6712-01

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 25

[IB Docket No. 02-10; FCC 12-79]

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: In this document, the Federal Communications Commission (Commission) modifies its C-band and Ku-band licensing and service rules for Earth Stations on Board Vessels (ESVs) in order to promote greater ESV operational flexibility without causing harmful interference to the Fixed-Satellite Service (FSS) operators.

DATES: Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

FOR FURTHER INFORMATION CONTACT: Jennifer Balatan or Howard Griboff, Policy Division, International Bureau, (202) 418-1460.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Second Order on Reconsideration, adopted on July 17, 2012, and released on July 19, 2012 (FCC 12-79). The full text of this document is available for inspection and copying during normal business hours in the Commission Reference Center, 445 12th Street, SW, Washington, DC 20554. The document is also available for download over the Internet at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0719/FCC-12-79A1.doc. The complete text may also be purchased from the Commission's copy contractor, Best Copy and

Printing, in person at 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, via telephone at (202) 488-5300, via facsimile at (202) 488-5563, or via e-mail at Commission@bcpiweb.com.

Summary of the Second Order on Reconsideration

On December 15, 2004, the Commission adopted the ESV Report and Order in IB Docket No. 02-10 (ESV Order) (70 FR 4775-01, January 31, 2005, as amended at 40 FR 34665-01, June 15, 2005), establishing 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. On July 30, 2009, the Commission adopted the Order on Reconsideration (ESV Reconsideration Order), (74 FR 47100-01, September 15, 2009, as amended at 75 FR 7975-01, February 23, 2010) which revises some of the ESV licensing and service rules adopted in the ESV Order. In this Second Order on Reconsideration (Second Reconsideration Order), the Commission revises the ESV rules by adopting requirements for a certain type of ESV system: a system that operates multiple co-frequency terminals simultaneously, with each terminal using a different data rate or power level (variable power ESV system). Specifically, the Second Reconsideration Order adopts an aggregate power-density rule that will allow variable power ESV systems to operate their individual transmitters simultaneously while using varying off-axis EIRP-density levels instead of requiring each transmitter within the system to use the same EIRP-density. The aggregate power-density rule requires variable power ESV systems to operate at least one dB below the off-axis EIRP-density limits in order to protect the FSS from harmful interference. In addition, the Order requires ESV applicants seeking a waiver of the one dB requirement to file a report regarding their system operations. Further, the Second Reconsideration Order requires variable power ESV systems to cease transmissions if the power-density from an individual terminal

exceeds the off-axis EIRP-density limits or the power-density of one or more terminals causes the aggregate power to exceed the off-axis EIRP-density limits. The revisions this Second Reconsideration Order adopts for variable power ESVs should provide greater operational flexibility for those ESVs while continuing to ensure that the FSS operators are protected from harmful interference in the C-band and Ku-band.

Final Regulatory Flexibility 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 generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction." In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act. 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). In light of the rules adopted in the ESV Order, we find 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/Receive Earth Stations. The SBA has determined that the small business size standard for Satellite Telecommunications is a business that has $15 million or less in average annual receipts. 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. For the reasons described below, we certify that the policies and rules adopted in this Second Reconsideration Order will not have a significant economic impact on a substantial number of small entities.

In the ESV Order, the Commission established 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. These rules allow ESV operations in the C- and Ku-bands, while ensuring that ESVs protect the fixed service (FS) and fixed-satellite service (FSS) operators, and a limited number of Government operations in these bands from harmful interference. In the Order on Reconsideration, the Commission clarified and modified certain ESV rules designed to protect the FSS and the FS in the C- and Ku-bands in order to allow greater operational flexibility for ESVs. For example, ESVs may operate at higher off-axis power-density levels as long as the ESV remains within the parameters of the coordination agreements between the target satellite and adjacent satellites. In this Second Reconsideration Order, we further promote operational flexibility while ensuring that the FSS are protected from harmful interference by adopting an aggregate power-density rule and a cessation of emission rule for variable power ESV systems. The Commission does not expect a substantial number of small entities to be directly impacted by the rule changes adopted in this Second Reconsideration Order. Specifically, we expect that fewer than ten entities will be affected by the variable power rule provisions adopted in this Order. In addition, we believe these new rule provisions will not impose a significant economic impact on small entities and, in fact, will benefit both large and small entities utilizing variable power systems by allowing greater operational flexibility in providing ESV service. Therefore,

we certify that the requirements adopted in this Second Reconsideration Order will not have a significant economic impact on a substantial number of small entities.

