



Federal Communications Commission  
Washington, D.C. 20554

November 12, 2015

Mr. Carlos M. Nalda  
LMI Advisors  
8601 James Creek Drive  
Springfield, VA 22201

Re: Panasonic Avionics Corporation  
IBFS File Nos. SES-MFS-20150609-00349,  
SES-AFS-20150820-00558  
Call Sign: E100089

Dear Mr. Nalda:

On June 6, 2015, Panasonic Avionics Corporation (Panasonic) filed the above-captioned application to modify its existing blanket license for earth stations aboard aircraft (ESAA) operating in the Ku-band. An amendment to the application was subsequently filed on August 20, 2015. In its modification application, among other things, Panasonic seeks to designate the Eutelsat 70B, Galaxy 16, JCSAT-5A, Yamal 401, Yamal 300K, and NSS-6 satellites as points of communication. To facilitate our processing of the application and associated amendment, we request that Panasonic supplement its application as described below.

In its application, Panasonic has provided a letter from Eutelsat relevant to communications with Eutelsat 70B, as required pursuant to Section 25.227(a)(2) and 25.227(b)(2) of the Commission's rules.<sup>1</sup> This letter includes a statement that the proposed operations of Panasonic's transmit/receive terminals at the power density levels defined in the agreement between Panasonic and Eutelsat are "consistent with existing satellite coordination agreements with the adjacent satellites to Eutelsat 70B."<sup>2</sup> Consistent with Section 25.227(b)(2)(ii) of the Commission's rules, we ask that Panasonic confirm with Eutelsat that these coordination agreements include adjacent satellite systems within  $\pm 6$  degrees of orbital separation from Eutelsat 70B.<sup>3</sup>

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<sup>1</sup> See Application of Panasonic Avionics Corp. to Modify Ku-Band Earth Stations Aboard Aircraft (ESAA) Blanket License, Technical Appendix at A-1:C (Panasonic Modification Application). IBFS File No. SES-MFS-20150609-00349.

<sup>2</sup> *Id.*

<sup>3</sup> 47 C.F.R. § 25.227(b)(2)(ii). Section 25.227(b)(2)(ii) requires a "statement from the target satellite operator certifying that the power density levels that the ESAA applicant provided to the target satellite operator are consistent with the existing coordination agreements between its satellite(s) and the adjacent satellite systems within 6° of orbital separation from its satellites."

As part of its request, Panasonic also requests waiver of Section 25.283(c)<sup>4</sup> of the Commission's rules for Eutelsat 70B, JCSAT-5A, Yamal 401K, and NSS-6. We ask that Panasonic provide the following additional information regarding orbital debris mitigation to enable us to determine whether the public interest is served by grant of its request to designate the Eutelsat 70B, Yamal 401, and NSS-6 satellites as points of communication:

(1) Eutelsat 70B. In the Eutelsat 70B Orbital Debris Mitigation and Satellite End-of-Life Statement, Section 4.A of the Eutelsat 70B Space Debris Mitigation Plan provides a table showing the predicted masses of materials at End of Life, which we understand to be the masses before passivation, and states that the fuel and oxidizer tanks will be emptied as far as possible during passivation.<sup>5</sup> We request that Panasonic provide the predicted masses of remaining materials after passivation, when the spacecraft has been switched off.

(2) Yamal 401. We request that Panasonic confirm or correct the figures in the table in the appendix of the Yamal 401 Orbital Debris Mitigation Plan for the nitrogen pressurant and xenon propellant, and state the temperature(s) at which the end-of-life pressures were computed.<sup>6</sup>

(3) NSS-6. The NSS-6 Orbital Debris Mitigation Plan contains a table in the section addressing 47 C.F.R. §25.114(d)(14)(ii) that lists the volumes of the two oxidizer tanks, and the pressures, temperatures, and masses of oxidizer in these tanks.<sup>7</sup> This table does not appear to account for residual pressurant that may remain in the oxidizer tanks, nor is the type of oxidizer specified. We request that Panasonic provide the type and mass of any residual pressurant in these tanks, and the type of oxidizer in them.

Further, we note that Panasonic has requested to communicate with the Yamal 300K satellite at its new orbital location of 177 degrees W.L., including for service to earth stations in the United States.<sup>8</sup> Panasonic has also indicated that it will employ an associated gateway earth station located in Brewster, Washington, for operations with the Yamal 300K satellite.<sup>9</sup> We view the proposed operations as a request for access to the United States market by a non-U.S.-licensed space station.<sup>10</sup> Accordingly, Panasonic must provide the Commission with information showing that the operations of Yamal 300K are consistent with all the Commission requirements for a U.S.-licensed system operating in the United States, including, but not limited to, an FCC Form 312 Schedule S.<sup>11</sup>

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<sup>4</sup> 47 C.F.R. § 25.283(c). Section 25.283(c) requires that upon a spacecraft completing its mission, a space station licensee shall ensure, unless prevented by technical failures beyond its control, that all stored energy sources on board the satellite are discharged, by venting excess propellant, discharging batteries, relieving pressure vessels, and other appropriate measures.

<sup>5</sup> Panasonic Modification Application at Technical Appendix at A-1:D: "Eutelsat 70B Orbital Debris Mitigation and End-of-Life Statement" at 6-7 of 7 and Table.

<sup>6</sup> *Id.* at A-4:D: "Yamal-401 Orbital Debris Mitigation Plan" at Appendix.

<sup>7</sup> *Id.* at A-6:D: "NSS-6 Orbital Debris Mitigation Plan" at 3 of 5.

<sup>8</sup> Panasonic Modification Application, Narrative at 3, Table 1.

<sup>9</sup> *Id.* at 9, Table 2.

<sup>10</sup> See 47 C.F.R. § 25.137; *In the Matter of Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service*, Report and Order, IB Docket 96-111, 12 FCC Rcd 24094, 24175, at ¶ 189 (1997) (*DISCO II*).

<sup>11</sup> See 47 C.F.R. § 25.137(d); 47 C.F.R. § 25.114.

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Additionally, please submit the name of the relevant International Telecommunication Union (ITU) satellite network filing and administration<sup>12</sup> for the following requested points of communication: Eutelsat 70B, JCSAT-5A, Yamal 401, Yamal 300K, and NSS-6.

Please submit the requested information by December 14, 2015. Failure to do so may result in the dismissal of the portion of the application that seek to designate the Eutelsat 70B, JCSAT-5A, Yamal 401, Yamal 300K, and NSS-6 satellites as points of communication pursuant to Section 25.112(c) of the Commission's rules.<sup>13</sup>

Sincerely,



Jose P. Albuquerque  
Chief, Satellite Division  
International Bureau

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<sup>12</sup> See ITU Radio Regulations, No. 1.2.

<sup>13</sup> 47 C.F.R. § 25.112(c).