PART 52—[AMENDED]

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart HH—New York

■ 2. Section 52.1670 is amended by adding new paragraph (c)(107) to read as follows:

§ 52.1670 Identification of plan.

* * * * *

(c) * * *

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(107) Revisions to the State Implementation Plan submitted on December 9, 2002, by the New York State Department of Environmental Conservation which consists of the adoption of California's second generation Low Emissions Vehicle (LEV) program.

(i) Incorporation by reference.

(A) Regulation part 218 ''Emissions Standards for Motor Vehicles and Motor Vehicle Engines'' of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6NYCRR), part 218, subparts 218–1, 218–2, 218–3, 218–5, 218–6, 218–7 and 218–8 filed on November 28, 2000 and effective on December 28, 2000.

■ 3. Section 52.1679 is amended by revising the entry for part 218 under title 6 to read as follows:

§ 52.1679 EPA-approved New York State regulations.

New York State regulation	State effective date	Latest EPA approval date	Comments
Title 6			
* *	*	* *	* *
Part 218, Emission Standards for Motor Vehicles and Motor Vehicle Engines:	.....	.....	EPA's approval of part 218 only applies to light-duty vehicles.
Subpart 218–1: Applicability and Definitions.	12/28/00	1/31/05, [insert FR citation of this document].	
Subpart 218–2: Certification and Prohibitions.	12/28/00	1/31/05, [insert FR citation of this document].	
Subpart 218–3: Fleet Average	12/28/00	1/31/05, [insert FR citation of this document].	
Subpart 218–4: Zero Emissions Vehicle Sales Mandate.	5/28/92	1/6/95, 60 FR 2025.	
Subpart 218–5: Testing	12/28/00	1/31/05, [insert FR citation of this document].	
Subpart 218–6: Surveillance	12/28/00	1/31/05, [insert FR citation of this document].	
Subpart 218–7: Aftermarket Parts	12/28/00	1/31/05, [insert FR citation of this document].	
Subpart 218–8: Severability	12/28/00	1/31/05, [insert FR citation of this document].	
* *	*	* *	* *

[FR Doc. 05–1630 Filed 1–28–05; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 2, 25, and 101

[IB Docket No. 02–10, FCC 04–286]

Procedures To Govern the Use of Satellite Earth Stations on Board Vessels in the 5925–6425 MHz/3700–4200 MHz Bands and 14.0–14.5 GHz/11.7–12.2 GHz Bands

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document is a summary of the *Report and Order* adopted by the Commission in this proceeding. The Commission adopted licensing and service rules for satellite earth stations on vessels (ESVs) in the C- and Ku-bands that will provide regulatory certainty to ESV licensees, while protecting existing users in the bands. The new rules will further the Commission's goal of promoting market-based deployment of broadband technologies.

DATES: Effective March 2, 2005, except for 47 CFR 25.221(c), 25.221(e), and 25.222(c) which contain information requirements that have not yet been approved by Office of Management and Budget (OMB). The Commission will publish a document in the **Federal Register** announcing the effective date of those sections. OMB, the general public, and other Federal agencies are invited to comment on the information collection requirements on or before April 1, 2005.

ADDRESSES: In addition to filing comments with the Office of the Secretary, a copy of any comments on the Paperwork Reduction Act information collection(s) contained herein should be submitted to Judith B. Herman, Federal Communications Commission, Room 1–C804, 445 12th Street, SW., Washington, DC 20554, or via the Internet to *Judith-B.Herman@fcc.gov,* and to Kristy L. LaLonde, OMB Desk Officer, Room 10236 NEOB, 725 17th Street, NW., Washington, DC 20503 or via the Internet to *Kristy_L._LaLonde@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Jennifer Gorny or Gardner Foster, Policy Division, International Bureau, (202) 418–1460. For additional information concerning the Paperwork Reduction Act information collection(s) contained in this document, contact Judith B. Herman at (202) 418–0214, or via the Internet at *Judith-B.Herman@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Report and Order* in IB Docket No. 02–10, FCC 04–286, adopted December 15, 2004, and released on January 6, 2005. This proceeding was initiated by the Notice of Proposed Rule Making (*ESV NPRM*), 69 FR 3056, January 22, 2004. The full

text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (Room CY–A257, 445 12th Street, SW., Washington, DC 20554). The document is also available for download over the Internet at *http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC–04–286A1.pdf.* The complete text may also be purchased from the Commission's copy contractor, Best Copy and Printing, Inc., (BCPI) located in Room CY–B402, 445 12th Street, SW., Washington, DC 20554. Customers may contact BCPI at their Web site: *http://www.bcpiweb.com* or call 1–800–378–3160.

Paperwork Reduction Act of 1995 Analysis

This *Report and Order* contains modified information collections. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public to comment on the information collection(s) contained in this *Report and Order* as required by the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13. Public and agency comments are due April 1, 2005. In addition, the Commission notes that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might ''further reduce the information collection burden for small business concerns with fewer than 25 employees.''

In this present *Report and Order,* we have assessed the effects of adopting licensing and service rules for ESVs, and find that with the flexibility allowing ESV providers to use either the C-band or the Ku-band will provide regulatory certainty to small businesses while protecting against interference.

The Commission will send a copy of the *Report and Order* in a report to be sent to Congress and the General Accounting Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

Summary of Report and Order

On November 24, 2003, the Commission released the *ESV NPRM* seeking comment on proposed rules for satellite services on vessels, including broadband services. The Commission's proposals sought to provide regulatory certainty to ESVs while protecting incumbent terrestrial fixed service (FS) and fixed satellite service (FSS) operators in the C- and Ku-bands.

On December 15, 2004, the Commission adopted the *Report and Order* in this proceeding. The *Report and Order* establishes licensing and service rules for ESVs operating in the 5925–6425 MHz/3700–4200 MHz (C-band) and 14.0–14.5 GHz/11.7–12.2 GHz (Ku-band) frequencies. A portion of the ''extended'' Ku-band (10.95–11.2 GHz and 11.45–11.7 GHz) is also included in this decision. ESVs have been used for the past several years to provide communications services, including Internet access, to cruises, merchant ships, ferries, barges, yachts and U.S. Navy vessels. The Commission's decision will allow ESV operations to continue in the C- and Ku-bands, while ensuring that ESVs protect FS and FSS operators, and a limited number of Government operations in these bands from harmful interference.

To protect FS operations in the C-band, ESV operators will be subject to operational requirements, including spectrum limitations and coordination requirements. The Commission imposes fewer operational requirements in the Ku-band than in the C-band because ESVs are less likely to cause harmful interference to incumbent services in that band. For example, in the Ku-band, ESV coordination with the fixed terrestrial service is not required because these operations are limited in that band. In the 14.0–14.5 GHz band, ESV coordination is required near a limited number of Federal Government earth stations. ESVs will be permitted to operate in portions of the ''extended'' Ku-band downlink (10.95–11.2 GHz and 11.45–12.2 GHz) and must accept all interference from FS operations in that band. In addition, the new rules place power limits on ESV operations to protect fixed satellite operators in both the C- and Ku-bands. The Commission also requires ESV operators in both bands to collect and maintain vessel tracking data to assist in identifying and resolving sources of interference. Finally, the Commission establishes a regulatory framework that will enable foreign-licensed ESVs to operate near the United States without causing harmful interference to domestic operations.

