

Commercial Space Transportation License

License No. 18-111 Rev 13

Space Exploration Technologies

is authorized, subject to the provisions of 51 U.S.C. Subtitle V, chapter 509, and the orders, rules, and regulations issued under it, to conduct launches of the Falcon 9 vehicle.

This license is granted subject to the terms, conditions, and limitations set forth in licensing orders A and B, and any subsequent orders or other written stipulations, issued by the Office of Commercial Space Transportation, which are hereby incorporated by reference.

The Licensee shall at all times conduct its operations in accordance with the regulations prescribed by the Office of Commercial Space Transportation for the activities authorized by the license.

Original Issue Date:	October 4, 2018
18-111 Rev 13 Issued:	April 16, 2024
18-111 Rev 13 Effective:	April 16, 2024



US Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., SW
Washington, D.C. 20591

A handwritten signature in black ink, reading "Katie L. Cranor", is positioned above the digital signature information.

Digitally signed by Katie
Lynne Cranor
Date: 2024.04.17
14:25:35 -04'00'

Katie L. Cranor
Manager, Safety Authorization Division

LICENSE AND ORDERS REVISION HISTORY

Rev No.	Date	Section	Description
0	Oct 4, 2018	License and Orders (Original)	1) Original issuance date for the license and orders un LLO 18-111
1	Nov 15, 2018	License (Rev 1)	1) Changed paragraph (i) to include “other payload classes approved by the Office of Commercial Space Transportation” in addition to communications, remote sensing, and navigation payload classes.
1	Nov 15, 2018	Order A, Launch (Rev 1)	1) Paragraph (2) replaced “issued concurrently” with “originally issued on October 4, 2018” 2) Paragraph (3)(a) changed to include “other payload classes approved by the Office of Commercial Space Transportation” in addition to communications, remote sensing, and navigation payload classes.
1	Nov 15, 2018	Order B, Flight (Rev 1)	1) Paragraph (2) replaced “issued concurrently” with “originally issued on October 4, 2018” 2) Paragraph (3)(d) changed to include “other payload classes approved by the Office of Commercial Space Transportation” in addition to communications, remote sensing, and navigation payload classes.
1	Nov 15, 2018	Order C, Pre-Flight Ground Operations (Rev 1)	1) Paragraph (2) replaced “issued concurrently” with “originally issued on October 4, 2018” 2) Paragraph (3)(a) changed to include “other payload classes approved by the Office of Commercial Space Transportation” in addition to communications, remote sensing, and navigation payload classes.
1	Nov 15, 2018	Order D, Financial Responsibility Requirements (Rev 1)	1) Paragraph (2) replaced “issued concurrently” with “originally issued on October 4, 2018” 2) Paragraph (4)(a) added Fifty-Three Million Dollars (\$53,000,000) value for non-RTLS launches. Fifty Million Dollars (\$50,000,000) for launches with RTLS. 3) Paragraph (5)(a) added (a) Sixty-One Million Dollars (\$61,000,000) value for non-RTLS launches. One Hundred Million Dollars (\$100,000,000) for launches with RTLS.
2	Sept 10, 2020	License (Rev 2)	1) Changed paragraph (i) and (ii) to reference Vandenberg Space Force Base
2	Sept 10, 2020	Order A, Launch (Rev 2)	1) Paragraph (3)(a) and (b) to reference Vandenberg Space Force Base 2) Paragraph (3)(a), added “or at the stage’s splashdown after a purposeful disposal”
2	Sept 10, 2020	Order B, Flight (Rev 2)	1) Paragraph (3)(b) changed reference to Vandenberg Space Force Base 2) Removed paragraph (3)(c) that referenced the flight azimuth
2	Sept 10, 2020	Order C, Pre-Flight Ground Operations (Rev 2)	1) Paragraph (3) changed reference to Vandenberg Space Force Base

