

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
Request for 30-Day STA Using Castle Rock, CO Earth Station, Call Sign E040174, to Perform De-orbit Maneuvers for the Intelsat 701 (S2400) Satellite

1. Applicant

|                   |   |                      |                             |
|-------------------|---|----------------------|-----------------------------|
| <b>Name:</b>      | Intelsat License LLC                              | <b>Phone Number:</b> | 703-559-7848                |
| <b>DBA Name:</b>  |   | <b>Fax Number:</b>   | 703-559-8539                |
| <b>Street:</b>    | c/o Intelsat Corporation<br>7900 Tysons One Place | <b>E-Mail:</b>       | susan.crandall@intelsat.com |
| <b>City:</b>      | McLean  | <b>State:</b>        | VA                          |
| <b>Country:</b>   | USA   | <b>Zipcode:</b>      | 22102 -5972                 |
| <b>Attention:</b> | Susan H. Crandall                                 |                      |                             |



File # SES-SINF20170403-00356  
Call Sign N1367N Grant Date 4/26/17  
(or other identifier)  
Term Dates From: 5-1-17 To: 5-31-17  
Approved: [Signature]

Applicant: Intelsat License LLC  
Call Sign: E040174  
File No.: SES-STA-20170403-00356  
Special Temporary Authority (STA)

Intelsat License LLC is granted a 30-day STA to operate its earth station Call Sign E040174 in Castle Rock, Colorado to perform de-orbit maneuvers for the Intelsat 701 satellite (Call Sign S2400). Communications will be conducted on 6173.7 MHz and 6176.3 MHz (Earth-to-space) (LHCP) and on 3947.5 MHz, 3948.0 MHz, 3952.0 MHz, and 3952.5 MHz (space-to-Earth) (RHCP) frequencies with the following conditions:

- 1) Operations shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.
- 2) Operations must be coordinated with all operators of satellites that use the same frequency bands and are in the de-orbit path. All operators of satellites in that path will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs. The 24x7 contact information for the mission is as follows: Ph.: (703) 559-7701 - East Coast Operations Center (primary); (310) 525-5591 - West Coast Operations Center (back-up). Request to speak with Harry Burnham or Kevin Bell
- 3) Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending or future Intelsat License LLC applications.
- 4) Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Intelsat License LLC's risk.
- 5) Intelsat must dispose of Intelsat 701 in accordance with the conditions of grant of IBFS File No. SAT-MOD-20160425-00040.

This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. §0.261, and is effective immediately.



File # SES-STA-20170403-00356  
Call Sign E040174 Grant Date 4-20-17  
(or other identifier)  
Term Dates  
From: 5-1-17 To: 5-31-17  
Approved: Paul E. Hayes

|   |                       |                      |                            |
|---|-----------------------|----------------------|----------------------------|
| <b>2. Contact</b>   |                       |                      |                            |
| <b>Name:</b>  | Cynthia J. Grady      | <b>Phone Number:</b> | 703-559-6949               |
| <b>Company:</b>   | Intelsat Corporation  | <b>Fax Number:</b>   | 703-559-8539               |
| <b>Street:</b>  | 7900 Tysons One Place | <b>E-Mail:</b>       | cynthia.grady@intelsat.com |
| <b>City:</b>  | McLean                | <b>State:</b>        | VA                         |
| <b>Country:</b>   | USA                   | <b>Zipcode:</b>      | 20008 -3006                |
| <b>Attention:</b>   |                       | <b>Relationship:</b> | Legal Counsel              |
| (If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.) |                       |                      |                            |
| 3. Reference File Number or Submission ID   |                       |                      |                            |
| 4a. Is a fee submitted with this application?   |                       |                      |                            |
| <input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).                                   |                       |                      |                            |
| <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee  |                       |                      |                            |
| <input type="radio"/> Other (please explain):   |                       |                      |                            |
| 4b. Fee Classification CGX - Fixed Satellite Transmit/Receive Earth Station   |                       |                      |                            |
| 5. Type Request   |                       |                      |                            |
| <input type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input checked="" type="radio"/> Other   |                       |                      |                            |
| 6. Requested Use Prior Date   |                       |                      |                            |
| 7. City Castle Rock   |                       |                      |                            |
| 8. Latitude (dd mm ss.s h) 39 16 33.0 N   |                       |                      |                            |

