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

In the Matter of	)	
	)	
Mobile Satellite Ventures	)	File No. SAT-LOA-19980702-00066
Subsidiary LLC	)	File No. SAT-AMD-20001214-00171
	)	File No. SAT-AMD-20010302-00019
Application for Authority to Launch	)	File No. SAT-AMD-20031118-00335
and Operate an L-band	)	File No. SAT-AMD-20040209-00014
Mobile-Satellite Service Satellite	)	File No. SAT-AMD-20040928-00192
at 101° W.L.	)	Call Sign S2358
	)	
	)	

Order and Authorization

Adopted: May 23, 2005 **Released:** May 23, 2005

By the Chief, International Bureau

I. INTRODUCTION

1. By this Order, we authorize Mobile Satellite Ventures Subsidiary LLC (MSV) to launch and operate a second-generation L-band Mobile Satellite Service (MSS)[1] satellite, known as MSV-1, at the 101° W.L. orbit location. The satellite will provide MSS on a common carrier basis within the United States, and between the United States and North America, Central America, the northern part of South America, and the Caribbean. Grant of this application will allow MSV to continue to serve its existing customers, expand the range of its services, and provide competitive communications services to the most rural and remote areas.

II. BACKGROUND

2. MSV is the successor to Motient Services, Inc. (formerly known as AMSC Subsidiary Corporation).[2] It is authorized to operate the U.S.-licensed L-band MSS satellite, AMSC-1, on up to 20 megahertz of spectrum (10 megahertz in each transmission direction) in the 1525-1544 MHz (space-to-Earth), 1545-1559 MHz (space-to-Earth), 1626.5-1645.5 MHz (Earth-to-space),

[1] As used in this *Order and Authorization*, the term "L-Band" denotes the 1525-1559 MHz and 1626.5-1660.5 MHz frequency bands.

[2] MSV is the only entity the Commission authorized to launch and operate a U.S. MSS system in the L-band. In November 2001, the Commission approved the application of Motient and TMI Communications and Company, Limited Partnership ("TMI") to consolidate their U.S. L-band MSS operations into a new company called Mobile Satellite Ventures LP ("MSV LP"). *See* Motient Services Inc., TMI Communications and Company LP, and Mobile Satellite Ventures LLC*, Order and Authorization*, 16 FCC Rcd 20469 (Int. Bur. 2001).

and 1646.5-1660.5 MHz (Earth-to-space) frequency bands for MSS service link operations[3] and in the 10.75-10.95 GHz (space-to-Earth) 13.0-13.15 GHz (Earth-to-space) and 13.2-13.25 GHz (Earth-to-space) frequency bands for Fixed-Satellite Service (FSS) feeder link operations.[4] AMSC-1 was launched into the 101° W.L. orbit location in 1995. MSV began offering service from that satellite in 1996.

3. In July 1998, MSV filed an application to launch and operate a satellite to replace AMSC-1 at the 101° W.L. orbit location.[5] MSV proposed to use up to 14 megahertz of spectrum in each of the 1626.5-1660.5 MHz and 1525-1559 MHz bands for service links. It also proposed to use 100 megahertz of spectrum in the 12.75-13.00 GHz band and 100 megahertz of spectrum in the 11.2-11.45 GHz band for feeder link operations.

4. In December 2000, MSV amended its application to request an additional 150 megahertz of feeder link spectrum in each transmission direction, for a total of 250 megahertz in each direction, in the 11.2-11.45 GHz (space-to-Earth) and 12.75-13.00 GHz (Earth-to-space) frequency bands.[6] In March 2001, MSV filed another amendment to add an ancillary terrestrial component ("ATC") to its system.[7] The Commission placed the application, as amended, on Public Notice in March 2001.[8] AT&T Wireless Services, Inc., Cellular Telecommunications and Internet Association (CITA), New ICO Global Communications Ltd., Inmarsat Ventures PLC, Aeronautical Radio, Inc., Deere & Company, Cingular Wireless LLC, Verizon Wireless, and SITA Information Networking Computing Canada, Inc. and Ericsson Inc. filed comments or petitions to deny the ATC component of the application.[9] The commenters objected to MSV's

[3] *See* Amendment of Parts 2, 22, 25 of the Commission's Rules to Allocate Spectrum for and to Establish Rules and Policies Pertaining to the Use of Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services, *Memorandum Opinion, Order and Authorization*, 4 FCC Rcd 6041 (1989) ("*MSV Licensing Order*") *remanded by* Aeronautical Radio, Inc. v. FCC, 928 F.2d 428 (D.C. Cir. 1991); *Final Decision on Remand,* 7 FCC Rcd 266 (1992); *aff'd,* Aeronautical Radio, Inc. v. FCC, 983 F.2d 275 (D.C. Cir. 1993); *see also* AMSC Subsidiary Corporation, *Memorandum Opinion and Order*, 8 FCC Rcd 4040 (1993) ("*MSV License Modification Order*") and Establishing Rules and Policies for the use of Spectrum for Mobile Satellite Services in the Upper and Lower L-band, *Report and Order*, 17 FCC Rcd 2704 (2002) ("*Lo*wer *L-Band Report and Order*").

[4] *MSV Licensing Order*, 4 FCC Rcd at 6048, para. 52. The term "feeder link" refers to fixed-satellite service radio links carrying signals in both directions between a MSS satellite and gateway earth stations. The gateway earth stations connect the MSS system with other networks, such as the public switched telephone network.

[5] *See* Application of AMSC Subsidiary Corporation, File No. SAT-LOA-19980702-00066 (Jul. 2, 1998).

[6] *See* Application of Motient Services Inc., File No. SAT-AMD-20001214-00171 (Dec. 14, 2000).

[7] *See* Application of Mobile Satellite Ventures Subsidiary LLC, File No. SAT-AMD-20010302-00019 (Mar. 2, 2001). The term "ancillary terrestrial component" means a terrestrial communications network used in conjunction with a qualifying satellite network system authorized pursuant to Commission rules.

[8] *See Public Notice*, Report No. SAT-00066 (Mar. 19, 2001).

[9] Kitcomm Satellite Communications Ltd. also filed comments. Kitcomm requested that the Commission not "slam the door" on competition in the lower L-band. At the time, Kitcomm had pending a Letter of Intent (LOI) to serve the U.S. market with a satellite licensed by Australia that would use a portion of the lower L-band. The Bureau subsequently dismissed the LOI because the proposed operations would interfere with existing service to customers. *See* Kitcomm Satellite Communications Ltd., *Order*, 19 FCC Rcd 6069 (Int'l Bur. 2004). Kitcomm and Deere also opposed the then-proposed merger of TMI and Motient on the groundgrounds that it would bar any possibility of

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request to use the L-band for terrestrial services. They believe that this use will result in a reduction of L-band satellite capacity and that such non-conforming use should be addressed in a rulemaking proceeding and not by waiver.

5. On November 4, 2003, MSV submitted a letter[10] requesting that the Commission refrain from applying its new bond requirement to its application. In the *Space Station Licensing Reform Order,*[11] the Commission replaced the then-existing financial qualification requirements with a requirement that a licensee execute a performance bond no later than 30 days after grant.[12] MSV states that because it wishes to continue to serve its established customers, there is no question about speculation or warehousing. MSV also claims that it would not have been subject to the bond requirement if the Commission had acted on its application sooner. MSV also argues that its intent to provide public safety services justifies a waiver of the bond requirement. EchoStar opposes MSV's request, noting that the Commission intended the new bond requirement to apply to all FSS and MSS satellite licensees seeking to operate on spectrum not previously licensed to it.[13]

6. MSV filed a further amendment[14] to its application in November 2003 to increase the amount of feeder link spectrum to 450 megahertz within the 12.75-13.25 GHz uplink band and 450 megahertz within the 11.2-11.45/10.75-10.95 downlink bands. The amendment also revised certain technical parameters for its replacement satellite[15] and deleted the ATC component of the Amendment.[16] MSV requested a waiver of Footnote NG104 of Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106, which limits use of these frequencies by GSO satellites

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competition in the United States. We addressed these comments in our Orderorder approving the Motient/TMI consolidation and need not address them further here. *See* note 2, *supra.*

[10] Letter from Lon Levin, Vice President, MSV to Marlene Dortch, Secretary, FCC (Nov. 4, 2003) ("*MSV Letter*") at 1.

[11] Amendment to the Commission's Space Station Licensing Rules and Policies*, First Report and Order and Notice of Further Rulemaking*, IB Docket No. 02-34, and Mitigation of Orbital Debris, *First Report and Order*, IB Docket No. 02-54, 18 FCC Rcd 10760 (2003) ("*Space Station Licensing Reform Order*").

[12] *Id*. at 10826, para. 170.

[13] Letter from Pantelis Michalopoulos, Counsel for EchoStar Satellite Corporation to Marlene H. Dortch, Secretary, FCC (Nov. 14, 2003) ("*EchoStar Letter*").

[14] *See* Application of Mobile Satellite Ventures Subsidiary LLC, File No. SAT-AMD-20031118-00335 (Nov. 18, 2003).

