

**Attachment**

**Description of Application for Modification of License**

**1.0 OVERVIEW**

This application seeks to modify the current Row 44, Inc. (“Row 44”)<sup>1</sup> Ku-band Earth Stations Aboard Aircraft (“ESAA”) license (Call Sign E080100) to add AMC-3 at 67° W.L. as an additional point of communication operating at skew angles ranging up to sixty-five degrees.<sup>2</sup> The requested changes relate solely to the 0.62 meter TECOM Ku-Stream antenna, which is identified as Remote Terminal #2 in the existing Row 44 license. No other changes in the technical parameters contained in the current ESAA license are proposed. Row 44 notes, however, that it already has pending another modification application which may be granted in advance of the instant modification application. The chart below tracks key parameters as currently authorized in Row 44’s ESAA authorization, as requested in the pending modification, and as further modified in this request.

<b>Technical Parameter</b>	<b>Existing License</b>	<b>Pending MOD</b>	<b>Current MOD</b>
Max Transmit Input Power (Watts)	20	31.6	31.6
Max EIRP per Carrier (dBW)	41.8	43.8	43.8
Max EIRP Density per Carrier (dBW/4kHz)	14.8	16.2	17.2
Max EIRP Density Toward the Horizon (dBW/4 kHz)	13.3	13.3	13.3
Max Range of Satellite Arc (degrees longitude)	37.5W-166W	37.5W-166W	37.5W-166W

The Schedule B information submitted with this application contains only the parameters that apply to communication with the AMC-3 satellite and are not intended to supersede maximum parameters specified in either the current authorization or contained in the other pending modification application that exceed values stated herein. To the extent that the already pending modification application is granted prior to this one, some of the requested maximum parameters may already be effective; however, in the event that the current application is acted upon first, Row 44 is requesting that to the extent that the authority requested in this application is broader (e.g., the situational maximum EIRP density per carrier), the parameters requested herein should

<sup>1</sup> The in-flight connectivity business established by Row 44 now operates under the name Global Eagle Entertainment, which is the parent company of Row 44 (*see* IBFS File No. SES-T/C-20121203-01063). As Row 44 remains the name of the FCC licensee, that designation is used in this application.

<sup>2</sup> Row 44 notes that the FCC’s IBFS database indicates that AMC-3 is located at 87° W.L. (86.9° W.L.), although the FCC authorized its relocation to its current location at 67° W.L. on June 28, 2012 (FCC File No. SAT-MOD-20111220-00243). *See* FCC Public Notice, Report No. SAT-00879, DA No. 12-1017, at 1 (released June 29, 2012).

be reflected in the final updated authorization ultimately issued to Row 44 in this and other pending application proceedings.

The requested changes in operating parameters requested here will provide enhanced service to airline passengers on flights operating over North American and Central American airspace and in the Atlantic Ocean and Caribbean regions by allowing increased system capacity and service availability. Except as specifically set forth herein and in Schedule B, Row 44 seeks these modifications subject to all terms and conditions set forth in its current license.<sup>3</sup>

Row 44 seeks to implement service on AMC-3 subject to this modification application as soon as practicable, and respectfully requests that this modification application be placed on Public Notice as quickly as possible in order to facilitate this projected implementation schedule. To the extent necessary, Row 44 may need to seek Special Temporary Authority to permit modified service using AMC-3 in advance of final action on the entirety of the current request for modification.

## **2.0 TECHNICAL DESCRIPTION, LINK BUDGETS AND PREDICTED COVERAGE AREA**

Exhibit A includes a technical description of the proposed changes, a depiction of the coverage contours in relation to combinations of EIRP and skew angle (skew angle ranging from 15° to 65°), as well as representative link budgets. *See* 47 C.F.R. § 25.227(b)(4).

## **3.0 COORDINATION LETTER**

Row 44's intended operations are within the scope that SES has coordinated with the adjacent satellite operators, and should not cause harmful interference into adjacent satellites operating in accordance with FCC's two-degree spacing policy. A copy of a supplemental coordination letter covering Row 44's proposed new operations with AMC-3 is attached hereto as Exhibit B. *See* 47 C.F.R. § 25.227(b)(2).

