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August 8, 2019

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Request for Special Temporary Authority
7.3m S-band Antenna, Paumalu, Hawaii
EXPEDITED TREATMENT REQUESTED

Dear Ms. Dortch:

Intelsat License LLC ("Intelsat") herein requests an expedited grant of Special Temporary Authority ("STA")[1] for three days, commencing August 13, 2019, to utilize a 7.3m S-band antenna located at its Paumalu, Hawaii teleport to receive telemetry signals from the Chandrayaan-2 spacecraft[2] as it transits to the Moon. Chandrayaan-2 launched on July 22, 2019. Intelsat is seeking expedited treatment because, due to unforeseen circumstances, the original antennas that were planned to support the spacecraft's maneuvers on August 13th will not have coverage of the spacecraft when the maneuvers will occur. Intelsat expects to receive telemetry for approximately five minutes on August 13, 2019.[3]

Subject to Federal Communications Commission ("FCC" or "Commission") approval, Intelsat's antenna will receive telemetry from Chandrayaan-2 at 2041.598 MHz. During the Chandrayaan-2 mission, ISRO will serve as the mission manager. Telemetry received by Intelsat will be forwarded to ISRO. Intelsat will remain in control of the baseband unit, RF equipment, and antenna.

In support of the request, and to the extent necessary, Intelsat seeks waiver of Section 25.114 of the FCC's rules,[4] which outlines the legal and technical information required for applications for space

[1] Intelsat has filed its STA request, FCC Form 159, a $210.00 filing fee, and this supporting letter electronically via the International Bureau's Filing System ("IBFS").

[2] Chandrayaan-2 is an Indian Space Research Organisation ("ISRO") lunar mission. More information on Chandrayaan-2 can be found at https://www.isro.gov.in/chandrayaan2-home-0.

[3] Intelsat is seeking three days of STA to cover any contingencies that may occur.

[4] 47 C.F.R. 25.114.

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station authorizations; Section 25.135 of the Commission's rules,[5] which requires that earth station applicants "requesting authority to communicate with a non-U.S. licensed space station" to serve the United States must demonstrate that U.S.-licensed satellite systems have effective competitive opportunities to provide analogues services in certain countries and must provide the same legal and technical information for the non-U.S.-licensed space station as required by Section 25.114 for U.S.-licensed space stations; and the U.S. Table of Frequency Allocations,[6] which allocates 2041.598 MHz to commercial Fixed and Mobile services.

The Commission may grant a waiver for good cause shown.[7] The Commission typically grants a waiver where the particular facts make strict compliance inconsistent with the public interest.[8] In granting a waiver, the Commission may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis.[9] Waiver is therefore appropriate if special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest.

Waiver of Sections 25.114 and 25.137

Intelsat herein seeks authority to provide telemetry services to a spacecraft in transit to the Moon—not commercial services—to the United States, and thus believes that Section 25.137 does not apply. To the extent the Commission determines, however, that Intelsat's request for authority to provide telemetry services on an STA basis is a request to serve the United States with a non-U.S.-licensed satellite, Intelsat respectfully requests a waiver of Sections 25.114 and 25.137 of the Commission's rules.[10] In this case, good cause exists for a waiver of both Section 25.114 and Section 25.137 of the FCC's rules.

With respect to Section 25.114, Intelsat seeks authority only to provide telemetry services for the Chandrayaan-2 lunar mission. The information sought by Section 25.114, however, is not relevant to lunar missions. For example, specifying predicted space station antenna gain contour(s) for each transmit and receive antenna beam[11] is not relevant to a lunar mission where the satellite is only sending telemetry to the Earth during its transit path away from the Earth.

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[5] 47 C.F.R. § 25.137.

[6] 47 C.F.R. § 2.106.

[7] 47 C.F.R. § 1.3.

[8] *N.E. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) ("*Northeast Cellular*").

[9] *WAIT Radio v. FCC*, 419 F.2d 1153, 1159 (D.C. Cir. 1969); *Northeast Cellular*, 897 F.2d at 1166.

[10] 47 C.F.R. §§ 25.114 and 25.137.

[11] 47 C.F.R. § 25.114(c)(4)(vi)(A).

