

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
AC BidCo LLC	)	File No. SES-MOD-_____
	)	Call Sign E120106
Modification to Blanket License for	)	
Operation of Ku-Band Transmit/Receive	)	
Earth Stations Aboard Aircraft	)	

**MODIFICATION**

AC BidCo LLC (“AC BidCo”) hereby requests a modification of its blanket license to operate Ku-band transmit/receive earth stations aboard aircraft (“ESAAs”) on domestic and international flights.<sup>1</sup> AC BidCo requests that the Commission modify the AC BidCo ESAA License as follows:

- (1) update the orbital location of the AMC-1 satellite to 130.9° W.L. and authorize the AES1 AeroSat antennas to communicate with AMC-1 at the updated location;
- (2) specify the use of the Eutelsat 172B replacement satellite at 172° E.L. in lieu of Eutelsat 172A for the AES1 AeroSat antennas;
- (3) specify the use of the SES-15 replacement satellite at 129.15° W.L. in lieu of AMC-1 in the conventional Ku-band and authorize use of SES-15 extended Ku-band frequencies for both the AES1 AeroSat antennas and the AES2 ThinKom antennas.

A narrative description of the relevant changes is provided here, and AC BidCo is attaching an FCC Form 312 that identifies the revised points of communication. Copies of relevant coordination letters are attached as well. Pursuant to Section 25.117(c) of the Commission’s rules, AC BidCo is providing herein information that is changing as a result of the

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<sup>1</sup> See Call Sign E120106, File No. SES-MFS-20170725-00793, granted Oct. 4, 2017 (the “AC BidCo ESAA License”).

modification. AC BidCo certifies that the remaining information provided in support of the AC BidCo ESAA License has not changed.<sup>2</sup>

## **I. SATELLITES USED BY THE AC BIDCO ESAA NETWORK**

AC BidCo requests modification of its license to specify the satellites described below as points of communication for the AC BidCo ESAA network pursuant to the provisions of Section 25.227(a)(2) and (b)(2). Each of the requested satellites is eligible for authority for use with the AC BidCo ESAA network. Updated tables listing the satellites to be used and the associated ground stations are provided in Annex 2 hereto. As noted in Annex 2, AC BidCo seeks authority for the AMC-1 and Eutelsat 172B satellites to communicate only with the AeroSat model HR6400 antennas designated as AES1 on the AC BidCo ESAA License. AC BidCo seeks authority for the SES-15 satellite to communicate with both the AeroSat AES1 terminals and the ThinKom model 2Ku antennas designated as AES2 on the license.

AMC-1: AMC-1 is U.S.-licensed, and a request to reassign the satellite from 129.15° W.L. to 130.9° W.L. was recently granted by the Commission.<sup>3</sup> AC BidCo seeks authority to use AMC-1 capacity for ESAA operations on a primary basis in the 14-14.5 GHz uplink spectrum and in the 11.7-12.2 GHz downlink spectrum,<sup>4</sup> consistent with the AMC-1 License and with the Commission's orders in the ESAA proceeding.<sup>5</sup>

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<sup>2</sup> For the Commission's convenience, AC BidCo has attached as Annex 1 hereto a table listing the information required pursuant to Section 25.227 of the Commission's rules and providing a cross-reference to the necessary information.

<sup>3</sup> *SES Americom, Inc.*, Call Sign S2445, File No. SAT-MOD-20170810-00115, granted Nov. 22, 2017 (the "AMC-1 License").

<sup>4</sup> AC BidCo was granted Special Temporary Authority ("STA") to communicate with AMC-1 in the conventional Ku-band spectrum during and after its relocation from 129.15° W.L. to 130.9° W.L. See *AC BidCo LLC*, File No. SES-STA-20171127-01278, granted Nov. 30, 2017.

<sup>5</sup> *Revisions to Parts 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations*

AMC-1 will continue to provide coverage of North America and the Pacific Ocean. A letter confirming that operation of the AC BidCo AeroSat model HR6400 AES1 terminals is consistent with coordination agreements with satellites operated within six degrees of AMC-1 at 130.9° W.L. was submitted with the AC BidCo STA request for AMC-1 and is included in Annex 3 for the Commission's convenience.

