Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Intelsat License LLC	)	
	)	
Application for Modification of the Intelsat 5 Authorization to Specify Operation at the 157° E.L. Orbital Location	)	IBFS File No. SAT-MOD-20140829-00097
	)	
Application for Modification of the Intelsat 5 Authorization to Extend the License Term for the Space Station	)	IBFS File No. SAT-MOD-20121002-00176
	)	Call Sign: S2704
	)	

ORDER AND AUTHORIZATION

Adopted: March 26, 2015 **Released: March 26, 2015**

By the Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. By this Order, we grant the requests[1] of Intelsat License LLC (Intelsat) to modify the authorization for its Intelsat 5 space station (Call Sign S2704) to specify operations at the 157.0° E.L. orbital location to provide Fixed-Satellite Service (FSS) in the 3700-4200 MHz (space-to-Earth), 5925-6425 MHz (Earth-to-space), 11.45-11.7 GHz (space-to-Earth), and 14.0-14.25 GHz (Earth-to-space) frequency bands[2] and to extend the license term for Intelsat 5 through December 31, 2020. Intelsat is also authorized to conduct Telemetry, Tracking, and Command (TT&C) operations necessary to maintain Intelsat 5 at the 157.0° E.L. orbital location using the following center frequencies: 14.498 GHz and 13.999 GHz (Earth-to-space); 11.451 GHz, 11.452 GHz, and 11.454 GHz (space-to-Earth). In granting Intelsat's requests, we deny the Petition to Deny or Defer filed by ABS Global, Ltd (ABS) for the reasons set forth below.[3] By these actions, we allow Intelsat to maintain continuity of service to its customers from the 157.0° E.L. orbital location throughout the full service life of the Intelsat 5 space station.

II. BACKGROUND

2. Intelsat seeks to modify its authorization for Intelsat 5 to specify operations at 157° E.L.

[1] Intelsat License LLC, Application for Modification of the Intelsat 5 Authorization to Specify Operation at the 157° E.L. Orbital Location, IBFS File No. SAT-MOD-20140829-00097 (*Intelsat 2014 Modification*); Intelsat License LLC, Application for Modification of the Intelsat 5 Authorization to Extend the License Term for the Space Station, IBFS File No. SAT-MOD-20121002-00176 (*Intelsat 5 Extension Mod*).

[2] Intelsat's 2014 modification application originally requested the use of the 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth), and 12.75-13.25 GHz (Earth-to-space) frequency bands, which are subject to the FSS Plan contained in Appendix 30B of the ITU Radio Regulations, and for which there is no U.S. ITU filing at the 157.0° E.L. location. Intelsat subsequently withdrew those bands from this application. *See* Letter from Susan Crandall, Assistant General Counsel, Intelsat Corp., to Marlene H. Dortch, Secretary, FCC, (dated Sept. 15, 2014), available in IBFS File No. SAT-STA-20140502-00047.

[3] Petition to Deny or Defer of ABS Global, Ltd. (dated Nov. 13, 2014) (ABS Petition).

and to extend the license term of Intelsat 5 through December 31, 2020. Intelsat 5 was originally authorized on July 2, 1997, to provide FSS from the 58.0° W.L. orbital location and began service from that orbital location on October 25, 1997.[4] Intelsat 5 subsequently was authorized to operate at the 169.0° E.L. orbital position.[5] On October 2, 2012, Intelsat filed an application to modify its license for Intelsat 5 by extending the end of the license term from October 25, 2012, through December 31, 2020.[6] On August 29, 2014, Intelsat filed an application to operate Intelsat 5 at the 157.0° E.L. orbital location to replace the Intelsat 706 space station at that location.[7] Intelsat 5 currently operates at the 157.0° E.L. orbital location pursuant to a grant of special temporary authority, pending action on Intelsat's modification requests.[8]

3. Intelsat's requests were placed on public notice,[9] and in response ABS petitioned to deny or defer Intelsat's requests, and Intelsat opposed ABS's petition.[10] In its Petition, ABS states that "the Commission should defer action on the application to the extent that it requests authority for Intelsat to engage in non-TT&C transmissions in the C-band (and specifically, in the frequency bands 5925-6025 MHz and 3700-4000 MHz) using Intelsat 5 at 157.0° E.L. until such time as ABS and Intelsat jointly inform the Commission that they have reached a mutually satisfactory coordination agreement regarding the operations of the Intelsat 5 and ABS-6 satellites."[11] ABS states that, absent this coordination agreement, ABS's future C-band services from the ABS-6 satellite at the adjacent orbital location of 159.0° E.L. would be precluded by Intelsat 5's C-band operations at 157° E.L.[12] ABS further

[4] Intelsat 5 was originally licensed to PanAmSat as PAS-9. *See* PanAmSat Licensee Corp.; 13 FCC Rcd 4743 (IB Sat. Div. 1997) (File No. CSS-94-015.).