[15] *See* Application of Mobile Satellite Ventures Subsidiary LLC, File No. SAT-AMD-20031118-00335 (Nov. 18, 2003). The most significant changes MSV proposed to the technical parameters of the satellite are as follows: (i) to increase the size of the L-band service link antenna; (ii) to increase the Equivalent Isotropically Radiated Power (e.i.r.p.) of the satellite; (iii) to increase the potential number of L-band spot beams; and (iv) to modify the baseline air interface protocol from GMR only to GMR-2 (satellite adaptation of GSM), S-cdma2000 (satellite adaptation of cdma2000), and SWCDMA (satellite adaptation of W-CDMA). MSV included revised link budgets to reflect these changes.

[16] Rather, MSV applied for separate authority to add an ATC component to its in-orbit AMSC-1 satellite and to include an ATC component on future satellites, including MSV-1. We granted this authority in Mobile Satellite Ventures Subsidiary LLC, *Order and Authorization*, DA 04-3553 (Int'l Bur. 2004).

to international services only. MSV also requested a waiver of Section 25.210(j) of the Commission's rules, 47 C.F.R. § 25.210(j), to operate with a greater East-West station-keeping tolerance.

7. In February 2004, MSV again amended its application to request an additional 50 megahertz of spectrum (in each transmission direction) for feeder links at 10.70-10.75 GHz (space-to-Earth) and 13.15-13.20 GHz (Earth-to-space), for a total of 500 megahertz in each transmission direction.[17] In its amendment, MSV requested a further waiver of Footnote NG104 of Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106, to cover the additional spectrum. It also requested a waiver of Section 25.210(j) of the Commission's rules, 47 C.F.R. § 25.210(j), to operate with a greater East-West station-keeping tolerance.

8. PanAmSat Corporation (PanAmSat), Intelsat LLC (Intelsat), and SES Americom, Inc (SES) jointly filed an Opposition to the MSV station-keeping waiver request. They argue that allowing MSV to operate with an East-West station-keeping tolerance of ±0.10° would leave less geostationary satellite orbital space for satellites to be safely and easily co-located nearby.[18] DIRECTV, Inc. filed comments opposing MSV's waiver request due to the congestion at the nominal 101° W.L. orbit location where DIRECTV operates four satellites.[19] In response, MSV states that its second-generation satellite is bigger than typical satellites and will therefore expend most of its available fuel to achieve a geosynchronous orbit. MSV says that it will save fuel if we permit it to operate within a ±0.1° station-keeping box and that requiring it to adhere to a ±0.05° station-keeping box, which is required by the rules, will reduce the life of the satellite by one-half.[20]

9. On April 23, 2004, the Satellite Division sent MSV two letters, one of which dismissed the February 2004 amendment to add 50 megahertz of feeder link spectrum in each transmission direction and the other of which requested additional information concerning the 450 megahertz of feeder link spectrum in each direction previously requested.[21] We took this dual approach in light of a Public Notice we issued in December 2003.[22] In that Public Notice, we clarified the analysis applicants must use in the two-degree spacing showing required to be filed with each application for a new space station. We also indicated that we would provide applicants filing applications before the Public Notice with an opportunity to amend their applications to conform to the clarified requirements but would dismiss applications filed subsequent to the Public Notice that did not contain this analysis.[23] We therefore dismissed

[17] *See* Application of Mobile Satellite Ventures Subsidiary LLC, File No. SAT-AMD-20040209-00014 (Feb. 9, 2004).

[18] Joint Opposition at 1.

[19] DIRECTV comments at 1-2.

[20] MSV Response at 4.

[21] *See* Letter to Lon C. Levin, Vice President, Mobile Satellite Ventures Subsidiary LLC, from Thomas S. Tycz, Chief, Satellite Division, International Bureau, FCC, DA 04-1095 (Apr. 23, 2004) ("*MSV Dismissal Letter*").

[22] Public Notice, SPB-195, *International Bureau Clarification of C.F.R. 47 C.F.R. 25.140 (B)(2) Space Station Application Interference Analysis*, 18 FCC Rcd 25099 (Dec. 3, 2003).

[23] *Id*.

MSV's February 2004 Amendment but invited MSV to file a conforming amendment with respect to its earlier requests.

10. In response, MSV filed an interference analysis for its "pre-2004" frequencies. It also filed a Petition for Reconsideration of the Division's dismissal of its February 2004 Amendment, claiming it did not understand that it had to submit a two-degree spacing analysis when there were no operating or proposed co-frequency satellites within two degrees of MSV-1's proposed orbit location. EchoStar filed an Opposition to MSV's Petition for Reconsideration and MSV filed a Reply. In June 2004, to clarify the apparently common confusion about the need to file a two-degree analysis when there are no co-frequency adjacent satellites, we issued a Public Notice clarifying that, in such cases, the applicant must submit an analysis that demonstrates the compatibility of its system with an identical system at an assumed two degree separation.[24] We also stated that we would dismiss all applications that did not include this "hypothetical" analysis on a going-forward basis but that we would request this analysis from pending applicants that had not provided one.

11. In light of our decision to afford several then-pending applicants an opportunity to submit a two-degree spacing analysis pursuant to the June 2004 Public Notice, we granted MSV's Petition for Reconsideration and reinstated MSV's February 2004 Amendment.[25] Consistent with the June 2004 Public Notice, we afforded MSV an opportunity to provide the required two-degree spacing analysis for the spectrum requested in that Amendment. On September 28, 2004, MSV filed this analysis. It also filed further information pertaining to its request to operate the proposed satellite with an East-West station-keeping tolerance outside the permitted limit.[26]

12. We placed MSV's November 2003, February 2004, and September 2004 amendments on Public Notice on October 8, 2004.[27] EchoStar filed an Application for Review of the Bureau's reinstatement of MSV's February 2004 amendment, to which MSV filed an opposition and EchoStar filed a reply.[28]

III. DISCUSSION

A. Processing Procedure

13. MSV states that MSV-1 will be a replacement for its AMSC-1 satellite at the 101º W.L. orbit location. Given the huge costs of building, launching, and maintaining a satellite system, the Commission has provided GSO satellite operators the assurance that they will be

[24] Public Notice, SPB-207, 19 FCC Rcd 10652 (June 13, 2004)

[25] *See* Mobile Satellite Ventures Subsidiary LLC, *Order,* 19 FCC Rcd 18133 (Int'l Bur. 2004).

[26] *See* Application of Mobile Satellite Ventures Subsidiary LLC, File No. SAT-AMD-20040928-00192 (Sept. 28, 2004).

[27] *See* Public Notice, *Report No. SAT-00248* (Oct. 8, 2004).

[28] *See* Mobile Satellite Ventures Subsidiary LLC, Amendment to Application for Authority to Launch and Operate a Replacement MSS Satellite at 101 W.L., *Application for Review*, filed October 15, 2004 by Echostar Satellite LLC (Echostar Application for Review).

able to continue to serve their customers once their in-orbit satellite is retired.[29] While this is the first request for a follow-on NGSO-like satellite,[30] the replacement expectancy is equally applicable here. The Commission considers applications for replacement satellites on a streamlined processing basis and will "grant stamp" the application if the applicant is otherwise qualified.[31] The Commission has held, however, that a licensee has no replacement expectancy with regard to next-generation satellites that increase the system's coverage area or use additional frequencies.[32]

14. We disagree with MSV's characterization of MSV-1 as a replacement satellite. MSV requests additional spectrum in both the service-link bands and in the feeder-link bands. In the service-link L-band, MSV requests authority to operate MSV-1 on 14 megahertz of spectrum in each direction. AMSC-1, however, is authorized to operate on 10 megahertz in each direction. Thus, MSV is not entitled to a replacement expectancy with respect to the additional 4 megahertz of spectrum in each direction and we would ordinarily subject this additional spectrum to the modified processing round procedure established for NGSO-like systems in the *Space Station Licensing Reform Order*.[33] However, in its *Lower L-band Report and Order*,[34] the Commission limited MSV's L-band operations to 10 megahertz of spectrum in each transmission direction. Citing strides in spectrum-efficient MSS technologies in reducing the amount of spectrum required for an economically viable L-band MSS system, the Commission modified MSV's license for AMSC-1 from 14 megahertz of spectrum in each transmission direction in the "upper" portion of the L-band to 10 megahertz of spectrum in each direction across both the "lower" and "upper" L-bands.[35] The Commission further indicated that if it could coordinate internationally more than 10 megahertz in each direction for a U.S. MSS system, it would first consider applications from other U.S. MSS applicants before considering awarding the additional spectrum to MSV.[36] MSV has not provided any reason for us to revisit this decision. Thus, we deny MSV's request for an additional 4 megahertz of L-band spectrum in each direction. In light of this denial, we can now consider the service-link portion of the MSV-1 application as a replacement application. This means that we can consider the L-band portion of MSV-1 without instituting a processing round.

15. MSV also requests authority to use previously unauthorized spectrum for its fixed-satellite service (FSS) feeder-links. Because feeder links use directional earth station antennas and can provide co-frequency, co-coverage service at geostationary satellite orbital

[29] *See e.g.,* Licensing of Space Stations in the Domestic Fixed-Satellite Service, *Report and Order,* 50 Fed. Reg. 36071 (Sept. 5, 1985), at para. 27.

[30] While the MSV-1 satellite will operate in geostationary-satellite orbit, we consider the service-link portion as "NGSO-like" for processing purposes because the satellite will communicate with user terminals with omnidirectional antennas. *See Space Station Licensing Reform Order*, 18 FCC Rcd at 10773, para. 21.

