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

In the Matter of	)	
	)	
Verestar, Inc.	)	
	)	File No. SES-STA-20010323-00632
Request for Expedited Special Temporary	)	
Authority for the Brewster Earth Stations to	)	
Support In-Orbit and Integration System Tests	)	
with the ICO F-2 Satellite	)	
	)	
	)	

ORDER AND AUTHORIZATION

Adopted: May 9, 2001 **Released: May 10, 2001**

By the Chief, Satellite and Radiocommunication Division, International Bureau:

I. INTRODUCTION

1. By this Order, we grant Verestar, Inc. ("Verestar") special temporary authority ("STA") to operate certain earth stations, located at Brewster, Washington, in support of initial equipment and in-orbit tests ("IOT") of the non-geostationary satellite orbit ("NGSO") ICO F-2 satellite, scheduled for launch on June 6, 2001 by ICO-Teledesic Global Limited ("ITGL").[1] This authority is for a period of 60 days, and is subject to conditions. This authorization will permit Verestar to verify the performance of the ICO satellite network through its ground segment operations at Brewster, Washington.

II. BACKGROUND

2. In an Order released on June 24, 1999, the Chiefs of the Commission's International Bureau and Office of Engineering and Technology granted conditional authority for U.S. Electrodynamics, Inc. ("USEI") to operate five Earth stations at Brewster, Washington, to provide tracking, telemetry, and command ("TT&C") communications for ICO Global Communications ("ICO") satellites, using 4 MHz of spectrum in the vicinity of 5 GHz for uplink transmission and 4 MHz in the vicinity of 7 GHz for downlink reception.[2] This initial authorization was later modified to allow use of an additional 3 MHz of spectrum at

[1] Following Chapter 11 reorganization under the Federal Bankruptcy Code, ICO merged into the new company of ICO-Teledesic Global Limited ("ITGL"). *See In the Matter of ICO-Teledesic Global Limited Application for Transfer of Control of Space Station License of Teledesic LLC to ICO-Teledesic Global Limited*, Memorandum Opinion, Order and Authorization, DA 01-6, File No. SAT-T/C-20000531-00097, Call Sign S2136 (*rel.* January 9, 2001).

[2] *In re Applications of U.S. Electrodynamics, Inc. For Authority to construct and operate five transmit/receive Earth stations at Brewster, Washington for operation with the ICO Medium Earth Orbit Satellite System*, Order and Authorization, DA 00-99-1249 (*released* June 24, 1999) ("*USEI TT&C Authorization*"). On April 12, 2000 the Commission approved the assignment of USEI earth station authorizations to ATC Teleports, Inc. ("ATC"), including the ICO System TT&C earth station antennas. *In re Satellite Communications Services Information; Re: Actions Taken*, Public Notice Report No. SES-00173 (*eff.* April 7, 2000). Subsequently, ATC changed its name to Verestar, Inc.

5 GHz and 7 GHz for TT&C between Brewster, Washington and ICO satellites.[3]

3. Verestar now requests temporary authority to support additional testing in frequency bands contemplated for use in its eventual commercial operations. Specifically, Verestar requests authority for (1) verification and calibration of test equipment and earth station radio frequency equipment from approximately May 6, 2001, until launch date; (2) in orbit testing ("Phase One) of the ICO F-2 satellite immediately following its launch, scheduled for June 6, 2001, until approximately September 6, 2001; (3) "Phase two" in orbit testing from approximately mid-September 2001 until May 6, 2002; and finally (4) "end-to-end II testing" for every ICO satellite following the completion of each in orbit test to begin approximately on December 31, 2001 until May 6, 2002.[4] We note that to the extent the Verestar STA application is requesting authority beyond the 60-day STA period granted in this authorization, we will address this following the close of the comment cycle specified in the public notice recently issued pertaining to Verestar's request.[5] We dismiss, without prejudice to refiling at a later date, that portion of its application requesting special temporary authority for a period in excess of 180 days.[6]

