

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

In the Matter of)	
)	
Amendment of the Commission’s Rules Regarding Maritime Radio Equipment and Related Matters)	WT Docket No. 14-36
)	
Petition to Request that FCC Amend the Rules to Permit the Use of Maritime VHF Portable Radios Ashore Near Areas of Maritime and Boating Activity)	RM-11540
)	
Petition for Rulemaking to Amend Part 80 of the Commission’s Rules to Provide for a Digital Small Message Service on Certain Maritime VHF Channels)	RM-11563
)	
Petition to Amend Part 95 of the Commission’s Rules to Provide for Certain Personal Radio Service Devices)	RM-11667
)	

REPORT AND ORDER

Adopted: August 30, 2016

Released: September 1, 2016

By the Commission:

I. INTRODUCTION

1. In this *Report and Order*, we address a number of issues pertaining to the Maritime Radio Services that were raised in the *Notice of Proposed Rulemaking (Notice)* in this proceeding,¹ and amend the Commission’s rules accordingly. The decisions herein update the rules and requirements in order to better protect lives and property at sea, as well as support improved day-to-day operations. In this *Report and Order*, we amend our rules to:

- require emergency position indicating radio beacons (EPIRBs) to be capable of broadcasting position data when activated to improve the ability of rescue personnel to locate distressed ships;
- update the equipment standards for Personal Locator Beacons (PLBs) to ensure that PLBs meet the updated functional and technical parameters necessary to meet the distress alerting needs of the general public;
- require that devices marketed for use in the United States as Satellite Emergency Notification Devices (SENDs) meet the requirements of the Radio Technical Commission for Maritime Services (RTCM) SEND standard to promote the reliability of devices used for tracking in emergency situations;

¹ Amendment of the Commission’s Rules Regarding Maritime Radio Equipment and Related Matters, *Notice of Proposed Rulemaking*, WT Docket No. 14-36, 29 FCC Rcd 2516 (2014) (*Notice*).

- permit equipment certification and use of Maritime Survivor Locating Devices (MSLDs) that comply with RTCM MSLD standards to enhance maritime safety;
- provide for equipment certification and use of Automatic Identification System Search and Rescue Transmitters (AIS-SARTs) that comply with international standards, which will contribute to maritime safety;
- clarify the Commission's Rules regarding ship radar equipment to eliminate references to an obsolete standard;
- permit limited use of portable marine VHF radio transmitters by persons on shore in areas adjacent to the water for communications relating to the operational and business needs of the associated vessel to provide flexibility in the use of marine radio equipment in a manner that furthers maritime safety;
- permit VHF Digital Small Message Services (VDSMS) on certain maritime VHF channels, in order to promote flexibility and efficiency in the use of marine radio equipment in a manner that furthers maritime safety;
- allow assignment or transfer of control of ship station licenses, removing a regulatory hurdle to secondary market transactions; and
- make certain editorial changes to correct certain erroneous cross-references and deletions and other typographical errors in the Part 80 rules.

II. BACKGROUND

2. The Maritime Radio Services provide for the unique distress, operational and personal communications needs of vessels at sea and on inland waterways.² In the *Notice*, the Commission addressed petitions for rulemaking filed by the National Global Maritime Distress and Safety System (GMDSS) Implementation Task Force (GMDSS Task Force)³ and RTCM⁴ regarding the Maritime Radio Services and certain other proposed rule changes, and proposed additional maritime-related rule changes on its own motion. The Commission sought comment on whether to (1) require EPIRBs to be capable of broadcasting position data when activated; (2) update the equipment standards for PLBs; (3) authorize equipment certification and use of SENDs that comply with RTCM standards; (4) permit equipment certification and use of MSLDs that comply with RTCM standards; (5) provide for equipment certification and use of AIS-SARTs that comply with international standards; (6) clarify the rules regarding radar equipment; (7) permit the limited use of portable marine VHF radio transmitters by persons on shore; (8) permit VDSMS on certain maritime VHF channels; (9) allow assignment or transfer

² See *id.* at 2518 ¶ 3 (presenting a general overview of the Maritime Radio Services).

³ Petition to Request that FCC Amend the Rules to Permit the Use of Maritime VHF Portable Radios Ashore Near Areas of Maritime and Boating Activity, RM-11540 (filed June 10, 2009). The GMDSS Task Force was chartered by the U.S. Coast Guard to supplement government functions in expediting the implementation of the GMDSS. The membership includes over 3,500 representatives of government agencies, commercial vessel owners and operators, recreational vessel interests, training institutions, service agents, manufacturers, trade associations, and maritime labor organizations.

