

Lockheed Martin Corporation
Carpentersville, New Jersey Earth Station STA
January 2013
Attachment

Description

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) to provide telemetry, tracking and control (“TT&C”) functions during the post-launch and transfer orbit phases of operation for the Amazonas 3 satellite.¹ Amazonas 3, a Brazilian-licensed satellite destined for the 61° W.L. orbital location, is currently scheduled for launch on February 7, 2013, and Lockheed Martin would need to begin test transmissions in preparation for the launch approximately on or about February 5, 2013.²

Lockheed Martin specifically seeks authority to transmit telecommand signals on the 14.0015 GHz and 14.4940 GHz frequencies and to receive telemetry signals from the satellite on the 11.70025 GHz and 12.1995 GHz frequencies. Lockheed Martin is requesting the duration of this STA to be 30 days from February 5, 2013, in the event of any slippage in the anticipated dates of the various phases of operation; it also expects that all Carpentersville operations in support of the launch will be completed for Amazonas 3 within 10 days after the satellite is launched.

Both of the transmit frequencies Lockheed Martin seeks to use for the Amazonas 3 TT&C LEOp support operations are included in Lockheed Martin’s former license for Call Sign E920702 and current application for the Ku-band antenna in File No. SES-LIC-20081130-01443 (under Call Sign E7541). Lockheed Martin’s proposed transmissions on both transmit frequencies will use the emission designators for telecommand that are proposed in the pending license application, or will use carriers that do not exceed the highest e.i.r.p., e.i.r.p. density, and bandwidth prescribed in the 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.

Both of the frequencies on which satellite telemetry transmissions from Amazonas 3 will be received under the STA requested here are also included as receive frequencies in Lockheed

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 inadvertently non-renewed license for a 14.2 meter Ku-band antenna at the Carpentersville, NJ site under Call Sign E920702. 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, are pending.

² The test transmissions that would begin on or about February 5 would occur over a period of approximately two 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.

Martin's Ku-band authorization under Call Sign E920702 and application under Call Sign E7541. Both frequencies are also as proposed in Hispamar Satelites, S.A.'s pending petition for a declaratory ruling to add the Amazonas 3 satellite to the Commission's Permitted Space Station List. *See* Application of Hispamar Satelites, S.A., File No. SAT-PPL-20121018-00183. Hispamar Satelites, S.A.'s petition has been accepted for filing. In the Ku-band, the Amazonas 3 satellite is a replacement for Amazonas 1, which is on the Commission's Permitted Space Station List. All of Lockheed Martin's proposed TT&C operations in support of the Amazonas 3 launch will be on a strictly non-harmful interference, non-protected basis.

Lockheed Martin believes that the limited operations it proposed in support of the launch of Amazonas 3 satellite – operations Lockheed Martin and the satellite operator will coordinate 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 – are required in the public interest. Lockheed Martin's 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 from the U.S. and other countries that operate there depends in no small part on ensuring that the Amazonas 3 satellite is controlled while over North America, and Lockheed Martin's earth station thus will serve a limited-duration, but nonetheless vital function.

Lockheed Martin designates Michael Usarzewicz to be the contact person that will be available whenever transmission to, or reception from, Amazonas 3 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 previously authorized under Call Sign E920270 and that is now the subject of the pending application and 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 JCSAT-12, File No. SES-STA-20090615-00734. 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 Amazonas 3 satellite, for a term of 30 days commencing February 5, 2013.