
**Commercial
Space
Transportation
License**

License Number: LLS 11-077 (Rev 1)

**ORBITAL SCIENCES
CORPORATION**

is authorized, subject to the provisions of 51 USC Subtitle V, ch. 509, and the orders, rules, and regulations issued under it, to conduct a launch.

General. Orbital Sciences Corporation is authorized to conduct:

- (i) A flight of a Antares launch vehicle from Pad 0A at Wallops Flight Facility (WFF) transporting a Cygnus mass simulator and four secondary payloads to low Earth orbit; and
- (ii) Pre-flight ground operations at WFF associated with the flight identified in paragraph (i) of this license, of a Antares launch vehicle.

This license is granted subject to the terms, conditions, and limitations set forth in licensing orders A, B, C, and D and any subsequent orders issued by the Office of Commercial Space Transportation.

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 this license.

US Department
of Transportation
Federal Aviation
Administration



800 Independence Ave., S.W.
Washington, D.C. 20591

Original Issued on: September 2, 2011
Revision 1 Issued On: January 27, 2012
Revision 1 Effective On: January 27, 2012



Manager, Licensing and Evaluation Division

License Order No. LLS 11-077A (Rev 2)

OFFICE OF
COMMERCIAL SPACE TRANSPORTATION
LICENSE ORDER REGARDING

LAUNCH

AUTHORIZED BY LICENSE NO. LLS 11-077
ISSUED TO

Orbital Sciences Corporation

1. Authority: This Order is issued to Orbital Sciences Corporation, referred to as Orbital, under 51 U.S.C. subtitle V, chapter 509 and 14 C.F.R. Ch. III.
2. Purpose: This Order modifies License No. LLS 11-077, originally issued on September 2, 2011, and renewed on May 24, 2012, by the Federal Aviation Administration's Office of Commercial Space Transportation, authorizing Orbital to conduct the launch of an Antares launch vehicle; and prescribes as conditions to License No. LLS 11-077 certain requirements applicable to the launch.
3. Definitions: For purposes of License No. LLS 11-077 and any orders issued by the FAA pertaining to activities covered by License No. LLS 11-077:
 - (i) "Flight" shall mean the flight of an Antares launch vehicle commencing with ignition of the first stage from Wallops Flight Facility (WFF) on the same ground track and trajectory as presented in the license application for the purposes of transporting a Cygnus mass simulator and four secondary payloads to low Earth orbit. A flight is concluded upon Orbital's last exercise of control over the Antares vehicle, including the safing of Antares vehicle stages or components that reach Earth orbit, following separation of the payloads.
 - (ii) "Pre-flight ground operations" shall mean Orbital's pre-flight preparations of the Antares vehicle at WFF beginning with the arrival of the Antares vehicle at WFF.
4. Flight Safety Data Package Submittal: Orbital shall submit the mission specific final Flight Safety Data Package to the FAA for verification that the ground track and the

License Order No. LLS 11-077A (Rev 2)

trajectory is as represented in Orbital's license application.

5. License Term: License No. LLS 11-077 terminates upon completion of the launch authorized by the license, or on September 1, 2013, whichever occurs first.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

By: 
Kenneth Wong, Manager
Licensing and Evaluation Division

Issued On: May 24, 2012
Effective On: May 24, 2012

Revision History:

Original License Order - Issued September 2, 2011

Revision 1 - Issued January 27, 2012

- 1) Change launch vehicle name from "Taurus II" to "Antares"
- 2) Added four secondary payloads to section 3(i)

Revision 2 - Issued May 24, 2012

- 1) Change the first sentence of paragraph 2 from "This Order modifies License No. LLS 11-077, issued concurrently by the Federal Aviation Administration's Office..." to "This Order modifies License No. LLS 11-077, originally issued on September 2, 2011, and renewed on May 17, 2012, by the Federal Aviation Administration's Office..."
- 2) Correct typographical error on paragraph 2 by changing from "...activities covered by License No. LSS 11-077..." to "...activities covered by License No. LLS 11-077..."
- 3) Change license termination date on paragraph 5 from "September 1, 2012" to "September 1, 2013".

