



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Office of the Air Traffic Organization  
Western Service Area

2200 South 216<sup>th</sup> Street  
Des Moines, WA 98198

Edge of Space Sciences, Inc.  
ATTN: Russell Chadwick  
4371 North 63<sup>rd</sup> Street  
Boulder, Colorado 80301

Dear Mr. Chadwick:

Enclosed is your Federal Aviation Administration (FAA) Form 7711-1, *Certificate of Waiver or Authorization* (WSA-1902-BAL), issued in response to your application to operate unmanned balloon launches/flights up to 115,000 feet Mean Sea Level near Denver, Colorado. The certificate is effective February 9, 2019, through December 31, 2019, and your compliance with the enclosed special provisions is mandatory.

If you intend to request renewal of this waiver and/or file a new and separate application, please forward application documents electronically to [9-ATO-WSA-OSG-Part101@faa.gov](mailto:9-ATO-WSA-OSG-Part101@faa.gov) or submit hard-copy documents to FAA, Western Service Center, Operations Support Group, 2200 S. 216th St., Des Moines, WA, 98198, no fewer than 45 days prior to the event date. Along with your FAA Form 7711-2, *Application for Certificate of Waiver or Authorization*, please include a map clearly depicting the site, as well as a copy of the prior certificate if requesting renewal.

If you have questions, please contact Joe DeRosa, Support Specialist, Operations Support Group, Western Service Center at 206-231-2235 / email: [joseph.ctr.derosa@faa.gov](mailto:joseph.ctr.derosa@faa.gov).

Sincerely,

Shawn M. Kozica  
Manager  
Operations Support Group  
Western Service Center

Enclosure

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

# CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

Edge of Space Sciences, Inc. (EOSS) / Russell B. Chadwick, Vice President

ADDRESS

4371 North 63<sup>rd</sup> Street, Boulder, CO 80301 / 303-530-0228 / russell.b.chadwick@gmail.com and ...@noaa.gov

This certificate is issued for the operations specifically described hereinafter. No person shall conduct an operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

Activity: Up to 14 unmanned free balloon launches IAW 14 CFR, Part 101; this Certificate; and Special Provisions.  
Max. Altitude: 115,000 feet Mean Sea Level (MSL)  
Location: Five (5) potential launch sites – see special provisions and attached map/table of launch sites  
Time: Official sunrise to sunset applicable to launch site (daylight hours only)  
Date/s: 02/09/2019 - 12/31/2019

COA: WSA-1902-BAL

(cc: Leidos FS, ZDV, D01)

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR 101.35 Equipment and marking requirements (a)(3) ...radar reflective devices...

## STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE – This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance

## SPECIAL PROVISIONS

Special Provisions Nos. 1 to 7, inclusive, are set forth on the reverse side hereof.

This certificate is effective from February 9, 2019 to December 31, 2019, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

Western Service Area

(Region)

(Signature)

Shawn M. Kozica, Manager  
Operations Support Group, WSC

(Title)

(Date)

## **WSA-1902-BAL SPECIAL PROVISIONS**

Prepared for and applicable to:

**Edge of Space Sciences, Inc. (EOSS)**  
(POC: Russell Chadwick, Vice President)

1. Authority to deviate from the Code of Federal Regulations (CFR) is limited to specific regulations shown on the attached Certificate of Waiver or Authorization; compliance with all other applicable CFRs, including all subparts of Part 101, is mandatory.
2. **You must make the following notifications to concerned facilities as listed below:** Note: The notification information listed below is necessary for Air Traffic Control (ATC) to advise known aircraft of balloon and payload location. It does not alleviate EOSS's responsibility to ensure safety to unknown aircraft, persons, or their property.
  - a. **Seven (7) days in advance of the launch:** Provide pre-launch notice to the following:
    - (1) Denver Air Route Traffic Control Center (ARTCC) Traffic Management Unit (TMU) at 303-651-4252
    - (2) Denver ARTCC Airspace and Procedures Office at 303-651-4532 and/or email [michelle.flores@faa.gov](mailto:michelle.flores@faa.gov)
    - (3) Denver Terminal Radar Approach Control (TRACON), Airspace and Procedures Office at 303-342-1510 and/or email [9-den-tracon-airspace-special-request@faa.gov](mailto:9-den-tracon-airspace-special-request@faa.gov)
  - b. **Twenty-four (24) hours in advance of the launch:** Contact Denver TRACON Airspace and Procedures Office at 303-342-1510. If unable to reach anyone at that number, contact Denver TRACON at 303-342-1590. Provide your pre-launch notice.
  - c. **Between 12 and 72 hours prior to conducting operations:** Contact Leidos Flight Service at 877-487-6867 and ask to issue a Notice to Airmen (NOTAM) referencing this waiver.
  - d. **Between 12 and 72 hours prior to launch:** Provide current forecast trajectory to:
    - (1) Denver ARTCC Airspace and Procedures Office at 303-651-4532 and/or email [michelle.flores@faa.gov](mailto:michelle.flores@faa.gov)
    - (2) Denver Terminal Radar Approach Control (TRACON), Airspace and Procedures Office at 303-342-1510 and/or email [9-den-tracon-airspace-special-request@faa.gov](mailto:9-den-tracon-airspace-special-request@faa.gov)
  - e. **Between 30 minutes and two (2) hours prior to conducting operations:** Call Denver ARTCC at 303-651-4252 and Denver TRACON at 303-342-1590 to advise them of the

forecast trajectory.

- f. **Fifteen (15) minutes prior to launch:** Call Denver ARTCC TMU at 303-651-4252 to ensure the cell phone used at the site is working and able to send and receive phone calls.
  - g. **As requested by Denver ARTCC and Denver TRACON:** Provide launch information, en route position reports, and “on deck” reports. Advise Denver ARTCC when the balloon has burst or when the balloon is being cut down.
  - h. **Prior to issuing the cut down command:** In the event an unplanned early termination of flight occurs, call Denver ARTCC at 303-651-4252 to coordinate the optimum time for cut down, to avoid possible conflict with high traffic volume and known aircraft.
  - i. **When operations have terminated:** Advise Denver ARTCC at 303-651-4252 and Denver TRACON at 303-342-1590 when the balloon has landed. Call Leidos Flight Service at 877-487-6867 and ask to cancel the NOTAM.
3. Provide the following information to each facility upon **initial** notification:
    - a. Provide/verify/confirm launch location.
    - b. Time of launch and duration of activity.
    - c. Ascent rate, direction, speed, altitude of operation, package separation information, and estimated impact location.
    - d. Telemetry monitoring capabilities. Position updates via established internet site are required for each descent package (give separate position reports). Verify the website: [www.wxqa.com/cgi-bin/balon1.cgi](http://www.wxqa.com/cgi-bin/balon1.cgi) and [www.eoss.org/scgi-bin/balon1.cgi](http://www.eoss.org/scgi-bin/balon1.cgi).
    - e. Means of establishing contact with launch site (cellular or satellite phone number).
    - f. Capability to advise the FAA when all launched objects have returned to earth.
  4. Safety spotters must scan the airspace within five (5) miles of the launch site to ascertain the area is clear of aircraft and will remain clear of aircraft during balloon package launch operation.
  5. All operations will be conducted in accordance with the holder’s safety rules and codes.
  6. The holder must be responsible for safeguarding persons and property on the ground and must ensure all persons connected with the operation are familiar with the waiver and the above special provisions.
  7. The following map/image on next page depicts launch sites applicable to this certificate:

