

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

In the Matter of)	
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)	
New ICO Satellite Services G.P.)	
)	
Application for Modification of Authority)	File Nos. SAT-MOD-20050926-00182
For Use of the 2 GHz Band to Provide)	SAT-AMD-20050927-00186
Mobile Satellite Service)	SAT-AMD-20060505-00054
)	
)	Call Sign: S2651
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MEMORANDUM OPINION AND ORDER

Adopted: December 19, 2006

Released: December 19, 2006

By the Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. By this Order, we grant New ICO Satellite Services G.P.'s (ICO) application to modify its reservation of spectrum for provision 2 GHz Mobile Satellite service (MSS) in the United States.¹ Specifically, we modify the orbital location of its satellite specified in ICO's spectrum reservation from 91° W.L. to 92.85° W.L. We deny, however, ICO's request to waive the Commission's rules to permit use of C-band frequencies for its telemetry, tracking, and command (TT&C) operations under limited or emergency circumstances. This modification will facilitate the timely implementation of ICO's MSS service in a manner consistent with Commission policy.

II. BACKGROUND

2. On July 17, 2001, the Commission granted ICO's request for a reservation of spectrum for

¹ "2 GHz MSS" refers to MSS using frequencies in the 2000-2020 MHz uplink band and 2180-2200 MHz downlink band for service link transmission, *i.e.*, transmission between the satellite(s) and mobile earth stations. See Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, *Report and Order*, IB Docket No. 99-81, 15 FCC Rcd 16127 (2000) (*2 GHz MSS Report and Order*). In December 2005, the International Bureau approved ICO Satellite Services G.P. *pro forma* assignment of its 2 GHz MSS spectrum reservation to New ICO Satellite Services G.P. A "reservation of spectrum" is one of the procedural mechanisms available for non-U.S.-licensed satellite operators to seek access to the U.S. market. See Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Service in the United States, *Report and Order*, IB Docket No. 96-111, 12 FCC Rcd 24094 (1997) (*DISCO II*).

a non-geostationary satellite orbit system (NGSO).² On May 24, 2005, the International Bureau (Bureau) authorized ICO to modify its reservation of spectrum to operate a single geostationary satellite orbit (GSO) satellite, ICO-G, at the 91° W.L. orbital location.³ The Bureau determined that ICO had satisfied the milestone conditions of its authorization to date.⁴ Further, the Bureau granted ICO's request to modify its spectrum reservation to specify feeder links in the Ka-band.⁵ The Bureau, however, denied ICO's waiver request to conduct emergency TT&C operations in the C-band.⁶

3. In September 2005, ICO filed another application to modify its 2 GHz MSS spectrum reservation. In this request, ICO asked for authority to change its assigned orbital location from 91° W.L. to 93° W.L.⁷ ICO claimed that it had a greater likelihood of successful coordination from the 93° W.L. orbital location because there are fewer International Telecommunication Union filings with date priority at the 93° W.L. orbital location. Further, pursuant to its spectrum reservation, ICO stated it is reserved exclusive use of the dedicated 2 GHz frequencies, and therefore, the change in orbital location does not raise any interference or coordination issues with respect to service link operations.⁸ ICO also asserted that its proposed Ka-band feeder link operations will comply with the Commission's two-degree spacing policy.⁹

4. In addition, ICO again requested a waiver of section 25.202(g) of the Commission's rules to allow TT&C operations in the C-band. ICO proposed to use 1 MHz of spectrum in the 5925-5930 MHz and 6420-6425 MHz bands for telecommand purposes, and 300 KHz within the 3700-3705 MHz and 4195-4200 MHz bands for telemetry purposes.¹⁰ ICO stated it would use these C-band frequencies for a brief

² The spectrum reservation was granted to ICO's predecessor-in-interest, ICO Services Limited; ICO Services Limited, *Order and Authorization*, 16 FCC Rcd 13762 (IB/OET 2001).