[31] *Space Station Licensing Reform Order*, 18 FCC Rcd at 10856, para 253.

[32] *Space Station Licensing Reform Order*, 18 FCC Rcd at 10857-58, para. 258.

[33] *Space Station Licensing Reform Order*, 18 FCC Rcd at10760, 10782-90, paras. 48-67.

[34] *Lower L-Band Report and Order*, 17 FCC Rcd at 2704, para. 19.

[35] *Id.*

[36] *Lower L-Band Report and Order*, 17 FCC Rcd at 2704, para. 20.

spacing of two degrees, we consider them as GSO-like for processing purposes.[37] Thus, we will consider this portion of MSV's request pursuant to the processing procedures for new GSO-like satellites. Specifically, MSV's request to use additional FSS feeder links is governed by the first-come first-served policy for GSO-like satellites set forth in S*pace Station Licensing Reform Order*.[38] Under the first-come first-served procedure, the Commission will grant an application if the proposed satellite will not cause harmful interference to a previously licensed satellite or a satellite proposed in a previously filed application and the applicant is otherwise qualified. The Commission will not take action on subsequent applications until it acts on the mutually exclusive application that is "first-in-line."

16. MSV proposes to use 500 megahertz of frequency in each direction for its feeder link operations. Of this total, there is no dispute that MSV is first-in-line for 450 megahertz in each direction.[39] EchoStar disputes MSV's first-in-line status with respect to the 10.70-10.75 GHz (space-to-Earth) and 13.15-13.20 GHz (Earth-to-space) frequency bands that MSV requested in its February 9, 2004 amendment. Echostar had previously requested to use the same frequencies as part of its earlier filed application to construct, launch and operate a satellite at the 101° W.L. orbit location. On February 9, 2004, the Satellite Division dismissed, without prejudice to refiling, EchoStar's application as both incomplete and internally inconsistent.[40] Later that day, MSV filed its amendment to use this same 100 megahertz of spectrum (50 megahertz in each direction) on its proposed satellite at 101° W.L. On February 10, 2004, EchoStar refiled an application that included the same 100 megahertz of spectrum. The Commission subsequently dismissed MSV's February 2004 amendment for failure to file a two-degree interference analysis. As noted, the Commission later reinstated MSV's application given the confusion about the need to file a two-degree spacing interference analysis when there are no co-frequency satellites operating or licensed within two degrees of the proposed satellite.[41] As a result, MSV is first-in-line in the processing queue with respect to this 100 megahertz of spectrum. Further, we disagree with EchoStar that any grant to MSV that precludes others from using this 100 megahertz of spectrum would increase the risk of "warehousing" this spectrum.[42] The Commission's first-come first-served procedure for GSO-like applications—which was

[37] In cases where a proposed satellite has both "NGSO-like" and "GSO-like" components, such as MSV-1, the Commission stated it will consider the proposal as two separate applications. It will consider the GSO-like portion under the "first-come, first-served"procedure and the NGSO-like portion under the modified processing round procedure. *Space Station Licensing Reform Order*, 18 FCC Rcd at 10786, paras. 57.

[38] *Space Station Licensing Reform Order*, 18 FCC Rcd at10760, 10810-12, paras.125-131.

[39] For clarity of discussion, we include in this total the 200 megahertz in each direction that the Commission has already authorized to AMSC-1 for feeder-links in the 10.75-10.95 GHz and 13.0-13.15/13.2-13.25 GHz bands. We recognize that MSV is entitled to a "replacement expectancy" for this spectrum but, as a practical matter, we will grant it operating authority for this spectrum on MSV-1 on either a "replacement expectancy" or "first-in-line" basis if we find MSV otherwise qualified.

[40] Letter to David K. Moskowitz, Senior Vice President and General Counsel, EchoStar Satellite Corporation from Thomas Tycz, Chief, Satellite Division, FCC, DA 04-323 (Feb. 9, 2004) ("EchoStar Dismissal Letter") (finding inconsistencies between requested frequency bands and incomplete technical information regarding the Channel Frequency Plan).

[41] Mobile Satellite Ventures LLC, *Order*, 19 FCC Rcd at 18133.

[42] *See* Letter from Pantelis Michalopoulos, Counsel for EchoStar Satellite Corporation, to Marlene H. Dortch, Secretary, FCC (Mar. 25, 2005).

designed to give applicants filing first the sole license to operate on the proposed frequencies—contains a variety of safeguards to prevent warehousing.[43] Consequently, MSV is first-in-line for all of its proposed 1000 megahertz of feeder link spectrum (500 megahertz in each direction) under the Commission's first-come first-served policy[44] and we will award it a license to operate on these frequencies if it is qualified.[45]

B. Legal Qualifications

17. In considering applications to launch and operate a new satellite system, we must determine whether a grant will serve the public interest. In making this determination, we consider, among other things, whether the applicant is qualified to launch and operate the satellite. The Commission has previously granted MSV space station licenses, finding that MSV possesses the requisite legal qualifications to hold a Commission license. Nothing in the record here suggests that we revisit this conclusion.

C. Technical Qualifications

1. ATC

18. Several entities challenged MSV's request to provide ATC services using MSS frequencies. Those arguments are moot in light of the Commission's finding that MSS providers can provide ATC in conjunction with the provision of MSS over MSS frequencies[46] and the Commission's recent authorization of MSV to provide ATC services in conjunction with its provision of MSS in the L-band.[47]

[43] Among other things, licensees must post a performance bond within 30 days and must adhere to specified construction milestones. *Space Station Licensing Reform Order*, 18 FCC Rcd at 10826, para. 170.

[44] On October 15, 2004, EchoStar filed an application for review requesting the Commission to review its decision to reinstate MSV's February 2004 amendment. EchoStar's application for review is pending. This grant to MSV is, of course, subject to the outcome of that proceeding.

[45] EchoStar recently suggested that it may be able to coordinate shared use of this 50 megahertz with MSV. *See* LetterLetters from Pantelis Michalopoulos, Counsel for EchoStar Satellite Corporation, to Marlene H. Dortch, Secretary, FCC (Mar. 25, 2005 and Apr. 19, 2005). MSV states that it is willing to discuss a sharing arrangement with EchoStar. *See* Letters from Jennifer A. Manner, Vice President, Regulatory Affairs for MSV to Marlene H. Dortch, Secretary, FCC (Apr. 4, 2005 and Apr. 29, 2005). If the parties reach an agreement, we will entertain a request that involves co-frequency operations.

[46] Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L--Band, and the 1.6/2.4 GHz Bands; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz bands, *Report and Order and Notice of Proposed Rulemaking*, IB Docket Nos. 01-185 and 02-364, 18 FCC Rcd 1962 (2003), petitions for reconsideration pending (*ATC Report and Order),* modified *sua sponte* by *Order on Reconsideration*, 18 FCC Rcd 13590 (2003).

[47] Mobile Satellite Ventures Subsidiary LLC, *Order and Authorization*, DA 04-3553 (Int'l Bur. 2004). In this Order and Authorization, we granted MSV's request for ATC authority, subject to certain conditions, and contingent upon the grant of the then-pending license application for MSV-1. The *Order and Authorization* also provided that MSV's ATC authority will expire concurrently with the MSV-1 license, if granted.

2. East-West Station-keeping Tolerance

19. MSV requests a waiver of Section 25.210(j) of the Commission's rules,[48] which requires that GSO space stations be maintained within ±0.05° of their assigned orbital longitude in the east/west direction, unless specifically authorized by the Commission to operate with a different longitudinal tolerance, and except as provided in Section 25.283(b) (end-of-life disposal) of the Commission's rules.[49] MSV seeks to operate within ±0.10° of its assigned nominal GSO orbital longitude.[50] According to MSV, a waiver is justified because there are no nearby satellites to which MSV-1's operations could cause interference.[51] In addition, MSV states that the costs of complying with a ±0.05° east-west station-keeping tolerance (such as increased fuel to maintain a tighter tolerance) outweigh any purported benefits. [52]

20. DIRECTV, Inc. states that the very congested 101° W.L. orbit location is not an appropriate candidate for relaxation of the East-West station-keeping rules. DIRECTV notes that it operates four satellites at the 101° W.L. orbit location and is constrained by international agreement to locate all of its DBS satellites at the nominal 101° W.L. orbital location within a 0.4° "box" bounded by 100.8° W.L. and 101.2° W.L.[53] DIRECTV observes that MSV seeks to operate in one-half of the "box" in which all DIRECTV satellites must operate. PanAmSat, Intelsat and SES Americom also argue that a larger station-keeping box at 101° W.L. would adversely affect co-located satellites.[54] With so many satellites clustered at 101° W.L., they state that some satellites might be forced to operate in overlapping longitudinal boxes.[55] In that case, they note that an alternative co-location strategy would be needed to avoid close approaches, which would increase fuel usage for neighboring satellites, while MSV would conserve fuel at their expense.[56] Finally, they acknowledge that all satellite operators have to endure a fuel penalty in order to comply with the Commission's station-keeping rules. In response, MSV argues that the Commission has not applied a ±0.05° East-West station-keeping box to GSO MSS satellites. MSV also cites the large mass of MSV-1 compared to other satellites, which will require that all of its available fuel will be expended in order to achieve its final geosynchronous orbit. [57]

[48] 47 C.F.R. §25.210(j).

