

FAA a written application for renewal of the license at least 90 days before the expiration date of the license.

(b) *Application.*(1) A license renewal application shall satisfy the requirements set forth in this part and any other applicable part of this chapter.

(2) The application may incorporate by reference information provided as part of the application for the expiring license or any modification to that license.

(3) The applicant must describe any proposed changes in its conduct of licensed activities and provide any additional clarifying information required by the FAA.

(c) *Review of application.* The FAA conducts the reviews required under this chapter for a license to determine whether the applicant's license may be renewed for an additional term. The FAA may incorporate by reference any findings that are part of the record for the expiring license.

(d) *Grant of license renewal.* After completion by the FAA of the reviews required by this chapter for a license and issuance of the requisite approvals and determinations, the FAA issues an order amending the expiration date of the license. The FAA may impose additional or revised terms and conditions necessary to protect public health and safety and the safety of property and to protect U.S. national security and foreign policy interests.

(e) *Denial of license renewal.* The FAA informs a licensee, in writing, if the licensee's application for renewal has been denied and states the reasons for denial. A licensee whose application for renewal is denied may follow the procedures set forth in section 413.21 of this part.

## PART 415—LAUNCH LICENSE

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## § 415.1

APPENDIX A TO PART 415—FAA/  
USSPACECOM LAUNCH NOTIFICATION  
FORM

AUTHORITY: 49 U.S.C. 70101-70121.

SOURCE: Amdt. 415-03, 64 FR 19616, Apr. 21, 1999, unless otherwise noted.

### Subpart A—General

#### § 415.1 Scope.

This part prescribes requirements for obtaining a license to launch a launch vehicle, other than a reusable launch vehicle (RLV), and post-licensing requirements with which a licensee shall comply to remain licensed. Requirements for preparing a license application are contained in part 413 of this subchapter. Requirements for obtaining a license to launch an RLV and conduct an RLV mission are contained in part 431 of this subchapter.

[Doc. No. FAA-1999-5535, 65 FR 56658, Sept. 19, 2000]

#### § 415.3 Types of launch licenses.

(a) *Launch-specific license.* A launch-specific license authorizes a licensee to conduct one or more launches, having the same launch parameters, of one type of launch vehicle from one launch site. The license identifies, by name or mission, each launch authorized under the license. A licensee's authorization to launch terminates upon completion of all launches authorized by the license or the expiration date stated in the license, whichever occurs first.

(b) *Launch operator license.* A launch operator license authorizes a licensee to conduct launches from one launch site, within a range of launch parameters, of launch vehicles from the same family of vehicles transporting specified classes of payloads. A launch operator license remains in effect for five years from the date of issuance.

#### § 415.5 Policy and safety approvals.

To obtain a launch license, an applicant must obtain policy and safety approvals from the FAA. Requirements for obtaining these approvals are contained in subparts B, C and F of this part. Only a launch license applicant may apply for the approvals, and may apply for either approval separately and in advance of submitting a com-

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plete license application, using the application procedures contained in part 413 of this subchapter.

#### § 415.7 Payload determination.

A payload determination is required for a launch license unless the proposed payload is exempt from payload review under § 415.53 of this part. The FAA conducts a payload review, as described in subpart D of this part, to make the determination. Either a launch license applicant or a payload owner or operator may request a review of its proposed payload using the application procedures contained in part 413 of this subchapter. Upon receipt of an application, the FAA may conduct a payload review independently of a launch license application.

#### § 415.9 Issuance of a launch license.

(a) The FAA issues a launch license to an applicant who has obtained all approvals and determinations required under this chapter for a license.

(b) A launch license authorizes a licensee to conduct a launch or launches in accordance with the representations contained in the licensee's application, subject to the licensee's compliance with terms and conditions contained in license orders accompanying the license, including financial responsibility requirements.

#### § 415.11 Additional license terms and conditions.

The FAA may modify a launch license at any time by modifying or adding license terms and conditions to ensure compliance with the Act and regulations.

#### § 415.13 Transfer of a launch license.

(a) Only the FAA may transfer a launch license.

(b) An applicant for transfer of a launch license shall submit a license application in accordance with part 413 of this subchapter and shall meet the requirements of part 415 of this subchapter. The FAA will transfer a license to an applicant who has obtained all of the approvals and determinations required under this chapter for a license. In conducting its reviews and issuing approvals and determinations, the FAA may incorporate by reference

any findings made part of the record to support the initial licensing determination. The FAA may modify a license to reflect any changes necessary as a result of a license transfer.