III. DISCUSSION

A. Application

4. The Verestar Application notes that testing will verify the performance not only of the satellite payload (2 GHz repeaters and antenna subsystem) but also the entire feeder link system (5/7 GHz), including the telemetry and command subsystem.[7] Verestar indicates that the sole purpose of the STA is for testing and integration of relevant components of the ICO System, and not for transmission of commercial traffic.[8]

B. Frequency Coordination and Interference Matters

1. 5/7 GHz

5. In the United States the 5 GHz and 7 GHz feeder link frequencies for which Verestar seeks authority (5150-5250 MHz and 6975-7075 MHz) are not currently allocated for commercial satellite service. The International Telecommunication Union has allocated these frequencies for feeder link transmission between earth stations and non-geostationary mobile satellite service ("MSS")

[3] *In re Applications of U.S. Electrodynamics, Inc. For Modification of licenses for five transmit/receive fixed satellite Earth stations at Brewster, Washington for operation with the ICO Medium Earth Orbit Satellite System*, Order and Authorization, DA 00-00-547 (March 10, 2000) ("*USEI TT&C Modification Authorization*"). Subsequently, USEI filed an STA request for testing with respect to the launch of the first ICO satellite. Request for Special Temporary Authority of U.S. Electrodynamics, Inc., File No. SES-STA-2000121-0089, dated January 21, 2000. However, due to an anomaly of the Sea Launch rocket carrying the ICO spacecraft, the satellite launch was unsuccessful. *See* Letter of William K. Coulter, Counsel to U.S. Electrodynamics, Inc., to Magalie Roman Salas, Secretary, Federal Communications Commission, File No. SES-STA-20000121-00089, dated March 16, 2000. Consequently, USEI withdrew its request. *Id.*

[4] Verestar notes that the instant STA request seeks the same authority as requested by the application withdrawn on March 16, 2000. Verestar Application at 3. *See* note 3, *supra.*

[5] Public Notice Report No. SES-00277 (April 6, 2001).

[6] *See* 47 U.S. C. §§ 309(c)(2)(G), 309(f).

[7] *See* Verestar, Inc. Request for Expedited Special Temporary Authority for the Brewster Earth Stations to Support In-Orbit and Integration System Tests with the ICO-F-2 Satellite, dated March 23, 2001 ("*Verestar Application*").

[8] *Id.*

satellites.[9] Similarly, the Commission has initiated a rulemaking to amend the domestic Table of Frequency Allocations to conform to the international allocation in this respect.[10] Moreover, the International Bureau has granted waivers to allow several licensees to use portions of these internationally-allocated bands for MSS feeder links and TT&C.[11] Consistent with our ruling in the *USEI TT&C Authorization*, we conclude that a waiver of Section 2.102(a) of the Commission's Rules to permit the proposed operation on a non-harmful-interference basis is warranted, pending completion of the domestic allocation proceeding.[12]

a. Coordination with Authorized NGSO Satellite Systems

6. Section 25.203(k) of the Commission's rules, 47 C.F.R. § 25.203(k), requires that:

> [a]n applicant for an earth station that will operate with . . . non-geostationary satellite[s] in a shared frequency band in which the non-geostationary system is . . . proposed to be . . . licensed for feeder links, shall demonstrate . . . that its proposed earth station will not cause unacceptable interference to any other satellite network that is authorized to operate in the same frequency band or certify that the operations of its earth station shall conform to established coordination agreements between the operator(s) of the space station(s) with which the earth station is to communicate and the operator(s) of any other space station licensed to use the band.

7. Verestar has entered into a coordination agreement with Globalstar, the only currently operating satellite network in this frequency band, and has submitted a demonstration that its operations will not interfere with Globalstar operations.[13] On our own motion, we grant a waiver of Section 25.203(k) with respect to other authorized satellite networks. Within the 60 day period of this STA, no additional systems are scheduled to begin operations. Thus, operations pursuant to the STA will not "cause unacceptable interference to any other satellite network that is authorized to operate" in these frequency bands.

b. NTIA Coordination

8. Verestar's proposed 5150-5250 MHz MSS feeder uplink band is allocated in the United States for government use in the aeronautical radionavigation service on a primary basis. Therefore, these operations must be coordinated with the National Telecommunications and Information Administration ("NTIA"). NTIA has reviewed the Verestar Application, and does not object to a grant of special temporary authorization, subject to the relevant conditions imposed in the *USEI TT&C Authorization* and *USEI Modification Authorization.*

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[9] ITU Radio Regulations Footnote S5.447A.