|  |                         |  |               |
|--|-------------------------|--|---------------|
| 9. State   | CO                      | 10. Longitude<br>(dd mm ss.s h)          | 104 48 34.0 W |
| 11. Please supply any need attachments.  |                         |  |               |
| Attachment 1: STA Request  | Attachment 2: Exhibit A | Attachment 3:                            | Attachment 3: |
| 12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)   |                         |  |               |
| <div style="border: 1px solid black; padding: 5px;"> <p>Intelsat License LLC herein requests a grant of Special Temporary Authority for 30 days, commencing May 1, 2017, to use its Castle Rock, Colorado C-band earth station, call sign E040174, to perform de-orbit maneuvers for the Intelsat 701 (S2400) satellite. Intelsat 701 is expected to begin de-orbiting on May 1, 2017 and the de-orbit is expected to last</p> </div>      |                         |  |               |
| 13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. |                         |  |               |
| 14. Name of Person Signing   |                         | 15. Title of Person Signing              |               |
| Cynthia J. Grady   |                         | Regulatory Counsel, Intelsat Corporation |               |
| <p>WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).</p>   |                         |  |               |

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## **12. Description**

Intelsat License LLC herein requests a grant of Special Temporary Authority for 30 days, commencing May 1, 2017, to use its Castle Rock, Colorado C-band earth station, call sign E040174, to perform de-orbit maneuvers for the Intelsat 701 (S2400) satellite. Intelsat 701 is expected to begin de-orbiting on May 1, 2017 and the de-orbit is expected to last approximately 30 days.

March 31, 2017

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

Re: Request for Special Temporary Authority  
Castle Rock, Colorado Earth Station E040174

Dear Ms. Dortch:

Intelsat License LLC (“Intelsat”) herein requests a grant of Special Temporary Authority (“STA”)<sup>1</sup> for 30 days, commencing May 1, 2017, to use its Castle Rock, Colorado C-band earth station, call sign E040174,<sup>2</sup> to perform de-orbit maneuvers for the Intelsat 701 (S2400) satellite.<sup>3</sup> Intelsat 701 is expected to begin de-orbiting on May 1, 2017 and the de-orbit is expected to last approximately 30 days.

The proposed Intelsat 701 deorbit operations will be performed in the following frequencies:

- 6173.7 MHz and 6176.3 MHz in the uplink (LHCP), and
- 3947.5 MHz, 3948.0 MHz, 3952.0 MHz, and 3952.5 MHz in the downlink (RHCP).

The proposed operations will be coordinated with all operators of satellites that use the same frequency bands and are in the de-orbit path.

In further support of this request, Intelsat herewith attaches Exhibit A, which contains technical information that demonstrates that the operation of the earth station will be compatible with its electromagnetic environment and will not cause harmful interference into any lawfully operating terrestrial facility. Intelsat will take all practical steps to ensure that the operations proposed herein do not cause harmful interference to existing terrestrial operations. In the extremely unlikely event that

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<sup>1</sup> Intelsat has filed its STA request, an FCC Form 159, a \$200.00 filing fee, and this supporting letter electronically via the International Bureau’s Filing System (“IBFS”).

<sup>2</sup> Intelsat is concurrently filing STA requests for E000296, E4132, and E040125 to support the Intelsat 701 de-orbit maneuvers.

<sup>3</sup> See Intelsat License LCC, Application to Modify Authorization for Intelsat 701, File No. SAT-MOD-20160425-00040 (stamp grant June 18, 2016) (approving Intelsat’s post-mission disposal plan for the Intelsat 701 satellite).

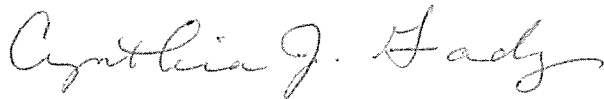
Ms. Marlene H. Dortch  
March 31, 2017  
Page 2

harmful interference should occur due to transmissions to or from its earth station, Intelsat will take all reasonable steps to eliminate the interference.

Grant of this STA request will allow Intelsat to perform TT&C for the Intelsat 701 satellite during de-orbit and therefor safely transition the satellite into its graveyard orbit. As such, this request is in the public interest.

Please direct any questions regarding this STA request to the undersigned at (703) 559-6949.

Respectfully submitted,

A handwritten signature in cursive script that reads "Cynthia J. Grady".