Eutelsat 172B: The AC BidCo ESAA License includes authority for AeroSat AES1 terminals to communicate with the Eutelsat 172A satellite at 172° E.L. The Commission has authorized operations of the Eutelsat 172B satellite to replace Eutelsat 172A at that location.<sup>6</sup> As a result of this satellite replacement, AC BidCo ESAA traffic that had been carried by Eutelsat 172A at 172° E.L. was transferred to the Eutelsat 172B satellite at that location effective November 20, 2017.

Section 25.118(a)(3)(ii) allows earth station licensees to implement changes in points of communication without prior consent of the Commission if the change results from deployment of a replacement space station authorized to serve the United States.<sup>7</sup> The rule requires the earth station licensee to provide a notification within 30 days after the modification takes place. Accordingly, AC BidCo hereby notifies the Commission of this change in points of

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*Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14-14.5 GHz Frequency Bands*, Notice of Proposed Rulemaking and Report and Order, IB Docket Nos. 12-376 & 05-20, 27 FCC Rcd 16510 (2012) ("ESAA Order"); Second Report and Order and Order on Reconsideration, IB Docket No. 12-376, 29 FCC Rcd 4226 (2014) ("ESAA Second Order," and with the ESAA Order, the "ESAA Decisions").

<sup>6</sup> *ES 172 LLC*, Call Sign S3021, File Nos. SAT-STA-20171104-00149, granted in part and deferred in part Nov. 16, 2017 and SAT-RPL-20170927-00136, granted in part and deferred in part Dec. 7, 2017 (together, the "Eutelsat 172B Authorizations"). The Eutelsat 172B Authorizations did not act on the request for use of the 12.7-12.75 GHz frequencies with earth stations located in the United States and its Territories and Possessions. As noted in Annex 2, however, AC BidCo does not use that band segment within the United States.

<sup>7</sup> See 47 C.F.R. Section 25.118(a)(3)(ii).

communication and requests that the Commission update the AC BidCo ESAA License to specify the use of Eutelsat 172B at 172° E.L. in lieu of Eutelsat 172A at that location.

Complete technical information regarding the Eutelsat 172B satellite was submitted in the proceedings for the Eutelsat 172B Authorizations and is therefore already on file with the Commission. AC BidCo requests update of its license to reflect its use of Eutelsat 172B capacity for ESAA operations on a primary basis in the 14-14.5 GHz uplink spectrum and on an unprotected basis in the 10.95-11.2 GHz and 11.45-11.7 GHz downlink spectrum, consistent with the Commission's ESAA Decisions and with the terms of the Eutelsat 172B Authorizations. AC BidCo also seeks authority to use Eutelsat 172B capacity for ESAA operations on a nonconforming basis in the 12.2-12.75 GHz downlink spectrum for service outside United States airspace.

Eutelsat 172B provides coverage of the North Pacific and Northeastern Russia. A letter confirming that operation of the AC BidCo ESAA terminals is consistent with coordination agreements with satellites operated within six degrees of Eutelsat 172B at 172° E.L. is included in Annex 3.

SES-15: The AC BidCo ESAA License includes authority for both AeroSat AES1 terminals and ThinKom AES2 terminals to communicate with the AMC-1 satellite at 129.15° W.L. The Commission has authorized the conventional Ku-band capacity of SES-15 to replace AMC-1 at that location.<sup>8</sup> As a result of this satellite replacement, AC BidCo ESAA traffic currently carried by AMC-1 will be transferred to the SES-15 satellite in early 2018.

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<sup>8</sup> *SES Satellites (Gibraltar) Limited*, Call Sign S2951, File Nos. SAT-PPL-20160126-00007, granted July 12, 2016; SAT-MPL-20160718-00063, granted Dec. 14, 2016; & SAT-MPL-20170914-00130, granted Nov. 22, 2017 (together, the "SES-15 Authorizations").

