

Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this document and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This action will be effective April 11, 2005.

List of Subjects in 40 CFR Part 271

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous material transportation, Hazardous waste, Indians lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements.

Authority: This action is issued under the authority of sections 2002(a), 3006 and 7004(b) of the Solid Waste Disposal Act as amended 42 U.S.C. 6912(a), 6926, 6974(b).

Dated: January 18, 2005.

A. Stanley Meiburg,

Deputy Regional Administrator, Region 4.

[FR Doc. 05-2457 Filed 2-8-05; 8:45 am]

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 1, 2, and 25

[IB Docket No. 99-67; FCC 03-283]

Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements

AGENCY: Federal Communications Commission.

ACTION: Final rule; announcement of effective date.

SUMMARY: The Commission adopted new rules and policies pertaining to portable Global Mobile Personal Communications by Satellite (GMPCS) transceivers, *i.e.*, satellite telephones and other portable transceivers operated by end users for communication via direct radio links with satellites. These devices are used for both voice and data communication and may be used for internet access or other modes of broadband communication. Certain rules contained new information

collection requirements and were published in the **Federal Register** on February 6, 2004. This document announces the effective date of these published rules.

DATES: The amendments to 47 CFR 1.1307, 2.1033, 2.1204, 25.129 and 25.132 published at 69 FR 5707, February 6, 2004, became effective on March 8, 2004.

FOR FURTHER INFORMATION CONTACT: William Bell, Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554, (202) 418-0741 or via the Internet at William.Bell@fcc.gov.

SUPPLEMENTARY INFORMATION: On July 22, 2004, the Office of Management and Budget (OMB) approved the information collection requirements contained in 47 CFR 1.1307, 2.1033, 2.1204, 25.129 and 25.132 pursuant to OMB Control No. 3060-1063. Accordingly, the information collection requirements contained in these rules became effective on March 8, 2004.

Federal Communications Commission.

Marlene H. Dortch,
Secretary.

[FR Doc. 05-2503 Filed 2-8-05; 8:45 am]

BILLING CODE 6712-01-P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 15

[ET Docket No. 98-153; FCC 04-285]

Ultra-Wideband Transmission Systems

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document responds to two petitions for reconsideration that were filed in response to the Commission's decision to establish regulations for unlicensed ultra-wideband ("UWB") operation. It also responds to the rule making proposals contained in the *Memorandum Opinion and Order and Further Notice of Proposed Rule Making* in this docket. The order establishes new rules for wideband unlicensed devices operating in the 5925-7250 MHz, 16.2-17.7 GHz, and 22.12-29 GHz bands.

DATES: Effective March 11, 2005.

FOR FURTHER INFORMATION CONTACT: John Reed (202) 418-2455, Policy and Rules Division, Office of Engineering and Technology.

SUPPLEMENTARY INFORMATION: This is a summary of the *Second Report and Order and Second Memorandum*

Opinion and Order ("2nd R&O and 2nd MO&O"), FCC 04-285, adopted December 15, 2004, and released December 16, 2004. The full text of this document is available for inspection and copying during regular business hours in the FCC Reference Center (Room CY-A257), 445 12th Street, SW., Washington, DC 20554. The complete text of this document also may be purchased from the Commission's copy contractor, Best Copy and Printing, Inc. 445 12th Street, Room CY-B402, Washington, DC, (202) 488-5300; FAX (202) 488-5563. The full text may also be downloaded at: www.fcc.gov. Alternative formats are available to persons with disabilities by contacting Brian Millin at (202) 418-7426 or TTY (202) 418-7365.

Summary of Second Report and Order

1. On February 14, 2002, the Commission adopted a *First Report and Order* implementing regulations to permit the unlicensed operation of ultra-wideband transmission systems. In response to fourteen petitions for reconsideration, a *Memorandum Opinion and Order and Further Notice of Proposed Rule Making* ("MO&O and FNPRM") was adopted on February 13, 2003, 69 FR 19746 and 69 FR 19773, April 22, 2003. Specifically, the Commission proposed amendments to four areas of its part 15 regulations. These amendments addressed: (1) The operation of low PRF systems in the 3.1-10.6 GHz band; (2) the measurement procedures applied to frequency hopping vehicular radar systems operating in the 22-29 GHz band; (3) the peak power limits applicable to wide-bandwidth, non-UWB part 15 transmitters; and (4) the elimination of the UWB definition.