**§415.15 Rights not conferred by launch license.**

Issuance of a launch license does not relieve a licensee of its obligation to comply with all applicable requirements of law or regulation that may apply to its activities, nor does issuance confer any proprietary, property or exclusive right in the use of any federal launch range or related facilities, airspace, or outer space.

**§§ 415.16–415.20 [Reserved]**

**Subpart B—Policy Review and Approval**

**§415.21 General.**

The FAA issues a policy approval to a license applicant unless the FAA determines that a proposed launch would jeopardize U.S. national security or foreign policy interests, or international obligations of the United States. A policy approval is part of the licensing record on which the FAA's licensing determination is based.

**§415.23 Policy review.**

(a) The FAA reviews a license application to determine whether it presents any issues affecting U.S. national security or foreign policy interests, or international obligations of the United States.

(b) *Interagency consultation.* (1) The FAA consults with the Department of Defense to determine whether a license application presents any issues affecting U.S. national security.

(2) The FAA consults with the Department of State to determine whether a license application presents any issues affecting U.S. foreign policy interests or international obligations.

(3) The FAA consults with other federal agencies, including the National Aeronautics and Space Administration, authorized to address issues identified under paragraph (a) of this section, associated with an applicant's launch proposal.

(c) The FAA advises an applicant, in writing, of any issue raised during a policy review that would impede issuance of a policy approval. The applicant may respond, in writing, or revise its license application.

**§415.25 Application requirements for policy review.**

In its launch license application, an applicant shall—

(a) Identify the model and configuration of any launch vehicle proposed for launch by the applicant.

(b) Identify structural, pneumatic, propellant, propulsion, electrical and avionics systems used in the launch vehicle and all propellants.

(c) Identify foreign ownership of the applicant as follows:

(1) For a sole proprietorship or partnership, identify all foreign ownership;

(2) For a corporation, identify any foreign ownership interests of 10% or more; and

(3) For a joint venture, association, or other entity, identify any participating foreign entities.

(d) Identify proposed launch vehicle flight profile(s), including:

(1) Launch site;

(2) Flight azimuths, trajectories, and associated ground tracks and instantaneous impact points;

(3) Sequence of planned events or maneuvers during flight;

(4) Range of nominal impact areas for all spent motors and other discarded mission hardware, within three standard deviations of the mean impact point (a 3-sigma footprint); and

(5) For each orbital mission, the range of intermediate and final orbits of each vehicle upper stage, and their estimated orbital lifetimes.

**§415.27 Denial of policy approval.**

The FAA notifies an applicant, in writing, if it has denied policy approval for a license application. The notice states the reasons for the FAA's determination. The applicant may respond to the reasons for the determination and request reconsideration.

**§§ 415.28–415.30 [Reserved]****Subpart C—Safety Review and Approval for Launch From a Federal Launch Range****§415.31 General.**

(a) The FAA conducts a safety review to determine whether an applicant is capable of launching a launch vehicle and its payload without jeopardizing public health and safety and safety of property. The FAA issues a safety approval to a license applicant proposing to launch from a federal launch range if the applicant satisfies the requirements of this subpart and has contracted with the federal launch range for the provision of safety-related launch services and property, as long as those launch services and the proposed use of launch property are within the federal launch range's experience. The FAA evaluates on an individual basis all other safety-related launch services and property associated with an applicant's proposal. A safety approval is part of the licensing record on which the FAA's licensing determination is based.

(b) The FAA advises an applicant, in writing, of any issue raised during a safety review that would impede issuance of a safety approval. The applicant may respond, in writing, or revise its license application.

**§415.33 Safety organization.**

(a) An applicant shall maintain a safety organization and document it by identifying lines of communication and approval authority for all launch safety decisions. Lines of communication, both within the applicant's organization and between the applicant and any federal launch range providing launch services, shall be employed to ensure that personnel perform launch safety operations in accordance with range safety requirements and with plans and procedures required by this subpart. Approval authority shall be employed to ensure compliance with range safety requirements and with plans and procedures required by this subpart.

(b) *Safety official.* An applicant shall identify by name, title, and qualifications, a qualified safety official author-

ized to examine all aspects of the applicant's launch safety operations and to monitor independently personnel compliance with the applicant's safety policies and procedures. The safety official shall report directly to the person responsible for an applicant's licensed launches, who shall ensure that all of the safety official's concerns are addressed prior to launch.