³ ICO Satellite Services G.P., *Memorandum Opinion and Order*, 20 FCC Rcd 9797 (Int'l Bur. 2005) (*ICO Modification Order*).

⁴ *ICO Modification Order*, 20 FCC Rcd at 9799-9800.

⁵ *ICO Modification Order*, 20 FCC Rcd at 9801. The Ka-band is generally defined as the 18.3-18.8 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 28.35-28.6 GHz (Earth-to-space), and 29.25-30.0 GHz (Earth-to-space) frequency bands.

⁶ *ICO Modification Order*, 20 FCC Rcd at 9802. The conventional C-band is 3700-4200 MHz (Earth-to-space) and 5925-6425 MHz (space-to-Earth).

⁷ ICO Satellite Services G.P., Letter of Intent Modification Application, File No. SAT-MOD-20050926-00182 (filed September 26, 2005) (*ICO Modification Application*). On September 27, 2005, ICO submitted a minor amendment to the application correcting the values for effective noise temperature and beam peak G/T performance for the satellite receiver. ICO Satellite Services G.P., File No. SAT-AMD-20050927-00186 (filed Sept. 27, 2005). Section 25.202(g) of the Commission's Rules, requires satellite operators to perform their TT&C functions at the edges of their service bands. 47 C.F.R. § 25.202(g).

⁸ *ICO Modification Application* at 3.

⁹ *ICO Modification Application* at 3. ICO has also filed an application to modify its Letter of Intent to add a second GSO satellite to its system, at the 115° W.L. orbital location. That application will be addressed in a separate order. See New ICO Satellite Services G.P., SAT-MOD-20051021-00206.

¹⁰ *ICO Modification Application* at 4.

period after launch while the satellite is moving to its assigned orbital location. Thereafter, according to ICO, these frequencies would be used in the event of an emergency involving a temporary or permanent failure of its Ka-band TT&C system.¹¹ ICO noted that another satellite operator, Intelsat, uses C-band frequencies at 93° W.L., and PamAmSat uses C-band frequencies at both the 91° W.L. and 95° W.L. orbital locations. ICO stated it will coordinate with these operators to identify suitable center frequencies for its emergency use TT&C frequencies.

5. In response to ICO's request, Intelsat North America LLC (Intelsat) asked the Commission to dismiss or deny ICO's application to the extent it seeks to use C-band frequencies at 93° W.L.¹² Intelsat stated that the C-band frequencies ICO requests are not available for assignment because Intelsat is operating a satellite, IA-6, at this location. As a result, Intelsat maintained that ICO's proposed use of the C-band frequencies will cause harmful interference to ICO's previously licensed operations.¹³ Further, Intelsat claimed that ICO had not coordinated its proposed use of these frequencies as required by section 25.202(g) of the Commission's rules. Intelsat maintained that co-frequency, co-coverage coordination is not likely to be achieved between Intelsat's operating satellite and ICO's proposed satellite. Finally, Intelsat noted its ITU priority for the C-band frequencies at the 93° W.L. orbital location.¹⁴

6. On May 5, 2006, ICO amended its request to provide for satellite operations at 92.85° W.L. instead of 93° W.L.¹⁵ ICO maintains that this change will simplify station keeping operations and minimize the likelihood of in-orbit collisions with other satellites. In coordinating its proposed operations with Intelsat, ICO determined that operating at a 0.15° offset from 93° W.L. would avoid the need for any changes to Intelsat's orbital position and help ensure against physical collision between the two satellites.¹⁶ In addition, ICO requests that the Commission defer action on its request for a waiver to permit the use of C-band frequencies for emergency TT&C operations, pending completion of frequency coordination with other satellite operators.¹⁷ In all other respects, ICO's request for a change in spectrum

¹¹ *ICO Modification Application* at 4.