Prior to the adoption of the *Report and Order,* the Commission permitted ESVs to operate pursuant to six month special temporary authorizations. In the *Report and Order,* the Commission adopted blanket licensing procedures and a fifteen-year license term. These measures will ensure expeditious processing and regulatory certainty.

Procedural Matters

Paperwork Reduction Act

This *Report and Order* contains or modified information collections subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13. It will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the modified information collection contained in this proceeding. All comments regarding the requests for approval of the information collection should be submitted to Judith B. Herman, Federal Communications Commission, Room 1–C804, 445 12th Street, SW., Washington, DC 20554, or via the Internet to *Judith-B.Herman@fcc.gov,* and to Kristy L. LaLonde, OMB Desk Officer, Room 10236 NEOB, 725 17th Street, NW., Washington, DC 20503 or via the Internet to *Kristy_L._LaLonde@omb.eop.gov.*

Final Regulatory Flexibility Act Certification

The Regulatory Flexibility Act of 1980, as amended (RFA), requires that a regulatory flexibility analysis be prepared for notice-and-comment rule making proceedings, unless the agency certifies that ''the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.'' The RFA, *see* 5 U.S.C. 601–612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Public Law 104–121, Title II, 110 Stat. 857 (1996), and 5 U.S.C. 605(b). The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' (5 U.S.C. 601(6)). In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. 5 U.S.C. 601(3) (incorporating by reference the definition of ''small-business concern'' in the Small Business Act, 15 U.S.C. 632). Pursuant to 5 U.S.C. 601(3), the statutory definition of a small business applies ''unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the **Federal Register**.'' A ''small business concern'' is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the U.S. Small Business Administration (SBA). *See* 5 U.S.C. 632.

In light of the rules adopted in this *Report and Order,* we believe that there are only two categories of licensees that would be affected by the new rules. These categories of licensees are Satellite Telecommunications and Fixed-Satellite Transmit/Received Earth Stations. The SBA has developed a small business size standard for Satellite Telecommunications, which consists of all such companies having $12.5 million or less in annual revenue. *See* 13 CFR 121.201, NAICS code 517410. Currently there are approximately 3,390 operational fixed-satellite transmit/received earth stations authorized for use in the C- and Ku-bands. The Commission does not request or collect annual revenue information, and thus is unable to estimate the number of earth stations that would constitute a small business under the SBA definition. Of the two classifications of licensees, we estimate that only 15 entities will provide ESV service.

Pursuant to the RFA, the Commission incorporated an Initial Regulatory Flexibility Analysis (IRFA) into the *ESV NPRM.* In the IRFA, the Commission tentatively concluded that the proposals contained in the *ESV NPRM* were the least burdensome alternatives for all entities, both large and small. We received no comments in response to the IRFA. For the reasons described below, we now certify that the policies and rules adopted in this *Report and Order* will not have a significant economic impact on a substantial number of small entities.

In 2003, the Commission adopted the *ESV NPRM* seeking comments on its proposals to license ESV hub stations for operation in both the C- and Ku-bands. In this *Report and Order,* the Commission establishes licensing and service rules for ESVs operating in the C- and Ku-bands. These rules allow ESV operations in the C- and Ku-bands, while ensuring that ESVs protect FS and FSS operators, and a limited number of Government operations in these bands from harmful interference.

ESVs have been used for the past several years to provide telecommunications services, including Internet access, to cruise ships, merchant ships, ferries, barges, yachts, and U.S. Navy vessels—*i.e.*, any marine craft large enough to meet reasonable size requirements and safely carry a stabilized satellite dish. Licensing ESV operations advances the Commission's goals and objectives for market-driven deployment of broadband technologies. The market for broadband via satellite-based communications continues to expand. As ESV operators deploy increasingly innovative broadband services to their subscribers, the rules will assure that, through ESVs, broadband services are available to businesses and consumers on the high seas, coastlines, and inland waterways.

In this *Report and Order,* the Commission imposes certain technical conditions on ESV operations as an application of the FSS with mobile capabilities. By allowing ESVs to continue operations in the C-band, the Commission strikes the appropriate balance of ESV and FS interests by adopting strict operational requirements for ESVs in the C-band that will ensure that incumbent and future FS operators are protected from harmful interference. The Commission encourages ESV operators to utilize the Ku-band for their operations wherever possible through enhanced rights and limited regulation in that band. Given the relatively limited presence of FS users in the 11.7–12.2 GHz band, and the Commission's belief that the proliferation of Ku-band satellites are making Ku-band spectrum more accessible and reliable, the Commission views the Ku-band as an ideal operational environment for future ESV growth. The availability of Ku-band spectrum for non-coordinated use could help reduce costs to both large and small entities. We believe that it will have no significant economic impact on small entities because ESV operators will have the ability to choose the spectrum (C-or Ku-band) that meets their needs and will not be precluded from being licensed in each band. In addition, permitting this flexibility will greatly reduce interference problems.

In both the C- and Ku-bands, the Commission requires ESV operators to protect FSS incumbents through limits on off-axis effective isotropically radiated power density and to cease operations if the ESV antenna drifts more than 0.2 degrees from the target satellite. In addition, the Commission adopts footnotes to the U.S. Table of Frequency Allocations to recognize ESVs as an application of the FSS with primary status. In doing so, the Commission implements, in part, the decision reached at the International Telecommunication Union's (ITU's) 2003 World Radiocommunication Conference (WRC–03), which added a footnote to the International Table of Frequency Allocations stating that, in the 5925–6425 MHz and 14.0–14.5 GHz bands, ESVs may communicate with FSS space stations. We also require operators in both bands to collect and maintain vessel tracking data to assist in identifying and resolving sources of interference. The Commission also provides for system licensing (consisting of ESV hub stations and/or blanket licensing for ESV earth stations) in order to give both C- and Ku-band ESV operators greater flexibility in structuring their operations. Finally, consistent with ITU encouragement of administrative cooperation in reaching agreements on the use of ESV systems, the Commission established a regulatory framework that will enable foreign-licensed ESVs to operate near the United States without causing harmful interference to domestic operations. This flexible approach should benefit all entities, and the requirements should not have a significant economic impact on small entities.