[5] *See* IBFS File No. SAT-MOD-20080725-00150 (granted Oct. 17, 2008). Intelsat 5 subsequently drifted to and operated at other orbital locations pursuant to grants of special temporary authority. *See, e.g.* IBFS File Nos. SAT-STA-20120911-00147 (drift to 65.45° E.L.); SAT-STA-20121017-00182 (drift to and operate at 65.45° E.L.); SAT-STA-20130715-00092 (drift to 50.15° E.L.); SAT-STA-20130808-00105 (operate at 50.15° E.L.); SAT-STA-20140502-00047 (drift to and operate at 157.0° E.L.).

[6] IBFS File No. SAT-MOD-20121002-00176 (*Intelsat 5 Extension Mod*); On October 24, 2012, Intelsat notified the Commission of the commencement of inclined orbit operations for Intelsat 5. Letter from Susan H. Crandall, Intelsat Corp., to Marlene H. Dortch, FCC (dated Oct. 24, 2011). The last north/south station-keeping maneuver occurred on October 12, 2012. *Id.*

[7] *See* IBFS File No. SAT-MOD-20140829-00097. Intelsat 706 was subsequently de-orbited. *See* Letter from Susan Crandall, Assistant General Counsel, Intelsat Corp., to Marlene H. Dortch, Secretary, FCC, (dated Jan. 14, 2015), available in IBFS File No. SAT–MOD–20121026–00188.

[8] *See* IBFS File No. SAT-STA-20140502-00047 (granted Oct. 10, 2014).

[9] *Policy Branch Information, Satellite Space Applications Accepted for Filing*, Public Notice, Report No. SAT-01046 (IBFS File No. SAT-MOD-20140829-00097); *Policy Branch Information, Satellite Space Applications Accepted for Filing*, Public Notice, Report No. SAT-00937 (Mar. 15, 2013).

[10] *See* ABS Petition, *supra*. On November 24, 2014, Intelsat submitted a response to ABS's petition. *See* Response of Intelsat License LLC, submitted by Jennifer D. Hindin, Counsel for Intelsat License LLC (dated Nov. 24, 2014)(Intelsat Response). On December 1, 2014, ABS submitted a reply to Intelsat's response. *See* Reply of ABS Global, Ltd. submitted by Arlene Kahng, General Counsel for ABS (dated Dec. 1, 2014)(ABS Reply). On December 19, 2014, Intelsat filed a supplemental response the ABS Petition. *See* Supplemental Response to the Petition to Deny or Defer of ABS Global Ltd. (dated Dec. 19, 2014)(Intelsat Supplemental Response). On January 5, 2015, ABS filed a reply to Intelsat's supplemental response. *See* Reply to Supplemental Response (dated Jan. 5, 2015)(ABS Reply to Supplemental Response).

[11] ABS Petition at 2.

[12] ABS provides numerous arguments regarding Intelsat's obligation to coordinate Intelsat 5's operations with ABS, most notably that under Article 9 of the ITU's Radio Regulations "the priority date of a particular filing is intended to be used for administrative convenience and is not meant to confer any additional rights on the relevant filing party."

argues that Intelsat has not provided an adequate interference analysis under Section 25.140(a) of the Commission's rules.[13]

4. Intelsat responds that ABS's arguments "ignore the important distinction between ITU filings seeking placement in the Master Register, and filings that have already been listed in the Master Register."[14] Intelsat further states that ABS's assertion that Intelsat is required to complete coordination with ABS in order for Intelsat to continue serving existing customers on C-band frequencies is incorrect; and that under Article 9 of the ITU Radio Regulations, it is ABS, with its junior ITU filing, that must seek coordination with Intelsat for ABS's new services.[15] Intelsat indicates that link budgets provided in the Intelsat 5 application are compliant with the FCC's rules.[16]