⁴ Petition for Rulemaking to Amend Part 80 of the Commission's Rules to Provide for a Digital Small Message Service on Certain Maritime VHF Channels, RM-11563 (filed Aug. 19, 2009); Petition for Rulemaking to Amend Part 95 of the Commission's Rules to Provide for Certain Personal Radio Service Devices, RM-11667 (filed June 20, 2012); Petition to Delay or Suspend Application of Part 47, § 80.273(b) on Marine Radar on Voluntarily Equipped Vessels, and to Clarify the Applicability of § 80.273(a), WT Docket No. 00-48 (filed Feb. 27, 2012). RTCM is a nonprofit organization that studies maritime issues. It is comprised of marine electronics manufacturers, government organizations such as the U.S. Coast Guard, and other parties interested in maritime operations.

of control of ship station licenses; and (10) correct certain typographical errors in the Part 80 rules. Six parties submitted comments and one party submitted reply comments to the *Notice*.⁵

III. DISCUSSION

A. Emergency Position Indicating Radio Beacons (EPIRBs)

3. EPIRBs are carried on board ships to alert others of a distress situation, and to assist search and rescue (SAR) personnel in locating those in distress.⁶ Specifically, an EPIRB transmits a digital signal on 406.0-406.1 MHz (406 MHz) that is detected by the search and rescue satellite-aided tracking (SARSAT)⁷ system operated by the National Oceanic and Atmospheric Administration (NOAA). The digital signal provides distress alerting, homing assistance, country and identification code of the station in distress, and other pertinent information.⁸ Traditional EPIRBs rely on satellite Doppler shift to identify the distress location. Some EPIRBs, however, transmit their Global Navigation Satellite System (GNSS)⁹ coordinates, which enables SAR authorities to determine an accurate location significantly faster than satellite Doppler shift.

4. EPIRBs must comply with the RTCM EPIRB standard incorporated by reference in our rules.¹⁰ RTCM updated its EPIRB standard to require, among other conditions, an internal navigation device designed to provide position data upon activation.¹¹ In the *Notice*, the Commission asked if the new RTCM EPIRB standard should be incorporated by reference in our rules, and sought comment on the appropriate timetable for phasing out certification, manufacture, sale and use of EPIRBs that do not comply with the new standard.¹²

5. All commenters addressing the issue support revising Part 80 to incorporate by reference the revised RTCM EPIRB standard.¹³ We agree that such an action is in the public interest because better

⁵ See Comments of Onoda (filed Apr. 7, 2014); Comments of Ted Anonymous (filed Apr. 1, 2014); Comments of GMDSS Task Force (filed June 2, 2014); Comments of RTCM (filed June 2, 2014); Comments of Standard Communications Pty. Ltd. (Standard Pty Ltd) (filed June 3, 2014); Comments of ACR Electronics Inc. (ACR) (filed Apr. 1, 2014); Reply Comments of Iridium Satellite LLC (Iridium) (filed June 30, 2014). Pursuant to a memorandum of understanding between the Commission and the National Telecommunications and Information Administration (NTIA), *see* FCC and NTIA Sign New Memorandum of Understanding on Spectrum Coordination, *Press Release* (rel. Jan. 31, 2003), NTIA reviewed a draft of this *Report and Order* and requested certain revisions that are discussed herein.

⁶ Jean Pierre de Lutz, *Letter*, 24 FCC Rcd 8567, 8567 (WTB MD 2009); *see also* 47 C.F.R. § 80.5.

⁷ SARSAT is part of the international COSPAS-SARSAT system, a cooperative development of the United States, Russia, Canada, and France. COSPAS is a Russian acronym that translates as “Space System for the Search of Vessels in Distress.”

⁸ EPIRBs also transmit a lower-powered homing signal on frequency 121.5 MHz to guide SAR teams to the vessel once they are in the general area. *See* 47 C.F.R. § 80.1061(b).

⁹ GNSS is a system of satellites that provides autonomous geospatial positioning with global coverage, such as the Global Positioning System (GPS). Wireless E911 Location Accuracy Requirements, *Third Further Notice of Proposed Rulemaking*, PS Docket No. 07-114, 29 FCC Rcd 2374, 2375 n.3 (2014).

