

Description of Operations and Public Interest Statement

Lockheed Martin Corporation (“Lockheed Martin”) requests special temporary authority (“STA”) to operate its Carpentersville, New Jersey Ku-band 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 transfer orbit phases of operation for the Netherlands-licensed SES-8 satellite. SES-8 is destined for operation at the 95° East Longitude orbital location, and is currently scheduled for launch on November 22, 2013 aboard a Falcon 9 launch vehicle from Cape Canaveral, Florida.² Accordingly, Lockheed Martin would likely need to begin test transmissions in preparation for the launch on or about November 19, 2013.³

Lockheed Martin specifically seeks authority to transmit telecommand signals on the 13.996 GHz frequency for in transit communications, and to receive telemetry signals from the satellite on the 11.1985 GHz and 12.2485 GHz frequencies. Additional technical parameters for the STA operation are set forth in the chart on page 3 of this narrative. Lockheed Martin is requesting the duration of this STA to be a total of thirty (30) days from November 19, 2013, 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 for SES-8 within ten (10) days after the 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, e.i.r.p., e.i.r.p. density, and bandwidth prescribed in the pending license application for the telecommand carriers. When no commands are being sent, a CW carrier that is within the emission envelope proposed in Lockheed Martin’s application, as amended, would be present. *See* File No. SES-AMD-20081219-01664, at Schedule B. The 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 SES-8 launch will be on a strictly non-harmful interference, non-protected basis.

¹ The pending application in File No. SES-LIC-20081103-01443, under Call Sign E7541, was filed on a provisional basis to replace Lockheed Martin’s license for a 14.2 meter Ku-band antenna at the Carpentersville, NJ site under Call Sign E920702, for which it inadvertently did not file a timely renewal application. 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, e.g.*, Peter B. de Selding, “SES-8 Satellite Arrives at Cape for Falcon 9 Launch,” Space News, October 8, 2013. The in-orbit testing location will be 81.5° E.L.

³ The test transmissions that would begin on or about November 19th 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.

Lockheed Martin believes that the limited operations it proposes in support of the launch of the SES-8 satellite are required in the public interest. Operations will be coordinated in advance with any and all potentially affected entities that operate communications systems in compliance with the Table of Frequency Allocations during the limited period of use.⁴ SES-8 will be co-located with NSS-6 to provide additional capacity over the Asia-Pacific region, with high performance beams supporting rapidly growing markets in South Asia and Indo-China, as well as providing expansion capacity for direct-to-home, very small aperture terminals and government applications. Lockheed Martin's Carpentersville earth station will be part of a global network of control facilities that will be used to position the satellite as it progresses from transfer orbit to its final location. The safe and orderly use of the entire geostationary 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 SES-8 satellite is controlled while over North America; Lockheed Martin's earth station thus will serve a vital function. Another U.S.-licensed earth station has recently been authorized on a similar STA basis for TT&C LEOp in connection with the planned SES-8 launch. *See* Intelsat License LLC, File No. SES-STA-20130910-00790, Call Sign KA258 (granted Sept. 20, 2013).

Lockheed Martin designates Michael Usarzewicz to be the contact person that will be available whenever transmission to, or reception from, SES-8 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.

The antenna to be used for this STA is already built. It is the same antenna that was authorized under Call Sign E920270 and that is now the subject of the pending reinstatement request described in Note 1 above, and has been used on an STA-basis to support other satellite launches. *See, e.g.*, 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); 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); Request of Lockheed Martin Corp. for STA to operate Carpentersville, NJ earth station in support of launch of SES-4, File No. SES-STA-20111209-01447 (granted Dec. 14, 2011). 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.

In sum, Lockheed Martin requests authority to operate its Carpentersville, NJ Ku-band earth station antenna to provide critical TT&C services during the launch and early operations phase of the SES-8 satellite, for a term of 30 days commencing November 19, 2013.

⁴ Orbital Sciences Corporation, the manager of the SES-8 LEOp mission, will handle the coordination.