III. DISCUSSION

5. With limited exceptions, no modification of a radio station governed by Part 25 may be made without prior grant of authority from the Commission.[17] Applications for modifications of space station authorizations will be granted unless such grant would make the applicant unqualified to operate a space station under Commission's rules or the grant would not serve the public interest, convenience, and necessity.[18] Applications for modification of geostationary orbit (GSO)-like satellite systems that seek to relocate a GSO satellite, or to add a frequency band to the authorization, are placed in a queue and considered only after previously filed space station applications have been considered.[19] We examine Intelsat's modification requests under this framework.

A. Modification to Provide FSS via Intelsat 5 at 157° E.L.

6. We grant Intelsat's authority to operate Intelsat 5 at the 157.0° E.L. orbital location to provide FSS in the 3700-4200 MHz (space-to-Earth), 5925-6425 MHz (Earth-to-space), 11.45-11.7 GHz (space-to-Earth), and 14.0-14.25 GHz (Earth-to-space) frequency bands and to conduct TT&C operations necessary to maintain Intelsat 5 at the 157.0° E.L. orbital location using the following center frequencies: 14.498 GHz and 13.999 GHz (Earth-to-space); 11.451 GHz, 11.452 GHz, and 11.454 GHz (space-to-Earth). These operations are subject to conditions and waivers previously applied to Intelsat's operations in these frequency bands at the 157.0° E.L. orbital location.[20] Intelsat has long operated satellites in these frequencies bands at 157.0° E.L., and Intelsat 5 is already operating in these frequency bands at this location pursuant to grants of special temporary authority.[21] The proposed satellite will not cause harmful interference to any previously licensed operations, and there is nothing in the record to suggest that the grant would not serve the public interest.[22]

B. Modification to Extend Intelsat 5 License Term

7. We find that the information provided by Intelsat warrants an extension of the Intelsat 5

[13] ABS Petition at 5.

[14] Intelsat Response at 3.

[15] Intelsat Reply at 3-4.

[16] Intelsat Response at 5. Intelsat also states that the link budgets in its application are based on current customer requirements and are consistent with Intelsat's proposal to ABS following the last ITU coordination meeting in May of 2014. *Id.*

[17] 47 C.F.R. §25.117(a).

[18] *Id.* at §25.117(d)(2)(i) & (ii).

[19] *Id.* at §25.117(d)(2)(iii) and §25.158.

[20] See *infra*, at para.2 and note 7.

[21] See *supra*, note 5.

[22] We address the petition of ABS subsequently in this Order. *See infra*, paras. 8-9.

license term for a period of slightly more than 8 years, through December 31, 2020. In its application, Intelsat estimates that due to Intelsat 5's planned relocation and commencement of inclined orbit operations in October 2012,[23] the current projected end of service life date for the space station is December 31, 2020. Furthermore, Intelsat indicates that Intelsat 5 should have sufficient fuel to continue maneuvers through the year 2033.[24] Additionally, in response to Commission requests, Intelsat demonstrated that the health of the Intelsat 5 space station is sufficient to provide service to its customers for the full service life term requested.[25] Accordingly, we find that extension of the license term for Intelsat 5 through December 31, 2020, to be in the public interest and consistent with our precedent.[26]

C. ABS Petition to Deny or Defer

8. We deny ABS's petition to deny or defer Intelsat's requests. Contrary to ABS's assertions, the Commission is not required to deny or defer Intelsat's application for regular authority to operate Intelsat 5 at 157.0° E.L. unless and until Intelsat and ABS come to a coordination agreement that allows ABS to operate on the same C-band frequencies as Intelsat 5 without interference. ABS's proposed operations at 159.0° E.L. are licensed by another Administration. Any potential interference arising from operations of satellites licensed by different Administrations, which are not within the scope of a grant of access to the U.S. market through the Commission's *DISCO II* policy,[27] are appropriately addressed through the satellite coordination procedures of the ITU, rather than through the Commission's space station licensing process.