Rev No.	Date	Section	Description
2	Sept 10, 2020	Order D, Financial Responsibility Requirements (Rev 2)	<ol style="list-style-type: none"> 1) Paragraph (4) added financial responsibility requirements for Starlink Group 2 missions, reformatted the subparagraphs for clarity, and changed the reference to Vandenberg Space Force Base 2) Paragraph (5) added financial responsibility requirements for Starlink Group 2 missions, reformatted the subparagraphs for clarity, and changed the reference to Vandenberg Space Force Base
3	Dec 15, 2021	Order D, Financial Responsibility Requirements (Rev 3)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(iii) added “and Starlink Group 4” 2) Paragraph (5)(a)(iii) added “and Starlink Group 4”
4	June 16, 2022	Order D, Financial Responsibility Requirements (Rev 4)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(ii) changed “Fifty Million Dollars (\$50,000,000)” to “Ninety-Four Million Dollars (\$94,000,000)”
5	July 7, 2022	Order D, Financial Responsibility Requirements (Rev 5)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(i) changed “Fifty-Three Million Dollars (\$53,000,000)” to “Ninety-Four Million Dollars (\$94,000,000)” 2) Paragraph (4)(b)(i) changed the reference to Vandenberg Space Force Base
6	Dec 28, 2022	Order D, Financial Responsibility Requirements (Rev 6)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(iv) added “Five-Hundred Million Dollars (\$500,000,000) for the EROS-C mission.”
7	Mar 24, 2023	Order D, Financial Responsibility Requirements (Rev 7)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(iii) changed “for Starlink Group 2 and Starlink Group 4 missions” to “for the SDA-0A, Starlink Group 2, or Starlink Group 4 missions” 2) Paragraph (5)(a)(iii) changed “for Starlink Group 2 and Starlink Group 4 missions” to “for the SDA-0A, Starlink Group 2, or Starlink Group 4 missions”
8	June 21, 2023	Order D, Financial Responsibility Requirements (Rev 8)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(iii) changed “for the SDA-0A, Starlink Group 2, or Starlink Group 4 missions” to “for the SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, or Starlink Group 6 missions” 2) Paragraph (5)(a)(iii) changed “for the SDA 0A, Starlink Group 2, or Starlink Group 4 missions” to “for the SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, or Starlink Group 6 missions”
9	July 18, 2023	Order D, Financial Responsibility Requirements (Rev 9)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(ii) changed “or Starlink Group 6 missions;” to “Starlink Group 6, or Starlink Group 6 Dogleg missions;” 2) Paragraph (5)(a)(i) changed “for LEO missions;” to “for LEO or Starlink Group 6 Dogleg missions;”