ESV operators also are required to establish a database for tracking the location of ESV remote earth stations and to maintain a point of contact for resolving possible claims of harmful interference. The Commission does not expect small entities to incur significant costs associated with this requirement. The new licensing rules will benefit both large and small entities by streamlining the process for obtaining authority from the Commission to provide ESV service. Licensees will have certainty in the provision of service because the new rules will provide license terms of 15 years rather than the current procedure whereby a licensee receives temporary authorization for 6 months. In addition, the new rules provide a simplified means of resolving issues of harmful interference. Small entities will benefit from the flexibility of being able to operate in the Ku-band where there are very few restrictions. We believe these requirements are nominal and do not impose a significant economic impact on small entities.

Therefore, we certify that the requirements adopted in this *Report and Order* will not have a significant economic impact on a substantial number of small entities.

Report to Congress: The Commission will send a copy of the *Report and Order,* including a copy of the Final Regulatory Flexibility Certification, in a report to Congress. In addition, the Commission will send a copy of the *Report and Order,* including a copy of the Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order* and Final Regulatory Flexibility Certification will also be published in the **Federal Register**.

Ordering Clauses

Accordingly, pursuant to the authority contained in sections 4(i), 7, 302(a), 303(c), 303(e), 303(f) and 303(r) of the Communications Act of 1934, as

amended, 47 U.S.C. sections 154(i), 157, 302(a), 303(c), 303(e), 303(f) and 303(r), the *Report and Order is adopted* and that parts 2, 25, and 101 of the Commission's Rules *are amended* as specified in the Final Rules, effective March 2, 2005, except for 47 CFR 25.221(c), 25.221(e), and 25.222(c), which are not effective until approved by the Office of Management and Budget. The Commission will publish a document in the **Federal Register** announcing the effective date of those sections.

The Regulatory Flexibility Certification, as required by section 604 of the Regulatory Flexibility Act and as set forth in the *Report and Order, is adopted.*

The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center shall send a copy of this *Report and Order,* including the Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Parts 2, 25, and 101

Radio, Satellites, Telecommunications.

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

Final Rules

■ For the reasons discussed in the preamble, parts 2, 25, and 101 of the Commission's rules are amended as follows:

PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

■ 1. The authority citation for part 2 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

■ 2. Section 2.106 is amended as follows:

■ a. Revise pages 55, 57, 64 and 66 of the Table of Frequency Allocations.

■ b. In the list of international footnotes, revise footnotes 5.457B, 5.487, 5.487A, and 5.488; and remove footnote 5.491.

■ c. In the list of non-Federal Government footnotes, add footnotes NG180, NG181, NG182, NG183 and NG184.

The revisions and additions read as follows:

§ 2.106 Table of Frequency Allocations.

* * * * *

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International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
See previous page for 3600-4200 MHz	3700-4200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile		3700-4200	3700-4200 FIXED NG41 FIXED-SATELLITE (space-to-Earth) NG180	International Fixed (23) Satellite Communications (25) Fixed Microwave (101)
4200-4400 AERONAUTICAL RADIONAVIGATION 5.438 5.439 5.440			4200-4400 AERONAUTICAL RADIONAVIGATION 5.440 US261		Aviation (87)
4400-4500 FIXED MOBILE			4400-4500 FIXED MOBILE	4400-4500	
4500-4800 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE			4500-4800 FIXED MOBILE US245	4500-4800 FIXED-SATELLITE (space-to-Earth) 5.441 US245	
4800-4990 FIXED MOBILE 5.442 Radio astronomy			4800-4940 FIXED MOBILE US203 US342	4800-4940 US203 US342	
			4940-4990	4940-4990 FIXED MOBILE except aeronautical mobile	Private Land Mobile (90) Fixed Microwave (101)
5.149 5.339 5.443			5.339 US311 US342 G122	5.339 US311 US342	
4990-5000 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149			4990-5000 RADIO ASTRONOMY US74 Space research (passive) US246		
5000-5150 AERONAUTICAL RADIONAVIGATION 5.367 5.443A 5.443B 5.444 5.444A			5000-5250 AERONAUTICAL RADIO-NAVIGATION US260	5000-5150 AERONAUTICAL RADIO-NAVIGATION US260 5.367 5.444A US211 US344 US370	Satellite Communications (25) Aviation (87)

International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
5570-5650 MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B 5.450 5.451 5.452			5570-5600 MARITIME RADIONAVIGATION US65 RADIOLOCATION G56 US50 G131	5570-5600 MARITIME RADIONAVIGATION US65 RADIOLOCATION US50	RF Devices (15) Maritime (80) Private Land Mobile (90)
			5600-5650 MARITIME RADIONAVIGATION US65 METEOROLOGICAL AIDS RADIOLOCATION G56 5.452 US50 G131	5600-5650 MARITIME RADIONAVIGATION US65 METEOROLOGICAL AIDS RADIOLOCATION 5.452 US50	
5650-5725 RADIOLOCATION MOBILE except aeronautical mobile 5.446A 5.450A Amateur Space research (deep space) 5.282 5.451 5.453 5.454 5.455			5650-5925 RADIOLOCATION G2	5650-5830 Amateur 5.150 5.282	RF Devices (15) ISM Equipment (18) Amateur (97)
5725-5830 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur 5.150 5.451 5.453 5.455 5.456	5725-5830 RADIOLOCATION Amateur 5.150 5.453 5.455				
5830-5850 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.451 5.453 5.455 5.456	5830-5850 RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.453 5.455			5830-5850 Amateur Amateur-satellite (space-to-Earth) 5.150	ISM Equipment (18) Amateur (97)
5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.150	5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation 5.150	5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Radiolocation 5.150		5850-5925 FIXED-SATELLITE (Earth-to-space) US245 MOBILE NG160 Amateur 5.150	ISM Equipment (18) Private Land Mobile (90) Personal Radio (95) Amateur (97)
5925-6700 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B MOBILE			5925-6425 5.150 US245	5925-6425 FIXED NG41 FIXED-SATELLITE (Earth-to-space) NG181	International Fixed (23) Satellite Commun. (25) Fixed Microwave (101)

10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A (Earth-to-space) 5.484 MOBILE except aeronautical mobile	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A MOBILE except aeronautical mobile		10.7-11.7 US211	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 US211 US355 NG104 NG182	Satellite Communications (25) Fixed Microwave (101)
11.7-12.5 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	11.7-12.1 FIXED 5.486 FIXED-SATELLITE (space-to-Earth) 5.484A Mobile except aeronautical mobile 5.485 5.488	11.7-12.2 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	11.7-12.7	11.7-12.2 FIXED-SATELLITE (space-to-Earth) NG143 NG145 NG183 5.488 NG184	Satellite Communications (25)
	12.1-12.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.485 5.488 5.489	5.487 5.487A 5.492			
5.487 5.487A 5.492	12.2-12.7 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	12.2-12.5 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile BROADCASTING 5.484A 5.487		12.2-12.7 FIXED BROADCASTING-SATELLITE	Satellite Communications (25) Fixed Microwave (101)
12.5-12.75 FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space)		12.5-12.75 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A			
5.494 5.495 5.496	5.487A 5.488 5.490 5.492 See next page for 12.7-12.75 GHz	MOBILE except aeronautical mobile BROADCASTING-SATELLITE 5.493	See next page for 12.7-12.75 GHz	5.487A 5.488 5.490	See next page for 12.7-12.75 GHz