As discussed above, Section 25.118(a)(3)(ii) allows earth station licensees to implement changes in points of communication without prior consent of the Commission if the change results from deployment of a replacement space station authorized to serve the United States. Pursuant to that rule, AC BidCo hereby notifies the Commission of this upcoming change in points of communication and requests that the Commission update the AC BidCo ESAA License to specify the use of SES-15 conventional Ku-band capacity in lieu of AMC-1 at 129.15° W.L.

In addition to its conventional Ku-band capacity, SES-15 also has authority to serve the U.S. using the 10.7-11.7 GHz extended Ku-band frequencies. AC BidCo requests modification of its ESAA license to permit both types of its ESAA terminals to communicate with SES-15 in these additional frequencies.

Complete technical information regarding the SES-15 satellite was submitted in the proceedings for the SES-15 Authorizations and is therefore already on file with the Commission. AC BidCo requests update of its license to reflect use of SES-15 capacity for ESAA operations on a primary basis in the 14-14.5 GHz uplink spectrum and the 11.7-12.2 GHz downlink spectrum and seeks authority to communicate with SES-15 on an unprotected basis in the 10.7-11.7 GHz downlink spectrum, consistent with the Commission's ESAA Decisions and with the terms of the SES-15 Authorizations.

SES-15 will provide coverage of North America and the Pacific Ocean. A letter confirming that operation of the AC BidCo ESAA terminals is consistent with coordination agreements with satellites operated within six degrees of SES-15 at 129.15° W.L. is included in Annex 3.

## **II. COORDINATION AND SPECTRUM SHARING MATTERS**

Attached as Annex 3 pursuant to Section 25.227(b)(2) of the Commission's rules are copies of letters confirming that AC BidCo's proposed ESAA operations are consistent with the coordination agreements between operators of the satellites discussed above and operators of adjacent spacecraft. Furthermore, AC BidCo's operations with the additional satellites will conform to the terms of the agreements between AC BidCo and the National Aeronautics and Space Administration and the National Science Foundation.

## **III. WAIVER REQUESTS**

AC BidCo seeks limited waivers of the Commission's rules in connection with its request to update the satellites authorized as points of communication for the AC BidCo ESAA network. Specifically, AC BidCo requests: (1) a waiver of the U.S. Table of Allocations in Section 2.106 to permit ESAA operations with the Eutelsat 172B satellite in the 12.2-12.75 GHz spectrum outside the United States; and (2) a waiver of footnote NG52 to the Table of Allocations to permit ESAA operations with the SES-15 satellite in the 10.7-10.95 GHz and 11.2-11.45 GHz bands on an unprotected, non-interference basis for ESAA operations, including for terminals in U.S. airspace.

Grant of each of these waivers is consistent with Commission precedent. The Commission has expressly recognized that "terminals on U.S.-registered aircraft may need to access foreign satellites while traveling outside of the United States (*e.g.*, over international waters), and therefore may need to downlink in the extended Ku-band in certain circumstances."<sup>9</sup> To meet this need, AC BidCo and other ESAA providers have requested and received

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<sup>9</sup> *Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service*, IB Docket No. 05-20, Notice of Proposed Rulemaking, 20 FCC Rcd 2906 (2005) at ¶ 18 (footnote omitted).

Commission authority to receive signals in the 12.2-12.75 GHz band, including with Eutelsat 172A, the satellite that Eutelsat 172B has replaced.<sup>10</sup>

The same rationale supports grant of a waiver to permit AC BidCo to receive transmissions from the Eutelsat 172B spacecraft in the 12.2-12.75 GHz band. This spectrum will not be used in U.S. airspace, and the proposed operations with Eutelsat 172B are consistent with coordination agreements with operators of adjacent satellites within six degrees. Authorizing AC BidCo to receive signals from Eutelsat 172B will not alter the technical characteristics of the satellite's operations in any way, and therefore will not create harmful interference to other authorized users of the spectrum. Furthermore, AC BidCo will not claim interference protection from such authorized users. Under these circumstances, grant of a Section 2.106 waiver is justified to permit use of the 12.2-12.75 GHz band for downlinks from Eutelsat 172B as part of the AC BidCo ESAA network.