Rev No.	Date	Section	Description
10	Aug 14, 2023	Order D, Financial Responsibility Requirements (Rev 10)	<ol style="list-style-type: none"> 1) Paragraph (4)(a)(iii) changed “for the SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, Starlink Group 6, or Starlink Group 6 Dogleg missions” to “for the SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, Starlink Group 6, Starlink Group 6 Dogleg, Starlink Group 7, or Starlink Group 7 Dogleg missions” 2) Paragraph (5)(a)(i) changed “for LEO or Starlink Group 6 Dogleg missions;” to “for LEO, Starlink Group 6 Dogleg, or Starlink Group 7 Dogleg missions;” 3) Paragraph (5)(a)(iii) changed “for the SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, or Starlink Group 6 missions;” to “for the SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, Starlink Group 6, or Starlink Group 7 missions;”
11	Sept 29, 2023	License and Orders	<ol style="list-style-type: none"> 1) The format of the License and Orders has been updated. This includes combining Order A Launch, Order B Flight, and Order C Preflight Ground Operations into Order A-1 Launch. Order D Financial Responsibility Requirements was transitioned into Order B-1 Financial Responsibility Requirements. Previously revisions were tracked for the license and each order individually. Future revisions to the License and/or Orders will be tracked jointly beginning with License No. 18-111 Rev 11. Previous revision histories from both the License and Orders have been removed and is now collated in the License and Orders Revision History table following the License page (here). 2) General information from the license has been removed and is now represented within Orders A-1 and B-1. 3) Throughout Order A-1 “low Earth orbit” and “Earth orbit” have been changed to say “orbit.” 4) From the previous Order B Flight revision Authorization statement 3(d) has been translated into Order A-1 Launch Authorization paragraph 4 of the current revision. 5) License term has been changed from “The term of License No. LLO 18-111 authorizing SpaceX to conduct launches is five (5) years from October 4, 2018” to “License No. 18-111 Rev 11 expires on March 9th, 2026.” 6) Removed financial responsibility requirements for the already launched EROS-C mission.
12	April 4, 2024	Order B-1, Financial Responsibility Requirements	<ol style="list-style-type: none"> 1) Paragraph 4(b)(iii), added “Starlink Group 8, or Starlink Group 8 Dogleg” 2) Paragraph 5(b)(i) added “Starlink Group 8 Dogleg” 3) Paragraph 5(b)(iii) added “Starlink Group 8”
13	April 16, 2024	Order B-1, Financial Responsibility Requirements	<ol style="list-style-type: none"> 1) Paragraph 4(b)(iii), added “Digital Globe”

**Office of Commercial
Space Transportation
License Order A-1
Regarding**

Launch

**AUTHORIZED BY LICENSE NO. 18-111 Rev 13
ISSUED TO:
Space Exploration Technologies**

License No. 18-111 Rev 13 Order A-1 establishes the orders regarding the launch of Space Exploration Technologies's Falcon 9 vehicle from Launch Complex 4E at Vandenberg Space Force Base.

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1. **Authority:** This Order is issued to Space Exploration Technologies under 51 U.S.C. Subtitle V, chapter 509, and 14 CFR chapter III.
 2. **Purpose:** This Order modifies License No. 18-111 Rev 13 issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation, authorizing Space Exploration Technologies to conduct the launch of its Falcon 9 vehicle as identified in the license application; and prescribes as conditions to License No. 18-111 Rev 13 certain requirements applicable to launch.
 3. **Definitions:** For purposes of License No. 18-111 Rev 13 and any orders issued by the FAA pertaining to activities covered by License No. 18-111 Rev 13:
 - a. "Pre-flight ground operations" shall mean Space Exploration Technologies's pre-flight preparations of the Falcon 9 vehicle at Vandenberg Space Force Base, beginning with the arrival of the Falcon 9 vehicle at Vandenberg Space Force Base.
 - b. "Flight" shall commence with the ignition of the first stage with the intention of liftoff of a Space Exploration Technologies's Falcon 9 vehicle from Launch Complex 4E at Vandenberg Space Force Base and transporting communications, remote sensing, navigation, or other payload classes approved by the Office of Commercial Space Transportation to orbit. A flight ends upon Space Exploration Technologies's last exercise of control over the vehicle, including the safing of the Falcon 9 vehicle stages or components that reach orbit, following separation of the payload, or at the stage's splashdown after a purposeful disposal.
 4. **Authorization:** In accordance with the representations in the Space Exploration Technologies application as of the date of this license, and any amendments to the license application or waivers approved by the FAA, in writing, Space Exploration Technologies is authorized to conduct:
 - a. Pre-flight ground operations
 - i. Using the Falcon 9 vehicle;
 - ii. From Launch Complex 4E at Vandenberg Space Force Base;
 - iii. Associated with launches of communications, remote sensing, navigation, or other payload classes approved by the Office of Commercial Space Transportation to orbit on Falcon 9 launch vehicles.
 - b. Flights:
 - i. Using the Falcon 9 vehicle;
 - ii. From Launch Complex 4E at Vandenberg Space Force Base;

- iii. Including flyback of the first stage booster for landing at Landing Zone 4 at Vandenberg Space Force Base, landing on a droneship, or splashdown in the ocean;
- iv. Transporting communications, remote sensing, navigation, or other payload classes approved by the Office of Commercial Space to orbit

5. **Special Reporting Requirement:**

- a. In addition to all applicable reporting requirements under 14 CFR Ch. III, Space Exploration Technologies must identify any anomaly occurring on a prior Falcon 9 launch that could be material to public safety no later than 15 days before any flight conducted, unless the requirement of 14 CFR 417.25(a) has already been satisfied.