¹⁰ *See* 47 C.F.R. §§ 80.7(f)(2), 80.1061(a) (incorporating by reference RTCM Standard 11000.2 for 406 MHz Satellite Emergency Position Indicating Radio Beacons (EPIRBs), dated June 20, 2002).

¹¹ RTCM Standard 11000.3 for 406 MHz Satellite Emergency Position Indicating Radio Beacons (EPIRBs), dated June 12, 2012. The new standard also incorporates by reference the latest technical characteristics and testing procedures from COSPAS-SARSAT C/S T.001, Specification for COSPAS-SARSAT 406 MHz Distress Beacons (COSPAS-SARSAT T.001), and COSPAS-SARSAT C/S T.007 (COSPAS-SARSAT T.007).

¹² *See Notice*, 29 FCC Rcd at 2519-20 ¶ 9.

¹³ *See* GMDSS Task Force Comments at 2; RTCM Comments at 2; Standard Pty Ltd Comments at 1; ACR Comments at 1-2.

location availability reduces search time and therefore contributes to the success of emergency rescues.¹⁴ Moreover, most commenters state that the price difference between EPIRBs that broadcast position data and those that do not has diminished or even disappeared, so adopting this requirement will impose little or no additional cost on end-users who purchase EPIRBs that comply with the new standard.¹⁵ We amend our rules to incorporate by reference the revised RTCM EPIRB standard¹⁶ as proposed.¹⁷

6. With respect to the appropriate timeline for phasing out EPIRBs that do not comply with the new standard, commenters generally agree that the Commission should cease accepting applications for certification of non-compliant EPIRBs beginning one year after the effective date of the rules adopted herein.¹⁸ With minor variations, commenters support prohibiting the continued manufacture, importation, and sale of non-compliant EPIRBs three years after the effective date.¹⁹ We conclude that these time frames are reasonable, and amend our rules to set forth these deadlines. With respect to continued use of non-compliant EPIRBs, most commenters argue that there is no need to establish a date after which use of such EPIRBs will be prohibited because most boat owners replace their EPIRBs at the battery replacement date, which is typically five years after the EPIRB is sold,²⁰ and one commenter proposes that use of non-compliant EPIRBs be prohibited six years after the rules become effective to allow owners to obtain the full five-year battery life of their current devices.²¹ We agree with the commenters that no deadline is required for vessels that voluntarily carry EPIRBs. We note that use by voluntary vessels of EPIRBs that do not comply with the new standard will continue to provide SAR personnel with the same

¹⁴ See GMDSS Task Force Comments at 2.

¹⁵ See GMDSS Task Force Comment at 3; RTCM Comments at 2; ACR Comments at 2. *But see* Standard Pty Ltd Comments at 2 (stating that the cost of developing and testing EPIRBs to meet the new standard will need to be amortized over the new models, thus raising the price). In a prior Commission proceeding, the United States Coast Guard observed that the cost of adding integral GPS capability to maritime equipment “has become very low.” See Amendment of Parts 13 and 80 of the Commission’s Rules Concerning Maritime Communications, *Memorandum Opinion and Order, Third Report and Order, and Third Further Notice of Proposed Rule Making*, WT Docket No. 00-48, 21 FCC Rcd 10282, 10318 ¶ 69 (2006).

¹⁶ After the *Notice* was released, RTCM revised the standard. See RTCM Standard 11000.4 for 406 MHz Satellite Emergency Position Indicating Radio Beacons (EPIRBs), dated June 1, 2015. The amended standard adds an option for the use of AIS position locating in addition to or in lieu of 121.5 MHz homing. NTIA requests that we incorporate the amended standard, but we decline to add the AIS option without notice and comment. Until such time as the amended standard is incorporated into Part 80, manufacturers may request waivers to permit the equipment authorization and use of AIS EPIRBs. See *McMurdo Group, Order*, WT Docket No. 15-110, 30 FCC Rcd 10634 (WTB MD 2015).