Similarly, Commission decisions support allowing use of the 10.7-10.95 GHz and 11.2-11.45 GHz band segments for ESAA operations. Prior to adoption of the ESAA Decisions, the Commission authorized ESAA operators to use extended Ku-band frequencies for ESAA downlinks.<sup>11</sup> The ESAA Order modified the Table of Allocations to permit ESAA operations in the conventional Ku-band, as well as in the 10.95-11.2 GHz and 11.45-11.7 GHz segments of the extended Ku-band, and the Commission acknowledged that ESAA operators may also wish to

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<sup>10</sup> See, e.g., AC BidCo ESAA License, Section B and conditions 900387 and 900389 (authorizing reception of transmissions in the 12.2-12.75 GHz band on a non-interference, non-protected basis); *Panasonic Avionics Corporation*, File No. SES-MFS-20160819-00730, Call Sign E100089, granted Oct. 19, 2016, Section B and condition 90312 (same).

<sup>11</sup> See, e.g., *Row 44 Inc.*, File No. SES-MFS-20100715-00903, Call Sign E080100, Attachment at 3 (requesting extension of the waiver of Section 2.106 that Row 44 was granted for conventional Ku-band downlinks to cover the proposed use of the 11.45-11.7 GHz band), granted Dec. 23, 2010.

use other downlink spectrum.<sup>12</sup> Although the Commission had not requested comment on changing the allocation status of other downlink bands, it specifically contemplated that access to such spectrum could be granted “on a case-by-case basis under Part 25 licensing rules.”<sup>13</sup>

The ESAA Decisions also adopted footnote NG52, the successor to former footnote NG104 which specified that use of the 10.7-11.7 GHz band by the fixed-satellite service is limited to international operations. In the ESAA Order, the Commission made clear that ESAA operations in the 10.95-11.2 GHz and 11.45-11.7 GHz band were permitted on an unprotected basis and did not require a waiver of new footnote NG52, but that express carve-out does not extend to the 10.7-10.95 GHz and 11.2-11.45 GHz band segments.<sup>14</sup> Nevertheless, the Commission has authorized ESAA operations in both these portions of the extended Ku-band.<sup>15</sup>

Consistent with these past rulings, AC BidCo requests a waiver of the Table of Allocations and footnote NG52 to permit its terminals to receive transmissions from SES-15 in the 10.7-10.95 GHz and 11.2-11.45 GHz band segments, including for U.S. domestic services. The Commission has granted U.S. market access for SES-15 operations in these band segments and has waived footnote NG52 to allow SES-15 to provide domestic services in the 10.7-11.7 GHz frequencies on an unprotected, non-interference basis in the United States.<sup>16</sup> Furthermore, SES has confirmed that operation of the AC BidCo ESAA terminals is consistent with coordination agreements with satellites operated within six degrees of SES-15.

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<sup>12</sup> See *ESAA Order* at n.43.

<sup>13</sup> *Id.*

<sup>14</sup> See *ESAA Order* at ¶ 21.

<sup>15</sup> See, e.g., *Panasonic Avionics Corporation*, File No. SES-MFS-20150609-00349, Call Sign E100089, granted June 30, 2016, Section B (authorizing use of the 10.7-12.75 GHz band).

<sup>16</sup> *SES Satellites (Gibraltar) Limited*, Call Sign S2951, File No. SAT-MPL-20170914-00130, granted Nov. 22, 2017, Attachment to Grant at 2-3, ¶ 3.



Authorizing AC BidCo to receive signals from SES-15 in the 10.7-10.95 GHz and 11.2-11.45 GHz band segments will not alter the technical characteristics of the satellite's operations in any way, and therefore will not create harmful interference to other authorized users of the spectrum. Furthermore, AC BidCo will not claim interference protection from such authorized users. Under these circumstances, waiving Section 2.106 and footnote NG52 is justified to permit use of SES-15 capacity in the 10.7-10.95 GHz and 11.2-11.45 GHz bands for ESAA operations, including in U.S. airspace.

**IV. CONCLUSION**

AC BidCo respectfully requests that the Commission modify the AC BidCo ESAA License to reflect the changes described herein.

