

EXHIBIT B**WAIVER REQUEST**

Pursuant to Section 1.3 of the Commission's rules, 47 C.F.R. § 1.3, HNS License Sub, LLC ("Hughes") respectfully requests a partial waiver of the data submission requirements of Sections 25.115(e) and 25.138(d)-(e) of the Commission's Rules, 47 C.F.R. §§ 25.115(e) and 25.138(d)-(e), with respect to some of the information that is required to be submitted with applications for 20/30 GHz band fixed-satellite service ("FSS") earth station applications.

Hughes' proposed 5.6m, 8.1m, 9.2m and 13.2m earth station antennas will be used to provide gateway services for the Jupiter 97W satellite that is scheduled to be launched in 2016 to the 97.1° W.L. orbital location. Hughes seeks a limited waiver in order to allow the processing and grant of authority for its new antennas prior to the submission of certain data elements from Section 25.138 that are called for in Section 25.115(e) of the rules. The required data is not available to Hughes currently and will not be available until after the first of each type of earth station antenna is constructed and ready for operation. As explained below, there is good cause to waive this rule and doing so is consistent with Commission precedent – in particular, because Hughes will supply the information required as soon as it is able to generate the data.¹ Grant of this request will serve the public interest by allowing the provision of additional advanced satellite broadband communication services in the United

¹ The Commission previously granted a similar waiver request. *See Satellite Communications Services Information Re: Actions Taken*, Report No. SES-00748, File No. SES-AMD-20050901-01203 (Sept. 14, 2005) (Public Notice) (granting DirecTV a waiver of Section 25.138 information requirements). Moreover, when it granted the initial applications under Call Signs E060382 and E060383 for the TT&C earth station antennas for operation with Hughes's SPACEWAY 3 satellite, it granted waivers identical to those requested here. *See, e.g.*, License for Call Sign E060382 at Condition 253.

States without undermining the purpose of the Commission's rules.

Under Section 25.115(e) of the Commission's rules, applications for FSS earth station licenses in the 20/30 GHz bands are required to include the information described in Section 25.138. Section 25.138(a) specifies GSO FSS earth station antenna off-axis EIRP spectral density requirements for transmissions in the 28.35-28.6 GHz and 29.25-30 GHz bands, while Section 25.138(d) specifies that a series of measured antenna radiation patterns are to be provided for the purpose of determining compliance with the off-axis EIRP density levels in Section 25.138(a). Similar data for the receive band is called for in Section 25.138(e). The requirements of Sections 25.138(a), (d), and (e) are aimed at ensuring that an earth station transmitting to a satellite in the geostationary arc does not cause excessive interference to neighboring satellites.²

A waiver of the Commission's rules is warranted when "good cause" is shown.³ A waiver may be granted if the grant "would not undermine the policy objective of the rule in question and would otherwise serve the public interest."⁴ Hughes is seeking a partial waiver of the obligation to provide with the instant earth station application the information called for in Sections 25.138(d) and (e) of the Commission's rules, and instead to allow Hughes to

² Hughes proposes to operate in the 28.6-29.1 GHz band. While this band is allocated on a primary basis for non-geostationary fixed-satellite service transmissions in the Earth-to-space direction, Hughes seeks a waiver of Section 25.138 to include the 28.6-29.1 GHz band in its requested gateway earth station authorizations. The showings made under this rule with respect to off-axis EIRP limits and Section 25.209 relate to the ability of an earth station to operate successfully in a two-degree spacing environment. To the extent that Hughes can do this in the 28.6-29.1 GHz band, it should be permitted to operate its proposed gateway earth stations on a co-equal basis with respect to any other geostationary networks that are operating in the fixed-satellite service on a secondary basis to non-geostationary systems in the band.