2. *Low PRF UWB systems.* In the *FNPRM*, the Commission invited comment on whether to amend the rules to permit the operation of any UWB product under the UWB standards currently designated for hand-held devices as long as the PRF does not exceed 200 kHz and the equipment employs a pulsed or an impulse modulation. In the *2nd R&O*, the Commission declines to amend its rules stating that low PRF systems can have a higher potential for causing interference unless some type of signal processing is incorporated in the victim receiver. The Commission will accommodate the requests from the equipment developers by increasing the peak power emission limit for select frequency bands available under the non-UWB part 15 regulations.

3. *Non-UWB peak power emission limits.* When an average emission limit

is specified for non-UWB devices, the rules also specify a limit on peak power that is 20 dB greater than the average limit. In some cases, peak measurement by a spectrum analyzer requires the application of a pulse desensitization correction factor ("PDCF") in order to compensate for the analyzer's inability to respond fast enough to measure the true peak for pulse widths narrower than the inverse of the resolution bandwidth. This peak limit may effectively prohibit some wideband operations. Further, a limit on the total peak power level is not well suited to measure the operation of, or represent the interference potential of, transmitters that employ extremely wide bandwidths. For that reason, the Commission proposed in the *FNPRM* to implement the same peak limit that is applied to UWB systems.

4. The total peak power of such a wideband system is not relevant to the interference potential of the device. Rather, it is the potential power in the bandwidth of the victim receiver that is relevant. In the *2nd R&O*, the Commission recognizes that allowing increased peak power levels could have an impact on some radio services and also expresses concern that allowing higher peak power levels could result in a significant increase in the number of consumer products along with a corresponding increase in interference potential. Thus, it believes that cautious constraints on the permitted frequency bands of operation and the standards for operation within those bands are necessary while it gains experience.

5. The Commission is amending its part 15 rules to permit higher peak emission levels in the 5925–7250 MHz band, indicating that the fixed, fixed-satellite, and mobile systems employed in this band likely incorporate a sufficient level of signal processing to reduce, if not eliminate, their vulnerability to increased peak emission levels, or it is expected that such authorized systems would generally be located in remote areas or with the receiving antennas situated in such a manner that they would not be routinely subject to emissions from nearby part 15 devices. The Commission also is permitting higher peak emission levels in the 16.2–17.7 GHz band but will limit operation within this band to vehicular back-up assistance radars that operate only when the vehicle is in reverse. This will significantly limit the proliferation of such devices and should ensure that harmful interference does not occur to the authorized radio services. Potential equipment manufacturers are forewarned that the 17.3–17.7 GHz portion of the 16.2–17.7 GHz band has

been allocated in Region 2 and the United States for the Broadcast Satellite Service, effective April 1, 2007. Once this allocation becomes effective, there is a possibility that the 17.3–17.7 GHz band may become designated as a restricted band and that part 15 fundamental emissions will be prohibited in this portion of the spectrum.

6. A peak EIRP limit of 20 log (RBW/50) dBm is adopted for the 5925–7250 MHz and 16.2–17.7 GHz bands, with RBW, the resolution bandwidth of the measurement instrument, being 1 to 50 MHz. This peak limit applies to the 50 MHz band centered at the frequency at which the highest average emission level occurs. RBW must be no greater than the –10 dB bandwidth of the emission. If frequency hopping or stepped frequency modulation is employed, the frequency hop or step function shall be disabled and the transmitter shall operate continuously on a fundamental frequency to measure the –10 dB bandwidth that is used to determine the maximum RBW that may be employed for the peak emission level. For transmitters operating under these new peak limits, the Commission is adopting the more stringent UWB average emission specifications requested by the National Telecommunications and Information Administration ("NTIA"). These limits and other pertinent standards are shown in the accompanying changes to the rules.

7. *Vehicular radar systems.* In the *FNPRM*, the Commission proposed to permit pulsed frequency hopping vehicular radars to be included under the definition of a UWB device provided the transmitters occupy the minimum required bandwidth within any 10 millisecond period rather than at any instantaneous point in time. However, the Commission is unwilling at this time to classify as a UWB device a frequency hopping transmitter that emits relatively narrowband signals. However, the systems can be accommodated under the non-UWB rules by increasing the peak power emission limit. As requested by NTIA, a frequency hopped vehicular radar system may not operate in the restricted bands. Thus, the frequency band of operation that is being established for this vehicle radar system is 23.12–29.0 GHz, exclusive of the restricted band at 23.6–24.0 GHz. Vehicular radar transmitters operating under these new peak limits also will be subject to limits similar to the UWB average emission specifications, as requested by NTIA. Any type of modulation may be employed. These limits and other

pertinent standards are shown in the accompanying changes to the rules.

