

Description of Operations and Public Interest Statement

Lockheed Martin Corporation (“Lockheed Martin”) requests special temporary authority (“STA”) to operate its Carpentersville, New Jersey fixed earth station (*see* File No. SES-LIC-20081103-01443, as amended)¹ to provide telemetry, tracking and control (“TT&C”) functions during the post-launch and early orbit phases (“LEOP”) of operation for the Express AM4R satellite. AM4R is destined for operation at the 80° East longitude orbital location (80° E.L.), and is currently scheduled for launch on May 16, 2014 aboard a Proton launch vehicle from the Baikonur facility in Kazakhstan.² Accordingly, Lockheed Martin would likely need to begin test transmissions in preparation for the launch on or about May 11, 2014.³

1. Requested STA Operations

Lockheed Martin specifically seeks authority to transmit telecommand signals at the center frequency 6535 MHz for in transit telecommand communications (Earth-to-space)⁴, and to receive telemetry signals from the satellite (space-to-Earth) at the 4199.5 MHz center frequency. Lockheed Martin is requesting the duration of this STA to be a total of thirty (30) days from May 11, 2014 to cover any slippage in the anticipated dates of the various phases of operation; it nonetheless expects that all Carpentersville operations in support of the launch will be completed within ten (10) days after the AM4R satellite is launched.

Lockheed Martin’s proposed transmissions will use total input power and emissions for telecommand that will fall below the highest input power, EIRP, EIRP density, and bandwidth prescribed for the telecommand carriers in its former FCC license. When no commands are being sent, a CW carrier that is within the emission of Lockheed Martin’s E7541 operation would be present. *See, e.g.*, File No. SES-AMD-20081219-01664, at Schedule B. The

¹ The pending application in File No. SES-LIC-20081103-01443, under Call Sign E7541, was filed on a provisional basis while Lockheed Martin’s license for a 14.2 meter Ku-band antenna at the Carpentersville, NJ site (under Call Sign E920702) remains the subject of a pending petition for reinstatement. Lockheed Martin’s petition to reinstate the license for Call Sign E920702, as well as the “replacement” application it filed in the alternative under File No. SES-LIC-20081103-01443 and Call Sign E7541, both remain pending.

² *See* Russian Satellite Communications Company Press Release, “Express-AM4R, a communications and broadcasting satellite, is now at Baikonur Cosmodrome,” dated April 21, 2014, available at <http://eng.rscs.ru/100/177/482.html> (last visited April 24, 2014).

³ The test transmissions that would begin on or about May 11th would occur over a period of approximately two to three days. During these tests, the earth station would not be communicating with any satellite; instead, the transmissions will be made with the antenna at zenith to verify RF functionality.

⁴ This frequency is in the extended C-band allocated to the Fixed-Satellite Service on a co-primary basis with the terrestrial Fixed service, and therefore subject to prior coordination with other users. Operations have been coordinated in advance with all potentially affected entities that operate communications systems in compliance with the Table of Frequency Allocations and a coordination report is included as part of this application.

information in the Schedule B portion of Lockheed Martin's pending application in File No. SES-LIC-20081130-01443, as amended, is hereby incorporated by reference. All of Lockheed Martin's proposed TT&C operations in support of the AM4R launch will be on a strictly non-harmful interference, non-protected basis.

The antenna to be used for this STA is already built. It is the same antenna that was authorized under Call Sign E7541 and that is now the subject of the pending request described in Note 1 above, and has been used during the pendency of that request on an STA-basis to support many other satellite launches. *See, e.g.*, Request of Lockheed Martin Corp. for STA to operate Carpentersville, NJ earth station in support of launch of Astra 5-B, SES-STA-20140310-00134 (granted Mar. 14, 2014); Request of Lockheed Martin Corp. for STA to operate Carpentersville, NJ earth station in support of launch of ABS-2, SES-STA-20140103-00005 (granted Jan. 28, 2014); Request of Lockheed Martin Corp. for STA to operate Carpentersville, NJ earth station in support of launch of SES-8, SES-STA-20131101-00922 (granted Nov. 18, 2013); Request of Lockheed Martin Corp. for STA to operate Carpentersville, NJ earth station in support of launch of Eutelsat 25B, SES-STA-20130809-00708 (granted Aug. 26, 2013). For this reason, Lockheed Martin does not provide a new analysis of non-ionizing radiation for the antenna, or any of the detailed transmission/reception parameters for the signals. Instead, Lockheed Martin incorporates by reference the radiation hazard study and Schedule B information that were included with the November 2008 modification application in File No. SES-LIC-20081103-01443, as amended.

Lockheed Martin designates Michael Usarzewicz to be the contact person that will be available whenever transmission to, or reception from, AM4R is to occur through the subject earth station. Mr. Usarzewicz can be reached at the following cell phone number: (609)-865-2658 and/or station number: (908) 859-4050.

2. Grant of the Requested Authority Will Serve the Public Interest

Lockheed Martin believes that the limited operations it proposes in support of the launch of the AM4R satellite are required in the public interest.⁵ Lockheed Martin understands that the AM4R satellite is licensed to the Russian Satellite Communications Company and will be located in geostationary orbit at 80°E.L. for the provision of communications services to Russia and the CIS countries. Lockheed Martin's Carpentersville earth station will be part of a global network of control facilities that will be used solely to position the satellite as it progresses from transfer orbit to its final location. No end user service will be provided within the United States at any time, and the AM4R satellite's destination orbital location at 80° E.L. does not afford visibility from the Carpentersville location.⁶ The safe and orderly use of the entire geostationary

⁵ The spacecraft will be controlled throughout the launch and transfer orbit phases by Astrium (France), which will manage the LEOP portion of the mission from its network control center in Toulouse, France.

⁶ Lockheed Martin notes that no waiver of the Commission's application rules with respect to non-U.S. satellites (*see* 47 C.F.R. §§ 25.114 and 25.137) is required in this instance, as the requested operations will not "serve the United States" market, but are instead intended only to assist in the launch and transfer

orbital resource and protection of the hundreds of satellites licensed by the U.S. and other countries that operate there depends in no small part on ensuring that the AM4R satellite is controlled while over North America; Lockheed Martin's earth station thus will serve a vital function.⁷

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As outlined above, Lockheed Martin requests authority to operate its Carpentersville, NJ earth station antenna to provide critical TT&C services during the launch and early operations phase of the AM4R satellite, for a term of 30 days commencing May 11, 2014.

orbit phases for deployment of a new satellite, which incidentally will also serve only points that lie outside the United States. Under such circumstances, the Commission has not required any submission pursuant to the application rules governing non-U.S. satellites, nor otherwise required any waiver showing. *See, e.g.*, Request of Lockheed Martin Corp. for STA to operate Carpentersville, NJ earth station in support of launch of Amazonas-3, File No. SES-STA-20130122-00078 (granted Feb. 4, 2013); *cf. EchoStar Satellite Operating Company*, 28 FCC Rcd 4229, 4233 (¶ 12) (IB 2013) (“ESOC will operate feeder links and TT&C earth stations within the United States, but we do not interpret these very limited technical operations, under STA, as constituting “DBS service” to the United States”).

⁷ Lockheed Martin also notes that the Commission has recently granted this same authority with respect to the AM4R launch to Inmarsat Hawaii Inc. for its C-band Earth station in Paumalu, Hawaii (Call Sign KA25). *See* FCC File No. SES-STA-20140205-00065 (granted April 15, 2014); FCC Public Notice, “Satellite Communications Services Information re: Actions Taken,” Report No. SES-01641, at 8 (released April 23, 2014).