Final Paperwork Reduction Act of 1995 Analysis

This Order on Reconsideration does not contain new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4).

Congressional Review Act

The Commission will send a copy of this Second Order on Reconsideration to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. 801(a)(1)(A).

Ordering Clauses

IT IS ORDERED that, pursuant to sections 4(i), 7, 302, 303(c), 303(e), 303(f) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 157, 302, 303(c), 303(e), 303(f) and 303(r), this Second Order on Reconsideration IS ADOPTED. Part 25 of the Commission's rules IS AMENDED, as specified below in the rule revisions, effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

IT IS FURTHER ORDERED that the Petition for Reconsideration filed by The Boeing Company IS GRANTED in part to the extent described above and IS DENIED in all other respects.

IT IS FURTHER ORDERED that the Petition for Reconsideration filed by ViaSat, Inc. IS DENIED.

IT IS FURTHER ORDERED that the Final Regulatory Flexibility Certification, as required by section 604 of the Regulatory Flexibility Act, IS ADOPTED.

IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Second Order on Reconsideration including the Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Part 25

Satellites.

FEDERAL COMMUNICATIONS COMMISSION

Marlene Dortch,
Secretary.

Final Rule

For the reasons discussed above, the Federal Communications Commission amends 47 CFR part 25 as follows:

PART 25 – SATELLITE COMMUNICATIONS

1. 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.

2. Amend § 25.221 as follows:

a. Revise paragraph (a) introductory text;

b. Revise paragraphs (a)(1)(ii) introductory text and (a)(1)(iii) introductory text;

c. Revise paragraph (a)(2) introductory text;

d. Revise paragraph (a)(2)(iii);

e. Redesignate paragraphs (a)(3) through (a)(12) as paragraphs (a)(4) through (a)(13);

f. Add new paragraph (a)(3);

g. Revise newly redesignated paragraph (a)(12);

h. Revise paragraph (b) introductory text;

i. Revise paragraph (b)(2) introductory text;

j. Revise paragraph (b)(2)(iv);

k. Redesignate paragraphs (b)(3) through (b)(5) as paragraphs (b)(4) through (b)(6); and

l. Add new paragraphs (b)(3) and (b)(7).

§ 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 Satellite Orbit (GSO) Satellites in the Fixed-Satellite Service.

(a) The following ongoing requirements govern all ESV licensees and operations in the 3700-4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) bands transmitting to GSO satellites in the fixed-satellite service. ESV licensees must comply with the requirements in paragraph (a)(1), (a)(2) or (a)(3) of this section and all of the requirements set forth in paragraphs (a)(4) through (a)(13) of this section. Paragraph (b) of this section identifies items that must be included in the application for ESV operations to demonstrate that these ongoing requirements will be met.

(1) * * *

(ii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following antenna pointing error requirements:

* * * * *

(iii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following cessation of emission requirements:

* * * * *

(2) The following requirements shall apply to an ESV that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section. An ESV or ESV system operating under this paragraph (a)(2) shall file certifications and provide a detailed demonstration(s) as described in paragraph (b)(2) of this section.

* * * * *

(iii) The ESV shall operate in accordance with the off-axis EIRP spectral-densities that the ESV supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(2) of this section. Except for ESVs with variable power systems, the ESV shall automatically cease emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. For ESVs using variable power systems, the individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits supplied to the target satellite operator; the individual transmitter must be self-monitoring and capable of shutting itself off; and if one or more ESV transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits supplied to the target satellite operator, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

(3) The following requirements shall apply to an ESV system that uses variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam unless that ESV system operates pursuant to paragraph (a)(2) of this section. An ESV system operating under this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3) of this section.

