

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

In the Matter of	)	
	)	
ECHOSTAR SATELLITE OPERATING CORPORATION	)	File No. SAT-STA-20140113-00004
	)	Call Sign S2232
	)	
Request for Renewal of Special Temporary Authorization to Move EchoStar 6 to, and Operate It at, 96.2° W.L.	)	

To: Chief, International Bureau

**OPPOSITION OF SPECTRUM FIVE LLC**

Spectrum Five LLC (“Spectrum Five”), pursuant to Section 25.154 of the Commission’s Rules, hereby opposes the above-captioned request for special temporary authority (“STA”) filed by EchoStar Satellite Operating Corporation (“EchoStar”) for a renewal of an STA originally filed in February 2013 for the ostensible purpose of providing Direct Broadcasting Satellite (“DBS”) service at the unassigned 96.2° W.L. orbital location from the EchoStar 6 satellite (which is now known to be in a highly inclined orbit).<sup>1</sup> In this Opposition, Spectrum Five provides three compelling reasons

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<sup>1</sup> The original EchoStar 6 STA for 96.2° W.L., File No. SAT-STA-20130220-00023 (“EchoStar STA Request”) was granted by the International Bureau in April 2013 (28 FCC Rcd 4229), and affirmed by the Commission in July 2013 (28 FCC Rcd 10412). The Commission’s affirmance is currently on appeal to the United States Court of Appeals for the D.C. Circuit in Case Nos. 13-1231 and 13-1232. In addition to the above-captioned STA request, four prior requests to extend/renew the EchoStar STA Request, along with associated earth station STA requests, remain pending before the Commission. See File Nos. SAT-STA-20130510-00067; SAT-STA-20130716-00093; SAT-STA-20130912-00115; SAT-STA-20131113-00131; and associated earth station STA requests. EchoStar’s request for a permanent modification of the EchoStar 6 license to operate at 96.2° W.L. (File No. SAT-MOD-20130227-00026, as twice amended) has also been opposed by Spectrum Five and remains pending.

why the Commission should deny the January 2014 STA Request and dismiss all of the pending STA extension/renewal requests as moot.<sup>2</sup>

First, EchoStar has violated one of the three specific conditions on which the EchoStar STA Request was granted in April 2013. In its grant, the Bureau ordered that operations by EchoStar under the STA must meet the following condition: “While at the 96.2° W.L. orbital location, ESOC must maintain the EchoStar 6 spacecraft with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees.”<sup>3</sup> EchoStar has claimed in multiple filings with the Commission regarding the longest-pending STA renewal/extension request (File No. SAT-STA-20130510-00067) that the EchoStar 6 satellite arrived at the 96.2° W.L. orbital location in April 2013, and that since April 25, 2013, EchoStar 6 has been completely within +/- 0.05 degrees of 96.2° W.L.<sup>4</sup> EchoStar made these claims while attempting to dismiss or discredit NORAD data supplied by Spectrum Five which showed that the EchoStar 6 satellite was clearly not station kept to within 0.05 degrees of 96.2° W.L. during or after April 2013, and continuing on through the summer and into the fall.<sup>5</sup>

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<sup>2</sup> For completeness, Spectrum Five is including a copy of this Opposition into the files of all of the pending STA requests for EchoStar 6 other than the initial STA request. The material presented here is pertinent to each of those requests, and confirms that no extension or renewal of the original EchoStar STA should be granted.

<sup>3</sup> *EchoStar Satellite Operating Corporation*, 28 FCC Rcd 4229, ¶ 20 (Int’l Bur. 2013) (“EchoStar STA Grant”).

<sup>4</sup> *See, e.g.*, Letter dated July 15, 2013, in File No. SAT-STA-20130510-00067, from P. Pham, Counsel for EchoStar, to M. Dortch, Secretary, FCC, at 3 and Attachment 2 (EchoStar Spacecraft Engineering Manager declares under penalty of perjury that “[f]rom April 25 to the present, the satellite has remained fully within a 0.05° station-keeping box at all times.”). *See also* Letter dated August 26, 2013, in File No. SAT-STA-20130510-00067, from B. Tramont, Counsel for EchoStar, to M. Dortch, Secretary, FCC, at 2.