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14-14.25 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504C 5.506A Space research 5.504A 5.505			14-14.2 RADIONAVIGATION US292 Space research	14-14.2 FIXED-SATELLITE (Earth-to-space) NG183 RADIONAVIGATION US292 Mobile-satellite (Earth-to-space) Space research	Satellite Communications (25) Maritime (80) Aviation (87)
14.25-14.3 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.506A 5.508A Space research 5.504A 5.505 5.508 5.509			14.2-14.4	14.2-14.47 FIXED-SATELLITE (Earth-to-space) NG183 Mobile-satellite (Earth-to-space)	Satellite Communications (25)
14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.506A 5.509A Radionavigation-satellite 5.504A	14.3-14.4 FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506 5.506B Mobile-satellite (Earth-to-space) 5.506A Radionavigation-satellite 5.504A	14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.506A 5.509A Radionavigation-satellite 5.504A			
14.4-14.47 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.506A 5.509A Space research (space-to-Earth) 5.504A			14.4-14.47 Fixed Mobile	NG184	
14.47-14.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A			14.47-14.5 Fixed Mobile US203 US342	14.47-14.5 FIXED-SATELLITE (Earth-to-space) NG183 Mobile-satellite (Earth-to-space) US203 US342	

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International Footnotes

* * * * *

5.457B In the bands 5925–6425 MHz and 14–14.5 GHz, earth stations located on board vessels may operate with the characteristics and under the conditions contained in Resolution 902 (WRC–03) in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, the Libyan Arab Jamahiriya, Jordan, Kuwait, Morocco, Mauritania, Oman, Qatar, the Syrian Arab Republic, Sudan, Tunisia and Yemen, in the maritime mobile-satellite service on a secondary basis. Such use shall be in accordance with Resolution 902 (WRC–03).

* * * * *

5.487 In the band 11.7–12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Regions 1 and 3 Plan in Appendix 30.

5.487A *Additional allocation:* in Region 1, the band 11.7–12.5 GHz, in Region 2, the band 12.2–12.7 GHz and, in Region 3, the band 11.7–12.2 GHz, are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated.

5.488 The use of the band 11.7–12.2 GHz by geostationary-satellite networks in the fixed-satellite service in Region 2 is subject to application of the provisions of No. 9.14 for coordination with stations of terrestrial services in Regions 1, 2 and 3. For the use of the band 12.2–12.7 GHz by the broadcasting-satellite service in Region 2, see Appendix 30.

* * * * *

Non-Federal Government (NG) Footnotes

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NG180 In the band 3700–4200 MHz (space-to-Earth) earth stations on vessels (ESVs) may be authorized to communicate with space stations of the fixed-satellite service and, while docked, may be coordinated for up to 180 days, renewable. ESVs in motion must operate on a secondary basis.

NG181 In the band 5925–6425 MHz (Earth-to-space), earth stations on vessels are an application of the fixed-satellite service (FSS) and may be authorized to communicate with space stations of the FSS on a primary basis.

NG182 In the bands 10.95–11.2 GHz and 11.45–11.7 GHz, earth stations on vessels may be authorized to communicate with U.S. earth stations through space stations of the fixed-satellite service but must accept interference from terrestrial systems operating in accordance with Commission Rules.

NG183 In the bands 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space), earth stations on vessels are an application of the fixed-satellite service (FSS) and may be authorized to communicate with space stations of the FSS on a primary basis.

NG184 Land mobile stations in the bands 11.7–12.2 GHz and 14.2–14.4 GHz and fixed stations in the band 11.7–12.1 GHz that are licensed pursuant to part 101, subpart J of the Commission's Rules as of March 1, 2005 may continue to operate on a secondary basis until their license expires. Existing licenses issued pursuant to part 101, subpart J will not be renewed in the bands 11.7–12.2 GHz and 14.2–14.4 GHz.

* * * * *

PART 25—SATELLITE COMMUNICATIONS

■ 3. The authority citation for part 25 continues to read as follows:

Authority: 47 U.S.C. 701–744. Interprets or applies Sections 4, 301, 302, 303, 307, 309 and 332 of the Communications Act, as amended, 47 U.S.C. Sections 154, 301, 302, 303, 307, 309, 332, unless otherwise noted.

■ 4. Section 25.115 is amended by adding paragraph (a)(2)(iii) to read as follows:

§ 25.115 Application for earth station authorizations.

(a) * * *

(2) * * *

(iii) The earth station is not an ESV.

* * * * *

■ 5. Section 25.130 is amended by revising paragraph (a) to read as follows:

§ 25.130 Filing requirements for transmitting earth stations.

(a) Applications for a new or modified transmitting earth station facility shall be submitted on FCC Form 312, and associated Schedule B, accompanied by any required exhibits, except for those earth station applications filed on FCC Form 312EZ pursuant to § 25.115(a). All such earth station license applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter. Additional filing requirements for Earth Stations on Vessels are described in §§ 25.221 and 25.222.

* * * * *

■ 6. Section 25.201 is amended by adding the following definitions in alphabetical order to read as follows:

§ 25.201 Definitions.

* * * * *

Ambulatory. Not stationary. Baselines from which maritime boundaries are measured change with accretion- and erosion-caused ambulation of the boundaries themselves.

* * * * *

Baseline. The line from which maritime zones are measured, also known as the coast line. The baseline is a combination of the low-water line (''low-tide elevation'') and closing lines across the mouths of inland water bodies. The baseline is defined by a series of baseline points. The baseline points are not just the low-water marks of the shore of mainland but also includes islands and ''low-water elevations'' (*i.e.*, natural rocks). Baseline points are ambulatory, and thus, require adjustment from time-to-time by the U.S. Department of State's Baseline Committee.

* * * * *

Earth Station on Vessel (''ESV''). An ESV is an earth station onboard a craft designed for traveling on water receiving from and transmitting to fixed-satellite space stations.

* * * * *

Low-Tide Elevation. A naturally formed area of land that is surrounded by and above water at low tide but below water at high tide. Low-tide elevations serve as part of the coast line when they are within the breath of the territorial sea of the mainland (either uplands or inland waters) or an island. 1958 Convention on the Territorial Sea, Article 11.

* * * * *

■ 7. Section 25.202 is amended by adding paragraph (a)(8) to read as follows:

§ 25.202 Frequencies, frequency tolerance and emission limitations.