Row 44's operations, as modified, will continue to conform to the terms of its existing coordination agreements with the National Aeronautics and Space Administration ("NASA") and the National Science Foundation ("NSF"), as required under Condition 90057 its current ESAA license.<sup>4</sup>

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<sup>3</sup> *See* Row 44 Inc., Radio Station Authorization, Call Sign E080100, File No. SES-MOD-20121023-00963, as amended by SES-AFS-20130920-00833 & SES-AFS-20140203-00029 (Sat. Div., granted Aug. 29, 2014).

<sup>4</sup> Row 44's coordination agreements with NASA and NSF pre-date the adoption of current rule Sections 25.227(c)(1) & (d)(1), which provide for Public Notice to allow comment on coordination agreements governing operations of ESAA networks in frequency bands shared

#### **4.0 RADIATION HAZARD STUDY**

Exhibit C to this application is a revised radiation hazard assessment, submitted pursuant to Section 25.227(b)(8) of the Commission's Rules, reflecting the changed operating parameters requested for the TECOM antenna.

#### **5.0 SPACECRAFT, FREQUENCY & BEAM COVERAGE**

See chart on next page

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
with NASA and NSF facilities. Accordingly, to the extent necessary, Row 44 requests that the Public Notice issued announcing acceptance of this modification application include the referenced notifications concerning Row 44's existing coordination agreements with NASA and NSF.


**Spacecraft, Frequency & Beam Coverage Table  
 (All Provide Some Coverage to U.S. Locations)**

Satellite	Location	Beam Coverage Area	Tx (GHz)	Rx (GHz)	Satellite Operator
AMC-2	80.85W	North America, Central America, Caribbean and North Atlantic	14.05-14.47	11.7-12.2	SES
AMC-3	67.0 W	North America, Central America, Atlantic and Caribbean	14.05-14.47	11.7-12.2	
AMC-9	83.0W	North America, Caribbean and North Atlantic	14.05-14.47	11.7-12.2	
SES-1	101.0W	North America, Central America, and Caribbean	14.05-14.47	11.7-12.2	
SES-6*	40.5W	Atlantic Ocean	14.05-14.47	10.95-11.2; 11.45-11.7	
IS-19	166.0E	Pacific Ocean	14.05-14.47	12.25-12.75	Intelsat
Eutelsat 115WA (Satmex 5)*	114.9W	North America and Pacific Ocean	14.05-14.47	11.7-12.2	Eutelsat
Eutelsat 117WA (Satmex 8)*	116.8 W	North America and Caribbean	14.05-14.47	11.7-12.2	
T11N†	37.5W	North Atlantic Ocean	14.05-14.47	11.45-11.7; 11.7-12.2	Telesat
Estrella do Sul (T14R)*	63.0W	North Atlantic Ocean, Canada and Caribbean	14.05-14.47	11.7-12.2	
Horizons 1*	127.0W	North America and Pacific Ocean	14.05-14.47	11.7-12.2	JSAT

\* = Non-U.S.-licensed satellites included on Ku-band Permitted List

† = T11N is a U.S.-licensed satellite (Call Sign S2357) operated by Telesat Canada

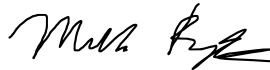
 = New Point of Communication requested in this modification application

 = Points of Communication subject to pending modification

## 6.0 LICENSEE CERTIFICATION

I, Michael Pigott, Vice President, Legal Affairs, of Row 44, Inc., hereby certify as follows:

1. The target space station operator for the satellite subject to this modification application, AMC-3, has confirmed that proposed Earth Stations Aboard Aircraft operations are within coordinated parameters for adjacent satellites up to 6 degrees away on the geostationary arc; and
2. The licensee will continue to comply with the requirements of paragraphs (a)(6), (a)(9), (a)(10), and (a)(11) of Section 25.227 of the Commission's Rules and the conditions of its existing license.



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Michael Pigott  
Vice President, Legal Affairs  
Row 44, Inc.

April 24, 2015