9. We also find that Intelsat need not address ABS's proposed operations at 159° E.L. as part of its interference analysis under Section 25.140(a) of the Commission's rules. Section 25.140(a) is a provision of the Commission's two-degree spacing policy applicable to U.S.-licensed space stations and to those operations of non-U.S.-licensed space stations involving approved communications with U.S.-licensed earth stations. As discussed above, any interference concerns arising from filings of different Administrations, which are not within the scope of a grant of access to the U.S. market, are appropriately addressed through the satellite coordination procedures of the ITU. In addition, we observe that space station applicants have routinely requested permission to deviate from the parameters of the two-degree-spacing environment when such deviations are permitted under the terms of coordination agreements, and the Commission has routinely granted such requests.[28] Under current rules and practice, operating authority may be obtained, based on coordination agreements, for a geostationary orbit FSS system that does not conform to technical limits for two-degree compatibility. As explicitly indicated in the ordering clauses, operations at these higher power levels cannot be conducted until all required coordinations with affected operators are completed.[29]

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[23] On October 24, 2012, Intelsat notified the Commission of the commencement of inclined orbit operations for Intelsat 5. Letter from Susan H. Crandall, Intelsat Corp., to Marlene H. Dortch, FCC (dated Oct. 24, 2011). The last north/south station-keeping maneuver occurred on October 12, 2012. *Id.*

[24] *See* Intelsat 5 Extension Mod, Narrative at 2.

[25] *See* Letters from Susan Crandall, Assistant General Counsel, Intelsat Corp., to Marlene H. Dortch, Secretary, FCC (dated Feb. 12, 2013, and March 8, 2013), both available in IBFS File No. SAT–MOD–20121002–00176.

[26] *See, e.g.,* Application to Modify Authorization for Galaxy 25 to Extend the License Term, IBFS File No. SAT-MOD-20120320-00057 (granted Sept. 27, 2012).

[27] *Amendment of the Commission's Policies to Allow Non-U.S. Licensed Space Stations providing Domestic and International Service in the United States,* Report and Order, 12 FCC Rcd 24094 (1997).

[28] *Comprehensive Review of Licensing and Operating Rules for Satellite Services,* IB Docket. No. 12-267, Further Notice of Proposed Rulemaking, 29 FCC Rcd 12116, paras. 38-39 (2014).

[29] *See infra*, para. 19.

IV. ORDERING CLAUSES

10. IT IS ORDERED that the application of Intelsat License LLC, IBFS File No. SAT-MOD-20140829-00097, to operate a geostationary orbit space station, Intelsat 5 (S2704), at the 157.0° E.L. orbital location, IS GRANTED. Accordingly, Intelsat is authorized to operate Intelsat 5 at the 157.0° E.L. orbital location to provide FSS in the 3700-4200 MHz (space-to-Earth), 5925-6425 MHz (Earth-to-space), 11.45-11.7 GHz (space-to-Earth), and 14.0-14.25 GHz (Earth-to-space) frequency bands. Intelsat is also authorized to conduct TT&C operations necessary to maintain Intelsat 5 at the 157.0° E.L. orbital location using the following center frequencies: 14.498 GHz and 13.999 GHz (Earth-to-space); 11.451 GHz, 11.452 GHz, and 11.454 GHz (space-to-Earth).

11. IT IS FURTHER ORDERED that the application, IBFS File No. SAT-MOD-20121002-00176, of Intelsat to extend the license term for the Intelsat 5 space station through December 31, 2020, IS GRANTED.

12. IT IS FURTHER ORDERED that the Petition to Deny or Defer filed by ABS Global, Ltd IS DENIED for the reasons stated herein.

13. IT IS FURTHER ORDERED that Intelsat must prepare the necessary information, as may be required for submission to the International Telecommunication Union (ITU), to initiate and complete the advance publication, international coordination, due diligence, and notification process for this space station, in accordance with the ITU Radio Regulations. Intelsat shall be responsible for all cost-recovery fees associated with ITU filings. No protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments with other administrations. *See* 47 C.F.R. § 25.111(b).

14. IT IS FURTHER ORDERED that Intelsat must maintain the Intelsat 5 space station with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees of the 157.0° E.L. orbital location.

15. IT IS FURTHER ORDERED that Intelsat must operate Intelsat 5 at the 157.0° E.L. orbital location in accordance with any existing or future coordination agreements for this location.