(a) * * *

(8) The following frequencies are available for use by ESVs:

3700–4200 MHz (space-to-Earth)
5925–6425 MHz (Earth-to-space)
10.95–11.2 GHz (space-to-Earth)
11.45–11.7 GHz (space-to-Earth)
11.7–12.2 GHz (space-to-Earth)
14.0–14.5 GHz (Earth-to-space)

ESVs shall be authorized and coordinated as set forth in §§ 25.221 and 25.222. ESV operators, collectively, may

coordinate up to 180 megahertz of spectrum in the 5925–6425 MHz (Earth-to-space) band for all ESV operations at any given location subject to coordination.

* * * * *

■ 8. Section 25.203 is amended by revising paragraphs (a), (b), (c) introductory text, (d) and (k) to read as follows:

§ 25.203 Choice of sites and frequencies.

(a) Sites and frequencies for earth stations, other than ESVs, operating in frequency bands shared with equal rights between terrestrial and space services, shall be selected, to the extent practicable, in areas where the surrounding terrain and existing frequency usage are such as to minimize the possibility of harmful interference between the sharing services.

(b) An applicant for an earth station authorization, other than an ESV, in a frequency band shared with equal rights with terrestrial microwave services shall compute the great circle coordination distance contour(s) for the proposed station in accordance with the procedures set forth in § 25.251. The applicant shall submit with the application a map or maps drawn to appropriate scale and in a form suitable for reproduction indicating the location of the proposed station and these contours. These maps, together with the pertinent data on which the computation of these contours is based, including all relevant transmitting and/or receiving parameters of the proposed station that is necessary in assessing the likelihood of interference, an appropriately scaled plot of the elevation of the local horizon as a function of azimuth, and the electrical characteristics of the earth station antenna(s), shall be submitted by the applicant in a single exhibit to the application. The coordination distance contour plot(s), horizon elevation plot, and antenna horizon gain plot(s) required by this section may also be submitted in tabular numerical format at 5° azimuthal increments instead of graphical format. At a minimum, this exhibit shall include the information listed in paragraph (c)(2) of this section. An earth station applicant shall also include in the application relevant technical details (both theoretical calculations and/or actual measurements) of any special techniques, such as the use of artificial site shielding, or operating procedures or restrictions at the proposed earth station which are to be employed to reduce the likelihood of interference, or of any particular characteristics of the earth station site which could have an effect on the calculation of the coordination distance.

(c) Prior to the filing of its application, an applicant for operation of an earth station, other than an ESV, shall coordinate the proposed frequency usage with existing terrestrial users and with applicants for terrestrial station authorizations with previously filed applications in accordance with the following procedure:

* * * * *

(d) An applicant for operation of an earth station, other than an ESV, shall also ascertain whether the great circle coordination distance contours and rain scatter coordination distance contours, computed for those values of parameters indicated in § 25.251 (Appendix 7 of the ITU RR) for international coordination, cross the boundaries of another Administration. In this case, the applicant shall furnish to the Commission copies of these contours on maps drawn to appropriate scale for use by the Commission in effecting coordination of the proposed earth station with the Administration(s) affected.

* * * * *

(k) An applicant for operation of an earth station, other than an ESV, that will operate with a geostationary satellite or non-geostationary satellite in a shared frequency band in which the non-geostationary system is (or is proposed to be) licensed for feeder links, shall demonstrate in its applications 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.

■ 9. Section 25.204 is amended by adding paragraphs (h) and (i) to read as follows:

§ 25.204 Power limits.

* * * * *

(h) ESV transmissions in the 5925–6425 MHz (Earth-to-space) band shall not exceed an e.i.r.p. spectral density towards the radio-horizon of 17 dBW/MHz, and shall not exceed an e.i.r.p. towards the radio-horizon of 20.8 dBW. The ESV network shall shut-off the ESV transmitter if the e.i.r.p. spectral density towards the radio-horizon or e.i.r.p. towards the radio-horizon are exceeded.

(i) Within 125 km of the TDRSS sites identified in § 25.222(d), ESV transmissions in the 14.0–14.2 GHz (Earth-to-space) band shall not exceed an e.i.r.p. spectral density towards the horizon of 12.5 dBW/MHz, and shall not exceed an e.i.r.p. towards the horizon of 16.3 dBW.

■ 10. Section 25.205 is revised to read as follows:

§ 25.205 Minimum angle of antenna elevation.

(a) Earth station antennas shall not normally be authorized for transmission at angles less than 5° measured from the horizontal plane to the direction of maximum radiation. However, upon a showing that the transmission path will be seaward and away from land masses or upon special showing of need for lower angles by the applicant, the Commission will consider authorizing transmissions at angles between 3° and 5° in the pertinent directions. In certain instances, it may be necessary to specify minimum angles greater than 5° because of interference considerations.

(b) ESVs making a special showing requesting angles of elevation less than 5° measured from the horizontal plane to the direction of maximum radiation pursuant to (a) of this Section must still meet the effective isotropically radiated power (e.i.r.p.) and e.i.r.p. density towards the horizon limits contained in § 25.204(h) and (i).

■ 11. Section 25.221 is added to read as follows:

§ 25.221 Blanket Licensing provisions for Earth Stations on Vessels (ESVs) receiving in the 3700–4200 MHz (space-to-Earth) frequency band and transmitting in the 5925–6425 MHz (Earth-to-space) frequency band, operating with Geostationary Satellites in the Fixed-Satellite Service.

(a) All applications for licenses for ESVs transmitting in the 5925–6425 MHz (Earth-to-space) bands to geostationary-orbit satellites in the fixed-satellite service shall provide sufficient data to demonstrate that the ESV operations meet the following criteria, which are ongoing requirements that govern all ESV licensees and operations in these bands:

(1) The off-axis effective isotropically radiated power (e.i.r.p.) spectral density for co-polarized signals, emitted from the ESV, in the plane of the geostationary satellite orbit as it appears at the particular earth station location (*i.e.*, the plane determined by the focal point of the antenna and the line tangent to the arc of the geostationary satellite orbit at the position of the target satellite), shall not exceed the following values:

26.3–25log(θ) dBW/4kHz for 1.0° ≤ θ ≤ 7.0°
5.3 dBW/4kHz for 7.0° < θ ≤ 9.2°
29.3–25log(θ) dBW/4kHz for 9.2° < θ ≤ 48°
−12.7 dBW/4kH for 48° < θ ≤ 180°

(2) In all other directions, the off-axis e.i.r.p. spectral density for co-polarized signals emitted from the ESV shall not exceed the following values:

29.3–25log(θ) dBW/4kHz for 1.0° ≤ θ ≤ 48°
−12.7 dBW/4kHz for 48° < θ ≤ 180°

(3) For θ > 7°, the values given in paragraphs (a)(1) of this Section may be exceeded by no more than 10% of the earth station antenna sidelobes, provided no individual sidelobe exceeds the criteria given by more than 3 dB.