(i) The effective aggregate EIRP-density from all terminals shall be at least 1 dB below the off-axis EIRP-density limits defined in paragraph (a)(1)(i) of this section, with the value of N=1. In this context the term “effective” means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO

or non-GSO satellite shall not exceed that produced by a single transmitter operating 1 dB below the off-axis EIRP-density limits defined in paragraph (a)(1)(i) of this section. An ESV system operating under this this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3)(i) of this section.

(ii) The individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section. The individual transmitter must be self-monitoring and capable of shutting itself off. If one or more ESV transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

* * * * *

(12) ESVs operating within 200 km from the baseline of the United States, or within 200 km from a U.S.-licensed fixed service offshore installation, shall complete coordination with potentially affected U.S.-licensed fixed service operators 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 electronically via the International Bureau Filing System (http://licensing.fcc.gov/myibfs/) to be placed on public notice. The coordination notifications must be filed in the form of a statement referencing the relevant call signs and file numbers. 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, prior to the end of the 30-day comment period of the public notice, any objections are received from U.S.-licensed fixed service operators that have been excluded from coordination, the ESV licensee shall immediately cease operation of that particular station on frequencies used by the affected U.S.-licensed fixed service station until the coordination dispute is resolved and the ESV licensee informs the Commission of the resolution.

* * * * *

(b) Applications for ESV operation in the 5925-6425 MHz (Earth-to-space) band to GSO satellites in the Fixed-Satellite Service must include, in addition to the particulars of operation identified on Form 312, and associated Schedule B, the applicable technical demonstrations in paragraph (b)(1), (b)(2) or (b)(3) of this section and the documentation identified in paragraphs (b)(4) through (b)(7) of this section.

* * * * *

(2) An ESV applicant proposing to implement a transmitter under paragraph (a)(2) of this section and using off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section shall provide the following certifications and demonstration(s) as exhibits to its earth station application:

* * * * *

(iv) Except for variable power ESV applicants, a demonstration from the ESV operator that the ESV system is capable of detecting and automatically ceasing

emissions within 100 milliseconds when the transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. Variable power ESV applicants shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator; that the individual transmitter is self-monitoring and capable of shutting itself off; and that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP spectral-densities supplied to the target satellite operator.

(3) An ESV applicant proposing to implement an ESV system under paragraph (a)(3) of this section and using variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam shall provide the information in paragraphs (b)(3)(i) and (b)(3)(ii) of this section as exhibits to its earth station application. The International Bureau will place these showings on Public Notice along with the application.

(i) The ESV applicant shall provide a detailed showing of the measures it intends to employ to maintain the effective aggregate EIRP-density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at least 1 dB below the EIRP-density limits defined in paragraph (a)(1)(i) of this section. In this context the term “effective” means that

the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single ESV transmitter operating at 1 dB below the limits defined in paragraph (a)(1)(i) of this section.

(ii) The ESV applicant shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limit specified in paragraph (a)(3)(i) of this section and that the individual transmitter is self-monitoring and capable of shutting itself off. The ESV applicant shall also provide a detailed showing that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section.

* * * * *

(7) Except for ESV systems operating pursuant to paragraph (a)(2) of this section, ESV systems authorized pursuant to this section shall be eligible for a license that lists ALSAT as an authorized point of communication.

3. Amend § 25.222 as follows:

a. Revise paragraph (a) introductory text;

b. Revise paragraphs (a)(1)(ii) introductory text and (a)(1)(iii) introductory text;

c. Revise paragraph (a)(2) introductory text;

d. Revise paragraph (a)(2)(iii);

e. Redesignate paragraphs (a)(3) through (a)(7) as paragraphs (a)(4) through (a)(8);

f. Add new paragraph (a)(3);

g. Revise paragraph (b) introductory text;

h. Revise paragraph (b)(2) introductory text;

i. Revise paragraph (b)(2)(iv);

j. Redesignate paragraphs (b)(3) through (b)(5) as paragraphs (b)(4) through (b)(6); and

k. Add new paragraphs (b)(3) and (b)(7).

§ 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 Orbit (GSO) Satellites in the Fixed-Satellite Service.