Cynthia J. Grady  
Regulatory Counsel  
Intelsat Corporation

cc: Paul Blais



Prepared By

**COMSEARCH**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

Prepared For

**Intelsat License LLC  
Castle Rock, Colorado**

Temporary Transmit-Only Earth Station  
Operation Dates: 04/15/2017 - 05/15/2017

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations. Verbal and written coordination was conducted with the below listed carriers on March 1, 2017.

Company

AC BidCO LLC  
AT&T Mobility Spectrum LLC - CO  
AT&T Mobility Spectrum LLC - KS, MO  
AirLife Denver  
Arvada Police Dept.  
BNSF Railway Company  
Black Hawk Police Department  
Black Hills Corporation  
Boulder, County of  
CBS Communication Services Inc  
CBS Television Stations  
Cellular Inc. Network Corporation  
Chaffee County Telecom, LLC  
City of Aurora  
City of Colorado Springs  
City of Lakewood, CO  
Colorado Interstate Gas Company  
Colorado Springs Utilities  
County of Pueblo  
Directlink, LLC  
Douglas County Sheriff's Office  
Eagle-Net Alliance  
Entravision Holdings, LLC  
FONES WEST DIGITAL SYSTEMS INC.  
Federal Communication Commission  
Gilpin County Sheriff's Office  
Gray Television Licensee, LLC  
Intermountain Rural Electric Association  
KSE Radio Ventures, LLC  
Kellin Communications  
LP Broadband, Inc.  
Live Wire Networks, Inc.  
MHO Networks  
Midwest Energy, Inc.  
Mountain Broadband LLC  
Multimedia Holdings Corporation

NE Colorado Cellular, Inc.  
New Cingular Wireless PCS LLC -Colorado  
New Cingular Wireless PCS, LLC - KS, MO  
Nex-Tech Wireless, LLC  
Nucla Naturita Telephone Company  
Olympic Wireless, LLC  
Qwest Corporation  
Roggen Telephone Enterprises, Inc.  
Sangre de Cristo Communications, LLC  
Sprint Communications Company, LP  
Sprint Spectrum L.P.  
Sprint Spectrum LP DBA Sprint PCS  
State of Colorado  
Sunflower Electric Power Corporation  
Tallgrass Operations, LLC  
Tri-State Generation & Transmission Assn  
Tribune Broadcasting Denver License, LLC  
University Corp for Atmospheric Research  
Verizon Wireless (VAW) LLC -CO/ID/MT/WY  
Xcel Energy Services, Inc.  
Y-W Electric Association, Inc

There are no unresolved interference objections with the station contained in these applications.

The following section presents the data pertinent to frequency coordination of the earth station that was circulated to all carriers within its coordination contours.

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

Date: 03/01/2017  
Job Number: 170301COMSGE03

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### Administrative Information

Status ENGINEER PROPOSAL  
Call Sign TEMP05  
Licensee Code INTELS  
Licensee Name Intelsat License LLC

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### Site Information

CASTLE ROCK, CO  
Venue Name  
Latitude (NAD 83) 39° 16' 33.0" N  
Longitude (NAD 83) 104° 48' 34.0" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 2088.0 m / 6850.4 ft

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### Link Information

Satellite Type Geostationary  
Mode TO - Transmit-Only  
Modulation Analog and Digital  
Satellite Arc 33° W to 177° West Longitude  
Azimuth Range 101.8° to 258.5°  
Corresponding Elevation Angles 5.3° / 5.0°  
Antenna Centerline (AGL) 5.49 m / 18.0 ft

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### Antenna Information

Transmit - FCC32  
Manufacturer Vertex  
Model 9 FMC  
Gain / Diameter 53.8 dBi / 9.0 m  
3-dB / 15-dB Beamwidth 0.20° / 0.40°

Max Available RF Power (dBW/4 kHz) 3.7  
(dBW/MHz) 27.7

Maximum EIRP (dBW/4 kHz) 57.5  
(dBW/MHz) 81.5

Interference Objectives: Long Term -154.0 dBW/4 kHz 20%  
Short Term -131.0 dBW/4 kHz 0.0025%