**§415.35 Acceptable flight risk.**

(a) *Flight risk through orbital insertion or impact.* Acceptable flight risk through orbital insertion for an orbital launch vehicle, and through impact for a suborbital launch vehicle, is measured in terms of the expected average number of casualties ( $E_c$ ) to the collective members of the public exposed to debris hazards from any one launch. To obtain safety approval, an applicant shall demonstrate that the risk level associated with debris from an applicant's proposed launch shall not exceed an expected average number of 0.00003 casualties per launch ( $E_c \leq 30 \times 10^{-6}$ ).

(b) *Hazard identification and risk assessment.* To demonstrate compliance with this section, an applicant shall submit an analysis that identifies hazards and assesses risks to public health and safety and safety of property associated with nominal and non-nominal flight under its launch proposal.

(c) A launch vehicle shall be designed to ensure that flight risks meet the criteria set forth in this section. An applicant shall identify and describe the following:

(1) Launch vehicle structure, including physical dimensions and weight;

(2) Hazardous and safety critical systems, including propulsion systems; and

(3) Drawings and schematics for each system identified under paragraph (c)(2) of this section.

(d) A launch vehicle shall be operated in a manner that ensures that flight risks meet the criteria set forth in this section. An applicant shall identify all launch operations and procedures that must be performed to ensure acceptable flight risks.

**§ 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

(c) Stored energy will be removed by depleting residual fuel and leaving all fuel line valves open, venting any pressurized system, leaving all batteries in a permanent discharge state, and removing any remaining source of stored energy. Other equivalent procedures may be approved in the course of the licensing process.

**§ 415.41 Accident investigation plan.**

(a) An applicant shall submit an accident investigation plan (AIP) containing the applicant's procedures for reporting and responding to launch accidents, launch incidents, or other mishaps, as defined in § 401.5 of this chapter. The AIP shall be signed by an individual authorized to sign and certify the application in accordance with § 413.7(c) of this chapter, and the safety official designated under § 415.33(b) of this subpart.

(b) *Reporting requirements.* An AIP shall provide for—

(1) Immediate notification to the Federal Aviation Administration (FAA) Washington Operations Center in case of a launch accident, a launch incident or a mishap that involves a fatality or serious injury (as defined in 49 CFR § 830.2).

(2) Notification within 24 hours to the Associate Administrator for Commercial Space Transportation or the Federal Aviation Administration (FAA) Washington Operations Center in the event of a mishap, other than those in § 415.41 (b) (1), that does not involve a fatality or serious injury (as defined in 49 CFR 830.2).

(3) Submission of a written preliminary report to the FAA, Associate Administrator for Commercial Space Transportation, in the event of a launch accident or launch incident, as defined in § 401.5 of this chapter, within five days of the event. The report shall identify the event as either a launch accident or launch incident, and shall include the following information:

- (i) Date and time of occurrence;
- (ii) Description of event;
- (iii) Location of launch;
- (iv) Launch vehicle;
- (v) Any payload;
- (vi) Vehicle impact points outside designated impact lines, if applicable;

(vii) Number and general description of any injuries;

(viii) Property damage, if any, and an estimate of its value;

(ix) Identification of hazardous materials, as defined in § 401.5 of this chapter, involved in the event, whether on the launch vehicle, payload, or on the ground;

(x) Action taken by any person to contain the consequences of the event; and

(xi) Weather conditions at the time of the event.

(c) *Response plan.* An AIP shall contain procedures that—

(1) Ensure the consequences of a launch accident, launch incident or other mishap are contained and minimized;

(2) Ensure data and physical evidence is preserved;

(3) Require the licensee to report to and cooperate with FAA and National Transportation Safety Board (NTSB) investigations and designate one or more points of contact for the FAA or NTSB; and

(4) Require the licensee to identify and adopt preventive measures for avoiding recurrence of the event.

(d) *Investigation plan.* An AIP shall contain—

(1) Procedures for investigating the cause of a launch accident, launch incident or other mishap;

(2) Procedures for reporting investigation results to the FAA; and

(3) Delineated responsibilities, including reporting responsibilities for personnel assigned to conduct investigations and for any one retained by the licensee to conduct or participate in investigations.

