



Federal Communications Commission  
Washington, D.C. 20554

March 10, 2017

Birger A. Johansen  
Space Norway AS  
Drammensveien 165  
Oslo, Norway

Re: Space Norway AS, IBFS File No. SAT-LOI-20161115-00111 (Call Sign S2978)

Dear Mr. Johansen:

On November 15, 2016, Space Norway AS (Space Norway) filed the above-captioned petition to provide service to the U.S. market via a non-geostationary-satellite orbit (NGSO) fixed-satellite service (FSS) system comprising of two satellites in highly elliptical orbits. Section 25.114(d)(14) of the Commission's rules requires that applicants for space station licenses, as well as petitioners requesting U.S. market access, provide a narrative description of the design and operational strategies that will be used to mitigate orbital debris.<sup>1</sup> To aid in the Commission's evaluation of Space Norway's petition, please provide the following additional information:<sup>2</sup>

1. A statement concerning assessment and limitation of the amount of debris released during normal operations, and assessment and limitation of the probability of the satellites becoming a source of debris by collisions with small debris or meteoroids that could cause loss of control and prevent post-mission disposal.
2. A statement concerning assessment and limitation of the probability of accidental explosions during and after completion of mission operations. This statement must include a demonstration that debris generation will not result from the conversion of energy sources on board the spacecraft into energy that fragments the spacecraft. Energy sources include chemical, pressure, and kinetic energy.
3. The accuracy—if any—with which the parameters of satellite orbits will be maintained, including apogee, perigee, inclination, and the right ascension of the ascending node(s). In the event that the system is not able to maintain orbital tolerances, *i.e.*, it lacks a propulsion system for orbital maintenance, that fact should be included in the debris mitigation disclosure. Such systems must also indicate the anticipated evolution over time of the orbit of the proposed satellites.
4. A casualty risk assessment including an estimate of the number, dimensions, weight and the kinetic energy of any surviving components/fragments that may reach the surface of the Earth, as well as an estimate of the resulting probability of human casualty. In the event there are surviving fragments, please provide the projected geographic area of the debris field, and any measures taken to forewarn people who are likely to be in the geographic region during the time period of the re-entry.

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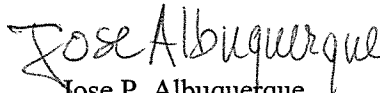
<sup>1</sup> 47 CFR § 25.114(d)(14).

<sup>2</sup> 47 CFR § 25.111(a).

5. Identify the administration that will register the Space Norway satellites pursuant to the United Nations Convention on Registration of Objects Launch into Outer Space.<sup>3</sup>

Space Norway must file a letter providing this information by April 11, 2017. Failure to do so may result in the dismissal of Space Norway's request pursuant to Section 25.112(c) of the Commission's rules, 47 CFR § 25.112(c).

Sincerely,



Jose P. Albuquerque  
Chief, Satellite Division  
International Bureau

cc: Phillip L. Spector  
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<sup>3</sup> <http://www.unoosa.org/oosa/en/spaceobjectregister/index.html>