[49] 47 C.F.R. § 25.283 (b). *See also Orbital Debris Order,* 19 FCC Rcd at 11567.

[50] MSV Application File No. SAT-AMD-20040209-00014 at 16. We construe this request as one to maintain the MSV satellite within ±0.1° of its assigned orbital longitude, as assessed at the nodal point of the orbit.

[51] MSV Application File No. SAT-AMD-20040209-00014 at 17.

[52] MSV Application File No. SAT-AMD-20040209-00014 at 17.

[53] DIRECTV comments at 2.

[54] Joint Opposition at 1.

[55] Joint Opposition at 2.

[56] Joint Opposition at 2.

[57] MSV Reply at 4.

21. The Commission may grant a waiver for good cause shown.[58] Waiver is appropriate if (1) special circumstances warrant a deviation from the general rule and (2) such deviation would better serve the public interest than would strict adherence to the general rule.[59] Generally, the Commission may grant a waiver of its rules in a particular case only if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest.[60] MSV states that a waiver is justified because there are no other satellites to which it could cause interference. MSV's analysis, however, is limited to those systems that are operating co-frequency with the MSV spacecraft and does not include other spacecraft that are not co-frequency, but may be impacted by the extended station-keeping box. Indeed, the operators of several of these satellites have raised concerns about MSV's proposed station-keeping box. Given this, we find that a waiver would undermine the policy objectives of this rule and would not serve the public interest. Accordingly, we deny MSV's waiver request.

3. North-South Station-keeping Tolerance

22. To save station-keeping fuel, MSV also requests authority to operate MSV-1 with an initial north-south inclination[61] of as much as six degrees.[62] This inclination would decrease under the influence of gravitational forces of the sun and moon and then would begin to increase, thereby fluctuating between about zero and six degrees during the expected life of the satellite. MSV states that its satellite will operate consistent with the requirements for inclined orbit satellites set forth in Section 25.280 of the Commission's rules.[63] We grant MSV's request. We note, however, that granting this request creates a potential for harmful interference between MSV-1's Ku-band operations and Ku-band NGSO fixed-satellite service (FSS) satellites. Pursuant to ITU Radio Regulations, GSO satellites such as MSV-1 are protected against interference from NGSO FSS satellites operating in the same band, provided that the GSO satellite's north-south inclination is 4.5º or less.[64] Thus, during those periods in which MSV-1 will operate at an inclination of up to 4.5°, MSV's network will be fully protected from interference from NGSO FSS networks.[65] During the periods in which MSV-1 will operate at an inclination more than 4.5º, its operations will not be protected from such NGSO operations. MSV will receive only the protection afforded to GSO satellites within a 4.5° north-south station-keeping inclination. We expect MSV to coordinate its operations at these higher

[58] 47 C.F.R. § 1.3. *See also* WAIT Radio v. FCC, 418 F.2d 1153 (D.C. Cir. 1969) (*WAIT Radio*); Northeast Cellular Tel. Co. v. FCC, 897 F.2d 1166 (D.C. Cir. 1990) (*Northeast Cellular*).

[59] *See Northeast Cellular*, 897 F.2d at 1166.

[60] *See WAIT Radio*, 418 F.2d at 1157.

[61] The inclination of an orbit is the angle between the orbital plane and the Earth's equatorial plane, measured counter-clockwise. A zero inclination orbit would mean the satellite is orbiting directly over the equator; an inclination of 90 degrees is a perfectly polar orbit.

[62] MSV Application File No. SAT-AMD-20040209-00014 at 17.

[63] 47 C.F.R. § 25.280.

[64] *See* Article 22.5I, Table 22-4A.

[65] *See* Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-frequency With GSO and Terrestrial Systems in the Ku-Band Frequency Range, *First Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 4096 (2000), at 4143-44.

23. inclinations with licensed NGSO FSS operators. Absent a coordination agreement, we require MSV-1's operation at inclinations between 4.5° and 6° to be on an unprotected and non-harmful interference basis to NGSO FSS satellites and MSV will receive only the protection afforded to GSO satellites within the 4.5º North-South station-keeping box.[66]

4. L-band Operations

a. Introduction

24. MSV-1 will have separate antenna systems for the service and feeder links. The service link antenna will use a 24-meter reflector with approximately 400 spot beams for coverage of the contiguous forty-eight states, Alaska, Canada, Mexico, Central America, the northern part of South America and the Caribbean. Under the International Table of Frequency Allocations, the 1525-1535 MHz band is allocated on a co-primary basis[67] to MSS and the Space Operation Service in Region 2.[68] The 1535-1559 MHz and 1626.5-1660 MHz bands are allocated on a primary basis to MSS. The 1660-1660.5 MHz band is allocated on a co-primary basis to MSS and the Radio Astronomy Service.[69] Domestically, the Commission has allocated the 1525-1559 MHz and 1626.5-1660 MHz bands to MSS on a primary basis and the 1660-1660.5 MHz bands on a co-primary basis to MSS and the Radio Astronomy Service.[70] In addition, there are a number of footnotes to the allocation table that place additional constraints on MSV's operations in portions of these bands. We discuss these in turn.

b. Co-Primary Allocation for the Space Operations Service

25. As noted, the 1.5 GHz downlink band is allocated on a co-primary basis to MSS and the Space Operations Service in Region 2. We remind MSV that it must coordinate its operations with co-primary operations in the 1525-1535 GHz band under the ITU Radio Regulations and that its operations are not entitled to any protection from interference until it has completed coordination.

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[66] To the extent MSV's planned operations in inclined orbit are impacted by denial of its request for waiver of the east-west station-keeping requirement, MSV will need to seek modification of its authorization to reflect any change in planned operations.

[67] Space stations operating in primary services are protected against interference from stations of secondary services. Stations operating in the secondary service cannot cause harmful interference to or claim protection from harmful interference from stations of a primary service. Co-primary services have equal rights to operate in particular frequencies. 47 C.F.R. §§ 2.104(d) and 2.105(c).

[68] For the allocation of frequencies, the International Telecommunication Union (ITU) has divided the world into three regions. Region 2 includes North and South America. *See* 47 C.F.R. § 2.104.

[69] 47 C.F.R. § 2.106.

[70] *See* Amendment of Parts 2, 25, and 87 of the Commission's Rules to Implement Decisions from World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range, ET Docket No. 02-305, FCC 03-269 (2003).

c. Passive Research for Extraterrestrial Emissions

26. According to Footnote 5.341 of the ITU Radio Regulations, some countries are conducting passive research in the 1525-1559 MHz band to search for intentional emissions of extraterrestrial origin.[71] The use of the 1525-1559 MHz band by the mobile-satellite service is subject to coordination under Article No. 9.11A of the ITU Radio Regulations.[72] Thus, we require MSV to coordinate its MSS operations in good faith with passive research operations being conducted by other countries. Further, 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 of other administrations.[73]

d. Maritime and Aeronautical Mobile-Satellite Distress Communications Services

27. International Footnote 5.353A of the ITU Radio Regulations states that MSS systems operating in the 1530-1544 and 1626.5-1645.5 MHz frequency bands may not interfere with maritime mobile-satellite service (MMSS) distress, urgency, and safety communications that are also operating in these frequencies. International Footnote 5.353A protects MMSS distress, urgency, and safety communications, such as Global Maritime Distress and Safety System ("GMDSS"), by providing priority access and real-time preemptive capability for GMDSS communications. Domestically, to ensure MSS compliance with the provisions of Footnote US315, which is similar to International Footnote 5.353A, the Commission established priority access and preemption requirements and policies for the mobile-satellite service in this band and incorporated these requirements into its rules. [74]

28. Further, mobile-satellite service operators must comply with International Footnote 5.357A of the ITU Radio Regulations for operations in the 1545-1555 and 1646.5-1656.5 MHz frequency bands and with International Footnote 5.362A of the ITU Radio Regulations for operations in the 1555-1559 MHz and 1656.5-1660.5 MHz bands. They provide that the aeronautical mobile-satellite (R) service (AMS(R) S) shall have priority access and immediate availability over all other MSS operations. AMS(R) S is a mobile satellite service using mobile terminals on-board aircraft. This service can be used to support domestic and international air traffic, including air traffic control. The (R) indicates that the spectrum is used for aeronautical communications related to the safety and regularity of flights primarily along national and international civil air routes. Further, MSS systems operating in these bands may not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44 of the ITU Radio Regulations.[75]

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[71] International Footnote 5.341 to Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106.

[72] *See* International Footnote 5.354 to Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106.

[73] *See* 47 C.F.R. § 25.111(b).

[74] *Lower L-band Report and Order,* 17 FCC Rcd at 2704.

[75] Article 44.1 of the ITU's Radio Regulations sets forth the order of priority for communication in the aeronautical mobile service and aeronautical mobile-satellite service. Priorities 1-6 are as follows: 1) distress calls, distress (continued....)

29. MSV must comply with the Commission's rules regarding priority access and real-time preemption because its Satellite Ground Station Subsystem (GSS) and Mobile Switching Center (MSC) will manage all satellite resources (*i.e.*, frequencies and power) and completely control the allocation of those resources to the mobile user terminals that use the satellite. MSV states that its satellite system will comply with all applicable requirements. As with the current system, the licensee will maintain a reserve pool of resources that will permit any additional demands of the AMS(R) S and GMDSS network to be met immediately. This AMS(R) S and GMDSS reserve pool will be maintained by retrieving resources from within the MSV network. We believe that the continuation of this practice, which has been successful on MSV's existing satellite, represents a reasonable approach to meeting MSV's priority and preemption requirements.