8. The interference aspects of a transmitter employing frequency hopping, stepped frequency modulation or gating are quite similar, as viewed by a receiver, in that both appear to the receiver to emit for a short period of time followed by a quiet period. Permitting the emissions from frequency hopping systems to be measured with the hopping active could give such systems a competitive advantage by permitting higher instantaneous average power levels than what are allowed for gated systems. Thus, the Commission also is eliminating the requirement that gated or stepped systems operating under this new regulation be tested with the gating or step function turned off. However, no provision is provided to permit transmitters employing swept frequency modulation to perform measurements with the sweep stopped. The Commission also is adopting NTIA's requested measurement procedure requiring that the RMS average and peak emission measurements be repeated with the analyzer in the maximum hold mode until there is no significant increase, i.e., less than 3 dB, in any of the maximum hold values.

9. The UWB regulations for operation in the 22–29 GHz band require vehicular radar systems that employ gating to be measured with the transmitter gated on and should be subject to the same measurement procedures. Thus, the Commission is amending the UWB regulations to permit the emissions from gated vehicular radar systems to be measured with the gating active. However, as requested by NTIA similar provisions are not being applied to UWB systems that employ frequency hopping, stepped frequency or similar modulation techniques.

10. *Clarification of existing non-UWB peak power emission limits.* As proposed in the *FNPRM*, the Commission is amending 47 CFR 15.35(b) to clarify that the peak power requirement applies to the total peak power produced by the device, unless specifically stated otherwise, and may necessitate the use of a PDCF. This clarification does not result in any changes to the current part 15 standards and should eliminate any confusion on the need to apply a PDCF under certain modulation and measurement conditions.

11. *UWB definition.* In the *FNPRM*, the Commission proposed to eliminate the minimum bandwidth requirement and to permit the operation of any transmission system, regardless of its

bandwidth, as long as it complies with the standards for UWB operation set forth in Subpart F of 47 CFR part 15. However, the Commission has accommodated the narrowband operations sought by the proponents in this proceeding through its amendments to the peak power levels while keeping any further expansion of equipment applications out of the sensitive restricted bands. Because of these changes, there is no necessity at this time to eliminate the UWB minimum bandwidth requirements. Such changes could be disruptive and could further delay the introduction of UWB devices.

Summary of Second Memorandum Opinion and Order

12. The 2nd MO&O addresses two petitions for reconsideration that were filed in response to the *Memorandum Opinion and Order and Further Notice of Proposed Rule Making*. Cingular, Inc. objected to the presence and level of emissions from UWB devices that may appear in the frequency bands allocated for the Cellular Radiotelephone Service ("cellular") and for the Personal Communications Services ("PCS"); claimed that the Commission can not legally permit the unlicensed operation of radio frequency ("RF") devices except as specifically authorized by Congress under 47 U.S.C. 307(e); and claimed that cellular and PCS licensees have exclusive use of the spectrum assigned to their respective operations and that any emissions from UWB devices undermine this exclusivity. The issues raised by Cingular are dismissed or denied, as appropriate. The Satellite Industry Association ("SIA") argued that the UWB emission limits in the 3650–4200 MHz band used by C-band fixed satellite systems ("FSS") are excessive and will result in harmful interference. The SIA petition is denied.

Administrative Provisions

13. The Commission will send a copy of this Second Report & Order and Second Memorandum Opinion 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).

14. *Final Regulatory Flexibility Certification*. The Regulatory Flexibility Act of 1980, as amended (RFA),¹ 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."² The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."³ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁴ 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 Small Business Administration (SBA).⁵

15. In this Second Report and Order and Second Memorandum Opinion and Order, we are implementing a change to the rules to facilitate the operation of wideband unlicensed transmitters. We also are responding to two petitions for reconsideration regarding rules that permit the marketing and operation of products incorporating ultra-wideband ("UWB") technology. UWB devices operate by employing very narrow or short duration pulses that result in very large or wideband transmission bandwidths. With appropriate technical standards, UWB devices can operate on spectrum occupied by existing radio services without causing interference, thereby permitting scarce spectrum resources to be used more efficiently. Further, as noted in the text we have continued to apply conservative limits to the standards applicable for UWB operation, until such time as we gain additional experience, to ensure that harmful interference would not be caused to other radio spectrum users. Further, the changes adopted in this proceeding will not affect any party legally manufacturing or marketing UWB devices. Thus, we expect that our actions do not amount to a significant economic impact. Accordingly, we certify that the rules being adopted in this Memorandum Opinion and Order will not have a significant economic impact on a substantial number of small entities.

