



Federal Communications Commission  
Washington, DC 20554

International Bureau

March 9, 2012

Todd M. Stansbury, Esq.  
Wiley Rein LLP  
1776 K Street, N.W.  
Washington, DC 20006

Re: Spectrum Five LLC, (Call Sign: S2777)  
IBFS File No. SAT-AMD-20111223-00247

Dear Mr. Stansbury:

On December 23, 2011, Spectrum Five LLC (Spectrum Five) filed an amendment to its pending petition for declaratory ruling seeking U.S market access for a Netherlands-licensed 17/24 GHz Broadcasting-Satellite Service (BSS) space station, Call Sign: S2777. The amendment seeks to conform Spectrum Five's pending application to the technical rules and information requirements adopted by the Commission in the *17/24 GHz BSS Second Report and Order* to mitigate space path interference from 17/24 GHz BSS space-to-Earth transmitting antennas into Direct Broadcast Satellite Service Earth-to-space receiving antennas operating in the same band.<sup>1</sup> Pursuant to Section 25.111(a) of the Commission's rules,<sup>2</sup> we request that Spectrum Five provide, by amendment, additional information to facilitate the processing of its petition.

Section 25.264(a)(4) of the Commission's rules requires filers to provide the predicted antenna off-axis gain information 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: five megahertz above the lower edge of the band; at the band center frequency; and five megahertz below the upper edge of the band.<sup>3</sup> In its amendment, Spectrum Five provides predicted antenna off-axis gain information at three frequencies: 17.3 GHz, 17.5 GHz and 17.7 GHz. Spectrum Five states that "the attached technical materials note frequencies

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<sup>1</sup> The 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*, IB Docket No. 06-123, FCC 11-93, 26 FCC Rcd 8927 (2011). While most of the rules adopted in this order became effective 30 days after publication in the Federal Register, the new information requirements will not become effective until March 15, 2011. 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, *Public Notice*, DA 12-71 (Rel. Jan. 2012).

<sup>2</sup> 47 C.F.R. § 25.111(a).

<sup>3</sup> 47 C.F.R. § 25.264(a)(4).

17.3 GHz, 17.5 GHz, and 17.7 GHz that have been rounded down.”<sup>4</sup> Spectrum Five does not explain, however, how it determined these measurement frequencies, nor what the term “rounded down” refers to. For example, if the entire spacecraft transmit band is taken to be 17.312 – 17.68792 GHz (excluding the beacon at 17.309 GHz),<sup>5</sup> the measurement frequencies should be: 17.317 GHz; 17.49996 GHz and 17.68292 GHz. Even if one assumes the entire 17.3 – 17.7 GHz band as the transmitting band, the measurement frequencies should be: 17.305 GHz, 17.5 GHz, and 17.695 GHz. We ask that Spectrum Five please clarify the three frequencies used for measurement, clarify how it determined the frequencies, and explain how the measurement frequencies conform to the requirement in Section 25.264(a)(4) of the Commission’s rules.

Section 25.114(d)(17)<sup>6</sup> of our rules requires 17/24 GHz BSS applicants seeking to operate at an offset location no greater than one degree from an Appendix F location pursuant to the provisions of Section 25.262(b) to submit a written request to that effect as part of the narrative portion of its application. An applicant seeking to operate pursuant to the provisions of Section 25.262(b) must include this written request in its application even if it chooses to operate with less than the full power flux density levels permitted under the rule. Alternatively, an offset applicant may seek to operate in accordance with other portions of Section 25.262, including, for example, paragraphs (d) and (e).<sup>7</sup> In its amendment, Spectrum Five proposes to change the orbital location from 118.8° W.L. to 119.25° W.L.<sup>8</sup> Both locations are offset from the 119° W.L. Appendix F orbital location.<sup>9</sup> The proposed offset of 0.25° is slightly greater than, and in a different direction from, the offset proposed initially. Spectrum Fives states, however, that the shift in orbital location does not change the technical information provided in its petition for declaratory ruling (SAT-LOI-20081113-00216).<sup>10</sup> Spectrum Five also notes that although it is eligible to operate the proposed satellite at 119.25° W.L. at full power, “to facilitate prompt grant, Spectrum Five seeks authority to operate at 119.25° W.L. within the same technical parameters previously submitted.”<sup>11</sup> We request Spectrum Five to clarify whether its application is for full power status at the amended orbital location under Section 25.262 of the Commission’s rules. Please also note that that the response to this question could require Spectrum Five to

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<sup>4</sup>SAT-AMD-20111223-00247, Narrative at 4, n.9.

<sup>5</sup> SAT-LOI-20081113-00216, Narrative at 5-6.

<sup>6</sup> 47 C.F.R. §§ 25.114(d)(17) and 25.262(b).

<sup>7</sup> 47 C.F.R. § 25.262(d)-(e).

<sup>8</sup> SAT-AMD-20111223-00247, Narrative at 1.

<sup>9</sup> In this service, the Commission adopted a framework in which 17/24 GHz BSS space stations would operate at orbital locations spaced at 4.0° intervals, as set forth in Appendix F of the *Order and FNPRM* (known as Appendix F locations). The 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, *Report and Order and Further Notice of Proposed Rulemaking*, IB Docket No. 06-123, 22 FCC Rcd 8842 (2007) at Appendix F.

<sup>10</sup> SAT-AMD-20111223-00247, Narrative at 1.

<sup>11</sup> SAT-AMD-20111223-00247, Narrative at 2-3, n 7.

further amend its technical showing, particularly with regard to the interference analysis required by Section 25.114(d)(7) of our rules<sup>12</sup> and possibly with regard to the link budget and power flux density calculations required by Sections 25.114(d)(4)-(5) of our rules.<sup>13</sup>

We request that Spectrum Five respond to the first item addressed in this letter (*i.e.*, the predicted antenna offset gain frequencies) by March 15, 2012. We further request that Spectrum Five respond to the question of status sought under Section 25.262 of the Commission's rules within 30 days from the date of this letter. Please provide Mark Young of my staff ([Mark.Young@fcc.gov](mailto:Mark.Young@fcc.gov)) with copies of both responses. Failure to timely respond may result in dismissal of the petition, pursuant to Sections 25.112(c) and 25.152(b) of the Commission's rules.<sup>14</sup>

Sincerely,



Robert G. Nelson  
Chief, Satellite Division  
International Bureau

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<sup>12</sup> 47 C.F.R. § 25.114(d)(7).

<sup>13</sup> 47 C.F.R. § 25.114(d)(4)-(5).

<sup>14</sup> 47 C.F.R. § 25.112(c) and 25.152(b).