

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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| In the Matter of |) | |
| ECHOSTAR CORPORATION |) | File No. SES-STA-_____ - _____ |
| |) | Call Sign E070015 |
| |) | |
| Application for Special Temporary Authority |) | File No. SES-STA-_____ - _____ |
| To Operate Two Ku-band Transmit/Receive |) | Call Sign E980127 |
| Earth Stations with EchoStar 8 at 77.0° W.L. |) | |
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APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

By this Application, and pursuant to Section 25.120(b)(3),¹ EchoStar Corporation (“EchoStar”) requests special temporary authority (“STA”) for 60 days to operate two “ALSAT” Fixed-Satellite Service (“FSS”) transmit/receive earth stations (Call Signs E070015 and E980127) to transmit command instruction to the EchoStar 8 satellite at 77.0° W.L. using the 14003 MHz frequency. EchoStar will file for a permanent modification of the earth station licenses hereafter.

I. BACKGROUND

As EchoStar has previously reported to the Commission, the EchoStar 8 satellite, which is currently operating under Mexican authority at the 77.0° W.L. orbital location, experienced a single event upset (“SEU”) in January 2011.² Since that time, EchoStar has conducted testing to

¹ 47 C.F.R. § 25.120(b)(3).

² See Letter from Petra A. Vorwig, Counsel for EchoStar Corporation, to Marlene H. Dortch, Secretary, FCC, *filed in* File No. SAT-T/C-20090217-00026 (Feb. 1, 2011).

determine whether and how the satellite was affected by the SEU.³ EchoStar has determined that the SEU did not have a major impact on the health or the longevity of the satellite, and it has not impaired the functionality of the payload. But the SEU did result in the partial disabling of the satellite's remaining 17 GHz receiver. While that receiver is capable of providing ranging functions, it is not capable of receiving command instructions, which therefore have to be conveyed over the 14003 MHz frequency. EchoStar is providing these instructions over two FSS transmit/receive earth stations located in Cheyenne, Wyoming, and Gilbert, Arizona, respectively.⁴ These earth stations are ALSAT stations and are operating within their licensed parameters.

For the reasons set forth herein, grant of this Application will not cause harmful interference to any authorized user of the spectrum and will serve the public interest.

II. GRANT OF THIS APPLICATION IS IN THE PUBLIC INTEREST

The STA requested in this application is in the public interest. In short, grant of this STA will ensure the continued safe operation of EchoStar 8 at the 77.0° W.L. orbital location while it continues to provide U.S. consumers direct-to-home satellite television service, including local-into-local program in certain markets.

Grant of this application also will not cause harmful interference. EchoStar has surveyed the satellites operating near EchoStar 8 at 77° W.L. and identified the Simón Bolívar satellite, operated by VeneSat and located at 78.0° W.L., as the nearest Ku-band satellite. EchoStar's Ku-

³ EchoStar will file shortly an interim report of these test results.

⁴ EchoStar understands that its partner, QuetzSat, S. de R.L. de C.V. ("QuetzSat"), has communicated with the Mexican administration and confirmed that the administration does not object to the temporary use of EchoStar 8's Ku-band command carrier at the 77° W.L. orbital location.

band operations will not cause harmful interference to Simón Bolívar because its Ku-band service is directed towards South America. Specifically, Simón Bolívar's Ku-band beam covers Cuba and South America and does not cover the United States. Consequently, the VeneSat satellite receive antenna gain contours roll-off over the United States resulting in decreasing receive gain. As a result, the satellite's receive antenna gain will be sufficiently reduced at EchoStar's earth station locations in Cheyenne, Wyoming, and Gilbert, Arizona, to ensure the earth stations do not cause harmful interference to the satellite. Furthermore, the technical characteristics of EchoStar's telemetry, tracking and control ("TT&C") antennas further reduce the potential interference into VeneSat's satellite. Specifically, EchoStar 8's command carrier transmissions will be performed from 9 meter TT&C antennas with a ground transmit antenna gain isolation of at least 32.5dB towards the VeneSat satellite.

The combined isolation of the Simón Bolívar receive contours, the satellites' spatial separation of one degree and the technical characteristics of EchoStar's antenna will result in an isolation or C/I level of at least -57 dB. Therefore, the EchoStar 8 command carrier operation over the 14 G will not interfere with Simón Bolívar's operations.

The next closest Ku-band satellites are Horizons 2, located at 74.0° W.L., and AMC 2 at 78.9° W.L. EchoStar's earth stations are operating according to the Commission's two-degree spacing requirements, and therefore will not cause harmful interference into either satellite. Furthermore, EchoStar is able to change the command carrier's polarization to further protect against interference.

Moreover, EchoStar will operate the earth stations to conduct TT&C operations while EchoStar 8 is operating at 77.0° W.L. in accordance with the following conditions:

1. Operations shall be on a non-harmful interference basis, meaning that EchoStar shall not cause interference to, and shall not claim protection from, interference

caused to it by any other lawfully operating satellites operating within the parameters of applicable international coordination agreements.

2. In the event that any harmful interference is caused while the satellite is operating at 77.0° W.L., EchoStar shall cease operations immediately upon notification of such interference and shall inform the Commission immediately, in writing, of such event.

III. WAIVER PURSUANT TO SECTION 304 OF THE ACT

In accordance with Section 304 of the Communications Act of 1934, as amended, 47 U.S.C. § 304, EchoStar hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise.

IV. CONCLUSION

For the foregoing reasons, EchoStar respectfully requests the grant of its application for an STA for 60 days to operate two ALSAT FSS transmit/receive earth stations (Call Signs E070015 and E980127) to provide only TT&C for the EchoStar 8 satellite at 77.0° W.L.

Respectfully submitted,

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