

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
Intelsat License LLC Request for STA Using Earth Station E040174 for Intelsat 34 On-Station TT&C

1. Applicant

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



File # SES-STA-E040174-00681
Call Sign E040174 Grant Date 11-13-15
(or other identifier) Term Dates
From: 11-15-15 To: 12-15-15
Approved: Susan H. Crandall

Applicant: Intelsat License LLC
Call Sign: E040174
File No.: SES-STA-20151014-00681
Special Temporary Authority (STA)

Intelsat License LLC is granted special temporary authority for 30 days beginning November 15, 2015, to use its Castle Rock, CO, fixed earth station, E040174, to provide on station, telemetry, tracking, and command ("TT&C") service to Intelsat 34 (S2915) at its permanent orbital location 55.5 ° W.L. to replace the satellite's current back-up TT&C antennas. Operations are authorized under the following conditions:

1. Operations are restricted to center frequencies 6173.7 MHz, and 6176.3 (Earth-to-space) and 3949.0 MHz, 3949.5 MHz, 3950.5 MHz and 3951 MHz (space-to-Earth).
2. All operations under this grant of STA shall be on an unprotected and non-harmful interference basis.
3. In the event of any harmful interference during Intelsat License LLC shall cease operations immediately upon notification of such interference, and shall immediately inform the Commission, in writing, of such an event.
4. Grant of this STA is without prejudice to any determination that the Commission may make regarding pending or future Intelsat License LLC applications.
5. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at License LLC's risk.

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. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.



File # SES-STA-20151014-00681
E040174
Call Sign E040174 Grant Date 11-13-15
(or other identifier)
Term Dates
From: 11-15-15 To: 12-15-15
Approved: Paul E. Hines

2. Contact	
Name: Susan H. Crandall	Phone Number: 703-559-7848
Company: Intelsat Corporation	Fax Number: 703-559-8539
Street: 7900 Tysons One Place	E-Mail: susan.crandall@intelsat.com
City: McLean	State: VA
Country: USA	Zipcode: 20008 -3006
Attention:	Relationship: 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 checked="" 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 (dd mm ss.h) 104 48 34.0 W
11. Please supply any need attachments. Attachment 1: STA Request Attachment 2: Exhibit A 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 upon grant, to use its Castle Rock, Colorado C-band earth station, call sign E040174, to provide on-station, telemetry, tracking, and command service to Intelsat 34 (S2915) at its permanent location of 55.5 W.L. E040174 will replace the current back-up</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. <p style="text-align: right;">Yes <input checked="" type="radio"/> No <input type="radio"/></p>	
14. Name of Person Signing Cynthia J. Grady	15. Title of Person Signing Regulatory Counsel, Intelsat Corporation
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).	

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

12. Description

Intelsat License LLC herein requests a grant of Special Temporary Authority for 30 days, commencing upon grant, to use its Castle Rock, Colorado C-band earth station, call sign E040174, to provide on-station, telemetry, tracking, and command service to Intelsat 34 (S2915) at its permanent location of 55.5 W.L. E040174 will replace the current back-up TT&C antennas of Intelsat 34.



INTELSAT

Envision. Connect. Transform.

October 14, 2015

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 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”)¹ for 30 days, commencing upon grant, to use its Castle Rock, Colorado C-band earth station—call sign E040174—to provide on-station, telemetry, tracking, and command (“TT&C”) service to Intelsat 34 (S2915) at its permanent location of 55.5° W.L.² E040174 will replace the satellite’s current back-up TT&C antennas.³

The proposed operations will be performed using the following frequencies:

6173.7 MHz and 6176.3 MHz in the uplink (LHCP); and
3949.0 MHz, 3949.5 MHz, 3950.5 MHz, and 3951 MHz in the downlink (RHCP).

In further support of this request, Intelsat hereby 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, and the waiver request submitted with its original STA request. In the extremely unlikely event that harmful interference should occur due to transmissions to or from its earth station, Intelsat will take all reasonable steps to eliminate the interference. Intelsat also notes that it is seeking to operate in the frequencies listed in this request at power levels not to exceed 27.0 dBW.

¹ Intelsat has filed its STA request, an FCC Form 159, a \$195.00 filing fee, and this supporting letter electronically via the International Bureau’s Filing System (“IBFS”).

² See *Policy Branch Information; Actions Taken*, Report No. SAT-01064, File No. SAT-LOA-20140114-00005 (Jan. 23, 2015) (Public Notice).