¹⁷ We also, as proposed, see *Notice*, 29 FCC Rcd at 2520 ¶ 10, remove references in Part 80 to COSPAS-SARSAT T.001 and T.007 distress beacons specifications because they are incorporated by reference in the RTCM EPIRB standard, and EPIRBs must be tested for compliance with these specifications before being submitted for equipment authorization. See *Notice*, 29 FCC Rcd at 2520 ¶ 10; 47 C.F.R. § 80.1061(c). Commenters support this proposal. See RTCM Comments at 3; GMDSS Task Force Comments at 4. We decline RTCM’s suggestion, see RTCM Comments at 3, to incorporate by reference the revised version of ITU-R Recommendation M.633-3, “Transmission characteristics of a satellite emergency position-indicating radiobeacon (satellite EPIRB) system operating through a low polar-orbiting satellite system in the 406 MHz band,” 2004 (ITU-R M.633-3), as beyond the scope of the *Notice*, because the Commission did not propose to amend the rules to revise the version of ITU-R M.633 that is incorporated by reference.

¹⁸ See GMDSS Task Force Comments at 3 (one year); RTCM Comments at 2 (one year); ACR Comments at 2 (one year); Standard Pty Ltd Comments at 1 (one year for EPIRBs without GPS, three years for EPIRBs with GPS).

¹⁹ See ACR Comments at 2 (two years); RTCM Comments at 2 (three years); GMDSS Task Force Comments at 3 (three years for manufacture, four years for sale); Standard Pty Ltd Comments at 1 (five years).

²⁰ See ACR Comments at 2; Standard Pty Ltd Comments at 2; RTCM Comments at 2.

²¹ See GMDSS Task Force Comments at 3.

quality of location information as they do currently. However, we adopt a six-year deadline for vessels that are required under our rules to carry EPIRBs, in order to ensure that these vessels provide better location availability during distress situations.²² We conclude that these transition periods fairly balance the interest in minimizing the compliance burden against the benefits of deploying new maritime safety features expeditiously.

7. Finally, we adopt our proposal to amend our rules to make plain that the use of prior-generation EPIRBs that operate only on 121.5/243 MHz and do not operate on 406 MHz is prohibited.²³ Commenters support this proposal,²⁴ which simply clarifies a prohibition that was adopted in 2002.²⁵

B. Personal Locator Beacons (PLBs)

8. Like EPIRBs, PLBs send distress signals on 406 MHz that are detected by the COSPAS-SARSAT satellite system and relayed to SAR authorities, but PLBs can be used on land and are intended to meet the distress alerting needs of the general public.²⁶ PLB use is licensed by rule under Part 95 of the Commission's Rules, which governs the Personal Radio Services (PRS).

9. PLBs must comply with the RTCM PLB standard incorporated by reference in our rules.²⁷ RTCM revised its PLB standard to update various technical requirements and to add test procedures for PLBs with integral GNSS receivers or internal navigation devices.²⁸ In the *Notice*, the Commission asked if the new RTCM PLB standard should be incorporated by reference in our rules and, if so, sought comment on the appropriate timetable for phasing out the certification, manufacture, sale and use of PLBs that do not comply with the new standard.²⁹

10. All commenters who address the question support revising Part 95 to incorporate by reference the revised RTCM PLB standard.³⁰ We agree that such an action is in the public interest because better location availability minimizes search time and therefore contributes to the success of emergency rescues.³¹ Moreover, commenters do not believe that compliance with the new testing protocol will materially affect PLB prices, so adopting this requirement will impose little or no additional

²² See 47 C.F.R. §§ 80.881(a), 80.905(a)(3)(vi), (4)(vi), 80.1085(a)(6). We note that the National Transportation Safety Board has recommended that the Commission amend its rules to mandate that EPIRBs on commercial vessels that are required to carry EPIRBs be capable of broadcasting position data when activated. See Letter dated Mar. 11, 2010, from Deborah A. P. Hersman, Chairman, National Transportation Safety Board, to Julius Genachowski, Chairman, FCC (available at <http://www.nts.gov/safety/safety-recs/reclatters/M-10-001.pdf>).

²³ See *Notice*, 29 FCC Rcd at 2520 ¶ 11. While our rules still permit the use of aircraft emergency locator transmitters (ELTs) that operate only on 121.5/243 MHz and do not operate on 406 MHz, see 47 C.F.R. § 87.195, ship station licenses do not authorize the use of ELTs on ships, see Amendment of Parts 80 and 87 of the Commission's Rules to Permit Operation of Certain Domestic Ship and Aircraft Radio Stations Without Individual Licenses, *Report and Order*, WT Docket No. 96-82, 11 FCC Rcd 14849, 14850 ¶ 4 (1996).

²⁴ See RTCM Comments at 3; GMDSS Task Force Comments at 3.