16. IT IS FURTHER ORDERED that in connection with the provision of service in any particular country, Intelsat is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that country.

17. IT IS FURTHER ORDERED that Intelsat's operation of the Intelsat 5 space station in the 11.45-11.7 GHz band is subject to footnote US211 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, US211, which urges applicants for airborne or space station assignments to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference, consistent with footnote US74.

18. IT IS FURTHER ORDERED that Intelsat's operation of the Intelsat 5 space station in the 11.45-11.7 GHz band is limited to international operations in accordance with footnote NG52 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, NG52.

19. IT IS FURTHER ORDERED that the operations of Intelsat 5 and associated earth stations must comport with the applicable uplink limits in 47 C.F.R. §§ 25.211, 25.218, 25.222, 25.226, and/or 25.227, and the downlink limit in 47 C.F.R. § 25.212(c)(2), unless Intelsat coordinates any non-conforming operation with the operations of U.S.-licensed GSO space stations within 6 degrees of 157° E.L. Non-conforming operation must also be coordinated with respect to those operations of non-U.S.-licensed space stations within 6 degrees of 157.0° E.L. involving approved communications with U.S.-licensed earth stations.

20. IT IS FURTHER ORDERED that operation of Intelsat 5 in the 3700-4200 MHz (space-to-

Earth), 5925-6425 MHz (Earth-to-space), 11.45-11.7 GHz (space-to-Earth), and 14.0-14.25 GHz (Earth-to-space) frequency bands will be subject to coordination pursuant to the ITU Radio Regulations with respect to space stations which are not U.S. licensed.

21. IT IS FURTHER ORDERED that Intelsat's request for a waiver of Section 25.114(c)(4)(vi)(A) of the Commission's rules, 47 C.F.R. § Section 25.114(c)(4)(vi)(A),[30] IS GRANTED. Section 25.114(c)(4)(vi)(A) requires predicted space station antenna gain contour(s) for each transmit and each receive antenna beam and nominal orbital location requested. With respect to Intelsat 5's TT&C bicone antenna and the uplink power control (ULPC) antenna, shown in Exhibits 2I, 2L, 2M and 2N, Intelsat indicates that the satellite manufacturer did not provide the beam patterns for these antennas in the required form. We find, however, that Exhibits 2I, 2L, 2M and 2N, together with the descriptive characterization provided on pages 1 and 2 of the Engineering Statement, fulfill the requirements of Section 25.114(c)(4)(vi)(A).

22. IT IS FURTHER ORDERED that Intelsat's operation of the Intelsat 5 space station at the 157.0° E.L. orbital location in the 3700-4200 MHz (space-to-Earth), 5925-6425 MHz (Earth-to-space), 11.45-11.7 GHz (space-to-Earth), and 14.0-14.25 GHz (Earth-to-space) frequency bands; is subject to the following conditions:

(a) Intelsat shall remain a signatory to the Public Services Agreement between Intelsat and the International Telecommunications Satellite Organization (ITSO) that was approved by the ITSO Twenty-fifth Assembly of Parties, as amended.

(b) No entity shall be considered a successor-in-interest to Intelsat under the ITSO Agreement for licensing purposes unless it has undertaken to perform the obligations of the Public Services Agreement approved by the Twenty-fifth Assembly of Parties, as amended.

23. This authorization is without prejudice to any determination on Intelsat's replacement expectancy at 157.0° E.L. in the 10.95-11.2 GHz, 11.7–11.95 GHz, 12.5–12.75 GHz, and 14.25–14.5 GHz bands, which were on Intelsat 706 at 157.0° E.L., but are not on Intelsat 5.

24. Intelsat is afforded 30 days from the date of release of this grant and authorization to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.

25. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.

FEDERAL COMMUNICATIONS COMMISSION

Jose Albuquerque

Jose P. Albuquerque
Chief, Satellite Division
International Bureau

[30] In its application, Intelsat requested a waiver of Section 25.114(d)(3. *See* Intelsat 5 @ 157 E.L. Mod., Narrative at 3. Section 25.114(d)(3) was recently re-designated as Section 25.114(c)(4)(vi)(A). *See Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Report and Order, 28 FCC Rcd 12403, 12434 (2013). Thus, we grant to Intelsat a waiver of Section 25.114(c)(4)(vi)(A).