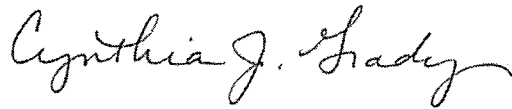
³ Intelsat expects shortly to file an application to permanently modify its E040174 license to include TT&C operations for Intelsat 34.

Ms. Marlene H. Dortch
October 14, 2015
Page 2

Grant of this STA request will allow Intelsat to ensure the safe station-keeping of the Intelsat 34 satellite as a back-up to the satellite's primary TT&C antenna. This, in turn, will help ensure continuity of service at the 55.5° W.L. orbital location and thereby promotes 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

**FREQUENCY COORDINATION AND INTERFERENCE
ANALYSIS REPORT**

Prepared for
Intelsat License LLC
CASTLE ROCK, CO
(E040174)
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
September 24, 2015

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

3. SUPPLEMENTAL SHOWING

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.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 08/26/2015.

Company

AT&T Communications of Mountain States
AT&T Mobility Spectrum LLC - CO
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
City of Aurora
City of Colorado Springs
City of Lakewood, CO
Colorado Interstate Gas Company
Colorado Springs Utilities
County of Pueblo
Douglas County Sheriff's Office
Entravision Holdings, LLC
FONES WEST DIGITAL SYSTEMS INC.
Gilpin County Sheriff's Office
Gogo LLC
Gray Television Licensee, LLC
Infrastructure Networks, Inc.
Intermountain Rural Electric Association
Kellin Communications
Live Wire Networks, Inc.
MHO Networks
Multimedia Holdings Corporation
NE Colorado Cellular, Inc.
New Cingular Wireless PCS LLC -Colorado
Nex-Tech Wireless, LLC
Olympic Wireless, LLC
Qwest Corporation
Roggen Telephone Enterprises, Inc.
Sangre de Cristo Communications, LLC
Sprint Communications Company, LP
Sprint Spectrum LP DBA Sprint PCS
Sprintcom, Inc
State of Colorado

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.

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed 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: 09/24/2015
Job Number: 150826COMSGE01

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E040174
Licensee Code INTELS
Licensee Name Intelsat License LLC

Site Information **CASTLE ROCK, CO**

Venue Name CC5
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

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 50° W to 60° West Longitude
Azimuth Range 114.1° to 122.5°
Corresponding Elevation Angles 18.2° / 25.5°
Antenna Centerline (AGL) 5.49 m / 18.0 ft

Antenna Information

Manufacturer Vertex
Model 9.0 FMC
Gain / Diameter 50.2 dBi / 9.0 m
3-dB / 15-dB Beamwidth 0.60° / 1.20°

Receive - FCC32

Vertex
9.0 FMC
50.2 dBi / 9.0 m
0.60° / 1.20°

Transmit - FCC32

Vertex
9.0 FMC
53.8 dBi / 9.0 m
0.20° / 0.40°

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

3.7
27.7

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

57.5
81.5

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

-154.0 dBW/4 kHz 20%
-131.0 dBW/4 kHz 0.0025%

Frequency Information

Emission / Frequency Range (MHz) 64K0G7W - 850KG7W / 3700.0 - 4200.0

Receive 4.0 GHz

64K0G7W - 850KG7W / 3700.0 - 4200.0

Transmit 6.1 GHz

850KG7W / 6170.0 - 6180.0

Max Great Circle Coordination Distance 358.3 km / 222.6 mi
Precipitation Scatter Contour Radius 508.4 km / 315.9 mi

235.9 km / 146.6 mi
272.6 km / 169.4 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

CASTLE ROCK, CO

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: Receive 4.0 GHz Transmit 6.1 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%
Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power: 3.7 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	5.33	113.41	-10.00	131.66	-10.00	100.00
5	4.79	108.52	-10.00	136.37	-10.00	100.00
10	3.89	103.61	-10.00	150.16	-10.00	100.00
15	4.01	98.78	-10.00	147.84	-10.00	100.00
20	3.85	93.93	-10.00	150.99	-10.00	100.00
25	3.58	89.09	-10.00	156.66	-10.00	100.00
30	3.74	84.25	-10.00	153.07	-10.00	100.00
35	3.35	79.43	-10.00	161.69	-10.00	100.00
40	2.87	74.64	-10.00	174.51	-10.00	100.00
45	2.58	69.87	-10.00	181.34	-10.00	101.35
50	2.50	65.10	-10.00	183.03	-10.00	102.77
55	1.71	60.47	-10.00	202.42	-10.00	119.86
60	1.36	55.83	-10.00	209.49	-10.00	128.53
65	0.54	51.37	-10.00	246.99	-10.00	160.52
70	0.00	46.96	-9.79	286.60	-9.79	196.16
75	0.00	42.48	-8.70	293.65	-8.70	200.31
80	0.00	38.11	-7.53	301.51	-7.53	204.81
85	0.00	33.88	-6.25	310.27	-6.25	208.09
90	0.00	29.86	-4.88	320.56	-4.88	213.56
95	0.23	25.99	-3.37	327.62	-3.37	216.99
100	0.00	22.88	-1.99	341.61	-1.99	225.85
105	0.00	20.29	-0.68	351.39	-0.68	231.71
110	0.00	18.67	0.22	358.31	0.22	235.91
115	0.28	17.98	0.63	350.75	0.63	229.46
120	0.36	18.81	0.14	336.51	0.14	219.31
125	0.30	20.91	-1.01	335.15	-1.01	219.74
130	0.52	23.66	-2.35	298.22	-2.35	196.72
135	0.43	27.02	-3.79	298.53	-3.79	198.43
140	0.55	30.04	-4.94	277.82	-4.94	183.61
145	1.02	32.74	-5.88	242.21	-5.88	152.14
150	1.54	35.82	-6.85	219.66	-6.85	133.76
155	1.39	39.64	-7.95	218.65	-7.95	133.68
160	1.46	43.54	-8.97	211.37	-8.97	129.47
165	1.44	47.66	-9.95	207.36	-9.95	126.58
170	1.53	51.86	-10.00	204.72	-10.00	124.19
175	1.93	56.07	-10.00	196.51	-10.00	114.51
180	2.33	60.38	-10.00	187.09	-10.00	106.24
185	2.57	64.81	-10.00	181.35	-10.00	101.36

COMSEARCH

Earth Station Data Sheet

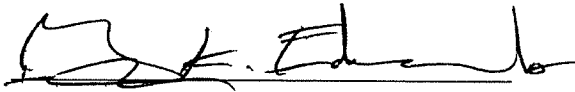
19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values		CASTLE ROCK, CO			
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		Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term		-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term		-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power				3.7 (dBW/4 kHz)	

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	2.96	69.29	-10.00	172.38	-10.00	100.00
195	3.16	73.84	-10.00	165.87	-10.00	100.00
200	3.18	78.44	-10.00	165.60	-10.00	100.00
205	2.89	83.07	-10.00	173.93	-10.00	100.00
210	2.65	87.69	-10.00	179.53	-10.00	100.00
215	2.70	92.30	-10.00	178.33	-10.00	100.00
220	3.32	96.93	-10.00	162.33	-10.00	100.00
225	3.28	101.55	-10.00	163.09	-10.00	100.00
230	3.48	106.18	-10.00	158.67	-10.00	100.00
235	3.42	110.76	-10.00	160.13	-10.00	100.00
240	3.40	115.33	-10.00	160.50	-10.00	100.00
245	3.51	119.88	-10.00	158.04	-10.00	100.00
250	3.53	124.37	-10.00	157.70	-10.00	100.00
255	3.67	128.84	-10.00	154.56	-10.00	100.00
260	3.61	133.17	-10.00	155.90	-10.00	100.00
265	3.77	137.48	-10.00	152.51	-10.00	100.00
270	3.98	141.69	-10.00	148.31	-10.00	100.00
275	4.00	145.63	-10.00	147.95	-10.00	100.00
280	4.02	149.30	-10.00	147.58	-10.00	100.00
285	4.64	153.05	-10.00	138.36	-10.00	100.00
290	5.69	156.73	-10.00	128.19	-10.00	100.00
295	5.86	159.06	-10.00	126.58	-10.00	100.00
300	5.20	159.59	-10.00	132.85	-10.00	100.00
305	5.01	159.41	-10.00	134.71	-10.00	100.00
310	5.30	158.55	-10.00	131.88	-10.00	100.00
315	5.39	155.58	-10.00	131.09	-10.00	100.00
320	4.95	151.07	-10.00	134.25	-10.00	100.00
325	4.63	146.47	-10.00	138.61	-10.00	100.00
330	4.54	141.87	-10.00	139.81	-10.00	100.00
335	4.47	137.20	-10.00	140.86	-10.00	100.00
340	5.31	132.67	-10.00	131.88	-10.00	100.00
345	5.69	127.96	-10.00	128.16	-10.00	100.00
350	5.73	123.14	-10.00	127.83	-10.00	100.00
355	5.67	118.30	-10.00	128.40	-10.00	100.00

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, 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: September 24, 2015