²⁵ See Amendment of Parts 13 and 80 of the Commission's Rules Concerning Maritime Communications, *Report and Order*, WT Docket No. 00-48, 17 FCC Rcd 6741, 6762 ¶ 47 (2002).

²⁶ See 47 C.F.R. § 95.1400.

²⁷ See 47 C.F.R. § 95.1402(a) (incorporating by reference "RTCM Recommended Standards for 406 MHz Satellite Personal Locator Beacons (PLBs)," Version 1.1, RTCM Paper 76-2002/SC110-STD, dated June 19, 2002).

²⁸ RTCM Standard 11010.2 for 406 MHz Satellite Personal Locator Beacons, with Amendment 1 and Amendment 2, dated June 8, 2012.

²⁹ See *Notice*, 29 FCC Rcd at 2521 ¶ 13.

³⁰ See GMDSS Task Force Comments at 4; RTCM Comments at 3; ACR Comments at 2.

³¹ See RTCM Comments at 4.

cost on purchasers of PLBs that comply with the new standard.³² We amend our rules to incorporate by reference the revised RTCM PLB standard.³³

11. With respect to the appropriate timeline for phasing out PLBs that do not comply with the new standard, commenters agree that the Commission should cease accepting applications for certification of non-compliant PLBs beginning one year after the effective date of the rules adopted herein.³⁴ With some minor variations, commenters support prohibiting the continued manufacture, importation, and sale of non-compliant PLBs three years after the effective date.³⁵ We conclude that these time frames are reasonable, and amend our rules to set forth these deadlines. We agree with the majority of commenters that there is no need to establish a date after which use of non-compliant PLBs will be prohibited,³⁶ because PLB use is voluntary and the continued use of PLBs that do not comply with the new standard will deliver the current quality of service to SAR personnel for distress alerting and locating capabilities. We conclude that these transition periods fairly balance the interest in minimizing the compliance burden against the benefits of deploying new safety features expeditiously.

12. The Commission also sought comment on whether, as recommended by the Secretariat of the International COSPAS-SARSAT Programme (COSPAS-SARSAT), to amend Part 95 to limit the use of 406 MHz band by PLBs to “distress and safety of life communications,” instead of “distress and safety communications.”³⁷ This clarification would make clear that PLB use should be under emergency conditions and for survival purposes. While non-life threatening emergencies or safety communications are important functions, use of PLBs to alert rescuers should be limited to situations of grave and imminent danger. This excludes some situations that might be broadly considered as safety communications.³⁸ We agree with RTCM, the only commenter addressing this issue, that this clarification of the intended use of PLBs would be beneficial,³⁹ and we amend the rule accordingly. As recommended by COSPAS-SARSAT, we also amend the rules to clarify that, rather than “issu[ing]”⁴⁰ unique identification codes, NOAA recognizes codes that manufacturers create based on COSPAS-SARSAT guidance.⁴¹

13. PLB owners must register their beacons with NOAA.⁴² Part 95 requires manufacturers to include a postage pre-paid registration card with each PLB, and to set forth NOAA’s mailing address on

³² See GMDSS Task Force Comments at 4; RTCM Comments at 4.

³³ As suggested by commenters, we also remove the technical requirements set forth in Section 95.1402(b) of the Commission’s Rules, 47 C.F.R. § 95.1402(b), because those requirements are included in the revised RTCM PLB standard. See RTCM Comments at 4; ACR Comments at 3. We also, as above with respect to EPIRBs, see note 17, *supra*, remove the references in Part 95 to COSPAS-SARSAT T.007 because it is incorporated by reference in the RTCM PLB standard.

³⁴ See GMDSS Task Force Comments at 4; RTCM Comments at 3; ACR Comments at 3.

³⁵ See ACR Comments at 3 (two years); GMDSS Task Force Comments at 4 (two years for manufacture, three years for sale); RTCM Comments at 2 (three years).

³⁶ See ACR Comments at 3; RTCM Comments at 4. *But see* GMDSS Task Force Comments at 4 (proposing a four-year phase-out of the use of non-compliant PLBs).

³⁷ See Notice, 29 FCC Rcd at 2521 ¶ 14 (emphasis added).

³⁸ See RTCM Comments at 4; see also 47 C.F.R. § 80.5 (defining “safety communications” as those that “if delayed in transmission or reception, may adversely affect the safety of life or property”).

³⁹ See RTCM Comments at 4.

⁴⁰ See 47 C.F.R. § 95.1402(e).