Respectfully submitted,

AC BIDCO LLC

By: /s/ Marguerite Elias

Of Counsel

Karis A. Hastings  
SatCom Law LLC  
1317 F Street, N.W., Suite 400  
Washington, D.C. 20004  
(202) 599-0975

Marguerite Elias  
Executive Vice President & General Counsel  
AC BidCo LLC  
111 North Canal Street  
Chicago, IL 60606  
(202) 870-7220

Dated: December 20, 2017

**ANNEX 1: Table of Information Required by Section 25.227**

<b>Section 25.227 Requirement</b>	<b>Citation to Information Provided</b>
25.227(a)(4) & 25.227(b)(5)	N/A: no use of a contention protocol is proposed.
25.227(a)(5) & 25.227(b)(6)	The 24/7 point of contact information remains the same. The phone number is +1 866-943-4662 and the e-mail address is <a href="mailto:noc@gogoair.com">noc@gogoair.com</a> . The street address is: AC BidCo Network Operations Center, 111 North Canal Street, Chicago, IL, 60606, as specified in Form 312 Schedule B, Items E2-E9.
25.227(a)(15)	AC BidCo certifications are in Annex 4 attached.
25.227(b)(2)(i)	Off-axis EIRP density information regarding the AeroSat and ThinKom terminals licensed for use by AC BidCo was previously provided to the Commission. Operations with the additional satellites included in this application will not involve any increase in the maximum off-axis EIRP density levels previously described to the Commission for the AeroSat and ThinKom terminals and authorized in the AC BidCo ESAA license.
25.227(b)(2)(ii)	Target satellite operator certifications are in Annex 3 attached.
25.227(b)(2)(iii) & (iv)	AC BidCo has previously demonstrated that its system will comply with coordination agreements and requirements to cease emissions.
25.227(b)(4)	The ESAA network will operate in U.S. airspace, foreign airspace, and in the airspace over international waters. Coverage areas for the specific satellites to be used in the ESAA network are described in the table found in Annex 2 attached. Contours for the AMC-1, Eutelsat 172B, and SES-15 satellites are already on file with the Commission.
25.227(b)(7)	AC BidCo certifications are in Annex 4 attached.
25.227(b)(8)	No change to previously filed Radiation Hazard analyses.
25.227(c)	AC BidCo's coordination agreement with NASA was filed February 1, 2013 in File Nos. SES-LIC-20120619-00574 <i>et al.</i>
25.227(d)	AC BidCo's coordination agreement with NSF was included as Amendment Exhibit B in File No. SES-AMD-20120731-00709.

**ANNEX 2:**

**Updated Spacecraft and Teleport Tables**

Satellite	Location	Beam Coverage Area	Tx (GHz)	Rx (GHz)	Use in US airspace?	Satellite Operator
<b>AMC-1<sup>1</sup></b>	130.9W	North America, Pacific Ocean	14-14.5	11.7-12.2	Yes	SES
<b>AMC-4<sup>2</sup></b>	134.9W	North America, Pacific Ocean	14-14.5	11.45-11.7; 11.7-12.2	Yes	
<b>AMC-6</b>	83W	North America	14-14.5	11.45-11.7; 11.7-12.2	Yes	
<b>AMC-21</b>	124.9W	United States	14-14.5	11.7-12.2	Yes	
<b>ASTRA 4A</b>	4.8E	Europe	14-14.25	11.7-12.2; 12.2-12.75	No	
<b>SES-1</b>	101W	North America	14-14.5	11.7-12.2	Yes	
<b>SES-3</b>	103W	North America	14-14.5	11.7-12.2	Yes	
<b>SES-4</b>	22W	Europe	14-14.5	12.5-12.75	No	
<b>SES-6</b>	40.5W	East Atlantic Ocean	14-14.5	10.95-11.2; 11.45-11.7	No	
		West Atlantic Ocean	14-14.5	10.95-11.2; 11.45-11.7	Yes	
<b>SES-10</b>	67W	North and Central America, the Gulf of Mexico, and the Caribbean	14-14.5	10.95-11.2; 11.45-11.7; 11.7-12.2	Yes	
<b>SES-15</b>	129.15W	North America, Pacific Ocean	14-14.5	10.7-11.7 11.7-12.2	Yes	
<b>Galaxy 17</b>	91W	North America	14-14.5	11.7-12.2	Yes	
<b>Galaxy 28</b>	89W	Brazil	14-14.5	11.7-12.2	No	
<b>IS-14</b>	45W	North and South America excludes Brazil	14-14.5	11.7-12.2	Yes	
<b>IS-18</b>	180E	South Pacific	14-14.5	12.25-12.75	No	
<b>IS-19</b>	166E	Northeast Pacific	14-14.5	12.25-12.75	Yes	
		Northwest Pacific	14-14.5	12.25-12.75	No	
		Australia				
		Southwest Pacific				
<b>IS-20</b>	68.5E	Middle East	14-14.5	10.95-11.2; 11.45-11.7; 12.5-12.75	No	
<b>IS-21</b>	58W	Brazil	14-14.5	11.7-12.2	No	
		South Atlantic Ocean	14-14.5	11.45-11.7	No	
<b>IS-22</b>	72.1E	Mobility from Mideast to Japan and to Australia	14-14.5	12.25-12.5	No	