Further, the information required under Section 25.114 of the FCC's rules is not necessary to determine potential harmful interference. The present application for receive-only services involves communications during a spacecraft's transit to the Moon—at no time will the spacecraft be communicating from geostationary or non-geostationary orbit. Additionally, as with any STA, Intelsat will perform the receive-only services on a non-interference basis. Moreover, because Schedule S is intended to provide operational information at a satellite's final location, it should not pertain to Chandrayaan-2 as it transits to the Moon.

Because it is not relevant to the service for which Intelsat seeks authorization, Intelsat seeks a waiver of all the information required by Section 25.114 of the Commission's rules. Intelsat has provided in this STA request the required technical information that is relevant to the telemetry services for which Intelsat seeks authorization.

Good cause also exists to waive Section 25.137 of the agency's rules. Section 25.137 is designed to ensure that "U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services" in other countries.[12] Here, there is no service being provided by the satellite; it is simply being placed into lunar orbit after separating from the launch vehicle. Thus, the purpose of Section 25.137 would not be served by applying these rules to lunar missions. For example, Section 25.137(d)(4) requires earth station applicants requesting authority to operate with a non-U.S.-licensed space station that is not in orbit and operating to post a bond.[13] The underlying purpose of Section 25.137(d)(4)—to provide parity between U.S.-licensed and non-U.S.-licensed commercial satellite systems in discouraging orbital location warehousing—would not be served by requiring Intelsat to post a bond to receive approximately five minutes of telemetry from Chandrayaan-2.

Additionally, it is Intelsat's understanding that Chandrayaan-2 is licensed by India, which is a WTO-member country. Thus, the purpose of Section 25.137—to ensure that U.S. satellite operators enjoy "effective competitive opportunities" to serve certain foreign markets—will not be undermined by grant of this waiver request.

Finally, Intelsat notes that it expects to receive telemetry from Chandrayaan-2 for a period of approximately five minutes. Requiring Intelsat to obtain copious technical and legal information from an unrelated party, where there is no risk of harmful interference and the operations will cease after five minutes, would pose undue hardship without serving underlying policy objectives.

Waiver of Sections the U.S. Table of Allocations

In order to ensure Intelsat can receive telemetry from Chandrayaan-2, Intelsat requests waiver of the U.S. Table of Frequency Allocations to permit its 7.3m S-band antenna in Paumalu, Hawaii to receive at 2041.598 MHz from Chandrayaan-2. Intelsat seeks authority only to receive a telemetry signal from Chandrayaan-2 and will not use the antenna to transmit to the spacecraft.

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[12] 47 C.F.R. § 25.137(a).

[13] 47 C.F.R. § 25.137(d)(4).

Good cause exists to waive the Table of Allocations for the 2025-2100 MHz frequency band. Chandrayaan-2 was designed with its telemetry in S-band and, as the spacecraft is now in orbit, it is not possible to change the design.

Moreover, grant of this waiver is consistent with the Commission's precedent. A waiver of the Table of Allocations is generally granted "when there is little potential interference into any service authorized under the Table of Frequency allocations and when the nonconforming operator accepts any interference from authorized services."[14] As noted above, Intelsat's proposed operations are receive-only for only five minutes. Additionally, Intelsat agrees to accept any level of interference into this earth station from licensed users in the band.

Given these particular facts, the waivers sought herein—to the extent required—are plainly appropriate.

Grant of this expedited STA request will allow Intelsat to help safely transit the Chandrayaan-2 spacecraft to the Moon, and thereby would promote the public interest.

Please direct any questions regarding this expedited STA request to the undersigned at (703) 559-6949.

Respectfully submitted,

/s/ Cynthia J. Grady

Cynthia J. Grady
Senior Counsel
Intelsat US LLC

cc: Paul Blais

[14] *See The Boeing Company*, Order and Authorization, 16 FCC Rcd 22645, 22651 (Int'l Bur. & OET 2001); *Application of Fugro-Chance, Inc. for Blanket Authority to Construct and Operate a Private Network of Receive-Only Mobile Earth Stations*, Order and Authorization, 10 FCC Rcd 2860 (Int'l Bur. 1995) (authorizing MSS in the C-band); *see also Application of Motorola Satellite Communications, Inc. for Modification of License*, Order and Authorization, 11 FCC Rcd 13952-13956 (Int'l Bur. 1996) (authorizing service to fixed terminals in bands allocated the mobile satellite service).