OFFICE OF
COMMERCIAL SPACE TRANSPORTATION
LICENSE ORDER REGARDING

FLIGHT

AUTHORIZED BY LICENSE NO. LLS 11-077
ISSUED TO

ORBITAL SCIENCES CORPORATION

1. Authority: This Order is issued to Orbital Sciences Corporation, referred to as Orbital, under 51 U.S.C. subtitle V, chapter 509, and 14 C.F.R. Ch. III.
2. Purpose: This Order modifies License No. LLS 11-077, issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation, authorizing Orbital to conduct the launch of a Antares launch vehicle; and prescribes as conditions to License No. LLS 11-077 certain requirements applicable to the authorization to conduct the flight of a launch vehicle.
3. Authorization: Orbital is authorized to conduct the flight of a Antares launch vehicle:
 - a) From Wallops Flight Facility (WFF), Virginia;
 - b) On the ground track and trajectory presented in the license application;
 - c) Transporting to low Earth orbit a Cygnus mass simulator and four secondary payloads; and
 - d) According to the launch vehicle, launch vehicle systems, and safety management program represented in the Orbital application as of the date of this order, and any amendments to the license application approved by the FAA, in writing.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

By: 
Kenneth Wong, Manager
Licensing and Evaluation Division

Issued On: January 27, 2012

Effective On: January 27, 2012

Revision History:

Original License Order - Issued September 2, 2011

Revision 1 - Issued January 27, 2012

- 1) Changed launch vehicle name from "Taurus II" to "Antares"
- 2) Added four secondary payloads to items transported to low Earth orbit in section 3c.

OFFICE OF
COMMERCIAL SPACE TRANSPORTATION
LICENSE ORDER REGARDING

PRE-FLIGHT GROUND OPERATIONS

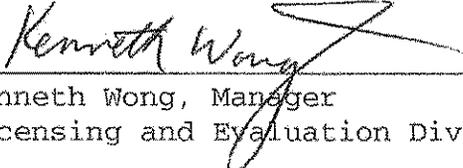
AUTHORIZED BY LICENSE NO. LLS 11-077
ISSUED TO

ORBITAL SCIENCES CORPORATION

1. Authority: This Order is issued to Orbital Sciences Corporation, referred to as Orbital, under 51 U.S.C. subtitle V, chapter 509, and 14 C.F.R. Ch. III.
2. Purpose: This Order modifies License No. LLS 11-077, issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation, authorizing Orbital to conduct the launch of a Antares launch vehicle; and prescribes as conditions to License No. LLS 11-077 certain requirements applicable to the authorization to conduct pre-flight ground operations.
3. Authorization: Orbital is authorized to conduct pre-flight ground operations at Wallops Flight Facility associated with the launch of a Cygnus mass simulator and four secondary payloads on an Antares launch vehicle.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

By: _____


Kenneth Wong, Manager
Licensing and Evaluation Division

Issued On: January 27, 2012
Effective On: January 27, 2012

Order No. LLS 11-077C (Rev 1)

Revision History:

Original License Order - Issued September 2, 2011

Revision 1 - Issued January 27, 2012

- 1) Changed launch vehicle name from "Taurus II" to "Antares"
- 2) Added four secondary payloads in section 3.

OFFICE OF
COMMERCIAL SPACE TRANSPORTATION
LICENSE ORDER REGARDING

FINANCIAL RESPONSIBILITY REQUIREMENTS

Under License No. LLS 11-077

Issued to

ORBITAL SCIENCES CORPORATION

1. Authority: This Order is issued to Orbital Sciences Corporation, referred to as Orbital, under 51 U.S.C. Subtitle V, chapter 509, and 14 C.F.R. part 440.
2. Purpose: This Order modifies License No. LLS 11-077, 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 C.F.R. 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 C.F.R. § 440.3.
4. Liability Insurance: Orbital shall maintain a policy or policies of liability insurance (or otherwise demonstrate financial responsibility) in accordance with 14 C.F.R. § 440.9(b) in the amount of:
 - (a) Thirteen Million Five Hundred Thousand Dollars (\$13,500,000) for covered claims resulting from flight of the Antares launch vehicle from Wallops Flight Facility (WFF).
 - (b) Nine Million Dollars (\$9,000,000) for covered claims resulting from pre-flight operations performed at WFF.

5. Government Property Insurance: Orbital shall maintain a policy or policies of insurance (or otherwise demonstrate financial responsibility) in accordance with 14 C.F.R § 440.9(d) in the amount of:
- (a) Forty Four Million Dollars (\$44,000,000) for covered claims resulting from flight of the Antares launch vehicle from WFF.
 - (b) One Million Dollars (\$1,000,000) for covered claims resulting from pre-flight operations performed at WFF.
6. Covered 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, at WFF.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

By: 
Kenneth Wong, Manager
Licensing and Evaluation Division

Issued On: January 27, 2012
Effective On: January 27, 2012

Revision History:

Original License Order - Issued September 2, 2011

Revision 1 - Issued January 27, 2012

- 1) Changed launch vehicle name from "Taurus II" to "Antares"