall designate an individual responsible for flight readiness. The applicant shall submit the following procedures for verifying readiness for safe flight:

(1) Launch readiness review procedures involving the applicant's flight safety personnel and federal launch range personnel involved in the launch. The procedures shall ensure a launch readiness review is conducted during which the individual designated under paragraph (a) of this section is provided with the following information to make a judgement as to flight readiness:

- (i) Flight-readiness of safety-related launch property and services to be provided by a federal launch range;
- (ii) Flight-readiness of launch vehicle and payload;
- (iii) Flight-readiness of flight safety systems;
- (iv) Mission rules and launch constraints;
- (v) Abort, hold and recycle procedures;
- (vi) Results of dress rehearsals and simulations conducted in accordance with paragraph (a)(4) of this section;
- (vii) Unresolved safety issues as of the launch readiness review and plans for addressing and resolving them; and
- (viii) Any additional safety information required by the individual designated under paragraph (a) of this section to determine flight readiness.

(2) Procedures that ensure mission constraints, rules and abort procedures are listed and consolidated in a safety directive or notebook approved by licensee flight safety and federal launch range personnel;

(3) Procedures that ensure currency and consistency of licensee and federal launch range countdown checklists;

(4) Dress rehearsal procedures that—

- (i) Ensure crew readiness under nominal and non-nominal flight conditions;
- (ii) Contain criteria for determining whether to dispense with one or more dress rehearsals; and
- (iii) Verify currency and consistency of licensee and federal launch range countdown checklists.

(5) Procedures for ensuring the licensee's flight safety personnel adhere to federal launch range crew rest rules.

(b) *Communications plan requirements.* An applicant shall submit a communications plan providing licensee and federal launch range personnel communications procedures during countdown and flight. Effective issuance and communication of safety-critical information during countdown shall include hold/resume, go/no go and abort commands by licensee and federal launch range personnel during countdown. The communications plan shall describe the authority of licensee and federal launch range personnel, by individual or position title, to issue these commands. The communications plan shall also ensure that—

(1) Communication networks are assigned so that personnel identified under paragraph (b) of this section have direct access to real-time safety-critical information required for issuing hold/resume, go/no go and abort decisions and commands;

(2) Personnel identified under paragraph (b) of this section monitor common intercom channel(s) during countdown and flight; and

(3) A protocol is established for utilizing defined radio telephone communications terminology.

(c) An applicant shall submit procedures that ensure that licensee and federal launch range personnel receive a copy of the communications plan required by paragraph (b) of this section, and that the federal launch range concurs in the communications plan.

§ 415.39 Safety at end of launch.

To obtain safety approval, an applicant must demonstrate for any proposed launch that for all launch vehicle stages or components that reach earth orbit—

(a) There will be no unplanned physical contact between the vehicle or its components and the payload after payload separation;

(b) Debris generation will not result from the conversion of energy sources into energy that fragments the vehicle or its components. Energy sources include chemical, pressure, and kinetic energy; and