AST Commercial Space Transportation

# FAA's Payload Authority & Planetary Protection

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Federal Aviation Administration

# Who Needs a License or Permit?

**An entity must obtain a license**

- To launch a launch vehicle from the United States;
- To operate a launch or reentry site within the United States;
- To reenter a reentry vehicle in the United States.

**An entity may obtain a permit**

- To launch a reusable suborbital vehicle from the United States for research and development, or prior to obtaining a launch license, to show compliance with requirements for a license or crew training.

**A U.S. citizen or an entity organized under the laws of the United States or any State must obtain a license**

- To launch a launch vehicle outside the United States;
- To operate a launch or reentry site outside of the United States;
- To reenter a reentry vehicle outside of the United States; or

**FAA does not license launches or reentries that "the Government carries out for the Government."**

- NASA and the Department of Defense often carry out their own launches.

# AST Payload Review

AST conducts a payload review for launch and reentry authorizations. However, for an exempt payload, AST considers its implications on launch and reentry safety.

A U.S. citizen or company can request a payload review independent of a license or permit application.

# AST Payload Review

There are several notable exceptions to the payload review requirements. Per § 415.53, AST does not conduct a payload review for payloads:

- Owned or operated by the US Government;
- Subject to regulation by the Federal Communications Commission (FCC); or
- Subject to regulation by the National Oceanic and Atmospheric Administration (NOAA).

Also, per § 435.41, AST does not conduct a payload review for reentry of a US Government payload.

# What is a Payload Review?

The FAA reviews payloads for impacts to:

- Public health and safety
- Safety of property
- U.S. national security
- Foreign policy interests
- International obligations of the United States

# Payload Review

Regulations contain information requirements but no criteria beyond those generally shown in the previous slide.

A key informational element is the payload's intended use in space.

It may be necessary to request additional information to address specific issues such as planned orbits that could threaten important orbiting objects such as ISS, ability to take photographs of national security assets, planetary protection, and the use of nuclear materials.

If AST makes a favorable payload determination, the payload determination becomes part of the record on which AST's licensing determination is based.

# Interagency Review Partners

| Agency | Primary Area of Responsibility |
|---|---|
| **DoD**<br>**Department of Defense** | Issues related to US national security |
| **DoS**<br>**Department of State** | Issues related to US foreign policy |
| **FCC**<br>**Federal Communications Commission** | US commercial communications satellites, including transmitters on launch/reentry vehicles for telemetry |
| **NASA**<br>**National Aeronautics and Space Administration** | The effect of commercial space activities on NASA programs |
| **NOAA**<br>**National Oceanic and Atmospheric Administration** | US commercially-owned remote sensing satellites |
| **ODNI**<br>**Office of the Director of National Intelligence** | Issues related to US national security |

# Payload Review Changes Proposed under Part 450

Part 450 will make regulation consistent with current practice.

- Current regulation states the FAA does not conduct a payload review for payloads that are subject to regulation by (1) the FCC or NOAA, or (2) Payloads owned or operated by the U.S. Government.
- Proposed regulation states that the FAA does not make a determination for (1) Those aspects of payloads that are subject to regulation by the FCC or the DoC; or (2) Payloads owned or operated by the U.S. Government.

# Payload Review Changes Proposed under Part 450

The proposed rule also adds the following application requirements:

- For orbital launches, approximate transit times to final orbit;
- Intended operations during the lifetime of the payload explicitly include anticipated life span and any planned disposal;
- Any encryption associated with data storage on the payload and transmissions to or from the payload; and
- Any other information necessary to make a determination based on public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States.

These additions were made largely at the request of the DoD.