<sup>1</sup> This satellite is only used for communications with the Aerosat antenna system, designated AES1.

<sup>2</sup> This satellite is only used for communications with the ThinKom 2Ku antenna system, designated AES2.

Satellite	Location	Beam Coverage Area	Tx (GHz)	Rx (GHz)	Use in US airspace?	Satellite Operator
<b>IS-29e</b>	50W	United States	14-14.5	10.95-11.7; 11.7-12.2	Yes	Intelsat
<b>IS-33e</b>	60E	Africa, Asia, and Europe	14-14.5	10.95-11.2; 11.45-11.7; 11.7-12.2; 12.5-12.6	No	
<b>IS-904</b>	60E	Spot 1 - Western Russia	14-14.5	10.95-11.2; 11.45-11.7	No	
<b>IS-907</b>	27.5W	East Pacific	14-14.5	10.95-11.2; 11.45-11.7	Yes	
<b>Eutelsat 115WB</b>	114.9W	North America	14-14.5	11.7-12.2	Yes	Eutelsat
<b>Eutelsat 117WA</b>	116.8W	Central and South America	14-14.5	11.7-12.2	Yes	
<b>E172B<sup>1</sup></b>	172E	North Pacific and Northeastern Russia	14-14.5	10.95-11.2; 11.45-11.7; 12.2-12.75	No	
<b>T-11N</b>	37.5W	Africa	14-14.5	10.95-11.2; 11.45-11.7; 12.5-12.75	No	Telesat
		Atlantic	14-14.5	11.45-11.7	No	
<b>Telstar 12V</b>	15W	Brazil	14-14.5	11.7-12.2	No	
<b>Telstar 18/ Apstar 5</b>	138E	Asia	14-14.5	12.2-12.75	No	
<b>JCSAT-2B</b>	154E	South Pacific	14-14.5	11.45-11.7; 12.25-12.75	Yes	JSAT
<b>JCSAT-5A<sup>1</sup></b>	132E	Japan	14-14.5	12.25-12.75	No	
<b>Yamal 300K</b>	177W	North Pacific Ocean	14-14.5	10.95-11.2; 11.45-11.7; 12.5-12.75	Yes	Gazprom Space Systems
<b>Yamal 401</b>	90E	Russia	14-14.5	10.95-11.2; 11.45-11.7; 12.5-12.75	No	
<b>Asiasat 7</b>	105.5E	China	14-14.5	12.25-12.75	No	AsiaSat
<b>ARSAT-2</b>	81W	North America	14-14.5	11.7-12.2	Yes	Empresa Argentina de Soluciones Satelitales S.A
<b>Optus D2</b>	152E	Australia	14-14.5	12.25-12.75	No	Optus

<sup>1</sup> These satellites are only used for communications with the Aerosat antenna system, designated AES1.

Satellite	Teleport Location	FCC Call Sign
<b>AMC-1</b>	Woodbine, MD	E900448
<b>AMC-4</b>	Brewster, WA	E120043
<b>AMC-6</b>	Perris, CA	E940448
<b>AMC-21</b>	Woodbine, MD	E900448
<b>ASTRA 4A</b>	Betzdorf, Luxembourg	N/A
<b>SES-1</b>	Woodbine, MD	E920698
<b>SES-3</b>	Woodbine, MD	E140059
<b>SES-4</b>	Bristow, VA	E020071
	Bristow, VA	E000696
<b>SES-6</b>	Betzdorf, Luxembourg	N/A
<b>SES-10</b>	Perris, CA	E940448
<b>SES-15</b>	Woodbine, MD	E170138
	South Mountain, CA	E170139
<b>Galaxy 17</b>	Atlanta, GA ATL-K26	E990214
<b>Galaxy 28</b>	Rio de Janeiro, Brazil	N/A
<b>IS-14</b>	ATL teleport ATL-C06	E940333
	ATL teleport ATL-K15	E090093
<b>IS-18</b>	Napa teleport NAP-K22	E990224
<b>IS-19</b>	Perth, Australia	N/A
	Napa teleport NAP-K31	E980460
	Napa teleport NAP-C30	E980467
<b>IS-20</b>	Fuchsstadt, Germany	N/A
<b>IS-21</b>	Rio de Janeiro, Brazil	N/A
	Mobility: MTN teleport MTN-K02	E030051
<b>IS-22</b>	Kumsan, Korea	N/A
<b>IS-29e</b>	Hagerstown, MD	E030103
<b>IS-33e</b>	Fuchsstadt, Germany	N/A
	Moscow, Russia	N/A
<b>IS-904</b>	Moscow, Russia	N/A
<b>IS-907</b>	Hagerstown, MD	E030103
<b>Eutelsat 115WB</b>	Brewster, WA	E120043
<b>Eutelsat 117WA</b>	Brewster, WA	E060416
<b>E172B</b>	Khabarovsk, Russia	N/A
<b>T-11N</b>	Aflenz, Austria	N/A
<b>Telstar 12V</b>	Rio de Janeiro, Brazil	N/A
<b>Telstar 18/Apstar 5</b>	China	N/A
<b>JCSAT-2B</b>	Kapolei, HI	E010236
<b>JCSAT-5A</b>	Yokohama, Japan	N/A
<b>Yamal 300K</b>	Brewster, WA BRW-05C	E120043
<b>Yamal 401</b>	Moscow, Russia	N/A
<b>Asiasat 7</b>	Beijing, China	N/A
<b>ARSAT-2</b>	Brewster, WA	E120043
<b>Optus D2</b>	Belrose, Australia	N/A

**ANNEX 3:**  
**Satellite Company Letters**



**Kimberly M. Baum**  
Vice President Spectrum Management & Development, Americas

**Federal Communications Commission**  
**International Bureau**  
**445 12th Street, S.W.**  
**Washington, D.C. 20554**

30 November 2017

Subject: Engineering Certification of SES Americom, Inc. for the AMC-1 Satellite

To whom it may concern,

This letter confirms that SES is aware that AC BidCo LLC. ("AC BidCo"), licensed by the Federal Communications Commission ("FCC") as AC BidCo LLC, is planning to file an application seeking a modification to its blanket authorization (the "Modification Application") to operate technically identical Ku-band Earth Stations Aboard Aircraft ("ESAA") pursuant to ITU RR 5.504A and Section 25.227 of the Commission's rules (Call Sign E120106). The Modification Application will seek authority for AC BidCo's ESAA terminals to communicate with the AMC-1 satellite during and after its relocation from 129.15° W.L. to 130.9° W.L., under the current ESAA rules, including Section 25.227.

Based upon the representations made to SES by AC BidCo concerning how it will operate on AMC-1 according to its letter dated November 27, 2017:

- SES certifies that it has completed coordination as required under the FCC's rules and that the power density levels specified by AC BidCo are consistent with any existing coordination agreements to which SES is a party with adjacent satellite operators within +/- 6 degrees of orbital separation from AMC-1.
- If the FCC authorizes the operations proposed by AC BidCo, SES will include the power density levels specified by AC BidCo in all future satellite network coordination with other operators of satellites adjacent to AMC-1.

Yours Sincerely,

Kimberly M. Baum

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**SES Americom, Inc.**  
1129 20th Street NW, Suite 1000  
Washington, DC 20036

Tel. +1 202 478 7100  
Fax +1 202 478 7101  
kimberly.baum@ses.com  
www.ses.com

1/1 USA

December 19th, 2017

Federal Communications Commission  
International Bureau  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

**Re: Engineering Certification of Eutelsat (Eutelsat 172B)**

Eutelsat confirms and hereby certifies the following with respect to the earth stations aboard aircraft ("ESAA") operations proposed by AC BidCo LLC ("AC BidCo") with the above referenced satellite:

- a) The proposed operation of the ESAA transmit/receive terminals at the power density levels defined between AC BidCo and Eutelsat is consistent with existing satellite coordination agreements with operators of satellites within 6 degrees of orbital separation from Eutelsat 172B.
- b) If the FCC authorizes the operation proposed by AC BidCo, Eutelsat will include the power density levels specified by AC BidCo, defined within the satellite coordination agreements, in all future satellite network coordination with adjacent satellite operators.

Sincerely,



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For Eutelsat  
Filipe De Oliveira  
Director of Resources Engineering

[www.eutelsat.com](http://www.eutelsat.com)





**Kimberly M. Baum**  
Vice President Spectrum Management & Development, Americas

**Federal Communications Commission  
International Bureau  
445 12th Street, S.W.  
Washington, D.C. 20554**

1 December 2017

Subject: Engineering Certification of SES Americom, Inc. for the SES-15 Satellite


To whom it may concern,

This letter confirms that SES is aware that AC BidCo LLC. ("AC BidCo"), licensed by the Federal Communications Commission ("FCC") as AC BidCo LLC, is planning to file an application seeking a modification to its blanket authorization (the "Modification Application") to operate technically identical Ku-band Earth Stations Aboard Aircraft ("ESAA") pursuant to ITU RR 5.504A and Section 25.227 of the Commission's rules (Call Sign E120106). The Modification Application will seek authority for AC BidCo's ESAA terminals to communicate with the SES-15 satellite at 129° W.L., under the current ESAA rules, including Section 25.227.

Based upon the representations made to SES by AC BidCo concerning how it will operate on SES-15 according to its letter dated November 11, 2017:

- SES certifies that it has completed coordination as required under the FCC's rules and that the power density levels specified by AC BidCo are consistent with any existing coordination agreements to which SES is a party with adjacent satellite operators within +/- 6 degrees of orbital separation from SES-15.
- If the FCC authorizes the operations proposed by AC BidCo, SES will include the power density levels specified by AC BidCo in all future satellite network coordination with other operators of satellites adjacent to SES-15.

Yours Sincerely,

  
for

Kimberly M. Baum

---

**SES Americom, Inc.**  
1129 20th Street NW, Suite 1000  
Washington, DC 20036  
USA

Tel. +1 202 478 7100  
Fax +1 202 478 7101  
kimberly.baum@ses.com  
www.ses.com

1/1

**ANNEX 4:**

**AC BidCo Certifications**

AC BidCo LLC (“AC BidCo”), in support of the foregoing application to modify the AC BidCo ESAA License, hereby certifies as follows:

1. AC BidCo’s target space station operators have confirmed that AC BidCo’s proposed ESAA operations over international waters are within coordinated parameters for adjacent satellites up to 6 degrees away on the geostationary arc.
2. AC BidCo will comply with the requirements contained in paragraphs (a)(6), (a)(9), (a)(10), and (a)(11) of Section 25.227 of the Commission’s rules, 47 C.F.R. § 25.227.

By:     /s/ Timothy Joyce      
Timothy Joyce  
VP of RF Engineering, Gogo LLC  
for AC BidCo LLC

December 20, 2017