¹² See *Public Notice*, Policy Branch Information, Report No. SAT-00325 (Oct. 21, 2005). Intelsat notes that its letter is filed untimely and asks that the letter be considered under section 1.41 of the Commission's rules (Informal Requests for Commission Action), 47 C.F.R. § 1.41. Letter to Marlene H. Dortch, Secretary, FCC, from Jennifer Hindin, Counsel for Intelsat North America LLC (March 27, 2006) (*Intelsat Letter*). Comments were also filed by ManSat Ltd (ManSat), which asserted that for the Ka-band frequencies, it had International Telecommunication Union (ITU) priority over ICO at 93° W.L., and asked that ICO's modified authorization be conditioned on a coordination agreement between it and ICO. Comments of ManSat Ltd Regarding the Application of Modification for Modification Authority by ICO Satellite Services G.P., filed November 18, 2005. ManSat's ITU filing has since been suppressed. Therefore, we need not address ManSat's request in this proceeding. See ITU Radiocommunication Bureau, Satellite Network IOMSAT-8, Special Section No. CR/C/1047 SUP, BR IFIC 2564, Date July 3, 2006; and Special Section No. API/A/2094 SUP, BR IFIC 2563, Date Feb. 21, 2006.

¹³ *Intelsat Letter* at 2.

¹⁴ *Intelsat Letter* at 2.

¹⁵ New ICO Satellite Services G.P., File No. SAT-AMD-20060505-00054 (filed May 5, 2006) (*ICO Amended Application*). This application was placed on public notice on May 19, 2006. *Public Notice*, Policy Branch Information, Report No. SAT-00362 (May 19, 2006).

¹⁶ *ICO Amended Application* at 2.

¹⁷ *ICO Amended Application* at 3.

reservation remains the same as that authorized in the *ICO Modification Order*.¹⁸

7. Intelsat also filed a petition to deny ICO's amended application, opposing ICO's request to use C-band frequencies for launch and emergency operations at the 92.85° W.L. orbital location.¹⁹ Intelsat maintained that ICO's amended request was made without any co-location discussions with Intelsat and did nothing to eliminate the risk of harmful interference into the Intelsat IA-6 satellite.²⁰

8. ICO filed an opposition to the petition maintaining that its application should not be denied based on its waiver request for TT&C operations.²¹ ICO also stated that Intelsat's concerns about harmful interference to the Intelsat IA-6 satellite are premature since frequency coordination has not been completed.²² Intelsat filed a reply.²³ Subsequently, however, Intelsat withdrew its petition to deny. Intelsat states that it has reached an agreement with ICO concerning ICO's proposed operations at 92.85 W.L.²⁴

III. DISCUSSION

A. Milestones

9. Before we authorize further modifications to ICO's 2 GHz MSS spectrum reservation, we must determine whether ICO has met its milestones to date. Generally, 2 GHz MSS GSO licensees must meet the following milestones: enter into a non-contingent satellite manufacturing contract within one year; complete critical design review within two years, begin physical construction of all satellites in the system within three years; complete construction of, and launch one satellite in its constellation into its assigned orbital location within five years of authorization; and launch and operate all satellites in the system within six years.²⁵ In the *ICO Modification Order*, the Bureau determined that ICO had satisfied the first two of these milestones. In that Order, the Bureau also expressed concerns about ICO's timetable for completing construction. The Bureau therefore conditioned ICO's modification on its meeting a number of intermediate milestones consistent with the performance schedule in its satellite

¹⁸ *ICO Amended Application* at 1. ICO also asks for a waiver of section 25.116 (b) and (d) of the Commission's rules, "to the extent necessary" to maintain its standing in the application processing queue. 47 C.F.R. § 25.116(b) and (d). See *ICO Amended Application*, footnote 2. In this regard, ICO notes that its Ka-band feeder link operations at 92.85° W.L. will be compatible with currently authorized and proposed Ka-band satellite operators within 2 degrees of this location. *ICO Amended Application*, footnote 2.

¹⁹ Intelsat North America LLC, Petition to Deny, filed May 22, 2006 (*Intelsat Petition to Deny*).

²⁰ *Intelsat Petition to Deny* at 3.

²¹ New ICO Satellite Services G.P., Opposition to Petition to Deny (filed June 6, 2006) (*ICO Opposition*).

²² *ICO Opposition* at 2.

²³ Intelsat North America LLC, Reply to Opposition to Petition to Deny (filed June 16, 2006) (*Intelsat Reply*).

²⁴ Letter to Marlene H. Dortch, Secretary, Federal Communications Commission, from Chin Kyung Yoo, Counsel for Intelsat North America LLC (September 6, 2006) (*Intelsat September 6 Letter*).

²⁵ 47 C.F.R. § 25.164.

construction contract.²⁶

10. ICO timely filed certifications for each of the intermediate milestones due to date. Specifically, on July 19, 2005, ICO certified by affidavit that it had commenced coordination of the physical operation of the satellite. The affidavit was supported by relevant correspondence between ICO and affected satellite operators. On July 25, 2005, ICO certified by affidavit that it had placed the required order for a traveling wave tube amplifier (TWTA). In addition, on January 12, 2006, ICO filed an affidavit certifying that it met the milestone requirement to “complete bus wire harness fabrication” by January 15, 2006, which included a confirmation from the satellite manufacturer. ICO also demonstrated compliance with its milestone, to “start communications panel/payload integration” by March 1, 2006. This affidavit was supported by statements and photographs from the manufacturer. ICO’s May 1, 2006 milestone, to complete propulsion integration, was also satisfied as supported by a certified statement and photograph. ICO also satisfied its most recent milestones – complete bus integration by July 1, 2006, complete physical coordination of the satellite by July 17, 2006, and complete main body integration by October 1, 2006 - with the appropriate affidavits and corroborating documentation.²⁷ As a result, we find that ICO has, to date, met all of the milestones in its 2 GHz MSS spectrum reservation.²⁸ ICO must meet the remaining milestones set forth in the *ICO Modification Order* or its reservation will be rendered null and void.²⁹

B. Location

11. The Commission grants modifications of satellite license and spectrum reservations when the proposed modifications present no significant interference problem and are otherwise consistent with Commission policies.³⁰ ICO’s application specifies the technical changes to its spectrum

²⁶ *ICO Modification Order*, 20 FCC Rcd at 9808. The Bureau also directed ICO to submit a bond in the amount of \$ 3 million. See 47 C.F.R. § 25.165. In accordance with the Commission’s rules, the bond was reduced by 25 percent for each milestone met. Because ICO had satisfied its contract execution and critical design review milestones, ICO submitted a bond for \$1.5 million, payable to the U.S. Treasury, on July 23, 2005. ICO was authorized to further reduce its bond after the Bureau determined that ICO had commenced physical construction of its geostationary satellite. *Public Notice*, Policy Branch Information, DA 06-116, Report No. SAT-00339 (Jan. 20, 2006).

²⁷ We note that ICO’s July 17, 2006 milestone is predicated on a grant of ICO’s application to operate at the 92.85° W.L. orbital location as a move to this location will eliminate the possibility of collision with nearby satellites. Because we grant the application, we find that the milestone to complete physical coordination of the satellite is satisfied.

²⁸ *ICO Modification Order*, 20 FCC Rcd at 9807. ICO’s remaining intermediate milestones are: complete reference performance test by January 1, 2007, complete thermal vacuum test by March 1, 2007; launch satellite by July 1, 2007; and certify that the satellite is operational by July 17, 2007. On November 9, 2006, ICO requested an extension of these milestones to the following dates: complete reference performance test by April 30, 2007; complete thermal vacuum test by June 15, 2007; launch satellite by November 30, 2007; and certify entire system is operational by December 31, 2007. This request will be addressed in a separate order. See *New ICO Satellite Services G.P.*, File No. SAT-MOD-20061109-00137. ICO’s reservation of spectrum remains in effect pending Commission action on its milestone extension request.

²⁹ *ICO Modification Order*, 20 FCC Rcd at 9807.