30. MSV does not request authority for U.S. fixed-gateway earth stations and mobile earth terminals (METs). Gateway earth stations and METs located in the United States will be licensed under separate applications in accordance with Part 25 of the Commission's rules. Nonetheless, in 1993, the National Telecommunications and Information Administration (NTIA) and the Federal Aviation Administration (FAA) created a minimum set of capabilities to ensure that fixed-gateway earth stations and METs operating in the 1545-1559 MHz and 1646.5-1660.5 MHz bands comply with Footnote US308 and ITU Radio Regulations 5.357A and 5.362A.[76] We will require that any U.S. fixed-gateway earth station and METs communicating via MSV-1 meet the minimum set of capabilities set forth in the "1993 NTIA Recommendations."

31. We also will require that all METs accessing MSV-1 conform to the emission limitations set forth in Section 25.216 of the Commission's Rules.[77] These emission levels were adopted in the *Global Mobile Personal Communications by Satellite* proceeding.[78] These emission levels were designed to protect the Global Navigation Satellite Systems (GNSS). For all transmissions, a limited amount of power radiates outside of the "operating" bandwidth. These "out-of-band" emissions may cause interference into another system. For this reason, the Commission has created rules to govern such emissions.[79] All METs must comply with the Commission's rules dealing with emission limitations.[80] Further, we anticipate that METs accessing MSV-1 located on aircraft will be type accepted under Part 87 of the Commission's rules.[81] Finally, International Footnote 5.374 of the ITU Radio Regulation requires that mobile

(...continued from previous page)
messages and distress traffic; 2) communications preceded by the urgency signal; 3) communications relating to radio direction-finding; 4) flight safety messages; 5) meteorological messages; and 6) flight regularity messages.

[76] *See* Letter to Cheryl Tritt, Chief, Common Carrier Bureau, FCC, from Richard D. Parlow, Associate Administrator, Office of Spectrum Management, NTIA, and Gerald Markey, Manager, Spectrum Engineering Division, FAA, and attachment to the letter, dated January 14, 1993 ("1993 NTIA Recommendations").

[77] 47 C.F.R. §§25.216(h), (i).

[78] *See* Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements, IB Docket No. 99-67, *Report and Order and Further Notice of Proposed Rulemaking*, 17 FCC Rcd 8309 (2002) (modified in *GMPCS*, *Second Report and Order*, IB Docket No. 99-67, 18 FCC Rcd 24423 (2003)).

[79] *See* 47 C.F.R. § 25.202(f).

[80] 47 C.F.R. § 25.202(f).

[81] 47 C.F.R. § 87.147.

earth stations in the mobile-satellite service operating in the bands 1631.5-1634.5 MHz and 1656.5-1660 MHz shall not cause harmful interference to stations in the fixed service operating in the countries listed in No. 5.359.[82] Therefore, we require MSV to ensure that all METs accessing MSV-1 comply with International Footnote 5.374 of the ITU Radio Regulation.

e. Distress and Safety Communications

32. MSV has requested authority to use the 1544-1545 MHz and 1645.5-1646.5 MHz band segments. According to International Footnotes 5.356 and 5.375 of the ITU Radio Regulations, the use of these bands by the mobile-satellite service is limited to distress and safety communications.[83] MSV proposes to use MSV-1 to provide commercial MSS services to North America, Central America, the northern part South America and the Caribbean. Given the broad range of commercial services provided on the MSV system, we will not permit MSV-1 to operate in the 1544-1545/1645.5-1646.5 MHz bands and potentially disrupt emergency communications in these bands.

f. Radio Astronomy Service

33. MSV has requested authority to operate in the 1660-1660.5 MHz band segment. The 1660-1660.5 MHz segment is allocated on a co-primary basis to MSS and the Radio Astronomy Service (RAS). International Footnote 5.376A of Section 2.106 of the Commission's rules states that mobile earth stations operating in the band 1660-1660.5 MHz shall not cause harmful interference to stations in the radio astronomy service.[84] In addition, Footnote US342 of Section 2.106 of the Commission's rules states that all practicable steps shall be taken to protect the radio astronomy service from harmful interference.[85] We remind MSV that it must coordinate with co-primary operations in the 1660-1660.5 MHz band and that its operations are not entitled to any protection from interference until it has completed coordination.

g. Coordination with other L-band MSS Systems

34. In North America and nearby international airspace and maritime areas, five satellite systems, which all operate in geostationary-satellite orbit (GSO), currently provide service in the L-band's 66 megahertz (33 megahertz in each transmission direction) MSS allocation. In 1996, the operators of the five North American L-band systems signed a Memorandum of Understanding (MoU). The MoU specified that "[s]pectrum allocations to individual operators will be reviewed annually on the basis of actual usage and short-term projections of future need." Unlike most international coordinations that create permanent assignments of specific spectrum, the operators' assignments can change from year to year based on their marketplace needs. While the most recent operator-to-operator agreement dates from

[82] *Also see* International Footnote 5.374 to Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106.

[83] International Footnotes 5.356 and 5.375 to Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106

[84] *See* International Footnote 5.376A in ITU Radio Regulation or Section 2.106 of the Commission's rules, which states: "Mobile earth stations operating in the band 1660-1660.5 MHz shall not cause harmful interference to stations in the radio astronomy service."

[85] 47 C.F.R. § 2.106, Footnote US342 .

1999, the five parties have continued to coordinate their operations informally and have been operating interference-free. We expect MSV to continue to operate MSV-1 in accordance with the current arrangement with other MSS providers and in compliance with any subsequent agreement. We also remind MSV that until coordination is completed, its operations will be on a non-harmful interference basis to other lawfully operating satellite or radio facilities and will receive no protection from interference caused by those facilities.

5. Ku-band Operations

a. International Plan

35. MSV's fixed-satellite service feeder link and TT&C operations will be conducted in the 10.7-10.95/11.2-11.45/12.75-13.25 GHz frequency bands from earth stations in the United States. According to International Footnote 5.441 of the Table of Frequency Allocations,[86] use of these bands by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the plan prescribed in Appendix 30B of the ITU Radio Regulations. The plan already provides for operation of a U.S.-licensed satellite at 101° W.L. Appendix 30B specifies a procedure for modifying the plan to permit additional FSS uses upon a showing of compatibility with FSS allotments and assignments pursuant to the plan. We have previously modified the plan for 200 megahertz of spectrum MSV is currently using. MSV did not submit a revised Appendix 30B analysis with its request for an additional 300 megahertz of feeder link spectrum. Nevertheless, we agree with MSV that it should be able to resolve any excess interference through coordination agreements with affected administrations. Thus, while we grant MSV operating authority for its proposed Ku-band operations, the operating authority is contingent upon the issuance of a favorable ITU finding pursuant to Appendix 30B, Article 6, and Section III of the ITU's Radio Regulations. Until such a finding is issued, we will allow MSV to operate on this Ku-band spectrum on a non-harmful interference basis.

b. Two-Degree Spacing

36. The Commission's FSS satellite licensing policy is predicated upon two-degree orbital spacing between geostationary satellites.[87] This policy permits the maximum use of the geostationary satellite orbit.[88] MSV has submitted the technical information specified in the Commission's rules.[89] Upon review of this information, we find that MSV-1's FSS feeder link and TT&C operations are two-degree compliant and meet all other technical requirements for these feeder link operations.

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[86] International Footnote 5.441 to Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106.

[87] For more information regarding the Commission's two-degree spacing policy, see Licensing Space Stations in the Domestic Fixed-Satellite Service, 48 F.R. 40233 (Sept. 6, 1983).

[88] *See, e.g.*, Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service, *Order and Authorization*, 11 FCC Rcd 13788 (1996), at 13790. Prior to the Commission's adoption of the two-degree spacing policy, satellites in the geostationary satellite orbit were usually spaced three or four degrees apart. By adopting rules that enabled satellite operators to place their space stations two degrees apart, the Commission was able to accommodate more geostationary satellites.

[89] *See* 47 C.F.R. §§ 25.114 and 25.210.

37. We note, however, that although there are no power-flux-density ("PFD") limits in the Commission's rules for emissions from a GSO satellite in MSV's proposed downlink bands, the ITU has established PFD restrictions to prevent interference with terrestrial wireless services.[90] MSV's PFD specifications are consistent with these restrictions.[91]

c. Waiver of Footnote NG104

38. Footnote NG104 of Section 2.106 of the Commission's rules states that use of the 10.7-11.7 GHz and 12.75-13.25 GHz bands in the United States by the fixed-satellite service in the geostationary-satellite orbit shall be limited to international systems.[92] MSV requests a waiver of this rule for its feeder link and TT&C operations, which will be conducted from two earth stations in the United States.