³ 47 C.F.R. § 1.3; *see also* *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

⁴ *See EchoStar KuX Corp. Application for Authority to Construct, Launch and Operate a Geostationary Satellite Using the Extended Ku-band Frequencies in the Fixed-Satellite Service at the 83° W.L. Orbital Location*, Order and Authorization, 20 FCC Rcd 919, ¶ 12 (2004) (Commission waiver for "good cause shown").

provide the required data within 30 days after filing its post-grant certification of earth station construction pursuant to Section 25.133(b) of the Commission's rules, 47 C.F.R. § 25.133(b), on the basis that:

- the specific new model of antenna specified has not previously been field deployed (meaning that the measured data required by Section 25.138(d) of the FCC rules is not currently available);
- the proposed antennas are not "production" antennas in the mass-production, ubiquitous deployment of small terminal sense of the word. Instead, the antenna type for which are non-consumer gateway antennas that should be subjected to a different level of scrutiny than potentially problematic small antennas targeted for ubiquitous deployment to commercial and consumer users;
- Hughes will provide currently-unavailable data per the specifications in Sections 25.138(d) and (e) of the FCC's rules for each type of antenna within 30 days after filing its required certification under Section 25.133(b) of the Commission's rules for completion of construction of the first of each antenna type proposed in this application.

Section 25.138(d) specifies that an applicant shall provide, for each earth station antenna type, a series of radiation patterns measured on a production antenna performed on a calibrated antenna range and, as a minimum, shall be made at the bottom, middle, and top frequencies of the 30 GHz band. The radiation patterns are:

(1) Co-polarized patterns for each of two orthogonal senses of polarizations in two orthogonal planes of the antenna.

(i) In the azimuth plane, plus and minus 10 degrees and plus and minus 180 degrees.

(ii) In the elevation plane, zero to 30 degrees.

(2) Cross-polarization patterns in the E- and H-planes, plus and minus 10 degrees.

(3) Main beam gain.⁵

Section 25.138(e) imposes similar information requirements for the 20 GHz band

⁵ See 47 C.F.R. § 25.138(d).

receiving earth station antenna.⁶

Under Section 25.115(e) of the Commission's rules, Hughes is obliged to submit, as part of its applications for a Ka-band earth station, measured antenna patterns from a production antenna of the type it proposes to deploy. The antennas proposed in this application, however, have not been built yet. These antennas are not ordinary "production" antennas, and measured data for these antenna models, as used in the Hughes gateway network, will only be available after the first unit is constructed and tested on site.

The purpose of the Section 25.115(e) is to ensure that FSS earth station operations in the 20/30 GHz frequency band do not subject neighboring satellite networks to harmful interference. The available antenna data points to the fact that co-frequency FSS operations of adjacent satellites will not be subject to harmful interference. Specifically, interference to other GSO FSS satellites will be within the levels permitted by the Commission's rules, and thus the GSO operations of other satellite operators will not be subject to harmful interference. Additionally, Hughes will be able to provide the additional data per the specifications in Sections 25.138(d) and (e) of the Commission's rules after each type of antenna is built. Moreover, Hughes notes that the gateway service functions for Jupiter 97W can and will meet the levels in Section 25.138(a) during all routine operations.

Furthermore, Section 25.138 was intended to address the licensing of ubiquitously deployed production antennas. As correctly noted in another application for licensing of a fixed transmit receive earth stations in the 30/20 GHz band, "the wide range of measurement parameters specified in the rule was meant to account for the wide range of installation possibilities for such mass marketed antennas, and for the fact that not every antenna would be

⁶ See *id.* § 25.138(e).

tested after installation.”⁷ In the instant case, there are only 17 earth stations, and each antenna will be used to provide gateway services in support of traffic carried on the new Jupiter 97W satellite. The gateway antennas will be very carefully installed and tested – much more so than ubiquitously deployed production antennas.

Finally, grant of the requested waiver is consistent with Commission precedent. The Commission granted a similar waiver to Hughes for the large-diameter earth station antennas that it uses successfully today with SPACEWAY 3.⁸ The antenna sidelobe performance of the large-diameter antennas proposed in this application is expected to be similar to that of other large-diameter Ka-band antennas from the same manufacturer covered under the prior waiver.

Accordingly, Hughes’s request for a partial waiver of the information requirements in Sections 25.115(e) and 25.138(d)-(e) in connection with its proposed gateway earth stations for Jupiter 97W is fully consistent with the purposes of the underlying rules. Moreover, grant of this waiver request will serve the public interest by expanding the range and quality of advanced broadband communication services that are available in the United States, including in the most rural and remote portions of the country

⁷ See *supra* n.1.

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