³⁰ See *The Boeing Company*, 18 FCC Rcd 12317, 12319 (Int’l Bur. 2003) and *Sirius Satellite Radio, Inc.*, 16 FCC Rcd 5419, 5420 (Int’l Bur. 2001).

reservation necessary as a result of its proposed change in orbital location. ICO maintains that its proposed change in orbital location will not raise any interference or coordination issues with respect to its service link operations.³¹ We find that ICO's proposal has no bearing on the assignment of service link frequencies given the method used for distributing 2 GHz MSS spectrum, which involves contiguous spectrum in discrete segments.³² ICO has also demonstrated that its Ka-band TT&C and feeder link operations will comply with the Commission's 2-degree spacing policy.³³ ICO's proposed 2 GHz MSS system also complies with the Commission's coverage requirement.³⁴ Accordingly, we find that ICO's request is not precluded by the Commission's rules and presents no interference issues.

C. C-Band Telemetry, Tracking, and Control

12. In its modification application, ICO requests a waiver of section 25.202(g) of the Commission's rules to permit use of C-band frequencies for its TT&C operations under limited or emergency circumstances. ICO proposes to use 1 MHz of spectrum within the 5925-5930 MHz and 6420-6425 MHz for telecommand purposes, and to use 300 kHz of spectrum within the 3700-3705 MHz and 4195-4200 MHz bands for telemetry purposes.³⁵ ICO notes that Intelsat uses the C-band frequencies at 93° W.L., and PanAmSat uses the C-band frequencies at the 91° and 95° W.L. locations. ICO states that it will coordinate with these licensees to find suitable frequencies for its emergency TT&C use. Assuming successful coordination, ICO states its proposed C-band operations will not interfere with satellites licensed to serve the United States.³⁶

13. Section 25.202(g) of the Commission's rules requires FSS systems operators to conduct their TT&C functions in the same frequency bands in which they are providing service.³⁷ The rule further provides that frequencies, polarization, and coding shall be selected to minimize interference into other satellite networks and within their own satellite system. The purpose of the rule is to simplify the coordination process among satellites at adjacent orbit location by limiting the number of potentially

³¹ *ICO Modification Application* at 3.

³² In the *ICO Modification Order*, the Bureau granted ICO access to 4 megahertz of continuous spectrum in each direction of transmission for service link operations. *ICO Modification Order*, 20 FCC Rcd at 9806. Subsequently, the Commission adopted an order redistributing spectrum returned or forfeited by previous licensees, resulting in a total of 20 megahertz of spectrum for each of the two current 2 GHz spectrum reservation holders, ICO and TMI Communications, in the 2 GHz Mobile Satellite Service. See *Use of Returned Spectrum in the 2 GHz Mobile Satellite Service Frequency Bands*, *Order*, IB Docket Nos. 05-220 and 05-221, 20 FCC Rcd 19696 (2005) (Petitions for Reconsideration pending).

³³ *ICO Modification Application*, Attachment B at 16; *ICO Amended Application* at 3. See 47 C.F.R. § 25.140(b)(2).

³⁴ *ICO Modification Application*, Attachment B at 16; *ICO Amended Application* at 3. See 47 C.F.R. § 25.143(b)(2). ICO's proposed satellite will provide coverage to all 50 states as well as to Puerto Rico and the U.S. Virgin Islands.

³⁵ *ICO Modification Application*, Attachment B at 13.

³⁶ *ICO Modification Application* at 4.

³⁷ 47 C.F.R. § 25.202(g) (telemetry, tracking, and telecommand functions for U.S. domestic satellites shall be conducted at either or both edges of the allocated band(s)).

affected operators to only those operators performing TT&C functions in the service bands. It also allows operators to maximize the efficiency of a system's TT&C operations.³⁸

14. The Commission's rules may be waived when good cause is demonstrated.³⁹ The Commission may exercise discretion to waive a rule where a particular set of facts make strict compliance inconsistent with the public interest.⁴⁰ In doing so, the Commission may take into account considerations of hardship, equity or more effective implementation of overall policy on an individual basis.⁴¹ Waiver of the Commission's rules, therefore, is appropriate only if special circumstances warrant a deviation from the general rule, and such deviation will serve the public interest.⁴²

