

launch azimuth and is positive in the downrange direction. The y-axis is positive to the left looking downrange. The xy-plane is tangent to the ellipsoidal earth model's surface at the origin and perpendicular to the geodetic vertical. The z-axis is normal to the xy-plane and positive directed away from the earth.

ϕ_0 , λ_0 , h_0 means a latitude, longitude, height system where ϕ_0 is the geodetic latitude of a launch point, λ_0 is the east longitude of the launch point, and h_0 is the height of the launch point above the reference ellipsoid. ϕ_0 and λ_0 are expressed in degrees-decimal-degrees.

§§ 420.6–420.14 [Reserved]

Subpart B—Criteria and Information Requirements for Obtaining a License

§ 420.15 Information requirements.

(a) *General*—(1) *Launch site operator.* An applicant shall identify the name and address of the applicant, and the name, address, and telephone number of any person to whom inquiries and correspondence should be directed.

(2) *Launch site.* An applicant shall provide the name and location of the proposed launch site and include the following information:

- (i) A list of downrange equipment;
- (ii) A description of the layout of the launch site, including launch points;
- (iii) The types of launch vehicles to be supported at each launch point;
- (iv) The range of launch azimuths planned from each launch point; and
- (v) The scheduled operational date.

(3) *Foreign ownership.* Identify foreign ownership of the applicant, as follows:

- (i) For a sole proprietorship or partnership, all foreign owners or partners;
- (ii) For a corporation, any foreign ownership interest of 10 percent or more; and
- (iii) For a joint venture, association, or other entity, any foreign entities participating in the entity.

(b) *Environmental.* An applicant shall provide the FAA with information for the FAA to analyze the environmental impacts associated with the operation of the proposed launch site. The information provided by an applicant must be sufficient to enable the FAA to com-

ply with the requirements of the National Environment Policy Act, 42 U.S.C. 4321 *et seq.* (NEPA), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, 40 CFR parts 1500–1508, and the FAA's Procedures for Considering Environmental Impacts, FAA Order 1050.1D. An applicant shall submit environmental information concerning a proposed launch site not covered by existing environmental documentation, and other factors as determined by the FAA.

(c) *Launch site location.* (1) Except as provided by paragraph (c)(2) of this section, an applicant shall provide the information necessary to demonstrate compliance with §§ 420.19–420.29.

(2) An applicant who is proposing to locate a launch site at an existing launch point at a federal launch range is not required to comply with paragraph (c)(1) of this section if a launch vehicle of the same type and class as proposed for the launch point has been safely launched from the launch point.

(d) *Explosive site plan.* (1) Except as provided by paragraph (d)(2) of this section, an applicant shall submit an explosive site plan that complies with §§ 420.63, 420.65, 420.67, and 420.69.

(2) If an applicant plans to operate a launch site located on a federal launch range, and if the applicant is required by the federal launch range to comply with the federal launch range's explosive safety requirements, the applicant shall submit the explosive site plan submitted to the federal launch range.

(e) *Launch site operations.* An applicant shall provide the information necessary to demonstrate compliance with the requirements of §§ 420.53, 420.55, 420.57, 420.59, 420.61, and 420.71.

§ 420.17 Bases for issuance of a license.

(a) The FAA will issue a license under this part when the FAA determines that:

(1) The application provides the information required by § 420.15;

(2) The FAA has completed an analysis of the environmental impacts associated with the proposed operation of the launch site, in accordance with NEPA, 40 CFR parts 1500–1508, and FAA Order 1050.1D;

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(3) The launch site location meets the requirements of §§ 420.19, 420.21, 420.23, 420.25, 420.27, and 420.29;

(4) The applicant has completed the agreements required by § 420.31;

(5) The application demonstrates that the applicant shall satisfy the requirements of §§ 420.53, 420.55, 420.57, 420.59, 420.61 and 420.71;

(6) The explosive site plan meets the criteria of §§ 420.63, 420.65, 420.67 and 420.69; and

(7) Issuing a license would not jeopardize foreign policy or national security interests of the United States.

(b) The FAA advises an applicant, in writing, of any issue arising during an application review that would lead to denial. The applicant may respond in writing, submit additional information, or amend its license application.

§ 420.19 Launch site location review—general.

(a) To gain approval for a launch site location, an applicant shall demonstrate that for each launch point proposed for the launch site, at least one type of expendable or reusable launch vehicle can be flown from the launch point safely. For purposes of the launch site location review:

(1) A safe launch must possess a risk level estimated, in accordance with the requirements of this part, not to exceed an expected average number of 0.00003 casualties (E_c) to the collective member of the public exposed to hazards from the flight ($E_c \leq 30 \times 10^{-6}$).

(2) Types of launch vehicles include orbital expendable launch vehicles, guided sub-orbital expendable launch vehicles, unguided sub-orbital expendable launch vehicles, and reusable launch vehicles. Orbital expendable launch vehicles are further classified by weight class, based on the weight of payload the launch vehicle can place in a 100-nm orbit, as defined in table 1.

(b) If an applicant proposes to have more than one type of launch vehicle flown from a launch point, the applicant shall demonstrate that each type of expendable or reusable launch vehicle planned to be flown from the launch point can be flown from the launch point safely.

(c) If an applicant proposes to have more than one weight class of orbital expendable launch vehicles flown from a launch point, the applicant shall demonstrate that the heaviest weight class planned to be flown from the launch point can be flown from the launch point safely.

TABLE 1 OF § 420.19—ORBITAL EXPENDABLE LAUNCH VEHICLE CLASSES BY PAYLOAD WEIGHT (LBS)

100 nm orbit	Weight class			
	Small	Medium	Medium large	Large
28 degrees inclination *	≤4400	>4400 to ≤11100	>11100 to ≤18500	>18500
90 degrees inclination	≤3300	>3300 to ≤8400	>8400 to ≤15000	>15000

* 28 degrees inclination orbit from a launch point at 28 degrees latitude.

§ 420.21 Launch site location review—launch site boundary.

(a) The distance from any proposed launch point to the closest launch site boundary must be at least as great as the debris dispersion radius of the largest launch vehicle type and weight class proposed for the launch point.

(b) For a launch site supporting any expendable launch vehicle, an applicant shall use the largest distance provided by table 2 for the type and weight

class of any launch vehicle proposed for the launch point.

(c) For a launch site supporting any reusable launch vehicle, an applicant shall determine the debris dispersion radius that represents the maximum distance from a launch point that debris travels given a worst-case launch vehicle failure in the launch area. An applicant must clearly and convincingly demonstrate the validity of its proposed debris dispersion radius.