(4) In all directions, the off-axis e.i.r.p. spectral density for cross-polarized signals emitted from the ESV shall not exceed the following values:

16.3–25log(θ) dBW/4kHz for 1.8° ≤ θ ≤ 7.0°
−4.7 dBW/4kHz for 7.0° < θ ≤ 9.2°

Where θ is the angle in degrees from the axis of the main lobe.

(5) For non-circular ESV antennas, the major axis of the antenna will be aligned with the tangent to the geostationary satellite orbital arc at the target satellite point, to the extent required to meet specified off-axis e.i.r.p. criteria.

(6) A pointing error of less than 0.2°, between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna.

(7) All emissions from the ESV shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°, and transmission will not resume until such angle is less than 0.2°.

(8) There shall be a point of contact in the United States, with phone number and address included with the application, available 24 hours a day, seven days a week, with authority and ability to cease all emissions from the ESVs, either directly or through the facilities of a U.S. Hub or a Hub located in another country with which the U.S. has a bilateral agreement that enables such cessation of emissions.

(9) ESVs that exceed the radiation guidelines of Section 1.1310 Radiofrequency radiation exposure limits must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(10) ESV operators transmitting in the 5925–6425 MHz (Earth-to-space) frequency bands to geostationary satellites in the fixed-satellite service (FSS) shall not seek to coordinate, in any geographic location, more than 36 MHz of uplink bandwidth on each of no more than two GSO FSS satellites.

(11) There shall be an exhibit included with the application describing the geographic area(s) in which the ESVs will operate.

(12) ESVs shall not operate in the 5925–6425 MHz (Earth-to-space) and 3700–4200 MHz (space-to-Earth) frequency bands on vessels smaller than 300 gross tons.

(b) Applications for ESV operation in the 5925–6425 MHz band to geostationary satellites in the fixed-satellite service must include, in addition to the particulars of operation identified on Form 312, and associated Schedule B, the following data, for each earth station antenna type:

(1) A series of e.i.r.p. density charts or tables, calculated for a production earth station antenna, based on measurements taken on a calibrated antenna range at 6.0 GHz, with the off-axis e.i.r.p. envelope set forth in paragraphs (a)(1) through (a)(4) of this section superimposed, as follows:

(i) Showing off-axis co-polarized e.i.r.p. spectral density in the azimuth plane, for off-axis angles from minus 10° to plus 10° and from minus 180° to plus 180°.

(ii) Showing off-axis co-polarized e.i.r.p. spectral density in the elevation plane, at off-axis angles from 0° to plus 30°.

(iii) Showing off-axis cross-polarized e.i.r.p. spectral density in the azimuth plane, at off-axis angles from minus 10° to plus 10°.

(iv) Showing off-axis cross-polarized e.i.r.p. spectral density in the elevation plane, at off-axis angles from minus 10° to plus 10°; or

(2) A series of gain charts or tables, for a production earth station antenna, measured on a calibrated antenna range at 6.0 GHz, with the Earth station antenna gain envelope set forth in § 25.209(a) and (b) superimposed, for the same planes and ranges enumerated in paragraphs (b)(1)(i) through (b)(1)(iv) of this section, that, combined with input power density entered in Schedule B, demonstrates that the off-axis e.i.r.p. spectral density envelope set forth in paragraphs (a)(1) through (a)(4) of this section will be met; or

(3) A certification that the antenna conforms to the gain pattern criteria of § 25.209(a) and (b), that, combined with input power density entered in Schedule B, demonstrates that the off-axis e.i.r.p. spectral density envelope set forth in paragraphs (a)(1) through (a)(4) of this section will be met.

(c) ESVs receiving and transmitting in the 3700–4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) frequency bands shall operate with the following provisions:

(1) For each ESV transmitter, a record of the ship location (*i.e.*, latitude/longitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than 1 year. Records will be recorded at time intervals no greater than every 20 minutes while the ESV is transmitting. The ESV operator will make this data available upon request to a coordinator, fixed system operator, fixed-satellite system operator, or the Commission within 24 hours of the request.

(2) ESV operators communicating with vessels of foreign registry must maintain detailed information on each vessel's country of registry and a point of contact for the relevant administration responsible for licensing ESVs.

(3) ESV operators shall control all ESVs by a Hub earth station located in the United States, except that an ESV on U.S.-registered vessels may operate under control of a Hub earth station location outside the United States provided the ESV operator maintains a point of contact within the United States that will have the capability and authority to cause an ESV on a U.S.-registered vessel to cease transmitting if necessary.

(4) ESVs, operating while docked, that complete coordination with terrestrial stations in the 3700–4200 MHz band in accordance with § 25.251, shall receive protection from such terrestrial stations in accordance with the coordination agreements, for 180 days, renewable for 180 days.

(d) ESVs in motion shall not claim protection from harmful interference from any authorized terrestrial stations or lawfully operating satellites to which frequencies are either already assigned, or may be assigned in the future in the 3700–4200 MHz (space-to-Earth) frequency band.

(e) ESVs operating in the 5925–6425 MHz (Earth-to-space) band, within 200 km from the baseline of the United States, or within 200 km from a fixed service offshore installation, shall complete coordination prior to operation. The coordination method and the interference criteria objective shall be determined by the frequency coordinator. The details of the coordination shall be maintained and available at the frequency coordinator, and shall be filed with the Commission

to be placed on Public Notice. Operation of each individual ESV may commence immediately after the Public Notice is released that identifies the notification sent to the Commission. Continuance of operation of that ESV for the duration of the coordination term shall be dependent upon successful completion of the normal public notice process. If any objections are received to the coordination prior to the end of the 30-day comment period of the Public Notice, the licensee shall immediately cease operation of that particular station until the coordination dispute is resolved and the ESV licensee informs the Commission of the resolution.

(f) ESV operators must automatically cease transmission if the ESV operates in violation of the terms of its coordination, including, but not limited to, conditions related to speed of the vessel or if the ESV travels outside the coordinated area, if within 200 km from the baseline of the United States, or within 200 km from a fixed service offshore installation. Transmissions may be controlled by the ESV network. The frequency coordinator may decide whether ESV operators should automatically cease transmissions if the vessel falls below a prescribed speed within a prescribed geographic area.

■ 12. Section 25.222 is added to read as follows:

§ 25.222 Blanket Licensing provisions for Earth Stations on Vessels (ESVs) receiving in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) frequency bands and transmitting in the 14.0–14.5 GHz (Earth-to-space) frequency band, operating with Geostationary Satellites in the Fixed-Satellite Service.