39. The Commission previously granted MSV a waiver of NG104 for its current satellite, AMSC-1, to allow it to use a total of 200 megahertz in each direction for feeder links.[93] MSV states that its proposed operations on MSV-1 will similarly involve only a small number of feeder link earth stations and thus will not hinder the development of terrestrial fixed services that share the band on a co-primary basis.[94] Indeed, the Commission recently granted a number of similar waiver requests, including one for MSV's MSV-2 satellite. In granting these waivers, the Commission said that allowing small numbers of gateway earth stations to operate in this portion of the Ku-band should not increase the frequency coordination burden on terrestrial wireless services significantly more than the burden imposed by existing permitted use of those bands by international systems.[95]

40. Accordingly, we grant MSV's request for waiver of Footnote NG104 for its feeder links and TT&C operations, which will be conducted in the 11.45 GHz and 13.25 GHz frequency bands at its existing gateway earth stations in Reston, Virginia and Alexandria, Virginia. As such, we find that the two TT&C earth stations should not significantly increase the

[90] *See* Section V of Article 21 of the ITU's Radio Regulations.

[91] MSV Application SAT-AMD-20040209-00014 at 18. The Commission has established identical PFD limits for downlinks in the adjacent 10.95-11.2 GHz band. *See* 47 C.F.R. § 25.208(b).

[92] 47 C.F.R. § 2.106 Footnote NG104.

[93] *MSV Licensing Order* at 6052, paras. 64-72.

[94] For example, the Commission has declined to amend Footnote NG104 to permit NGSO FSS user terminals to operate in this band because doing so would permit a "ubiquitous deployment" of earth stations that would hamper development of terrestrial services. Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range, *First Report and Order and Further NPRM*, 16 FCC Rcd 4096, (2000) ("*Ku-band NGSO FSS Order"*). Appendix 30B of the ITU Radio Regulations identifies the following frequency bands for the fixed-satellite service plan: 4500-4800 MHz, 6725-7025 MHz, 10.70-10.95 GHz, 11.20-11.45 GHz and 12.75-13.25 GHz.

[95] *Ku-band NGSO FSS Order* at ¶ 31 and n.65 (refusing to limit the number of NGSO FSS gateway earth stations that could operate, but noting that most applicants proposed to deploy less than five gateways). Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, *Notice of Proposed Rulemaking*, 14 FCC Rcd 4843 (1999), at ¶53. In re: Boeing Co., *Order and Authorization*, 18 FCC Rcd 12317 (2003). *See also* Mobile Satellite Ventures Subsidiary LLC, *Order and Authorization*, DA No. 05-50 (Int'l Bur. 2005 ("*MSV-2 Order*").

coordination burden on Fixed-Service applicants. MSV must still apply for license modifications of those two earth stations to request authority to communicate with MSV-1 on the additional spectrum in the 11.45 GHz and 13.25 GHz frequency bands.

d. Protection of Other Services

41. As noted, the Commission has allocated the 10.7-11.7 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) frequency bands on a co-primary basis with the Terrestrial Fixed Service.[96] The Commission has also allocated the 12.75-13.25 GHz (Earth-to-space) band to FSS on a co-primary basis with the Terrestrial Mobile Service.[97] MSV shall comply with Section 25.203(c) of the Commission's rules, 47 C.F.R. § 25.203(c), which sets forth coordination and other procedures designed to ensure that there is no harmful interference between stations operating in co-primary services. In addition, we expect MSV to take the same measures to protect terrestrial fixed and terrestrial mobile services that it set forth in its application for its MSV-2 satellite serving South America.[98] First, MSV shall coordinate its feeder link stations with terrestrial fixed and mobile systems as required by Section 25.203(c) of the Commission's rules.[99] In addition, MSV shall have a coordination study conducted on its earth stations to determine their suitability for operation and will apply mitigation techniques to ensure adequate protection of the earth stations and terrestrial systems. To ensure that its feeder link operation will not impede implementation of the Commission's spectrum-relocation policy for Fixed Service licensees currently operating in the 18.3-19.3 GHz band, we expect MSV to demonstrate when applying for feeder link earth station licenses that the proposed uplink operation would not interfere with, or require protection from, the operation of any existing Fixed Service station at its current site in the event that the Fixed Service station's assigned frequencies were to be shifted pursuant to Section 101.85, Section 101.89, Section 101.91, or Section 101.95 of the Commission's rules. [100]

42. In addition to protecting fixed and mobile services, we also expect MSV to protect other services operating in the bands it will be using. First, the 12.75-13.25 GHz band is allocated to the space research service (deep space) (space-to-Earth) for reception only at Goldstone, California. [101] We require MSV to take "all practicable steps" to ensure that its feeder link transmissions will not interfere with this service. Additionally, Footnote NG53 of Section 2.106 of the Commission's rules reserves the 13.15-13.20 GHz band for television pickup and Cable Television Relay Service ("CARS") inside a 50 kilometer radius of the top 100 television markets identified in Section 76.51 of the Commission's rules.[102] To avoid interfering

[96] 47 C.F.R. § 2.106.

[97] *Id.*

[98] *MSV-2 Order,* DA No. 05-50 (rel. Jan. 10, 2005), at paras. 29-31.

[99] 47 C.F.R. § 25.203(c).

[100] 47 C.F.R. §§ 101.85, 101.89, 101.91, 101.95.

[101] *See* 47 C.F.R. § 2.106, Footnote US251.

[102] MSV states that it understands that authority for uplink transmission in any portion of the 12.75-13.25 GHz band for which MSV does not already have authority will be withheld pending adoption of rules for coordination of such operation with Broadcast Auxiliary Service ("BAS") and CARS mobile pickup operations.

with these services, we will not permit MSV to transmit in the 13.15-13.2125 GHz band from a site within 50 kilometers of a top 100 television market identified in of the Commission's rules.[103]

43. Last, Footnote US211 of Section 2.106 of the Commission's rules states that space station operators in the 10.7-11.7 GHz band should take all practicable steps to protect radio astronomy observations from harmful interference in adjacent bands.[104] MSV states that the National Science Foundation has informed it that the protection level required at radio astronomy sites in the 10.6-10.7 GHz band is -160 dBW/m^2. [105] MSV has agreed to equip its replacement satellites with a transmitter output filter to limit the emissions in the 10.6-10.7 GHz band at or below this level. Existing in-orbit satellites in this band employ such a filter as part of past agreements between the MSS and radio astronomy communities. Consequently, subject to this agreement, we allow MSS to operate its feeder link and TT&C functions in the 10.7-10.95 GHz and 11.2-11.45 GHz bands on a non-harmful interference basis to radio astronomy operations in adjacent bands.

D. Bond Requirement

44. In its *Space Station Licensing Reform Order*, the Commission eliminated the financial requirements then in place and replaced them with a bond requirement. [106] The bond requirement is intended to ensure that licensees are financially able and committed to implementing their licensed systems in a timely manner. Under this requirement, any entity awarded a satellite license must execute a performance bond in the amount of $5 million for each NGSO system and $3 million for each GSO satellite, payable to the U.S. Treasury, within 30 days of the date of the license grant.[107] The bond is payable upon failure to meet any of the implementation milestones included in every license, where the licensee has not provided adequate justification for extending that milestone. Licensees may reduce the amount of the bond upon meeting each milestone.

45. The Commission does not impose a bond on replacement satellites because once a licensee has begun to provide service, it expects the licensee will use its replacement satellite to continue to provide service, and would not file the replacement application for speculative purposes. The Commission has held, however, that an existing licensee has no replacement expectancy with regard to next generation satellites that increase the coverage area or use

[103] For example, sinceSince Washington, D.C. is one of the 100 top television markets identified in Section 76.51 of the Commission's rules, MSV will not be able to operate an earth station in this band within 50 kilometers of Washington, D.C.

[104] 47 C.F.R. § 2.106, Footnote US211.

[105] Letter from Lon Levin, Mobile Satellite Ventures to Marlene H. Dortch, Secretary, FCC (May 12, 2004).

[106] *Space Station Licensing Reform Order*, 18 FCC Rcd at 10825-10826, paras. 167-171.

[107] *See also* Amendment of the Commission's Space Station Licensing Rules and Policies, *First Order on Reconsideration and Fifth Report and Order*, IB Docket No. 02-34, 19 FCC Rcd 12637 (2003) (*Space Station Reform First Reconsideration Order*) (reducing the bond amounts from those imposed on an interim basis in *the Space Station Licensing Reform Orde*r). In the *Reconsideration Order,* the Commission also determined that GSO MSS licensees should be subject to the GSO bond requirement, even though the proposed satellite is considered NGSO-like for purposes of determining the appropriate processing procedure. Id. at 12655, para. 46.

additional frequencies.[108] In its *Space Station Licensing Reform First Reconsideration* Order,[109] the Commission clarified that the bond requirement would apply in those circumstances where a satellite licensee proposes to operate a next-generation system using frequencies not authorized for its current system.

46. MSV asks the Commission to refrain from imposing a bond requirement despite its proposed use of additional spectrum.[110] MSV states that the Commission has discretion whether or not to apply the policies adopted in the *Space Station Licensing Reform Order* to applications filed before it adopted the *Order.*[111] MSV notes that the Commission intended the new licensing policies to apply to pending applications only if "doing so will help further the goals of this proceeding to expedite service to the public and discourage speculation."[112] MSV requests us to consider its MSV-1 satellite pursuant to the rules and policies in place at the time its application was originally filed. MSV argues that had the Commission acted when the first pleading cycle ended in 2001, it would not have been subject to the bond requirement.[113] MSV states that, given this, treating its application under prior satellite licensing rules will have no adverse precedential effect.