16. The Commission will send a copy of the Second Report and Order and

² 5 U.S.C. 605(b).

³ 5 U.S.C. 601(6).

⁴ 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*."

⁵ 15 U.S.C. 632.

Second Memorandum Opinion and Order, including a copy of this Final Regulatory Flexibility Certification, in a report to Congress pursuant to the Congressional Review Act.⁶ In addition, the Second Report and Order and Second Memorandum Opinion and Order and this final certification will be sent to the Chief Counsel for Advocacy of the SBA, and will be published in the *Federal Register*.⁷

17. *Ordering Clauses*. This action is taken pursuant to Sections 4(i), 302, 303(e), 303(f), 303(r), 304 and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 302, 303(e), 303(f), 303(r), 304 and 307. *It also is ordered* that part 15 of the Commission's Rules and Regulations *is amended* as specified in rule changes, effective 30 days after publication in the *Federal Register*. *It is ordered* that the Petition for Reconsideration from Cingular, Inc., *is denied*. *It is ordered* that the Petition for Reconsideration from Satellite Industry Association *is dismissed*.

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

19. *It is further ordered* that this proceeding *is terminated*.

List of Subjects 47 CFR Part 15

Communications equipment, Radio, Reporting and recordkeeping requirements, Security measures.

Federal Communications Commission.

William F. Caton,

Deputy Secretary.

Rule Changes

■ For the reasons discussed in the preamble, title 47 of the Code of Federal Regulations, part 15, is amended as follows:

PART 15—RADIO FREQUENCY DEVICES

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

Authority: 47 U.S.C. 154, 302a, 303, 304, 307, 336 and 544a.

■ 2. Section 15.35 is amended by revising paragraph (b) to read as follows:

§ 15.35 Measurement detector functions and bandwidths.

* * * * *

⁶ See 5 U.S.C. 801(a)(1)(A).

⁷ See 5 U.S.C. 605(b).

¹ 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).

(b) Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. When average radiated emission measurements are specified in this part, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. Unless otherwise specified, e.g., see §§ 15.250, 15.252, 15.255, and 15.509–15.519, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device, e.g., the total peak power level. Note that the use of a pulse desensitization correction factor may be needed to determine the total peak emission level. The instruction manual or application note for the measurement instrument should be consulted for determining pulse desensitization factors, as necessary.

* * * * *

■ 3. Section 15.215 is amended by revising paragraph (c), to read as follows:

§ 15.215 Additional provisions to the general radiated emission limitations.

* * * * *

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

■ 4. Section 15.250 is added to read as follows:

§ 15.250 Operation of wideband systems within the band 5925–7250 MHz.

(a) The – 10 dB bandwidth of a device operating under the provisions of this section must be contained within the 5925–7250 MHz band under all conditions of operation including the effects from stepped frequency, frequency hopping or other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage.

(b) The – 10 dB bandwidth of the fundamental emission shall be at least 50 MHz. For transmitters that employ frequency hopping, stepped frequency or similar modulation types, measurement of the – 10 dB minimum bandwidth specified in this paragraph shall be made with the frequency hop or step function disabled and with the transmitter operating continuously at a fundamental frequency following the provisions of § 15.31(m).

(c) Operation on board an aircraft or a satellite is prohibited. Devices operating under this section may not be employed for the operation of toys. Except for operation onboard a ship or a terrestrial transportation vehicle, the use of a fixed outdoor infrastructure is prohibited. A fixed infrastructure includes antennas mounted on outdoor structures, e.g., antennas mounted on the outside of a building or on a telephone pole.