<sup>5</sup> *Id.* at 3 n.9 (EchoStar asserts that Spectrum Five “misunderstands and distorts normal satellite movement and operations”).

It turns out that the NORAD data provided by Spectrum Five, which showed that EchoStar 6 was not within its station-keeping box during the first STA term and well thereafter, had things right.<sup>6</sup> In a letter EchoStar submitted quietly just after New Year's Day, EchoStar states pursuant to Section 1.65 of the Commission's Rules that EchoStar 6 was not kept in a station-keeping box of +/- 0.05° around 96.2° W.L. after all. Instead, EchoStar now says that due to an incorrect calibration parameter, rather than being at 96.2° W.L. as it had so vehemently asserted months earlier, "EchoStar 6's actual orbital location was 0.035° to 0.040° further east."<sup>7</sup> To make matters worse, EchoStar does not attempt to excuse its error or seek any kind of exemption from the station-keeping condition of the EchoStar STA Grant. Instead, it avoids any such acknowledgement and asserts that from April 13 to December 20, 2013, EchoStar 6 has "remained within the

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<sup>6</sup> NORAD data, in the form of two-line elements, is collected at random points in time. This data is accurate to show where the subject space object (EchoStar 6 in this case) was at the time the measurement was taken, but does not necessarily portray the maximum extent of the object's excursion either in the east-west or north-south directions. For purposes of this proceeding, the NORAD data supplied by Spectrum Five last year (in both the May STA proceeding and in the proceeding over EchoStar's request for permanent modification of its EchoStar 6 license) confirm that the satellite was outside of the +/- 0.05° station-keeping limit on a regular basis from April through September 2013. *See, e.g.*, Letter dated July 8, 2013, from T. Stansbury, Counsel for Spectrum Five, to M. Dortch, FCC, at Attachment (providing and analyzing NORAD data for the period from April 1, 2013 to July 5, 2013 in File No. SAT-STA-20130510-00067); Spectrum Five Supplemental Petition to Deny, File No. SAT-MOD-20130227-00026, as amended, at 16-17 & n.33, Attachment C (filed November 25, 2013) (providing NORAD data for the period from July to November 2013) ("Spectrum Five Supplemental Petition").

<sup>7</sup> *See* Letter (redacted version) dated January 3, 2014, from J. Manner, EchoStar, to M. Dortch, Secretary, FCC ("Manner Letter"). The Manner Letter was submitted into each of the then-pending satellite STA request files, along with the files of the modification application and the two amendments thereto. This Opposition does not rely upon or utilize in any way material EchoStar submitted to the Commission under request for confidential treatment, so there is no need for redaction or confidential treatment of this Opposition.

0.05° station-keeping box required by the STA for substantially greater than the majority of the time on a daily basis.”<sup>8</sup>

EchoStar’s statement acknowledges a *prima facie* violation of the EchoStar STA Grant. The condition for grant was maintenance of the EchoStar 6 satellite within 0.05° W.L. of the 96.2° W.L. orbital location. EchoStar’s statement that it did so only some of the time on a daily basis is not good enough, and the clever words it used to disguise its failure to meet the condition are tantamount to a misrepresentation to the Commission. Because the condition of the STA was not met for the original STA, it was also unmet for the June-July STA request in File No. SAT-STA-20130510-00067, for the August-September STA request in File No. SAT-STA-20130716-00093, for the October-November STA request in File No. SAT-STA-20130912-00115, and for at least part of the December 2013-to January STA in File No. SAT-STA-20131113-00131. As those requests seek to extend an STA grant containing an express condition that EchoStar failed to meet or even request be waived or excused, all of the pending STA extension/renewal requests through December must now be denied. The above-captioned STA extension/renewal request for February to March operations must consequentially be dismissed as moot, as there is nothing to renew or extend. EchoStar cannot expect to come into the Commission after eight months of operation in violation of the station-keeping condition, report non-compliance in a manner that seems calculated to suggest compliance, and expect to be rewarded for such actions with the grant of the pending STA requests – especially when the above-captioned new request fails even to acknowledge the past transgression.