⁴¹ See Notice, 29 FCC Rcd at 2521 ¶ 14; RTCM Comments at 4.

⁴² 47 C.F.R. § 95.1402(f). No commenter supported COSPAS-SARSAT’s request that the Commission amend Part 95 to emphasize that PLB owners are required to register their beacons. See Notice, 29 FCC Rcd at 2521 ¶ 14. We

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the PLB label.⁴³ Commenters state that NOAA's current preferred method of beacon registration is online.⁴⁴ We will therefore add the NOAA website information to our rules, but decline ACR's suggestion that we require manufacturers to add the website address to the PLB label as beyond the scope of the *Notice*, which did not propose to change the labeling requirements.⁴⁵ Manufacturers may of course include such information with each PLB if they choose.

C. Satellite Emergency Notification Devices (SENDs)

14. Although there is no established definition for the term "SENDs," it is often used to refer to small transmitters that provide a means for individuals in remote areas to alert others of an emergency situation and to aid SAR personnel to locate those in distress. These devices differ from PLBs in that they operate on satellite networks other than the 406 MHz COSPAS-SARSAT system. The service provided is typically a subscription service that sends data to a satellite, and is then used to create a Web-based report that enables the tracking of persons.

15. RTCM, with participation from the mobile satellite industry, has developed minimum requirements for the functional and technical performance of SENDs to ensure that these devices will work with a high degree of reliability in emergency situations.⁴⁶ In the *Notice*, the Commission sought comment on RTCM's proposal that the Part 95 rules be amended to incorporate by reference its SEND standard, and to prohibit devices that do not meet that standard from being marketed as SENDs.⁴⁷ The Commission noted, however, that such devices do not require authorization under Part 95 because they already can operate pursuant to the Part 25 mobile satellite service (MSS) rules, and tentatively concluded that incorporating what is effectively a voluntary standard is unnecessary and would not further the public interest.⁴⁸

16. Commenters are split regarding whether we should incorporate by reference RTCM's SEND standard into our rules. Most argue that it should be incorporated because users rely on satellite

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conclude that the proposal is unnecessary because the rule already makes this clear. *Cf.* Amendment of Part 90 of the Commission's Rules, WP Docket No. 07-100, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 25 FCC Rcd 2479, 2491-92 (2010) (declining to amend Wireless Medical Telemetry Service (WMTS) rules to emphasize that prior coordination is required before a WMTS device is activated, because the rules already set forth this requirement clearly).

⁴³ See 47 C.F.R. § 95.1401(e), (f). We note in response to commenters' concern that the mailing address set forth in the rule is obsolete, *see* ACR Comments at 3; RTCM Comments at 5, that the rule was updated after those comments were filed. *See* Amendment of Parts 80, 87, and 95 to Update Mailing Addresses Pertaining to Satellite Emergency Radiobeacons, *Order*, 29 FCC Rcd 10514 (WTB 2014).

⁴⁴ *See* RTCM Comments at 5; ACR Comments at 3.

⁴⁵ We note that ACR's suggestion that we prohibit the marketing as a "Personal Locator Beacon" or "PLB" of any device that does not meet the RTCM standard, *see* ACR Comments at 3, is under consideration in another proceeding. *See* Review of the Commission's Part 95 Personal Radio Services Rules, *Notice of Proposed Rule Making and Memorandum Opinion and Order on Reconsideration*, WT Docket No. 10-119, 25 FCC Rcd 7651, 7677 ¶ 68 (2010).

⁴⁶ RTCM Standard 12800.0 for Satellite Emergency Notification Devices (SENDs), dated August 1, 2011. The RTCM standard does not specifically define the term "Satellite Emergency Notification Device," but the standard describes such devices as those operating over any satellite system (excluding the COSPAS-SARSAT system and mobile satellite service devices that offer real-time, two way switched voice service that is interconnected with the public switched telephone network) that 1) provide a dedicated emergency notification function (*e.g.*, SOS, 911, Help) designed to notify either private or public emergency services of a distress situation; and 2) meet minimum requirements for functional and technical performance, as specified in the RTCM standard.

⁴⁷ *See Notice*, 29 FCC Rcd at 2522 ¶¶ 16, 18.