(d) Emissions from a transmitter operating under this section shall not exceed the following equivalent isotropically radiated power (EIRP) density levels:

(1) The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following RMS average limits based on measurements using a 1 MHz resolution bandwidth:

Frequency in MHz	EIRP in dBm
960–1610	– 75.3
1610–1990	– 63.3
1990–3100	– 61.3
3100–5925	– 51.3
5925–7250	– 41.3
7250–10600	– 51.3
Above 10600	– 61.3

(2) In addition to the radiated emission limits specified in the table in paragraph (d)(1) of this section, transmitters operating under the provisions of this section shall not exceed the following RMS average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240	– 85.3
1559–1610	– 85.3

(3) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs and this 50 MHz bandwidth must be contained within the 5925–7250 MHz band. The peak EIRP limit is 20 log (RBW/50) dBm where RBW is the resolution bandwidth in megahertz that is employed by the measurement instrument. RBW shall not be lower than 1 MHz or greater than 50 MHz. The video bandwidth of the measurement instrument shall not be less than RBW. If RBW is greater than 3 MHz, the application for certification filed with the Commission shall contain a detailed description of the test procedure, calibration of the test setup, and the instrumentation employed in the testing.

(4) Radiated emissions at or below 960 MHz shall not exceed the emission levels in § 15.209.

(5) Emissions from digital circuitry used to enable the operation of the transmitter may comply with the limits in § 15.209 provided it can be clearly demonstrated that those emissions are due solely to emissions from digital circuitry contained within the transmitter and the emissions are not intended to be radiated from the transmitter's antenna. Emissions from associated digital devices, as defined in § 15.3(k), e.g., emissions from digital circuitry used to control additional functions or capabilities other than the operation of the transmitter, are subject to the limits contained in subpart B of this part. Emissions from these digital circuits shall not be employed in determining the – 10 dB bandwidth of the fundamental emission or the frequency at which the highest emission level occurs.

(e) Measurement procedures:

(1) All emissions at and below 960 MHz are based on measurements employing a CISPR quasi-peak detector. Unless otherwise specified, all RMS average emission levels specified in this section are to be measured utilizing a 1 MHz resolution bandwidth with a one millisecond dwell over each 1 MHz segment. The frequency span of the analyzer should equal the number of sampling bins times 1 MHz and the sweep rate of the analyzer should equal the number of sampling bins times one millisecond. The provision in § 15.35(c) that allows emissions to be averaged over a 100 millisecond period does not

apply to devices operating under this section. The video bandwidth of the measurement instrument shall not be less than the resolution bandwidth and trace averaging shall not be employed. The RMS average emission measurement is to be repeated over multiple sweeps with the analyzer set for maximum hold until the amplitude stabilizes.

(2) The peak emission measurement is to be repeated over multiple sweeps with the analyzer set for maximum hold until the amplitude stabilizes.

(3) For transmitters that employ frequency hopping, stepped frequency or similar modulation types, the peak emission level measurement, the measurement of the RMS average emission levels, and the measurement to determine the frequency at which the highest level emission occurs shall be made with the frequency hop or step function active. Gated signals may be measured with the gating active. The provisions of § 15.31(c) continue to apply to transmitters that employ swept frequency modulation.

(4) The -10 dB bandwidth is based on measurement using a peak detector, a 1 MHz resolution bandwidth, and a video bandwidth greater than or equal to the resolution bandwidth.

(5) Alternative measurement procedures may be considered by the Commission.

■ 5. Section 15.252 is added to read as follows:

§ 15.252 Operation of wideband vehicular radar systems within the bands 16.2–17.7 GHz and 23.12–29.0 GHz.

(a) Operation under this section is limited to field disturbance sensors that are mounted in terrestrial transportation vehicles. Terrestrial use is limited to earth surface-based, non-aviation applications. Operation within the 16.2–17.7 GHz band is limited to field disturbance sensors that are used only for back-up assistance and that operate only when the vehicle is engaged in reverse.

(1) The -10 dB bandwidth of the fundamental emission shall be located within the 16.2–17.7 GHz band or within the 23.12–29.0 GHz band, exclusive of the 23.6–24.0 GHz restricted band, as appropriate, under all conditions of operation including the effects from stepped frequency, frequency hopping or other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage.

(2) The -10 dB bandwidth of the fundamental emission shall be 10 MHz or greater. For transmitters that employ

frequency hopping, stepped frequency or similar modulation types, measurement of the -10 dB minimum bandwidth specified in this paragraph shall be made with the frequency hop or step function disabled and with the transmitter operating continuously at a fundamental frequency following the provisions of § 15.31(m).

(3) For systems operating in the 23.12–29.0 GHz band, the frequencies at which the highest average emission level and at which the highest peak level emission appear shall be greater than 24.075 GHz.