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<sup>8</sup> Manner Letter at 2.

The second reason why the above-captioned STA request must be denied is because EchoStar continues to misrepresent the extent to which the EchoStar 6 satellite is being used near 96.2° W.L. for the fixed-satellite and mobile-satellite services authorized in the EchoStar STA grant. In fact, since the EchoStar 6 satellite arrived in the vicinity of 96.2° W.L. in April 2013, there has been no indication that the satellite's communications payload has been activated or operated for the provision of communications services at all. The only transmissions to the satellite have been telecommand links, and the only transmissions from the satellite have been telemetry links. Nevertheless, in the above-captioned STA request, as in all of the extension/renewal requests dating back to May 2013, EchoStar represents that the satellite "is in operation" at 96.2° W.L.<sup>9</sup>

In its petition to deny EchoStar's May 2013 STA extension/renewal request, Spectrum Five provided independently-taken monitoring data that confirmed that no operation of the EchoStar 6 satellite's communications payload was taking place following the relocation to near 96.2° W.L.<sup>10</sup> There is nothing to indicate that this situation has changed at all in the last eight months.<sup>11</sup> Spectrum Five arranged for monitoring of transmissions from EchoStar 6 to occur again on February 10, 2014; the

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<sup>9</sup> STA Request at 2. As explained above, due to the calibration error reported in the Manner Letter, even the telecommand and telemetry operations were not taking place "at 96.2° W.L." until just over a month ago, so the "in operation" claim in all of the prior pending STA requests simply was untrue for these functions as well.

<sup>10</sup> Spectrum Five Petition to Deny STA Request in File No. SAT-STA-20130510-00067, et al., at 3-4 and Attachment (filed May 22, 2013).

<sup>11</sup> Indeed, close examination of the language in the latest STA request reveals that all statements of service via EchoStar 6 are in forward-looking language. *See* STA Request at 3 ("[s]ignificant opportunity exists for EchoStar 6 to offer new multi-channel video services . . ." and "[a]dditional EchoStar 6 services also may include direct-to-home services . . .").

result is that no communications activity was taking place on any of EchoStar 6's transponders.

EchoStar's failure to provide *any* service via the EchoStar 6 satellite relocated pursuant to the EchoStar STA Grant precludes, as Spectrum Five argued before, any contention on EchoStar's part that the public interest would be seriously prejudiced (or indeed, negatively impacted in any way whatsoever) by a denial of the STA request.<sup>12</sup> There has never been a reason to extend the initial STA, and no reason exists now. Because the "operation" promised by EchoStar appears never to have occurred, the STA extension/renewal requests, must be denied.

Third, and perhaps a point that explains the failure of EchoStar to operate the communications payload on EchoStar 6, is the fact that the extent of satellite's north-south inclination prevents any non-tracking earth station from receiving a constant signal from EchoStar 6. It had become apparent in other related proceedings (e.g., the modification of license proceeding for permanent relocation of EchoStar 6 to 96.2° W.L.) that EchoStar suspended north-south station keeping for EchoStar 6 at +/- 0.05° in December 2011, and has not resumed it since.<sup>13</sup> With the standard rate of progression for satellites not station kept in the north-south direction (i.e., 0.85° per year),<sup>14</sup> the extent of north-south excursion on EchoStar 6 is now at approximately +/- 1.8°. EchoStar, in a

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<sup>12</sup> *Id.* at 3.

<sup>13</sup> See, e.g., EchoStar Motion to Strike Supplement to Petition to Deny in File No. SAT-AMD-20130613-00083, at 2-3 (filed December 9, 2013) (EchoStar stated that it ceased north-south station-keeping for EchoStar 6 in December 2011, and decided in the summer of 2012 that such station-keeping operations would remain suspended indefinitely).