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### Frequency Information

Transmit 6.1 GHz  
Emission / Frequency Range (MHz) 850KFXD / 6173.7 - 6176.3

Max Great Circle Coordination Distance 480.8 km / 298.7 mi  
Precipitation Scatter Contour Radius 300.3 km / 186.6 mi

|                                    |                        |         |
|------------------------------------|------------------------|---------|
| <b>Coordination Values</b>         | <b>CASTLE ROCK, CO</b> |         |
| Licensee Name                      | Intelsat License LLC   |         |
| Latitude (NAD 83)                  | 39° 16' 33.0" N        |         |
| Longitude (NAD 83)                 | 104° 48' 34.0" W       |         |
| Ground Elevation (AMSL)            | 2088.0 m / 6850.4 ft   |         |
| Antenna Centerline (AGL)           | 5.49 m / 18.0 ft       |         |
| Antenna Model                      | Vertex 9 meter         |         |
| Antenna Mode                       | Transmit 6.1 GHz       |         |
| Interference Objectives: Long Term | -154.0 dBW/4 kHz       | 20%     |
| Short Term                         | -131.0 dBW/4 kHz       | 0.0025% |
| Max Available RF Power             | 3.7 (dBW/4 kHz)        |         |

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Transmit 6.1 GHz   |                            |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|
|             |                       |                            | Horizon Gain (dBi) | Coordination Distance (km) |
| 0           | 5.33                  | 101.50                     | -10.00             | 100.00                     |
| 5           | 4.79                  | 96.75                      | -10.00             | 100.00                     |
| 10          | 3.89                  | 91.75                      | -10.00             | 100.00                     |
| 15          | 4.01                  | 86.75                      | -10.00             | 100.00                     |
| 20          | 3.85                  | 81.76                      | -10.00             | 100.00                     |
| 25          | 3.58                  | 76.76                      | -10.00             | 100.00                     |
| 30          | 3.74                  | 71.76                      | -10.00             | 100.00                     |
| 35          | 3.35                  | 66.77                      | -10.00             | 100.00                     |
| 40          | 2.87                  | 61.78                      | -10.00             | 100.00                     |
| 45          | 2.58                  | 56.80                      | -10.00             | 101.35                     |
| 50          | 2.50                  | 51.81                      | -10.00             | 102.77                     |
| 55          | 1.71                  | 46.86                      | -9.77              | 120.66                     |
| 60          | 1.36                  | 41.91                      | -8.56              | 133.51                     |
| 65          | 0.54                  | 37.02                      | -7.21              | 174.30                     |
| 70          | 0.00                  | 32.15                      | -5.68              | 210.33                     |
| 75          | 0.00                  | 27.24                      | -3.88              | 217.69                     |
| 80          | 0.00                  | 22.36                      | -1.74              | 226.94                     |
| 85          | 0.00                  | 17.56                      | 0.89               | 239.06                     |
| 90          | 0.00                  | 12.89                      | 4.25               | 255.17                     |
| 95          | 0.23                  | 8.45                       | 8.82               | 277.55                     |
| 100         | 0.00                  | 5.60                       | 13.29              | 468.28                     |
| 105         | 0.00                  | 6.23                       | 12.13              | 340.17                     |
| 110         | 0.00                  | 9.71                       | 7.32               | 272.10                     |
| 115         | 0.28                  | 13.21                      | 3.97               | 245.64                     |
| 120         | 0.36                  | 16.79                      | 1.37               | 224.87                     |
| 125         | 0.30                  | 20.38                      | -0.73              | 220.99                     |
| 130         | 0.52                  | 23.66                      | -2.35              | 196.73                     |
| 135         | 0.43                  | 27.02                      | -3.79              | 198.43                     |
| 140         | 0.55                  | 30.04                      | -4.94              | 183.61                     |
| 145         | 1.02                  | 32.60                      | -5.83              | 152.33                     |
| 150         | 1.54                  | 34.84                      | -6.55              | 134.84                     |
| 155         | 1.39                  | 37.33                      | -7.30              | 136.03                     |
| 160         | 1.46                  | 39.28                      | -7.85              | 133.39                     |
| 165         | 1.44                  | 40.92                      | -8.30              | 132.32                     |
| 170         | 1.53                  | 42.03                      | -8.59              | 129.10                     |
| 175         | 1.93                  | 42.37                      | -8.68              | 119.17                     |
| 180         | 2.33                  | 42.21                      | -8.64              | 111.10                     |
| 185         | 2.57                  | 41.73                      | -8.51              | 106.70                     |