**§ 415.43 Denial of safety approval.**

The FAA notifies an applicant, in writing, if it has denied safety approval for a license application. The notice states the reasons for the FAA's determination. The applicant may respond to the reasons for the determination and request reconsideration.

**§§ 415.44–415.50 [Reserved]****Subpart D—Payload Review and Determination****§ 415.51 General.**

The FAA reviews a payload proposed for launch to determine whether a license applicant or payload owner or operator has obtained all required licenses, authorization, and permits, unless the payload is exempt from review under § 415.53 of this subpart. If not otherwise exempt, the FAA reviews a payload proposed for launch to determine whether its launch would jeopardize public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States. A payload determination is part of the licensing record on which the FAA's licensing determination is based.

**§ 415.53 Payloads not subject to review.**

The FAA does not review payloads that are—

- (a) Subject to regulation by the Federal Communications Commission (FCC) or the Department of Commerce, National Oceanic and Atmospheric Administration (NOAA); or
- (b) Owned or operated by the U.S. Government.

**§ 415.55 Classes of payloads.**

The FAA may review and issue findings regarding a proposed class of payload, e.g., communications, remote sensing or navigation. However, each payload is subject to compliance monitoring by the FAA before launch to determine whether its launch would jeopardize public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States. The licensee is responsible for providing current information, in accordance with § 415.79(a), regarding a payload proposed for launch not later than 60 days before a scheduled launch.

**§ 415.57 Payload review.**

(a) *Timing.* A payload review may be conducted as part of a license application review or may be requested by a

payload owner or operator in advance of or apart from a license application.

(b) *Interagency consultation.* The FAA consults with other agencies to determine whether launch of a proposed payload or payload class would present any issues affecting public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States.

(1) The FAA consults with the Department of Defense to determine whether launch of a proposed payload or payload class would present any issues affecting U.S. national security.

(2) The FAA consults with the Department of State to determine whether launch of a proposed payload or payload class would present any issues affecting U.S. foreign policy interests or international obligations.

(3) The FAA consults with other federal agencies, including the National Aeronautics and Space Administration, authorized to address issues identified under paragraph (b) of this section associated with an applicant's launch proposal.

(c) The FAA advises a person requesting a payload determination, in writing, of any issue raised during a payload review that would impede issuance of a license to launch that payload or payload class. The person requesting payload review may respond, in writing, or revise its application.

**§ 415.59 Information requirements for payload review.**

(a) A person requesting review of a particular payload or payload class shall identify the following:

- (1) Payload name;
- (2) Payload class;
- (3) Physical dimensions and weight of the payload;
- (4) Payload owner and operator, if different from the person requesting payload review;
- (5) Orbital parameters for parking, transfer and final orbits;
- (6) Hazardous materials, as defined in § 401.5 of this chapter, and radioactive materials, and the amounts of each;
- (7) Intended payload operations during the life of the payload; and

(8) Delivery point in flight at which the payload will no longer be under the licensee's control.

(b) [Reserved]

**§ 415.61 Issuance of payload determination.**

(a) The FAA issues a favorable payload determination unless it determines that launch of the proposed payload would jeopardize public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States. The FAA advises any person who has requested a payload review of its determination, in writing. The notice states the reasons for the determination in the event of an unfavorable determination.

(b) Any person issued an unfavorable payload determination may respond to the reasons for the determination and request reconsideration.

**§ 415.63 Incorporation of payload determination in license application.**

A favorable payload determination issued for a payload or class of payload may be included by a license applicant as part of its application. However, any change in information provided under section 415.59 of this subpart must be reported in accordance with section 413.17 of this chapter. The FAA determines whether a favorable payload determination remains valid in light of reported changes and may conduct an additional payload review.

**§ 415.64–415.70 [Reserved]**

**Subpart E—Post-Licensing Requirements—Launch License Terms and Conditions**

**§ 415.71 Public safety responsibility.**

A launch licensee is responsible for ensuring the safe conduct of a licensed launch and for ensuring that public safety and safety of property are protected at all times during the conduct of a licensed launch.

**§ 415.73 Continuing accuracy of license application; application for modification of license.**

(a) A launch licensee is responsible for the continuing accuracy of rep-

resentations contained in its application for the entire term of the license. A launch licensee must conduct a licensed launch and carry out launch safety procedures in accordance with its application. A licensee's failure to comply with the requirements of this paragraph is sufficient basis for suspension or revocation of a license.