(4) These devices shall operate only when the vehicle is operating, e.g., the engine is running. Operation shall occur only upon specific activation, such as upon starting the vehicle, changing gears, or engaging a turn signal. The operation of these devices shall be related to the proper functioning of the transportation vehicle, e.g., collision avoidance.

(b) Emissions from a transmitter operating under this section shall not exceed the following equivalent isotropically radiated power (EIRP) density levels:

(1) For transmitters operating in the 16.2–17.7 GHz band, the RMS average radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following EIRP limits based on measurements using a 1 MHz resolution bandwidth:

Frequency in MHz	EIRP in dBm
960–1610	-75.3
1610–16,200	-61.3
16,200–17,700	-41.3
Above 17,700	-61.3

(2) For transmitters operating in the 23.12–29.0 GHz band, the RMS average radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following EIRP limits based on measurements using a 1 MHz resolution bandwidth:

Frequency in MHz	EIRP in dBm
960–1610	-75.3
1610–23,120	-61.3
23,120–23,600	-41.3
23,600–24,000	-61.3
24,000–29,000	-41.3
Above 29,000	-61.3

(3) In addition to the radiated emission limits specified in the tables in paragraphs (b)(1) and (b)(2) of this section, transmitters operating under the provisions of this section shall not

exceed the following RMS average EIRP limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240	-85.3
1559–1610	-85.3

(4) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs and this 50 MHz bandwidth must be contained within the 16.2–17.7 GHz band or the 24.05–29.0 GHz band, as appropriate. The peak EIRP limit is 20 log (RBW/50) dBm where RBW is the resolution bandwidth in MHz employed by the measurement instrument. RBW shall not be lower than 1 MHz or greater than 50 MHz. Further, RBW shall not be greater than the -10 dB bandwidth of the device under test. For transmitters that employ frequency hopping, stepped frequency or similar modulation types, measurement of the -10 dB minimum bandwidth specified in this paragraph shall be made with the frequency hop or step function disabled and with the transmitter operating continuously at a fundamental frequency. The video bandwidth of the measurement instrument shall not be less than RBW. The limit on peak emissions applies to the 50 MHz bandwidth centered on the frequency at which the highest level radiated emission occurs. If RBW is greater than 3 MHz, the application for certification shall contain a detailed description of the test procedure, the instrumentation employed in the testing, and the calibration of the test setup.

(5) Radiated emissions at or below 960 MHz shall not exceed the emission levels in § 15.209.

(6) Emissions from digital circuitry used to enable the operation of the transmitter may comply with the limits in § 15.209 provided it can be clearly demonstrated that those emissions are due solely to emissions from digital circuitry contained within the transmitter and the emissions are not intended to be radiated from the transmitter's antenna. Emissions from associated digital devices, as defined in § 15.3(k), e.g., emissions from digital circuitry used to control additional functions or capabilities other than the operation of the transmitter, are subject to the limits contained in subpart B of this part. Emissions from these digital circuits shall not be employed in determining the -10 dB bandwidth of

the fundamental emission or the frequency at which the highest emission level occurs.

(c) Measurement procedures:

(1) All emissions at and below 960 MHz are based on measurements employing a CISPR quasi-peak detector. Unless otherwise specified, all RMS average emission levels specified in this section are to be measured utilizing a 1 MHz resolution bandwidth with a one millisecond dwell over each 1 MHz segment. The frequency span of the analyzer should equal the number of sampling bins times 1 MHz and the sweep rate of the analyzer should equal the number of sampling bins times one millisecond. The provision in § 15.35(c) that allows emissions to be averaged over a 100 millisecond period does not apply to devices operating under this section. The video bandwidth of the measurement instrument shall not be less than the resolution bandwidth and trace averaging shall not be employed. The RMS average emission measurement is to be repeated over multiple sweeps with the analyzer set for maximum hold until the amplitude stabilizes.

(2) The peak emission measurement is to be repeated over multiple sweeps with the analyzer set for maximum hold until the amplitude stabilizes.

(3) For transmitters that employ frequency hopping, stepped frequency or similar modulation types, the peak emission level measurement, the measurement of the RMS average emission levels, the measurement to determine the center frequency, and the measurement to determine the frequency at which the highest level emission occurs shall be made with the frequency hop or step function active. Gated signals may be measured with the gating active. The provisions of § 15.31(c) continue to apply to transmitters that employ swept frequency modulation.