|                                    |                        |         |
|------------------------------------|------------------------|---------|
| <b>Coordination Values</b>         | <b>CASTLE ROCK, CO</b> |         |
| Licensee Name                      | Intelsat License LLC   |         |
| Latitude (NAD 83)                  | 39° 16' 33.0" N        |         |
| Longitude (NAD 83)                 | 104° 48' 34.0" W       |         |
| Ground Elevation (AMSL)            | 2088.0 m / 6850.4 ft   |         |
| Antenna Centerline (AGL)           | 5.49 m / 18.0 ft       |         |
| Antenna Model                      | Vertex 9 meter         |         |
| Antenna Mode                       | Transmit 6.1 GHz       |         |
| Interference Objectives: Long Term | -154.0 dBW/4 kHz       | 20%     |
| Short Term                         | -131.0 dBW/4 kHz       | 0.0025% |
| Max Available RF Power             | 3.7 (dBW/4 kHz)        |         |

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Transmit 6.1 GHz   |                            |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|
|             |                       |                            | Horizon Gain (dBi) | Coordination Distance (km) |
| 190         | 2.96                  | 40.65                      | -8.23              | 100.38                     |
| 195         | 3.16                  | 39.31                      | -7.86              | 100.00                     |
| 200         | 3.18                  | 37.74                      | -7.42              | 100.00                     |
| 205         | 2.89                  | 36.04                      | -6.92              | 106.43                     |
| 210         | 2.65                  | 33.93                      | -6.26              | 113.42                     |
| 215         | 2.70                  | 31.28                      | -5.38              | 115.74                     |
| 220         | 3.32                  | 27.95                      | -4.16              | 109.05                     |
| 225         | 3.28                  | 24.91                      | -2.91              | 114.53                     |
| 230         | 3.48                  | 21.53                      | -1.32              | 116.96                     |
| 235         | 3.42                  | 18.19                      | 0.50               | 124.87                     |
| 240         | 3.40                  | 14.71                      | 2.81               | 133.87                     |
| 245         | 3.51                  | 11.04                      | 5.93               | 143.40                     |
| 250         | 3.53                  | 7.37                       | 10.31              | 164.23                     |
| 255         | 3.67                  | 3.54                       | 18.28              | 292.58                     |
| 260         | 3.61                  | 2.06                       | 24.13              | 480.76                     |
| 265         | 3.77                  | 6.62                       | 11.48              | 164.82                     |
| 270         | 3.98                  | 11.54                      | 5.44               | 134.00                     |
| 275         | 4.00                  | 16.53                      | 1.54               | 118.60                     |
| 280         | 4.02                  | 21.52                      | -1.32              | 107.60                     |
| 285         | 4.64                  | 26.50                      | -3.58              | 100.00                     |
| 290         | 5.69                  | 31.50                      | -5.46              | 100.00                     |
| 295         | 5.86                  | 36.51                      | -7.06              | 100.00                     |
| 300         | 5.20                  | 41.50                      | -8.45              | 100.00                     |
| 305         | 5.01                  | 46.50                      | -9.69              | 100.00                     |
| 310         | 5.30                  | 51.50                      | -10.00             | 100.00                     |
| 315         | 5.39                  | 56.50                      | -10.00             | 100.00                     |
| 320         | 4.95                  | 61.50                      | -10.00             | 100.00                     |
| 325         | 4.63                  | 66.50                      | -10.00             | 100.00                     |
| 330         | 4.54                  | 71.50                      | -10.00             | 100.00                     |
| 335         | 4.47                  | 76.50                      | -10.00             | 100.00                     |
| 340         | 5.31                  | 81.50                      | -10.00             | 100.00                     |
| 345         | 5.69                  | 86.50                      | -10.00             | 100.00                     |
| 350         | 5.73                  | 91.50                      | -10.00             | 100.00                     |
| 355         | 5.67                  | 96.50                      | -10.00             | 100.00                     |

## Certification

I hereby certify that I am the technically qualified person responsible for the preparation of the frequency coordination data contained in this report. I am familiar with Parts 101 and 25 of the FCC Rules and Regulations and I have either prepared or reviewed the frequency coordination data submitted with this report, and that it is complete and correct to the best of my knowledge and belief.

BY: 

Gary K. Edwards  
Senior Manager  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147

DATED: March 16, 2017