(b) After a launch license has been issued, a licensee must apply to the FAA for modification of the license if:

(1) The launch licensee proposes to conduct a launch or carry out a launch safety procedure or operation in a manner that is not authorized by the license; or

(2) Any representation contained in the license application that is material to public health and safety or safety of property would no longer be accurate and complete or would not reflect the launch licensee's procedures governing the actual conduct of a launch. A change is material to public health and safety or safety of property if it alters or affects the licensee's launch plans or procedures submitted in accordance with subpart D of this part, class of payload, orbital destination, type of launch vehicle, flight path, launch site, launch point, or any safety system, policy, procedure, requirement, criteria or standard.

(c) An application to modify a launch license shall be prepared and submitted in accordance with part 413 of this chapter. The launch licensee shall indicate any part of its license or license application that would be changed or affected by a proposed modification.

(d) The FAA reviews approvals and determinations required by this chapter to determine whether they remain valid in light of a proposed modification. The FAA approves a modification that satisfies the requirements set forth in this part.

(e) Upon approval of modification, the FAA issues either a written approval to the launch licensee or a license order modifying the license if a stated term or condition of the license is changed, added or deleted. A written approval has the full force and effect of a license order and is part of the licensing record.

**§ 415.75 Agreement(s) with federal launch range.**

Prior to conducting a licensed launch from a federal launch range, a launch licensee or applicant shall enter into an agreement with a federal launch range providing for access to and use of U.S. Government property and services required to support a licensed launch from the facility and for public safety related operations and support. The agreement shall be in effect for the conduct of any licensed launch. A launch licensee shall comply with any requirements of the agreement(s) that may affect public safety and safety of property during the conduct of a licensed launch, including flight safety procedures and requirements.

**§ 415.77 Records.**

(a) A launch licensee shall maintain all records necessary to verify that licensed launches are conducted in accordance with representations contained in the licensee's application. A launch licensee shall retain records for three years after completion of all launches conducted under the license.

(b) In the event of a launch accident or launch incident, as defined in § 405.1 of this chapter, a launch licensee shall preserve all records related to the event. Records shall be retained until completion of any federal investigation and until the FAA advises the licensee that the records need not be retained. The licensee shall make available to federal officials for inspection and copying all records required to be maintained under these regulations.

**§ 415.79 Launch reporting requirements.**

(a) Not later than 60 days before each flight conducted under a launch operator license, a licensee shall provide the FAA the following launch-specific information:

- (1) Payload information contained in § 415.59 of this part;
- (2) Flight information, including the launch vehicle, planned flight path, including staging and impact locations, and on-orbit activity of the launch vehicle including payload delivery point(s); and
- (3) Mission specific launch waivers, approved or pending, from a federal

launch range from which the launch will take place, that are unique to the launch and may affect public safety.

(b) Not later than noon, EST, 15 days before each licensed flight a licensee shall submit to the FAA a completed Federal Aviation Administration/U.S. Space Command (FAA/USSPACECOM) Launch Notification Form (OMB No. 2120-0608).

(c) A launch licensee shall report a launch accident, launch incident, or a mishap that involves a fatality or serious injury (as defined in 49 CFR 830.2) immediately to the Federal Aviation Administration (FAA) Washington Operations Center and provide a written preliminary report in the event of a launch accident or launch incident, in accordance with the accident investigation plan (AIP) submitted as part of its license application under § 415.41 of this part.

**§ 415.81 Registration of space objects.**

(a) To assist the U.S. Government in implementing Article IV of the 1975 Convention on Registration of Objects Launched into Outer Space, each licensee shall provide to the FAA the information required by paragraph (b) of this section for all objects placed in space by a licensed launch, including a launch vehicle and any components, except:

(1) Any object owned and registered by the U.S. Government; and

(2) Any object owned by a foreign entity.

(b) For each object that must be registered in accordance with this section, not later than thirty (30) days following the conduct of a licensed launch, a licensee shall submit the following information:

(1) The international designator of the space object(s);

(2) Date and location of launch;

(3) General function of the space object; and

(4) Final orbital parameters, including:

(i) Nodal period;

(ii) Inclination;

(iii) Apogee; and

(iv) Perigee.

**§ 415.83 Financial responsibility requirements.**

A launch licensee shall comply with financial responsibility requirements specified in a license or license order.

**§ 415.85 Compliance monitoring.**

A launch licensee shall allow access by, and cooperate with, federal officers or employees or other individuals authorized by the FAA to observe any activities of the licensee, or of the licensee's contractors or subcontractors, associated with the conduct of a licensed launch.

**§§ 415.86–415.90 [Reserved]**

**Subpart F—Safety Review and Approval for Launch From a Launch Site Not Operated by a Federal Launch Range**

**§ 415.91 General.**

The FAA evaluates on an individual basis the safety-related elements of an applicant's proposal to launch a launch vehicle from a launch site not operated by a federal launch range. The FAA issues a safety approval to a license applicant proposing to launch from a launch site not operated by a federal launch range when the FAA determines that the launch demonstrates an equivalent level of safety to that provided by a launch from a federal launch range as set forth in subpart C of this part. A safety approval is part of the licensing record on which the FAA's licensing determination is based.

**§ 415.93 Denial of safety approval.**

The FAA notifies an applicant, in writing, if it has denied safety approval for a license application. The notice states the reasons for the FAA's deter-

mination. The applicant may respond to the reasons for the determination and request reconsideration.

**§§ 415.94–415.100 [Reserved]**

**Subpart G—Environmental Review**

**§ 415.101 General.**

An applicant shall provide the FAA with information for the FAA to analyze the environmental impacts associated with a proposed launch. The information provided by an applicant must be sufficient to enable the FAA to comply 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.

**§ 415.103 Environmental information.**

An applicant shall submit environmental information concerning:

- (a) A proposed launch site not covered by existing environmental documentation;
- (b) A proposed launch vehicle with characteristics falling measurably outside the parameters of existing environmental documentation;
- (c) A proposed launch from an established launch site involving a vehicle with characteristics falling measurably outside the parameters of any existing environmental impact statement that applies to that site;
- (d) A proposed payload that may have significant environmental impacts in the event of a mishap; and
- (e) Other factors as determined by the FAA.

APPENDIX A TO PART 415—FAA/USSPACECOM LAUNCH NOTIFICATION FORM

Form Approved OMB No. 2120-0608

 <small>U.S. Department of Transportation Federal Aviation Administration</small>	<h2 style="margin: 0;">FAA/USSPACECOM Launch Notification</h2>
1) Launch Site & Launch Date:	
2) Earliest and Latest possible Launch Time (GMT):	
3) List of objects to achieve orbit - to include payload description, Rocket bodies, and all other objects:	
4) Launch Booster, sustainer, and strap-on descriptions:	
5) Launch operator POC - to include name, address, & phone numbers:	
6) Orbital Parameters for all objects achieving orbit	
a) inertial launch azimuth at liftoff:	
b) inertial flight azimuth after liftoff:	
c) epoch time:	
d) nominal period (min):	
e) inclination (deg):	
f) eccentricity:	
g) semimajor axis (km):	
h) argument of perigee (deg):	
i) right ascension of ascending node (deg):	
j) mean anomaly (deg):	
k) start time of orbit (hh:mm:ss after launch):	
l) end time of orbit (hh:mm:ss after launch):	
7) Injection data	
a) injection point latitude (deg n or s) & longitude (deg e):	
b) inertial azimuth at injection point:	
c) height above earth (km):	

<b>FAA/USSPACECOM Launch Notification</b>	
d)	injection time (hh:mm:ss after liftoff):
8)	<b>Sequence of Events from liftoff to final injection. Give the times (hh:mm:ss after liftoff)</b>
a)	separation of each motor:
b)	ignition of each motor:
c)	cutoff of each motor:
d)	jettison of pieces:
e)	maneuvers:
f)	reorientations:
g)	deorbit:
h)	ejection of special packages or other experiments:
9)	<b>Optional - Schedule for events (not included in no. 8), such as ejection or experiments, maneuvering (unclassified missions), jettison of parts, extension of antenna and solar arrays, venting, spinning or despinning attitude changes, reorientation, or anything which may affect the orbital characteristics:</b>
10)	<b>A brief narrative description of the mission:</b>
11)	<b>Transmitting frequencies and power (required only if space surveillance is required), including device, band, power (watts), frequency (mhz), and emission scheduled by fixed program, command, or transponder tracking:</b>
12)	<b>Orbital objects cataloging instructions (include all orbital objects listed in no. 3, including common name, international designation, and country:</b>