47. Alternatively, MSV argues that the Commission should waive the bond requirement. According to MSV, requiring it to post a bond would add substantial and unnecessary costs to its next-generation MSS system particularly since, with its existing customer base, it has every incentive to construct and launch its replacement satellite in an expeditious manner.[114] Because there is no concern regarding warehousing, MSV believes a waiver would not undermine the policy underlying the bond requirement.[115] MSV notes that it needs the additional feeder link frequencies to accommodate an "expected" increase in traffic.[116] MSV also argues that waiver of the bond requirement is warranted because its replacement satellite will continue to provide important public safety services. MSV cites its unique dispatch radio, or "push-to-talk" feature, allows communications to be broadcast to a large group of users simultaneously, thereby allowing coordination of rescue efforts. In contrast, EchoStar argues that the Commission intended the bond requirement to apply to all new satellite licenses other

[108] *Space Station Licensing Reform Order*, 18 FCC Rcd at 10857-58, para. 258.

[109] *Space Station Reform First Reconsideration Order*, 19 FCC Rcd at 12658, para. 57.

[110] Letter from Lon Levin, Vice President, MSV to Marlene Dortch, Secretary, FCC (Nov. 4, 2003) (*MSV Letter*) at 1.

[111] *Space Station Licensing Reform Order*, 18 FCC Rcd at 10864, para 275.

[112] *MSV Letter* at 6.

[113] *MSV Letter* at 8.

[114] *MSV Letter* at 7.

[115] *MSV Letter* at 9.

[116] *MSV Letter* at 8.

than DBS and DARS licensees.[117] EchoStar further argues that the Commission has made it clear that a follow-on satellite that uses additional frequency bands is not included in a licensee's replacement expectancy.[118]

48. Initially, we disagree with MSV's characterization of the Commission's statements regarding the applicability of the *Space Station Licensing Reform Order* to pending applications. MSV confuses the Commission's statements with respect to its licensing procedures and with respect to the safeguards against speculation. The Commission stated that it would not necessarily apply its *processing* procedures for GSO-like and NGSO-like systems to pending applications. Thus, as MSV notes, the Commission stated it would not apply the "band-splitting" approach to licensing Ka-band NGSO systems because it had already developed a convincing record that spectrum sharing by multiple systems in this band was feasible.[119] In contrast, the Commission stated that because its safeguards against speculation help limit speculation and warehousing, it would apply those safeguards -- including the bond-posting requirement -- to all satellite licenses it issues after the *Space Station Licensing Reform Order's* effective date.[120] Moreover, in the *Space Station Reform First Reconsideration Order,* the Commission specifically considered and rejected arguments that it should treat applications filed *before* it adopted the *Space Station Licensing Reform Order* differently than applications filed after it adopted the *Reform Order* for purposes of requiring a bond.[121] MSV does not provide any basis for revisiting this issue here.

49. In any case, MSV filed its February 2004 amendment to its MSV-1 application requesting additional feeder link spectrum six months *after* the *Space Station Licensing Reform Order's* effective date. Thus, when it filed this amendment, MSV should have been aware that the Commission would not consider additional frequencies on its second-generation satellite as "replacement" frequencies.

50. Further, MSV has not shown "good cause" for waiving the bond requirement. MSV states that, given its existing customer base, it has every incentive to construct and launch its next-generation satellite in an expeditious manner. We do not, however, question MSV's intent to use MSV-1 to serve its existing customers. Rather, we seek assurance that MSV is committed to implementing *all* of MSV-1's requested and authorized spectrum. For this reason, the Commission has determined that *any* additional frequencies on a next-generation satellite would be subject to the bond requirement. While MSV claims it needs additional Ku-band frequencies to accommodate an "expected" increase in traffic, this does not qualify as a special circumstance that warrants a waiver of the bond requirement. Granting a waiver of the bond requirement under these circumstances would effectively undermine the policy underlying the requirement. Indeed, every satellite licensee seeking to use additional frequencies to expand its customer base could make the same argument, possibly encouraging applicants to seek access to

[117] *EchoStar Letter* at 2.

[118] *EchoStar Letter* at 5.

[119] *Space Station Licensing Reform Order,* 18 FCC Rcd at 10865-66, para. 280.

[120] *Space Station Licensing Reform Order,* 18 FCC Rcd at 10866, para. 281.

[121] Amendment of the Commission's Space Station Licensing Rules and Policies, *First Order On Reconsideration And Fifth Report and Order*, IB Docket No. 02-34, 19 FCC Rcd 12637, 12663-64 (para. 72)(2004) (*Space Station Reform Fifth Report and Order*).

additional spectrum to meet "best case" scenarios that may never materialize or to delay competitors from using that spectrum. By imposing a bond requirement with respect to additional frequencies, we ensure that licensees are committed to implementing all of the spectrum they have requested and are authorized to use.

51. MSV also fails to show "good cause" for a waiver based on its intent to provide public safety services on MSV-1. We have previously considered and rejected this argument in authorizing the MSV-2 satellite.[122] There, we concluded that MSV's "push to talk" feature did not justify a waiver of the bond requirement, noting that all MSS systems are inherently useful in providing public safety service because the user terminals are small and transportable.[123] Moreover, as is the case here, MSV did not identify any specific "safety" services besides the dispatch radio service.

52. Consequently, we deny MSV's waiver request and require it to post a $3 million bond within 30 days of the release date of this order. If MSV does not post this bond by the required date, this authorization shall be null and void. Moreover, once MSV has posted the bond, it will become payable if MSV surrenders any of the additional frequencies or if the Commission cancels any portion of the MSV-1 license pertaining to these additional frequencies for failure to meet the milestone schedule.

E. Milestones

53. It is longstanding Commission policy to impose milestones for satellite system implementation upon licensees.[124] Milestone schedules are designed to ensure that licensees are proceeding with construction and will launch their satellites in a timely manner, and that licensees unable or unwilling to proceed with their plans do not hold scare orbit-spectrum resources to the exclusion of other applicants.[125] In the *Space Station Licensing Reform Order*, the Commission codified this policy in Section 25.164 of its rules.[126]

54. While we do not impose this full set of milestones on "replacement" satellites, we do so here given the additional frequencies we are authorizing. We will not, as MSV requests, find here that the "replacement satellite" milestone schedule will govern if MSV does not

[122] *MSV-2 Order* at para. 35.

[123] *Id*.

[124] *See, e.g.*, MCI Communications Corp., *Memorandum Opinion and Order*, 2 FCC Rcd 233, 233 (para. 5) (Com. Car. Bur. 1987) (*MCI Order*) (noting that a milestone schedule is included in each domestic space station authorization issued by the Commission); *see also* Norris Satellite Communications, Inc., *Memorandum Opinion and Order*, 12 FCC Rcd 22299 (1997) (*Norris Review Order*); Morning Star Satellite Company, L.L.C., *Memorandum Opinion and Order*, 15 FCC Rcd 11350 (Int'l Bur. 2000), *aff'd*, 16 FCC Rcd 11550 (2001) (*Morning Star Reconsideration Order*).

[125] *See, e.g.*, Advanced Communications Corporation, *Memorandum Opinion and Order*, 10 FCC Rcd 13337, 13338 (para. 4) (Int'l Bur. 1995) (*Advanced Order*), *aff'd*, 11 FCC Rcd 3399 (1995) (*Advanced Review Order*), *aff'd*, *Advanced Communications Corporation v. FCC*, 84 F.3d 1452 (D.C. Cir. 1996) (unpublished order available at 1996 WL 250460); National Exchange Satellite, Inc., *Memorandum Opinion and Order*, 7 FCC Rcd 1990 (Com. Car. Bur. 1992) (*Nexsat Order*); AMSC Subsidiary Corp., *Memorandum Opinion and Order*, 8 FCC Rcd 4040, 4042 (para. 13) (1993) (*AMSC Order*); Motorola, Inc. and Teledesic LLC, *Memorandum Opinion and Order*, 17 FCC Rcd 16543 (Int'l Bur. 2002) (*Motorola/Teledesic Order*).

[126] 47 C.F.R. § 25.164. *See Space Station Licensing Reform Order*, 18 FCC Rcd at 10828, para. 173.

implement its additional frequencies.[127] We will act only on the application before us, that is, one that requests authority to operate on *both* replacement and additional frequency bands. If MSV chooses to change the frequencies on which MSV-1 will operate, it must file a license modification to do so. It may ask us to revisit the milestone schedule at that time. Thus, we require MSV to execute a construction contract for MSV-1 within one year of grant, complete Critical Design Review within two years of grant, begin physical construction within three years of grant, and launch and begin operations within five years of grant.

IV. CONCLUSION

55. Consequently, we find that granting MSV's application and associated waiver requests, to the extent provided herein, will serve the public interest by allowing MSV to continue to serve its customers with a next-generation system, to expand the range of its service offerings, and to provide additional choices for mobile-satellite service users.