(a) The following ongoing requirements govern all ESV licensees and operations 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 14.0-14.5 GHz (Earth-to-space) bands transmitting to GSO satellites in the fixed-satellite service. ESV licensees must comply with the requirements in paragraph (a)(1), (a)(2) or (a)(3) of this section and all of the requirements set forth in paragraphs (a)(4) through (a)(8) of this section. Paragraph (b) of this section identifies items that must be included in the application for ESV operations to demonstrate that these ongoing requirements will be met.

(1) * * *

(ii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following antenna pointing error requirements:

* * * * *

(iii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following cessation of emission requirements:

* * * * *

(2) The following requirements shall apply to an ESV that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section. An ESV or ESV system operating under this paragraph (a)(2) shall file certifications and provide a detailed demonstration(s) as described in paragraph (b)(2) of this section.

* * * * *

(iii) The ESV shall operate in accordance with the off-axis EIRP spectral-densities that the ESV supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(2) of this section. Except for ESVs with variable power systems, the ESV shall automatically cease emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. For ESVs using variable power systems, the individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits supplied to the target satellite operator; the individual transmitter must be self-monitoring and capable of shutting itself off; and if one or more ESV

transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits supplied to the target satellite operator, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

(3) The following requirements shall apply to an ESV system that uses variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam unless that ESV system operates pursuant to paragraph (a)(2) of this section. An ESV system operating under this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3) of this section.

(i) The effective aggregate EIRP-density from all terminals shall be at least 1 dB below the off-axis EIRP-density limits defined in paragraph (a)(1)(i) of this section, with the value of N=1. In this context the term “effective” means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single transmitter operating 1 dB below the limits defined in paragraph (a)(1)(i) of this section. An ESV system operating under this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3)(i) of this section.

(ii) The individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section. The individual transmitter must be self-monitoring and capable of shutting itself off. If one or more ESV transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section, then the

transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

* * * * *

(b) Applications for ESV operation in the 14.0-14.5 GHz (Earth-to-space) band to GSO satellites in the fixed-satellite service must include, in addition to the particulars of operation identified on Form 312, and associated Schedule B, the applicable technical demonstrations in paragraph (b)(1), (b)(2) or (b)(3) of this section and the documentation identified in paragraphs (b)(4) through (b)(7) of this section.

* * * * *

(2) An ESV applicant proposing to implement a transmitter under paragraph (a)(2) of this section and using off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section shall provide the following certifications and demonstration(s) as exhibits to its earth station application:

* * * * *

(iv) Except for variable power ESVs applicants, a demonstration from the ESV operator that the ESV system is capable of detecting and automatically ceasing emissions within 100 milliseconds when the transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. Variable power ESV applicants shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator; that the individual transmitter is self-monitoring and capable of shutting itself off; and that one or more transmitters are capable of

automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP spectral-densities supplied to the target satellite operator.

(3) An ESV applicant proposing to implement an ESV system under paragraph (a)(3) of this section and using variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam shall provide the information in paragraphs (b)(3)(i) and (b)(3)(ii) of this section as exhibits to its ESV application. The International Bureau will place these showings on Public Notice along with the application.

(i) The ESV applicant shall provide a detailed showing of the measures it intends to employ to maintain the effective aggregate EIRP-density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at least 1 dB below the EIRP-density limits defined in paragraph (a)(1)(i) of this section. In this context the term “effective” means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single ESV transmitter operating at 1 dB below the limits defined in paragraph (a)(1)(i) of this section.

(ii) The ESV applicant shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limit specified in

paragraph (a)(3)(i) of this section and that the individual transmitter is self-monitoring and capable of shutting itself off. The ESV applicant shall also provide a detailed showing that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section.

* * * * *

(7) Except for ESV systems operating pursuant to paragraph (a)(2) of this section, ESV systems authorized pursuant to this section shall be eligible for a license that lists ALSAT as an authorized point of communication.

* * * * *

[FR Doc. 2012-20202 Filed 08/17/2012 at 8:45 am; Publication Date: 08/20/2012]