6. **License Term:** License No. 18-111 Rev 13 expires on March 9th, 2026.

**OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

**Office of Commercial
Space Transportation
License Order B-1
Regarding**

**Financial Responsibility
Requirements**

**AUTHORIZED BY LICENSE NO. 18-111 Rev 13
ISSUED TO:
Space Exploration Technologies**

License No. 18-111 Rev 13 Order B-1 establishes the orders regarding the financial responsibility requirements of Space Exploration Technologies's Falcon 9 vehicle launch from Launch Complex 4E at Vandenberg Space Force Base.

1. **Authority:** This Order is issued to Space Exploration Technologies under 51 U.S.C. Subtitle V, chapter 509, and 14 CFR part 440.
2. **Purpose:** This Order modifies License No. 18-111 Rev 13 issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation, by prescribing financial responsibility requirements for licensed launch activities in accordance with 14 CFR part 440.
3. **Definitions:** For purposes of this Order, "licensed launch activities" shall mean activities authorized by the License. Other terms used in this Order are defined in accordance with 14 CFR 440.3.
4. **Liability Insurance:** Space Exploration Technologies shall maintain a policy or policies of liability insurance for covered claims in accordance with 14 CFR 440.9(b) in the amount of:
 - a. Pre-flight operations performed at Vandenberg Space Force Base
 - i. Nine Million Dollars (\$9,000,000) for covered claims resulting from pre-flight operations performed at VSFB; and
 - b. Flight of Falcon 9 vehicle from Vandenberg Space Force Base
 - i. Ninety-Four Million Dollars (\$94,000,000) for low Earth orbit (LEO) missions;
 - ii. Ninety-Four Million Dollars (\$94,000,000) for LEO missions that includes first stage return to launch site (LZ-4); or
 - iii. One-Hundred Fifty Million Dollars (\$150,000,000) for the Digital Globe, SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, Starlink Group 6, Starlink Group 6 Dogleg, Starlink Group 7, Starlink Group 7 Dogleg, Starlink Group 8, or Starlink Group 8 Dogleg missions;
5. **Government Property Insurance:** Space Exploration Technologies shall maintain a policy or policies of insurance in accordance with 14 CFR 440.9(d) in the amount of
 - a. Pre-flight operations performed at Vandenberg Space Force Base
 - i. Two Million Dollars (\$2,000,000) for covered claims resulting from pre-flight operations performed at VSFB; and
 - b. Flight of Falcon 9 vehicle from Vandenberg Space Force Base

- i. Sixty-One Million Dollars (\$61,000,000) for LEO, Starlink Group 6 Dogleg, Starlink Group 7 Dogleg, or Starlink Group 8 Dogleg missions;
 - ii. One Hundred Million Dollars (\$100,000,000) if the flight includes first stage return to launch site (LZ-4); or
 - iii. Forty-Four Million Dollars (\$44,000,000) for the SDA-0A, SDA-0B, Starlink Group 2, Starlink Group 4, Starlink Group 5, Starlink Group 6, Starlink Group 7, or Starlink Group 8 missions.
6. **Covered Government Property**: Covered government property includes all property owned, leased, or occupied by, or within the care, custody, or control of, the United States and its agencies, and its contractors and subcontractors involved in licensed launch activities from Launch Complex 4E at Vandenberg Space Force Base.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION