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

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| In the Matter of | ) | |
| | ) | |
| Spectrum Five LLC | ) | File No. SAT-AMD-2012_____ |
| | ) | |
| Application to Amend 103.15° W.L. 17/24 GHz Broadcasting Satellite Service Application | ) | Call Sign: S2778 |
| | ) | |

**AMENDMENT**

Spectrum Five LLC ("Spectrum Five") files this amendment to provide the predicted transmitting antenna off-axis gain information for Spectrum Five's proposed 103.15° W.L. 17/24 GHz Broadcasting Satellite Service ("BSS") satellite (Call Sign S2778).[1] Pursuant to recently released rules, 17/24 GHz BSS space station applicants are required to file an amendment to supplement the pending application with all required information.[2] This application has been filed electronically as an attachment to FCC Form 312.[3] The remaining technical information in

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1 *Policy Branch Information Satellite Space Applications Accepted for Filing*, Report No. SAT-00641, File No. SAT-LOI-20081119-00217 (Oct. 23, 2009).

2 47 C.F.R. § 25.264(a). *See also International Bureau Announces Effective Date for New Information Requirements in the 17/24 GHz Broadcasting-Satellite Service and Establishes Filing Deadline for Pending Applications and Current Authorizations*, Report No. SPB-239, DA 12-71 (Jan. 20, 2012) (Public Notice) (requiring each applicant with a pending 17/24 GHz BSS application to file a conforming amendment to its pending application no later than March 15, 2012).

3 Spectrum Five appreciates the Commission's recognition that any defects in this early filing will not be grounds for dismissal. *Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band*, Second Report and Order, 26 FCC Rcd 8927, 8957, n.184 (2011) ("If off-axis antenna gain data and associated information is filed prior to the effective date of these rules, defects in the off-axis antenna gain data will not be ground for dismissal").

Spectrum Five's pending application is unchanged and is incorporated by reference.[4]

New Section 25.264(a) requires the submission of predicted transmitting antenna off-axis antenna gain information:

> (1) In the X-Z plane, i.e., the plane of the geostationary orbit, over a range of 30 Degrees from the positive and negative X-axes in increments of 5 degrees or less.
>
> (2) In planes rotated from the X-Z plane about the Z-axis, over a range of up to 60 degrees relative to the equatorial plane, in increments of 10 degrees or less.
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> (3) In both polarizations.
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> (4) At a minimum of three measurement frequencies determined with respect to the entire portion of the 17.3-17.8 GHz frequency band over which the space station is designed to transmit: 5 MHz above the lower edge of the band; at the band center frequency; and 5 MHz below the upper edge of the band.
>
> (5) Over a greater angular measurement range, if necessary, to account for any planned spacecraft orientation bias or change in operating orientation relative to the reference coordinate system. The applicant must also explain its reasons for doing so.

Spectrum Five submits the requested antenna data predictions for its space station in the attached technical materials.[5] The required information is produced for a CONUS beam. Consistent with the new rule, the predictions for the CONUS beam were made in both polarizations (*i.e.,* RHCP and LHCP) at three measurement frequencies in the 17.3-17.8 GHz

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4 *See supra* note 1.

5 Because Spectrum Five does not plan for any spacecraft orientation bias or change in operating orientation relative to the reference coordination system, it does not provide predictions over a greater angular measurement range as specified in Section 25.264(a)(5). *See* 47 C.F.R. § 25.264(a). Similarly, because the power flux density of Spectrum Five's proposed space station will not exceed the coordination trigger of -117 dB W/m2/100 kHz at the location of any prior-filed U.S. DBS space station, Spectrum Five has not provided the calculation otherwise required in Section 25.264(b). *See* 47 C.F.R. § 25.264(b).

frequency band over which its proposed space station is designed to transmit. The data is calculated over a range of +/- 30 degrees from the X axis in the X-Z plane, and over a range of +/- 60 degrees in planes rotated about the Z axis. In addition, consistent with Sections 25.114(d)(18) and 25.264(h)(2) of the Commission's rules,[6] Spectrum Five will maintain the maximum orbital eccentricity to less than $3.1 \times 10^{-4}$.

For the foregoing reasons, Spectrum Five requests prompt grant of its pending Petition pursuant to its original application and this amendment.

Respectfully submitted,

Spectrum Five LLC

By: */s/ David Wilson*
David Wilson
President
SPECTRUM FIVE LLC

March 14, 2012

[6] 47 C.F.R. §§ 25.114(d)(18) and 25.264(h)(2).

## ENGINEERING CERTIFICATION

The undersigned hereby certifies to the Federal Communications Commission as follows:

(i) I am the technically qualified person responsible for the engineering information contained in the foregoing Application,

(ii) I am familiar with Part 25 of the Commission's rules, and

(iii) I have either prepared or reviewed the engineering information contained in the foregoing Application, and it is complete and accurate to the best of my knowledge and belief.

Signed:

*/s/ Thomas E. Sharon*

Dr. Thomas E. Sharon, COO

March 14, 2012

## FCC Form 312, Response to Question 36: Cancelled Authorizations

Spectrum Five LLC ("Spectrum Five") has never had an FCC license "revoked." However, Spectrum Five filed a petition[1] seeking a declaratory ruling to extend or waive the interim construction milestone associated with the 114.5° W.L. authorization.[2] The International Bureau ("Bureau") has denied this petition and cancelled Spectrum Five's authorization for the 114.5° W.L. orbital location.[3] Spectrum Five has a pending petition for reconsideration of this decision, asking the Bureau to reconsider its decision and reinstate Spectrum Five's market access authorization for the 114.5° W.L. orbital location.[4] Notwithstanding the fact that the Bureau's action does not seem to be the kind of revocation action contemplated by Question 36, Spectrum Five is herein making note of the decision in the interest of absolute candor and out of an abundance of caution. In any event, the Bureau's action does not reflect on Spectrum Five's basic qualifications, which are well-established and a matter of public record.

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1 Spectrum Five LLC, Petition for Declaratory Ruling To Modify Its Authorization to Serve the U.S. Market Using BSS Spectrum from the 114.5° W.L. Orbital Location, IBFS File No. SAT-MOD-20101126-00245 (filed Nov. 26, 2010).

2 *Spectrum Five LLC, Petition for Declaratory Ruling to Serve the U.S. Market Using Broadcast Satellite Spectrum from the 114.5º W.L. Orbital Location*, Order and Authorization, 21 FCC Rcd 14023 (2006).

3 *In the Matter of Spectrum Five LLC Petition for Declaratory Ruling to Extend or Waive Construction Milestone*, Memorandum Opinion and Order, DA 11-1252 (Int'l Bur., Jul. 26, 2011).

4 Petition for Reconsideration, File Nos. SAT-MOD-20101126-00245 and SAT-MOD-20101126-00269 (filed Aug. 25, 2011).