(a) All applications for licenses for ESVs receiving in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) frequency bands, and transmitting in the 14.0–14.5 GHz (Earth-to-space) frequency band, to Geostationary Satellites in the fixed-satellite service shall provide sufficient data to demonstrate that the ESV operations meet the following criteria, which are ongoing requirements that govern all ESV licensees and operations in these bands:

(1) The off-axis effective isotropically radiated power (e.i.r.p.) spectral density for co-polarized signals, emitted from the ESV in the plane of the geostationary satellite orbit as it appears at the particular earth station location (*i.e.*, the plane determined by the focal point of the antenna and the line tangent to the arc of the geostationary satellite orbit at the position of the target satellite), shall not exceed the following values:

$15-25\log(\theta)$ dBW/4kHz for $1.25° \leq \theta \leq 7.0°$

-6 dBW/4kHz for $7.0° < \theta \leq 9.2°$

$18-25\log(\theta)$ dBW/4kHz for $9.2° < \theta \leq 48°$

-24 dBW/4kHz for $48° < \theta \leq 180°$

(2) In all other directions, the off-axis e.i.r.p. spectral density for co-polarized signals emitted from the ESV shall not exceed the following values:

$18-25\log(\theta)$ dBW/4kHz for $1.25° \leq \theta \leq 48°$

-24 dBW/4kHz for $48° < \theta \leq 180°$

(3) For $\theta > 7°$, the values given in paragraphs (a)(1) of this section may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the criteria given by more than 3 dB.

(4) In all directions, the off-axis e.i.r.p. spectral density for cross-polarized signals emitted from the ESV shall not exceed the following values:

$5-25\log(\theta)$ dBW/4kHz for $1.8° \leq \theta \leq 7°$

-16 dBW/4kHz for $7° < \theta \leq 9.2°$

Where θ is the angle in degrees from the axis of the main lobe.

(5) For non-circular ESV antennas, the major axis of the antenna will be aligned with the tangent to the geostationary satellite orbital arc at the target satellite point, to the extent required to meet specified off-axis e.i.r.p. criteria.

(6) A pointing error of less than 0.2°, between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna.

(7) All emissions from the ESV shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°, and transmission will not resume until such angle is less than 0.2°.

(8) There shall be a point of contact in the United States, with phone number and address included with the application, available 24 hours a day, seven days a week, with authority and ability to cease all emissions from the ESVs, either directly or through the facilities of a U.S. Hub or a Hub located in another country with which the U.S. has a bilateral agreement that enables such cessation of emissions.

(9) ESVs that exceed the radiation guidelines of § 1.1310 of this chapter, Radiofrequency radiation exposure limits, must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(10) There shall be an exhibit included with the application describing the geographic area(s) in which the ESVs will operate.

(b) Applications for ESV operation in the 14.0–14.5 GHz (Earth-to-space) to geostationary satellites in the fixed-satellite service must include, in addition to the particulars of operation identified on Form 312 and associated Schedule B, the following data for each earth station antenna type:

(1) A series of e.i.r.p. density charts or tables, calculated for a production earth station antenna, based on measurements taken on a calibrated antenna range at 14.25 GHz, with the off-axis e.i.r.p. envelope set forth in paragraphs (a)(1) through (a)(4) of this section superimposed, as follows:

(i) Showing off-axis co-polarized e.i.r.p. spectral density in the azimuth plane, for off-axis angles from minus 10° to plus 10° and from minus 180° to plus 180°.

(ii) Showing off-axis co-polarized e.i.r.p. spectral density in the elevation plane, at off-axis angles from 0° to plus 30°.

(iii) Showing off-axis cross-polarized e.i.r.p. spectral density in the azimuth plane, at off-axis angles from minus 10° to plus 10°.

(iv) Showing off-axis cross-polarized e.i.r.p. spectral density in the elevation plane, at off-axis angles from minus 10° to plus 10°; or

(2) A series of gain charts or tables, for a production earth station antenna, measured on a calibrated antenna range at 14.25 GHz, with the Earth station antenna gain envelope set forth in § 25.209(a) and (b) superimposed, for the same planes and ranges enumerated in paragraphs (b)(1)(i) through (b)(1)(iv) of this section, that, combined with input power density entered in Schedule B, demonstrates that off-axis e.i.r.p. spectral density envelope set forth in paragraphs (a)(1) through (a)(4) of this section will be met; or

(3) A certification that the ESV antenna conforms to the gain pattern criteria of § 25.209(a) and (b), that, combined with input power density entered in Schedule B, demonstrates that the off-axis e.i.r.p. spectral density envelope set forth in paragraphs (a)(1) through (a)(4) of this section will be met.

(c) ESVs receiving in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) frequency bands, and transmitting in the 14.0–14.5 GHz (Earth-to-space) frequency band shall operate with the following provisions:

(1) For each ESV transmitter a record of the ship location (*i.e.*, latitude/longitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than 1 year. Records

will be recorded at time intervals no greater than every 20 minutes while the ESV is transmitting. The ESV operator will make this data available upon request to a coordinator, fixed system operator, fixed-satellite system operator, NTIA, or the Commission within 24 hours of the request.

(2) ESV operators communicating with vessels of foreign registry must maintain detailed information on each vessel's country of registry and a point of contact for the relevant administration responsible for licensing ESVs.

(3) ESV operators shall control all ESVs by a Hub earth station located in the United States, except that an ESV on U.S.-registered vessels may operate under control of a Hub earth station location outside the United States provided the ESV operator maintains a point of contact within the United States that will have the capability and authority to cause an ESV on a U.S.-registered vessel to cease transmitting if necessary.

(d) Operations of ESVs in the 14.0–14.2 GHz (Earth-to-space) frequency band within 125 km of the NASA TDRSS facilities on Guam (located at latitude: 13° 36′ 55″ N, longitude 144° 51′ 22″ E) or White Sands, New Mexico (latitude: 32° 20′ 59″ N, longitude 106° 36′ 31″ W and latitude: 32° 32′ 40″ N, longitude 106° 36′ 48″ W) are subject to coordination through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee (IRAC). When NTIA seeks to provide similar protection to future TDRSS sites that have been coordinated through the IRAC Frequency Assignment Subcommittee process, NTIA will notify the Commission that the site is nearing operational status. Upon public notice from the Commission, all Ku-band ESV operators must cease operations in the 14.0–14.2 GHz band within 125 km of the new TDRSS site until after NTIA/IRAC coordination for the new TDRSS facility is complete. ESV operations will then again be permitted to operate in the 14.0–14.2 GHz band within 125 km of the new TDRSS site, subject to any operational constraints developed in the coordination process.

(e) Operations of ESVs in the 14.47–14.5 GHz (Earth-to-space) frequency band within a) 45 km of the radio observatory on St. Croix, Virgin Islands (latitude 17° 46′ N, longitude 64° 35′ W); b) 125 km of the radio observatory on Mauna Kea, Hawaii (at latitude 19° 48′ N, longitude 155° 28′ W); and c) 90 km of the Arecibo Observatory on Puerto Rico (latitude 18° 20′ 46″ W, longitude 66° 45′ 11″ N) are subject to coordination through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee (IRAC).

