



Federal Communications Commission  
Washington, D.C. 20554

February 12, 2014

Mr. Carlos M. Nalda, Esq.  
Squire Sanders (US) LLP  
1200 19<sup>th</sup> Street N.W., Suite 300  
Washington, D.C. 20036

Re: Panasonic Avionics Corporation  
IBFS File Nos. SES-MFS-20130930-00845  
Call Sign: E100089

Dear Mr. Nalda:

On September 30, 2013, Panasonic Avionics Corporation (Panasonic) filed the above-captioned application to modify its existing blanket license for aeronautical mobile-satellite service terminals operating in the Ku-band. In its modification application, among other things, Panasonic seeks to designate the Superbird C2 and Apstar 7 satellites as points of communication. As part of its request, Panasonic requests waiver of Section 25.283(c)<sup>1</sup> of the Commission's rules for these satellites. We request Panasonic to provide the following additional information to enable us to determine whether the public interest is served by grant of its request to designate the Superbird C2 and Apstar 7 satellites as points of communication:

- (1) Superbird C2. We request Panasonic to provide the internal volume of each helium tank in liters. If the two tanks are interconnected, we request Panasonic to provide the combined internal volume of the helium tanks and the interconnecting plumbing in liters. Further, we ask Panasonic to confirm that the stated mass of the residual helium<sup>2</sup> is the mass at end-of-life and not the mass of helium loaded into the helium tanks before launch. If the stated mass does not correspond to end-of-life, please provide the estimated remaining mass of helium at end-of-life in kilograms. Additionally, we request Panasonic to provide the temperature in kelvins at which the estimated pressure of the residual helium was calculated. Finally, Panasonic should provide a detailed explanation of how the estimated pressure of the residual helium of approximately 2.07-2.40 megapascals (approximately 20.7-24 bars) was calculated. Further, please confirm that this value is correct or provide the correct residual helium pressure in megapascals or bars.

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<sup>1</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>2</sup> Application of Panasonic Avionics Corp. to Modify Blanket Aeronautical Mobile-Satellite Services ("AMSS") License to Operate Aircraft in the 14.0-14.5 GHz and 10.7-12.75 GHz Frequency Bands at 9 and Attach. 1: Technical Appendix: "SUPERBIRD-C2 Satellite End of Life Disposal and Debris Mitigation Plan" at 2 of 4 (Panasonic Modification Application). IBFS File No. SES-MFS-20130930-00845.

(2) Apstar 7. The debris mitigation plan for the Apstar 7 states that there are two 51.6 liter helium tanks,<sup>3</sup> but another place in the application indicates that there are three 51.6 liter helium tanks.<sup>4</sup> We ask Panasonic to confirm the correct number of helium tanks on Apstar-7. In addition, if the helium tanks are interconnected, we request Panasonic to provide the combined internal volume of the helium tanks and the interconnecting plumbing in liters. The orbital debris mitigation plan indicates that the helium tanks will have a total estimated mass of 7.68 kilograms of helium remaining at end-of-life.<sup>5</sup> We ask Panasonic to confirm that the stated mass of residual helium is the mass at end-of-life, or provide the mass at end-of-life in kilograms. We also ask Panasonic to provide the temperature, in kelvins, at which the estimated pressure of the residual helium was calculated. Panasonic should also provide a detailed explanation of how the estimated pressure of the residual helium of approximately 30 bars was calculated, and confirm that this value is correct or provide the correct residual helium pressure in bars.

Please submit the requested information by March 14, 2014. Failure to do so may result in the dismissal of the portion of the application that seek to designate the Superbird C2 and Apstar 7 satellites as points of communication pursuant to Section 25.112(c) of the Commission's rules.<sup>6</sup>

Sincerely,



Jose P. Albuquerque  
Chief, Satellite Division  
International Bureau

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<sup>3</sup> Panasonic Modification Application at 5 and Table.

<sup>4</sup> Panasonic Modification Application at 10 ("Three 51.6 liter helium tanks each will retain residual pressure of approximately 30 bars and be maintained with the temperature range of 0-40°C.").

<sup>5</sup> Panasonic Modification Application: Technical Appendix: "Statement on Conformity of APSTAR-7 Satellite with FCC Rules regarding Orbital Debris Mitigation" at 5.

<sup>6</sup> 47 C.F.R. § 25.112(c).