V. ORDERING CLAUSES

56. Accordingly, Mobile Satellite Ventures Subsidiary LLC's (MSV's) application File Nos. SAT-LOA-19980702-00066, Call Sign S2358, as amended by SAT-AMD-20001214-00171, SAT-AMD-20010302-00019, SAT-AMD-20031118-00335, SAT-AMD-20040209-00014, and SAT-AMD-20040928-00192 ARE GRANTED in part, and MSV IS AUTHORIZED to launch and operate its second-generation MSS satellite, known as MSV-1, at 101° W.L. on 10 megahertz of spectrum in each transmission direction in the 1525-1544/1545-1559 MHz (space-to-Earth) and the 1626.5-1645.5/1646.5-1660.5 MHz (Earth-to-space) frequency bands for mobile-satellite service links, and on 500 megahartz of spectrum in each transmission direction in the 12.75-13.15/13.20-13.25 GHz (Earth-to-space) and the 10.75-10.95/11.2-11.45 GHz (space-to-Earth) frequency bands for feeder links and tracking, telemetry and control functions, in accordance with the terms, conditions, and technical specifications set forth in its application, this Order, and the Commission's Rules.

57. IT IS FURTHER ORDERED that MSV's request to operate on 14 megahertz of spectrum in each transmission direction within the 1525-1544/1545-1559 MHz (space-to-Earth) and the 1626.5-1645.5/1646.5-1660.5 MHz frequency bands for mobile-satellite service links IS DENIED to the extent set forth herein.

58. IT IS FURTHER ORDERED that MSV's request to operate in the 1544-1545/1645.5-1646.5 MHz frequency bands, which are limited to distress and safety communications, IS DENIED.

59. IT IS FURTHER ORDERED that in the absence of a coordination agreement with other lawfully authorized L-band operators, MSV's operations in the 1525-1544 MHz, 1545-1559 MHz, 1626.5-1645.5 MHz, and 1646.5-1660.5 MHz frequency bands will be on a non-harmful interference basis. Consequently, MSV shall not cause harmful interference to any

[127] *See* Letter from Jennifer A. Manner, Vice President, Regulatory Affairs for MSV to Marlene H. Dortch, Secretary, FCC (Apr. 4, 2005) (referencing a Mar. 17, 2005 *ex parte* meeting with International Bureau staff in which it requested such treatment). . *See also* Letter from Jennifer A. Manner to Marlene H. Dortch (April 29, 2005).

other lawfully operating L-band satellite or radio facility and shall cease operations upon written notification of such interference. MSV shall also inform the Commission in writing of such notification. Furthermore, MSV must notify all other operators in these frequency bands that it will be operating on a non-harmful interference basis. MSV must also notify its customers that its operations are on a non-harmful interference basis.

60. IT IS FURTHER ORDERED that MSV's operations in the 1545-1559 MHz and 1646.5-1660.5 MHz bands shall comply with the real-time access and priority preemption requirements set forth in International Footnotes 5.357A and 5.362A to protect AMS[R]S.

61. IT IS FURTHER ORDERED that MSV's operations in the 1525-1544 MHz and 1626.5-1645.5 MHz bands shall comply with the real-time access and priority preemption requirements set forth International Footnote 5.353A to protect the Global Maritime Distress and Safety Service.

62. IT IS FURTHER ORDERED that MSV's use of the 12.75-13.25 GHz frequency band shall comply with the terms of Footnote US251 to 47 C.F.R. § 2.106 to ensure that MSV-1's Ku-band transmissions will not interfere with space research (deep space) (space-to-Earth) service at Goldstone, California.

63. IT IS FURTHER ORDERED that MSV may not transmit in the 13.15-13.2125 GHz band from a site within 50 kilometers of a top 100 television market identified in Section 76.51 of the Commission's rules.

64. IT IS FURTHER ORDERED that the authority for uplink transmission in any portion of the 12.75-13.25 GHz band from any specified site not previously authorized will be withheld pending adoption of rules for coordination of such operation with Broadcast Auxiliary Service (BAS) and Cable Television Relay Service (CARS) mobile pickup operations.

65. IT IS FURTHER ORDERED that Footnote NG104 to 47 C.F.R. § 2.106 of the Commission's rules IS WAIVED to allow MSV to provide tracking, telemetry, and control functions in the 11.2-11.45 GHz and 12.7-13.25 GHz bands (with the exception of the 13.15-13.2125 GHz band) to MSV-1 from gateway earth stations located in Reston, Virginia and Alexandria, Virginia. Footnote NG104 IS ALSO WAIVED to allow MSV to operate feeder links within the United States in the 10.7-10.95 GHz, 11.2-11.45 GHz, and 12.75-13.25 GHz frequency bands.

66. IT IS FURTHER ORDERED that the authorization for operation in the 10.7-10.95 GHz, 11.2-11.45 GHz, and the 12.75-13.25 GHz frequency bands pertains only to transmission between a single GSO satellite at 101° W.L. and a maximum of two fixed-satellite service earth stations within the continental United States.

67. IT IS FURTHER ORDERED that MSV's authority to operate in the 10.7-10.95 GHz, 11.2-11.45 GHz, and the 12.75-13.25 GHz bands is on a non-harmful interference basis until the issuance of an ITU finding permitting such additional use pursuant to Appendix 30B of the ITU's Radio Regulations.

68. IT IS FURTHER ORDERED that MSV's use of the 10.7-10.95 GHz and 11.2-11.45 GHz frequency bands shall comply with the terms of Footnote US211 to 47 C.F.R. §

2.106, 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.

69. IT IS FURTHER ORDERED that MSV shall limit satellite emissions in the 10.6-10.7 GHz band to -160 dBW/m^2 or less.

70. IT IS FURTHER ORDERED that MSV shall coordinate with co-primary Radio Astronomy Service stations in the 1660-1660.5 MHz band and will operate on a non-harmful interference basis to the radio astronomy service until it has completed this coordination.

71. IT IS FURTHER ORDERED that MSV shall coordinate with co-primary Space Operations Service stations in the 1525-1535 MHz band in Region 2 and will not be entitled to protection from interference until it has completed this coordination.

72. IT IS FURTHER ORDERED that MSV shall coordinate with those countries conducting passive research in the 1525-1559 MHz band and will not be entitled to any protection from interference from passive research radio stations unless it completes coordination with those applicable passive research services.

73. IT IS FURTHER ORDERED that MSV's request for a waiver of Section 25.210(j) of the Commission's rules, 47 C.F.R. § 25.210(j), to permit MSV to operate its MSV-1 satellite with an East-West station-keeping tolerance of ±0.1° IS DENIED. MSV-1 is specifically authorized to operate within an East-West station keeping tolerance of ±0.05.

74. IT IS FURTHER ORDERED that MSV must provide a written statement to the Commission within 60 days of the date of this grant that identifies any known satellites located at, or planned to be located at, MSV's assigned orbital location, or assigned in the vicinity of that location such that the station-keeping volume of the respective satellites might overlap, and that states the measures that will be taken to prevent in-orbit collisions with such satellites. This statement should address any licensed FCC systems, or any systems applied for and under consideration by the FCC. The statement need not address every filing with the ITU that meets these criteria, but should assess and address any systems reflected in ITU filings that are in operation or that MSV believes may be progressing toward launch, e.g. by the appearance of the system on a launch vehicle manifest. If MSV elects to rely on coordination with other operators to prevent in-orbit collisions, it shall provide a statement as to the manner in which such coordination will be effected.

75. IT IS FURTHER ORDERED MSV's operation at North-South inclinations between 4.5° and 6.0° shall be on an unprotected, non-harmful interference basis until it completes coordination with licensed NGSO FSS operators.

76. IT IS FURTHER ORDERED that MSV's MSS GSO satellite, MSV-1, shall be operated in full compliance with footnote 27 to Radio Regulation A.22.III.1 of Article 22, Section III of the ITU's Radio Regulations.

77. IT IS FURTHER ORDERED that MSV's request for waiver of Section 25.165(a)(2) of the Commission's rules, 47 C.F.R. § 25.165(a)(2), IS DENIED and MSV must file a bond with the Commission in the amount of $3,000,000.00, pursuant with the procedures set forth in Public Notice, DA 03-2602, 18 FCC Rcd 16283 (2003), by June 24, 2005.

78. IT IS FURTHER ORDERED that MSV must construct, launch and place its authorized satellite into operation in accordance with the technical parameters and terms and conditions of this authorization by the following dates:

A: Enter into a binding non-contingent contract to construct the licensed satellite system by May 26, 2006

B: Complete the Critical Design Review of the licensed satellite system by May 26, 2007

C: Begin the physical construction of the satellite by May 26, 2008.

D: Launch and begin operations of the satellite by May 26, 2010.

Failure to meet any of these dates shall render this authorization NULL and VOID.

79. IT IS FURTHER ORDERED that MSV shall 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 of this space station, in accordance with the ITU Radio Regulations. MSV shall be held responsible for all cost-recovery fees associated with these ITU filings. We also note that 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 of other administrations. *See* 47 C.F.R. § 25.111(b).

80. IT IS FURTHER ORDERED that MSV is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of any countries it proposes to serve.

81. IT IS FURTHER ORDERED that the license term for the MSV-1 satellite, Call Sign S2358, is fifteen years and will begin to run on the date that Mobile Satellite Ventures Subsidiary LLC certifies to the Commission that the satellite has been successfully placed into orbit and its operation fully conforms to the terms and conditions of this authorization.

82. This Order is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon adoption. 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 announcing that this action was taken.

FEDERAL COMMUNICATIONS COMMISSION

Donald Abelson
Chief
International Bureau