

March 1, 2019

**VIA ELECTRONIC FILING**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street S.W.  
Washington, D.C. 20554

Re: Hiber, Inc., Supplement to Orbital Debris Assessment Report  
IBFS File No. SAT-PDR-20180910-00069; Call Sign S3038

Dear Ms. Dortch:

Hiber, Inc. (“Hiber”), through its counsel, submits this letter to update its orbital debris assessment report (“ODAR”) submitted on February 22, 2019.<sup>1</sup> In Section 3.7 of the ODAR, Hiber calculated that two components of spacecraft were expected to survive reentry, the S-band antenna and the GPS antenna. With respect to the S-band antenna, Hiber had erroneously based its calculations assuming the antenna is made of ceramic when, in fact, the S-band antenna is made of anodized aluminum. Recalculating the reentry analysis using the correct material shows that the S-band antenna does not survive reentry. With respect to the GPS antenna, Hiber recalculated the impact energy for the GPS antenna using more precise measurements for its mass, rather than the worst-case assumptions originally used, and determined that the impact energy of the antenna with the more precise mass value is 7.62 joules, which is below the 15-joule NASA threshold.<sup>2</sup>

If you have any questions regarding this letter, please do not hesitate to contact me.

Very truly yours,

/s/Tony Lin

Tony Lin  
Counsel to Hiber, Inc.

cc: Karl Kensinger  
Stephen Duall

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<sup>1</sup> See Letter from Lynne Montgomery, Counsel to Hiber, Inc., to Jose Albuquerque (February 22, 2019).

<sup>2</sup> See NASA Technical Standard, Process for Limiting Orbital Debris, NASA-STD-8719.14A (with Change 1) (May 25, 2012). Although not stated in the ODAR, using the worst-case mass assumption, the impact energy associated with the GPS antenna was calculated to be ~18 joules.