(4) The -10 dB bandwidth is based on measurement using a peak detector, a 1 MHz resolution bandwidth, and a video bandwidth greater than or equal to the resolution bandwidth.

(5) Alternative measurement procedures may be considered by the Commission.

■ 6. Section 15.515 is amended by adding a new paragraph (g) to read as follows:

§ 15.515 Technical requirements for vehicular radar systems.

* * * * *

(g) The emission levels from devices operating under the provisions of this section that employ gated transmissions may be measured with the gating active.

Measurements made in this manner shall be repeated over multiple sweeps with the analyzer set for maximum hold until the amplitude stabilizes.

■ 7. Section 15.521 is amended by revising paragraph (d) to read as follows:

§ 15.521 Technical requirements applicable to all UWB devices.

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(d) Within the tables in §§ 15.509, 15.511, 15.513, 15.515, 15.517, and 15.519, the tighter emission limit applies at the band edges. Radiated emission levels at and below 960 MHz are based on measurements employing a CISPR quasi-peak detector. Radiated emission levels above 960 MHz are based on RMS average measurements over a 1 MHz resolution bandwidth. The RMS average measurement is based on the use of a spectrum analyzer with a resolution bandwidth of 1 MHz, an RMS detector, and a 1 millisecond or less averaging time. Unless otherwise stated, if pulse gating is employed where the transmitter is quiescent for intervals that are long compared to the nominal pulse repetition interval, measurements shall be made with the pulse train gated on. Alternative measurement procedures may be considered by the Commission.

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DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

47 CFR Part 301

Docket No. 050201021-5021-01

RIN 0660-AA15

Repeal of Mandatory Reimbursement Rules for Frequency Band or Geographic Relocation of Federal Spectrum-Dependent Systems

AGENCY: National Telecommunications and Information Administration, U.S. Department of Commerce

ACTION: Final Rule.

SUMMARY: The National Telecommunications and Information Administration (NTIA) is repealing its regulations governing reimbursement to federal entities by the private sector as a result of reallocation of frequency spectrum. The agency is taking this action in accordance with the Commercial Spectrum Enhancement Act which repealed the provision in the NTIA Organization Act under which the agency promulgated these regulations.

The Commercial Spectrum Enhancement Act established a fund within the Department of Treasury through which money will be provided to federal agencies for the costs incurred in relocating their radio communications systems.

DATES: These rules become effective on February 9, 2005.

FOR FURTHER INFORMATION CONTACT: Milton Brown, Deputy Chief Counsel, National Telecommunications and Information Administration, U.S. Department of Commerce, 1401 Constitution Avenue, N.W., Room 4713, Washington, DC 20230; telephone: (202) 482-1816; facsimile: (202) 501-8013; or electronic mail: mbrown@ntia.doc.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On June 17, 2002, the National Telecommunications and Information Administration (NTIA) issued a final rule entitled "Mandatory Reimbursement Rules for Frequency Band or Geographic Relocation of Federal Spectrum-Dependent Systems" (Mandatory Reimbursement Rules).¹ These regulations implemented a provision of Pub. L. No. 105-261, which required private sector licensees to reimburse federal agencies for the costs associated with relocating from or modifying the radio frequencies used by agencies' communications systems to accommodate the private sector licensees' use of the radio spectrum.² That law also directed NTIA to issue regulations to implement its requirements.

II. Repeal of the Mandatory Reimbursement Rules

On December 23, 2004, the President signed into law Public Law No. 108-494, the Commercial Spectrum Enhancement Act.³ Among other purposes, this Act struck the provision in the NTIA Organization Act requiring private sector licensees to reimburse federal agencies' relocation costs, and in its stead, created a new fund within the Department of Treasury through which federal agencies would be reimbursed for such costs and directed NTIA to take certain actions to implement the new reimbursement and relocation plan. Because the new law strikes the authorization underpinning the Mandatory Reimbursement Rules and eliminates any obligation on private

¹ See 67 Fed. Reg. 41,182 (2002) (The rules were codified at 47 C.F.R. Part 301.)

² See Pub.L.No. 105-261, 112 Stat. 1920, 2132 (1998), amending section 113(g) of the NTIA Organization Act (codified at 47 U.S.C. § 923(g)).

³ Pub.L.No. 108-494, 118 Stat. 3896, 3992 (2004).