

## **Exhibit A**

### **Description of Application**

#### **Response to Question No. 43**

By this application, LightSquared Subsidiary LLC (“LightSquared”) seeks modification of its license to allow transmission from the Napa earth station (Call Sign E080030) to SkyTerra 1 in the 12750-12752 MHz band (Earth-to-space) at a higher power than is currently authorized by the license for the earth station, thus making regular the temporary authorization granted in File Nos. SES-STA-20101213-01550, SES-STA-20110107-00024, and SES-STA-20110131-00096.<sup>1</sup> LightSquared seeks no other changes to this license.

The modification is necessary because LightSquared specified incorrect maximum power levels for the 12750-12752 MHz band in the license application for the Napa earth station, File No. SES-LIC-20080206-00131. This frequency band is used as a back-up band for ranging and command transmissions, and higher power is necessary to ensure that the earth station can maintain the link with the satellite under degraded conditions, such as in the event of rain.

For the earth station’s 7.3-meter antenna and the relevant 11-meter antenna, LightSquared seeks to increase, from 71 dBW to 82.5 dBW and 73.5 dBW to 85 dBW, respectively, the authorized maximum output power of its transmissions in the 12750-12752 MHz band. The associated maximum EIRP density will increase to 57.73 dBW/4 kHz and 60.30 dBW/4 kHz, for the 7.3-meter antenna and 11-meter antenna,

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<sup>1</sup> Pending grant of this application, LightSquared will continue to seek Special Temporary Authority for the higher power operation.

respectively. *See* Exhibit B (Table of Schedule B Technical Information to Be Modified).

As noted above, the 12750-12752 MHz band is used as a back-up band for ranging and command transmissions, which are normally conducted in the 13248-13250 MHz frequency band. The proposed maximum power levels for the 12750-12752 MHz band correspond exactly to the maximum power levels already authorized for transmissions in the 13248-13250 MHz band.<sup>2</sup> The requested higher maximum power for transmissions in the 12750-12752 MHz band will allow for greater margin under degraded conditions (such as in the event of rain), increasing the earth station's ability to maintain the link with the satellite's pipe/bi-cone antennas during those events.

LightSquared has coordinated proposed transmissions up to 85 dBW with TerreStar-1, which is the nearest unaffiliated satellite operating in the 12750-12752 MHz band.<sup>3</sup> Additionally, LightSquared has coordinated the proposed higher-power TT&C operations in the 12750-12752 MHz frequency band with co-channel terrestrial systems, as required pursuant to Section 25.203(c) of the Commission's rules. 47 C.F.R. § 25.203(c). The relevant coordination reports are attached to this application. *See* Exhibit D. For the reasons stated above, LightSquared requests grant of this application.

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<sup>2</sup> *See* License, Call Sign E080030.

<sup>3</sup> TerreStar-1 is at 111.0°W. In light of this minimum 9.8° of separation, the lowest amount of sidelobe discrimination is 45 dB.

## Technical Certification

I, Richard Evans, hereby certify under penalty of perjury that:

I am the technically qualified person responsible for preparation of the engineering information contained in this application, that I am familiar with Part 25 of the Commission's rules, that I have either prepared or reviewed the engineering information submitted in this application, and that it is complete and accurate to the best of my knowledge.

\_\_\_\_\_/s/\_\_\_\_\_  
Richard Evans  
Principal Engineer  
LightSquared Subsidiary LLC

March 4, 2011



## Exhibit B

Table of Schedule B Technical Information to Be Modified\*

<b>E28. Antenna ID</b>	<b>E43/44. Frequency Bands (MHz)</b>	<b>E45. T/R Mode</b>	<b>E46. Antenna Polarization (H,V,L,R)</b>	<b>E47. Emission Designator</b>	<b>E48. Maximum EIRP per Carrier (dBW)</b>	<b>E49. Maximum EIRP Density per Carrier (dBW)</b>
11.3M – 2	12750 -12752	T	Left and Right Circular	1M20G7D	85	60.30
11.3M – 1	12750 -12752	T	Left and Right Circular	1M20G7D	85	60.30
7.3M	12750 -12752	T	Left and Right Circular	1M20G7D	82.5	57.73

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\* Only the information provided in response to questions E48 and E49 of the Form 312 Schedule B, Maximum EIRP per Carrier (dBW) and Maximum EIRP Density per Carrier (dBW/4kHz), respectively, are changes to the license. The other information provided in response to questions E28 and E43 through E47 simply restate licensed parameters and are listed in the table solely to provide context for the changes described above.