[10] *Amendment of Parts 2, 25, and 97 of the Commission's Rules with Regard to the Mobile-Satellite Above 1 GHz* Notice of Proposed Rulemaking, 13 FCC Rcd 17107 (1998).

[11] *See L/Q Licensee, Inc.*, 11 FCC Rcd 16410 (Intl. Bureau 1996); *Mobile Communications Holdings, Inc.*, 12 FCC Rcd 9663 (Intl. Bureau 1997); *Constellation Communications, Inc.*, 12 FCC Rcd 9651 (Intl. Bureau 1997); and *Radio Station Authorization for AirTouch Satellite Services US, Inc.*, SES-LIC- 19970310-00343, Feb. 27, 1998.

[12] *See WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969), *cert. denied* 409 U.S. 1027. 2000 WL 266737 (F.C.C.), 15 F.C.C.R. 8610, 15 FCC Rcd. 8610

[13] Verestar Application at Exhibit 7.

c. 7 GHz (downlink) band

9. The proposed 6975-7075 MHz feeder downlink band is allocated on a primary basis to the terrestrial fixed and mobile services. Verestar has coordinated with the fixed and mobile carriers and submitted a demonstration to this effect.[14] Verestar has agreed to accept interference, if any, that it may receive from authorized stations in this band.

2. 2 GHz band

10. Verestar also proposes to transmit test signals in the 1985-2015 MHz band and receive test signals in the 2170-2200 MHz band, using test transceivers to be installed at the Brewster, Washington Earth-station complex. In the United States, operators in the 2 GHz band are required to either (1) demonstrate that their proposed satellite services will not cause unacceptable interference to any other authorized satellite network, or (2) certify that their Earth stations will conform to established coordination agreements between the operator of the space segment and the operator of any other space segment licensed to use the frequency.[15] The operations authorized in this STA are for 60 days. No other satellite network will begin operations in this band during this period. Therefore, no unacceptable interference will be caused to any other authorized satellite network.

a. Waiver Request: 1985-1990 MHz

11. Pursuant to section 2.106 of our rules, the 1985-1990 MHz frequency band is allocated in the United States to the non-government fixed and mobile services on a primary basis. Verestar requests a temporary waiver of the U.S. National Table of Frequency Allocations in section 2.106 of the Commission Rules to perform satellite tests in the 1985-1990 MHz band. In this waiver request, Verestar states that this band is allocated for MSS in ITU region 2 (of which the United States is a part) on a secondary basis until January 1, 2005. Furthermore, it is available for MSS use outside the United States. Thus, testing in this band would facilitate overall system testing. Presently, Verestar has not completed or submitted a demonstration of coordination with the licensee of this frequency band. Thus, this authorization does not include authority for use of the 1985-1990 MHz frequency band.

b. 1990-2015 MHz – Western Washington Frequency Coordination Committee (WWFCC)

12. The 1990-2015 frequency band is allocated to the mobile satellite service on a primary basis. This band is also allocated to the fixed and mobile services on a primary basis, for certain grandfathered operations. Through its Frequency Coordinator, ComSearch, Verestar has completed coordination of the 1990-2015 MHz frequency band with the local Western Washington State Chapter of the Society of Broadcast Engineers and specifically the Western Washington Frequency Coordination Committee("WWFCC").[16]

c. 2170-2200 MHz

13. The 2170-2200 MHz frequency band is allocated to the mobile satellite service on a

[14] *See* Verestar Application at Exhibit 8.

[15] 47 C.F.R. § 25.203(k).