<sup>14</sup> Satellite Systems: Principles and Technologies, B. Pattan, at 36 (1993).

letter filed February 7, 2014 in the EchoStar 6 modification of license proceeding, finally acknowledged these facts.<sup>15</sup>

The Commission has recognized before that DBS satellites do not operate with high inclination levels (characterized as excursion in the north-south direction of greater than 0.075°) “in order to avoid the need for satellite-tracking earth stations.”<sup>16</sup> It noted as well that consumer antennas (such as those that would be used with a DBS satellite) are not capable of tracking satellites.<sup>17</sup> EchoStar 6 is already in high inclination where non-tracking antennas cannot receive service from the satellite.<sup>18</sup> The satellite is incapable of providing the types of service outlined in the STA extension/renewal requests, and thus grant of any of the pending EchoStar STA requests, including the above-captioned STA extension/renewal request, is both unnecessary and unjustifiable.

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<sup>15</sup> See Letter dated February 7, 2014, in File No. SAT-MOD-20130227-00026, *et seq.*, from J. Manner, EchoStar, to M. Dortch, FCC.

<sup>16</sup> *The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band (Second Report and Order)*, 26 FCC Rcd 8927, 8945 & n.117 (2011).

<sup>17</sup> *Id.* at 8945 n.117 (referencing the 17/24 GHz BSS, but equally applicable to the DBS).

<sup>18</sup> Even at the +/- 1.16° north-south excursion level in the Schedule S section of EchoStar’s modification of license application for EchoStar 6, as amended, the pointing error would preclude use of non-tracking earth stations. In this regard, there is an inconsistency between the extent of the inclination reported in the modification proceeding and the link budget included in EchoStar’s modification application. The link margin shown in the modification application indicates a routing ground-terminal pointing error of 0.5° (based on the link budget entry showing antenna mis-pointing error of 0.30 dB) dB on the ground terminal pointing. See EchoStar Modification of License Application, File No. SAT-AMD-20130613-00083, at EchoStar 6 DBS Link Budget (QPSK Medium Power Mode). This is clearly not possible with a satellite at an inclination of over 1°. EchoStar knew or, as an experienced satellite operator, should have known at the time of filing that no direct-to-home or DBS services of any kind were going to be able to be offered over the highly-inclined EchoStar 6 satellite from its proposed 96.2° W.L. location. Moreover, as Spectrum Five has pointed out with respect to the modification application, and as EchoStar has finally acknowledged with its February 7 letter (ostensibly pursuant to Section 25.280 of the Commission’s Rules), the excursion level for EchoStar 6 is not static as the application suggests, but instead is progressively increasing. See Spectrum Five Supplemental Petition, at 16.

## **Conclusion**

On the basis of the foregoing discussion, it is clear that the Commission must deny all of EchoStar's pending requests for extension/renewal of the April 2013 STA grant authorizing the temporary relocation of EchoStar 6 to the 96.2° W.L. orbital location. EchoStar 6 failed to comply with the station-keeping condition of the initial STA, and was circumspect on this point when it finally revealed the transgression with the January 2014 Manner Letter. Moreover, EchoStar has never offered any communications service on the highly-inclined satellite since its arrival in the neighborhood of 96.2° W.L. in April 2013. Without such operation or the prospect of operation going forward, the pending STA requests fail to meet the second prong of the statutory STA test – i.e., the proponent cannot show that denial of the requested STA will substantially prejudice the public interest. Finally, EchoStar has not maintained north-south station keeping on EchoStar 6 to a level not “highly inclined” since sometime in 2012. This means that the satellite now stationed near 96.2° W.L. cannot be used with consumer earth stations (i.e., non-tracking earth stations) – a fact that likely explains why



the satellite has not been used for the provision of any communications services. If there is no basis for operation of the type proposed, the STA requests proposing that operation must be denied.

Respectfully submitted,

SPECTRUM FIVE LLC

By: /s/ David Wilson

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February 11, 2014

**CERTIFICATE OF SERVICE**

I, Pam Conley, hereby certify that a true and correct copy of the foregoing Opposition of Spectrum Five LLC was served on the following, by First-Class U.S. Mail, postage prepaid, this 11th day of February, 2014.

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