15. We find that ICO has failed to demonstrate special circumstances justifying a waiver of section 25.202(g). ICO has not shown that the requirement to provide TT&C in its service bands will cause it hardship or is in some way inequitable. Finally, ICO has not explained how granting its waiver request would result in better implementation overall policy. Accordingly, we deny ICO's request to waive section 25.202(g).⁴³

D. Orbital Debris Mitigation

16. Section 25.114(d)(14) of the Commission's rules requires applicants for space station authorizations to submit a description of the design and operational strategies that it will use to mitigate orbital debris, including a statement detailing post-mission disposal plans for space stations at the end of their operating life.⁴⁴ In its initial application, to locate the satellite at 93° W.L., ICO stated it had assessed the possibility of collision with satellites in the vicinity of 93° W.L. and concluded it would be necessary to physically coordinate its satellite with Intelsat's IA-6 satellite. ICO has, however, amended its application, and now seeks to place the satellite into permanent orbit at 92.85° W.L. nominal orbital position.⁴⁵ It will also, ICO states, maintain the satellite in longitude within $\pm 0.05^\circ$ of 92.85° for all

³⁸ Amendment of the Commission's rules with Regard to the 3650-3700 MHz Government Transfer Band, *First Report and Order and Second Notice of Proposed Rulemaking*, IB Docket No. 98-237, 15 FCC Rcd 20488, 20538 (2000) (the rule effectively "limits FSS operators to operating TT&C links in the same frequency bands as their FSS operations").

³⁹ 47 C.F.R. § 1.3.

⁴⁰ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

⁴¹ *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969) *aff'd* 459 F.2d 1203 (D.C. Cir. 1972).

⁴² *WAIT Radio*, 418 F.2d at 1159.

⁴³ ICO has also requested that the Commission defer action on its waiver request pending its attempt to coordinate its proposed use of C-band frequencies with other potentially affected satellite operators. *ICO Amended Application* at 3. Subsequently, Intelsat filed a letter stating that it had completed coordination with ICO, and withdrawing its Petition to Deny ICO's amended application. *Intelsat September 6 Letter*. We therefore dismiss ICO's request as moot.

⁴⁴ 47 C.F.R. § 25.114(d)(14).

⁴⁵ In response to ICO's orbital debris showing included in the initial modification application, the Satellite Division asked ICO to provide a written explanation regarding its proposed angular offset and other measures it will take to avoid in-orbit collisions with Intelsat's IA-6 satellite. Letter from Robert G. Nelson, Chief, Satellite Division, (continued....)

latitudes within $\pm 0.05^\circ$ of the equator.⁴⁶ ICO indicates that there are no known satellites that would have overlapping station-keeping volumes with its proposed operations at 92.85° W.L.⁴⁷ Based on this revised showing, we find that ICO's proposed operations raise no orbital debris mitigation concerns.

E. First-Come, First Served for Ka-band Feeder-Link Request

17. ICO requests authority to use the 29.25-30.0 GHz band for its feeder uplinks, and the 18.55-18.8 GHz, and 19.7-20.2 GHz band for its feeder downlinks between its satellite and a single U.S. gateway station.⁴⁸ ICO also proposes to use frequencies within these bands for on-station TT&C transmissions between its satellite and a control earth station in the United States, transmitting command/ranging signals at 29.999 GHz and telemetry/ranging signals at 20.199 GHz.⁴⁹

18. Under the Commission's rules, requests for feeder-link authority for GSO MSS satellite systems are classified as GSO-like for purposes of its satellite licensing procedures, and therefore considered on a first-come, first-served basis.⁵⁰ Modifications of GSO-like licenses are treated like new GSO-like satellite applications, and also considered on a first-come, first-served basis.⁵¹ Similarly, an amendment to a GSO-like application proposing a new orbit location is treated like a new GSO-like satellite application filed at the time of the amendment.⁵² Accordingly, with respect to ICO's Ka-band feeder-link spectrum reservation, the Commission's rules require us to consider ICO's request to relocate its satellite to 92.85° W.L. as a newly filed application.⁵³