[16] *See* Letter of William K. Coulter, Counsel to Verestar, Inc., to Magalie Roman Salas, Secretary, Federal Communications Commission, File No. SES-STA-20010123-00632, dated May 2, 2001. *See also* Verestar Application at Exhibit 4-C, Letter of Jeffrey Cowles, Sr. Frequency Coordinator, Comsearch, to Jeffrey Binckes, ICO Global Communications, February 18, 2000. WWFCC facilitates licensee-to-licensee communications, and reviews and recommends possible frequencies for compatible usage.

primary basis. The 2165-2200 MHz frequency band is also allocated to the fixed and mobile services on a primary basis for certain grandfathered operations. Through its frequency coordination contractor, Comsearch, Verestar has coordinated with the mobile satellite service and terrestrial fixed and mobile services. Verestar has resolved all potential cases of interference to incumbent operators and will be required to accept interference from authorized transmissions.

IV. CONCLUSION AND ORDERING CLAUSES

14. We find that grant of Special Temporary Authority to enable Verestar to conduct testing at its Brewster, Washington ground stations in support of ITGL's ICO F-2 satellite launch will serve the public interest.

15. Accordingly, pursuant to Section 309 of the Communications Act of 1934, as amended, 47 U.S.C. § 309, and authority delegated by Sections 0.241 and 0.261 of the Commission's Rules, 47 C.F.R. §§ 0.241 and 0.261, IT IS ORDERED that Application File No. SES-STA-20010323-00632 IS GRANTED Special Temporary Authority, and Verestar, Inc. IS AUTHORIZED to conduct testing operations addressed herein and proposed in its application for 60 days from the date of this authorization, subject to conditions.

16. IT IS FURTHER ORDERED that Section 2.102(a) of the Commission's Rules, 47 C.F.R. §2.102(a), IS WAIVED to permit use for testing in the 1990-2015 MHz, 2170-2200 MHz, 5150-5250 MHz and 6975-7075 MHz frequency bands, in accordance with the terms of this Order.

17. IT IS FURTHER ORDERED that Section 25.203(k) of the Commission's Rules, 47 C.F.R. § 25.203(k), IS WAIVED to permit use for testing in the 5150-5250 MHz and 6975-7075 MHz frequency bands, in accordance with the terms of this Order.

18. IT IS FURTHER ORDERED that this Authorization does not permit use of the 1985-1990 MHz band.

19. IT IS FURTHER ORDERED that harmful interference shall not be caused to authorized Radiocommunication services and interference protection from authorized stations shall not be claimed and that all expenses incurred for operation pursuant to this authorization shall be at Verestar's own risk, and this action is without prejudice to disposition of any application or issue under consideration in IB Docket No. 99-81 and OET Docket 98-142.

20. IT IS FURTHER ORDERED that Verestar, Inc. shall notify the District Director at the FCC Field Office in Kirkland, Washington, (425) 820-6271, prior to commencement of operation pursuant to this authorization, and shall provide a point of contact for the purpose of resolving any complaints of interference, and shall immediately resolve any resultant interference issue, by cessation of operation if necessary, upon notification from the District Director.

21. IT IS FURTHER ORDERED that Verestar, Inc. shall provide its point of contact for the purpose of resolving interference complaints to all the authorized Radiocommunication services within the Brewster earth station's coordination distance contour(s) prior to the commencement of its testing. Upon notification of harmful interference caused to authorized Radiocommunication services, Verestar, Inc. shall immediately cease such operations or adjust such operations to avoid harmful interference.

22. IT IS FURTHER ORDERED that operation pursuant to this license shall be consistent with the coordination statement that USEI submitted with a letter to the Commission's Secretary dated March 1, 2000. Verestar, Inc. shall ensure that not more than one of its earth station antennas is oriented, while transmitting, in the direction of one of the Microwave Landing System sites identified in Exhibit B of the USEI Modification Applications, File Nos. SES-MOD-19990820-1423 to 1427.

23. IT IS FURTHER ORDERED that this authorization is subject to the Commission's rulemaking proceedings in IB Docket 99-81 concerning applications for authority to provide 2 GHz MSS service and OET Docket 98-142 concerning service link domestic allocations in the 5/7 GHz frequency bands.

24. IT IS FURTHER ORDERED that this Order is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Thomas S. Tycz
Chief, Satellite and Radiocommunication Division