(f) In the 10.95–11.2 GHz (space-to-Earth) and 11.45–11.7 GHz (space-to-Earth) frequency bands ESVs shall not claim protection from interference from any authorized terrestrial stations to which frequencies are either already assigned, or may be assigned in the future.

■ 13. Section 25.271 is amended by revising paragraphs (b) and (c) introductory text and adding paragraph (f), to read as follows:

§ 25.271 Control of transmitting stations.

* * * * *

(b) The licensee of a transmitting earth station, other than an ESV, licensed under this part shall ensure that a trained operator is present on the earth station site, or at a designated remote control point for the earth station, at all times that transmissions are being conducted. No operator's license is required for a person to operate or perform maintenance on facilities authorized under this part.

(c) Authority will be granted to operate a transmitting earth station, other than an ESV, by remote control only on the conditions that:

* * * * *

(f) Rules for control of transmitting ESVs are provided in §§ 25.221 and 25.222.

■ 14. Section 25.277 is amended by revising paragraph (b) and the introductory text of paragraph (c) to read as follows:

§ 25.277 Temporary fixed earth stations.

* * * * *

(b) When a station, other than an ESV, authorized as a temporary fixed earth station, is to remain at a single location for more than six months, application for a regular station authorization at that location shall be filed at least 30 days prior to the expiration of the six-month period.

(c) The licensee of an earth station, other than an ESV, which is authorized to conduct temporary fixed operations in bands shared co-equally with terrestrial fixed stations shall provide the following information to the Director of the Columbia Operations Center at 9200 Farmhouse Lane, Columbia, Maryland 21046, and to the licensees of all terrestrial facilities lying within the coordination contour of the proposed temporary fixed earth station site before beginning transmissions:

* * * * *

PART 101—FIXED MICROWAVE SERVICES

■ 15. The authority citation for part 101 continues to read as follows:

Authority: 47 U.S.C. 154, 303.

§ 101.101 [Amended]

■ 16. Section 101.101 is amended by removing the entries for ''11,700–12,200'' and ''14,200–14,400'' from the table.

■ 17. Section 101.107 is amended by revising footnote 1 to read as follows:

§ 101.107 Frequency tolerance.

* * * * *

[1]Applicable only to common carrier LTTS stations. Tolerance for 2450–2500 MHz is 0.005%. Beginning Aug. 9, 1975, this tolerance will govern the marketing of LTTS equipment and the issuance of all such authorizations for new radio equipment. Until that date new equipment may be authorized with a frequency tolerance of .03% in the frequency range 2,200 to 10,500 MHz and .05% in the range 10,500 MHz to 12,200 MHz, and equipment so authorized may continue to be used for its life provided that it does not cause interference to the operation of any other licensee. Beginning March 1, 2005, new LTTS operators will not be licensed and existing LTTS licensees will not be renewed in the 11.7–12.2 GHz band.

* * * * *

■ 18. Section 101.113 is amended by republishing the entry for ''14,200–14,400'' and by adding footnote 12 in the table of paragraph (a) to read as follows:

§ 101.113 Transmitter power limitations.

(a) * * *

Frequency band (MHz)	Maximum allowable EIRP [1, 2]	
	Fixed; [1, 2] (dBW)	Mobile (dBW)
* *	*	* *
14,200–14,400 [12]	+45	
* *	*	* *

[12] Beginning March 1, 2005, no new LTTS operators will be licensed and no existing LTTS licensees will be renewed in the 14.2–14.4 GHz band.

* * * * *

■ 19. Section 101.147 is amended by revising note (24) in paragraph (a) to read as follows:

§ 101.147 Frequency assignments.

(a) * * *

(24) Frequencies in these bands are available for assignment to television pickup and television non-broadcast pickup stations. The maximum power for the local television transmission service in the 14.2–14.4 GHz

band is +45 dBW except that operations are not permitted within 1.5 degrees of the geostationary orbit. Beginning March 1, 2005, no new LTTS operators will be licensed and no existing LTTS licenses shall be issued in the 11.7–12.2 and 14.2–14.4 GHz bands.

* * * * *

■ 20. Section 101.803 is amended by revising notes (3) and (8) in paragraph (a), the text of paragraph (d) before the notes, and note (3) of paragraph (d) to read as follows:

§ 101.803 Frequencies.

(a) * * *

(3) This frequency band is shared, on a secondary basis, with stations in the broadcasting-satellite and fixed-satellite services. As of March 1, 2005, no new LTTS operators will be licensed in the 11.7–12.2 GHz band. LTTS operators authorized prior to March 1, 2005 may continue to operate in 11.7–12.2 GHz band until their license expires; no existing LTTS licenses will be renewed in the 11.7–12.2 GHz band.

* * * * *

(8) The maximum power for the local television transmission service in the 14.2–14.4 GHz band is +45 dBW except that operations are not permitted within 1.5 degrees of the geostationary orbit. As of March 1, 2005, no new LTTS operators will be licensed in the 14.2–14.4 GHz band. LTTS operators authorized prior to March 1, 2005 may continue to operate in 14.2–14.4 GHz band until their license expires; no existing LTTS licenses will be renewed in the 11.7–12.2 GHz band.

* * * * *

(d) Frequencies in the following bands are available for assignment to television STL stations in this service:

3,700 to 4,200 MHz (1)
5,925 to 6,425 MHz (1),(5)
10,700 to 11,700 MHz (1),(6)
11,700 to 12,100 MHz (3)
13,200 to 13,250 MHz (2)
21,200 to 22,000 MHz (2),(4),(7),(8)
22,000 to 23,600 MHz (2),(6),(8)
31,000 to 31,300 MHz (9)

* * * * *

(3) This frequency band is shared with space stations (space to earth) in the fixed-satellite service. As of March 1, 2005, no new LTTS operators will be licensed in the 11.7–12.2 GHz band. LTTS operators authorized prior to March 1, 2005 may continue to operate in 11.7–12.2 GHz band until their license expires; no existing LTTS licenses will be renewed in the 11.7–12.2 GHz band.

* * * * *

■ 21. Section 101.809 is amended in the table of paragraph (d) by republishing the entry for ''10,700 to 12,200'' and by adding footnote 2 to read as follows:

§ 101.809 Bandwidth and emission limitations.

* * * * *

(d) * * *

MAXIMUM AUTHORIZED

Frequency band (MHz)	Bandwidth (MHz)
* * * * *	
10,700 to 12,200	[1] [2] 40
* * * * *	

[2] As of March 1, 2005, no new LTTS operators will be licensed in the 11.7–12.2 GHz band. LTTS operators authorized prior to March 1, 2005 may continue to operate in 11.7–12.2 GHz band until their license expires; no existing LTTS licensees will be renewed in the 11.7–12.2 GHz band.

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[FR Doc. 05–1359 Filed 1–28–05; 8:45 am]

BILLING CODE 6712–01–P