19. ICO's request for feeder-link authority may be granted if it is qualified to operate a satellite system and provide service in the United States, and its request would not cause harmful interference to a satellite system proposed in any previously filed application.⁵⁴ The Commission has (Continued from previous page) _____ International Bureau, to Cheryl Tritt, Counsel for ICO Satellite Services G.P. (March 27, 2006). ICO replied by stating its intent to locate the satellite at the 92.85° W.L. orbital location, and that it would file an amendment to its modification application to reflect this change. Letter from Suzanne Hutchings Malloy, Senior Regulatory Counsel, ICO Satellite Services G.P. (April 12, 2006).

⁴⁶ *ICO Amended Application* at 2.

⁴⁷ *ICO Amended Application* at 2.

⁴⁸ *ICO Amended Application*, Attachment B at 2.

⁴⁹ *ICO Amended Application*, Attachment B at 14.

⁵⁰ *First Space Station Licensing Reform Order*, 18 FCC Rcd at 10810-12.

⁵¹ See 47 C.F.R. § 25.117(d)(2)(iii).

⁵² See 47 C.F.R. § 25.116(b), (d).

⁵³ See 47 C.F.R. § 25.137(f) (modifications and amendments of spectrum reservation requests filed by non-U.S.-licensed satellite operators are treated like modifications and amendments of U.S. licensees).

⁵⁴ 47 C.F.R. § 25.158(b). In addition, non-U.S.-licensed satellite operators seeking to enter the U.S. market must show that (1) their satellite system is in orbit or operating, (2) they have been granted a license from another administration, or (3) their satellite system has been submitted for coordination to the ITU. 47 C.F.R. § 25.137(c). ICO's amended application shows that the United Kingdom is continuing to support ICO's satellite system through its filings with the ITU. *ICO Amended Application*, Attachment 1.

previously found that ICO is qualified to provide satellite service in the United States. In addition, as a result of its *Amended Application*, ICO's proposed feeder link operations will be at least two-degrees away from any co-frequency satellite operations. Therefore, we grant ICO's request to modify its reservation of spectrum for its planned feeder links, as amended.⁵⁵

20. Future U.S.-licensed Ka-band earth stations that communicate with the New ICO satellite must coordinate with Government systems in accordance with footnote US334 to the Table of Frequency Allocations.⁵⁶ This footnote requires coordination of commercial systems with U.S. Government GSO and NGSO satellites that are presently operating in the 17.8-20.2 GHz frequency band. These Government systems operate in accordance with the power flux-density limits prescribed in the ITU Radio Regulations.⁵⁷

21. New ICO must also comply with footnote US255 to the Table of Frequency Allocations, which prescribes power flux-density limits for the 18.6-18.8 GHz band to protect the Earth Exploration Satellite Service (passive).⁵⁸

IV. CONCLUSION AND ORDERING CLAUSES

22. Based on the foregoing, we find that grant of New ICO's modification application, as amended, will serve the public interest, convenience and necessity.

23. Accordingly, IT IS ORDERED, that New ICO Satellite Services, G.P.'s Applications, File Nos. SAT-MOD-20050926-00182, SAT-MOD-20050927-00186, and SAT-AMD-20060505-00054 are GRANTED in PART and DENIED IN PART, as indicated herein. New ICO Satellite Services, G.P.

⁵⁵ ICO also requested a waiver of sections 25.116(b) and (d) of the Commission's rules to "the extent necessary" to avoid losing its place in the application processing queue. *ICO Amended Application*, n.2. Because no other applications were filed for the frequencies and location specified in ICO's amended request prior to the time ICO filed its amendment, its place in the queue is not affected by its amendment. Therefore, we dismiss ICO's waiver request as moot.

⁵⁶ 47 C.F.R. 2.106 US334. Government GSO space stations have been authorized by the National Telecommunications and Information Administration at 144° W.L., 141° W.L., 127° W.L., 69° W.L., 65° W.L., 60° W.L., 30° W.L., 24° W.L., 13° W.L., 10° W.L., 0° E.L., 44° E.L., 75° E.L., 82° E.L., 85° E.L., 92° E.L., and 110°E.L.

⁵⁷ Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *Report and Order*, IB Docket No. 98-172, 15 FCC Rcd 13430, 13473 (2000) (*18 GHz Band Report and Order*). The power flux-density limits in the 18.3-18.6 GHz band are -115/-105 dB (W/m²) in any one megahertz band, depending on the angle of arrival. There are currently no power flux-density limits for the 19.7-20.2 GHz band. Letter from William T. Hatch, National Telecommunications and Information Administration, to Dale Hatfield, Chief, Office of Engineering and Technology, Federal Communications Commission (March 29, 2000).

⁵⁸ 47 C.F.R. 2.106 US255 (as revised in the *18 GHz Band Report and Order*, 15 FCC Rcd at 13489) states: In addition to any other applicable limits, the power flux-density across the 18.6-18.8 GHz band produced at the surface of the Earth by emissions from a space station under assumed free-space propagation conditions shall not exceed -95 dB (W/m²) for all angles of arrival. This limit may be exceeded by up to 3 dB for no more than 5 percent of the time.

is RESERVED radio frequency spectrum for its geostationary satellite to operate at the 92.85° W.L. orbital location, in the 2000-2020/2180-2200 MHz bands in the United States, subject to the Commission's rules, the conditions and milestones specified in ICO Satellite Services G.P., *Memorandum Opinion and Order*, 20 FCC Rcd 9797 (Int'l Bur. 2005), and the reservation of spectrum specified in Use of Returned Spectrum in the 2 GHz Mobile Satellite Service Frequency Bands, *Order*, IB Docket Nos. 05-220 and 05-221, 20 FCC Rcd 19696 (2005) (Petitions for Reconsideration pending).

24. IT IS FURTHER ORDERED, that New ICO Satellite Services G.P. IS RESERVED radio-frequency spectrum in the 29.25-30.0 GHz (space-to-Earth) and 18.55-18.8/19.7-20.2 GHz (Earth-to-space) frequency bands, for feeder link transmissions and for on-station Tracking, Telemetry, and Control transmissions at 29.999 GHz and 20.199 GHz, in accordance with the technical specifications of its applications and the *ICO Modification Order*, and consistent with our rules, unless specifically waived, subject to the following conditions:

- a. All Ka-band downlink operations must be coordinated with U.S. Government systems in accordance with footnote US334 to the Table of Allocations, 47 C.F.R. § 2.106.
- b. Ka-band downlink operations in the 18.6-18.8 GHz frequency band must comply with the power flux-density limits specified in footnote US255 to the Table of Frequency Allocations, 47 C.F.R. § 2.106.


25. IT IS FURTHER ORDERED, that New ICO Satellites Services G.P.'s request that the Commission defer action on its request to waive section 25.202(g) of the Commission's rules, 47 C.F.R. § 25.202(g), to conduct TT&C in the C-band during transit to the 92.85° W.L. orbital location or during emergencies, IS DENIED.

26. IT IS FURTHER ORDERED, that New ICO Satellite Services G.P.'s request for waiver to conduct TT&C in the C-band during transit to the 92.85° W.L. orbital location or during emergencies IS DENIED.

27. IT IS FURTHER ORDERED that New ICO Satellite Services G.P.'s request for waiver of sections 25.116(b) and (d) of the Commission's rules, 47 C.F.R. 25.116(b) and (d), is DISMISSED AS MOOT.

28. This Order is issued pursuant to the Commission's rules on delegations of authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

for 
Robert G. Nelson
Chief
Satellite Division
International Bureau