⁴⁸ *See id.* at 2522 ¶ 17.

emergency notification services in emergency situations and expect devices to perform in a manner similar to PLBs (which, as discussed above, *are* required to meet the relevant RTCM standard), but the Part 25 MSS rules do not include any specific provisions to ensure that devices will perform with the degree of reliability specified in the RTCM standard.⁴⁹ ACR Electronics Inc. (ACR), a manufacturer of survival products, argues further that compliance with the RTCM SEND standard should be mandatory for all satellite communications devices outside the 406 MHz band that provide emergency distress notification functions, except for devices that offer real-time two-way switched voice service.⁵⁰ Iridium Satellite LLC (Iridium), an MSS provider, argues that incorporation by reference of the standard is unnecessary because voluntary compliance with the SEND standard by manufacturers and MSS providers is sufficient.⁵¹

17. We are adopting RTCM's proposal to the extent that we incorporate the RTCM SEND standard by reference under the Part 25 MSS rules for devices that are marketed as SENDs. We address commenters' concerns about consumer expectations by amending Part 25 to specify that the terms "SEND" and "Satellite Emergency Notification Device" may be used in marketing and sales only for devices that meet the requirements set forth in the RTCM SEND standard. We agree with Iridium that requiring all devices that are capable of transmitting an emergency distress alert to meet the RTCM SEND standard is overbroad.⁵²

D. Maritime Survivor Locating Devices (MSLDs)

18. MSLDs are intended for use by persons at risk of falling into the water such as mariners and workers on marine installations or docks, or by divers returning to the surface out of sight of their dive boats.⁵³ They can be worn on or as part of a garment or life jacket, and are intended to facilitate the rescue of personnel in the vicinity of their vessel or structure so that immediate assistance can be rendered without a time-consuming and expensive SAR operation. In light of this narrower focus, MSLDs do not operate on a frequency monitored by COSPAS-SARSAT, and do not transmit with as much power or for as long as EPIRBs or PLBs.⁵⁴ Instead, MSLDs transmit on frequencies that are received on a device monitored by personnel at the MSLD-wearer's vessel or facility.

19. RTCM has developed minimum requirements for the functional and technical performance of MSLDs.⁵⁵ In the *Notice*, the Commission proposed to incorporate by reference RTCM's MSLD standard into the Part 95 rules to allow certification and use of devices meeting the standard, and asked whether manufacturers should be required to coordinate their applications for equipment certification of MSLDs with the United States Coast Guard (Coast Guard).⁵⁶ The Commission also sought comment on the appropriate timetable for phasing out manufacture, sale and use of devices

⁴⁹ See RTCM Comments at 5; GMDSS Task Force Comments at 5; ACR Comments at 4.

⁵⁰ See ACR Comments at 4; *see also* RTCM Comments at 6 (stating that it has no objection to ACR's proposal).

⁵¹ See Iridium Reply Comments at 2-3.

⁵² See *id.* Implementation of such a requirement could require a more precise definition of what devices are covered, which is beyond the scope of the record in this proceeding.

⁵³ MSLDs have sometimes been referred to as "man-overboard" devices, *see, e.g.*, Wireless Telecommunications Bureau Clarifies that Certain 121.5 MHz Devices Are Permitted Despite Termination of Satellite Processing of 121.5 MHz Distress Signals, *Public Notice*, 24 FCC Rcd 8483, 8483 (WTB MD 2009), but that term does not fully encompass the scope of possible MSLD uses.

⁵⁴ See, *e.g.*, David Marshall, *Letter*, 13 FCC Rcd 23688, 23688-89 (WTB PSPWD 1998) (*David Marshall*).

⁵⁵ RTCM Standard 11901.1 for Maritime Survivor Locating Devices (MSLD), dated June 4, 2012.

⁵⁶ See *Notice*, 29 FCC Rcd at 2523 ¶¶ 20-21.

intended to aid in the location of persons in the water that were approved by waiver but do not comply with RTCM's MSLD standard.⁵⁷

20. Commenters agree that RTCM's MSLD standard should be incorporated by reference in our rules.⁵⁸ We agree that allowing for certification and use of MSLDs will enhance safety for individuals on or near the water by providing for earlier alerting and rescues that are both more rapid and effective and less costly, and we therefore incorporate the standard into Part 95 as proposed.⁵⁹ We also agree with commenters who support coordination with the Coast Guard for equipment authorization to assure that MSLDs meet the RTCM MSLD standard,⁶⁰ and will therefore also require such coordination. As suggested by RTCM, certification of MSLDs that include a function intended to send a distress message directly to the Coast Guard or any other SAR organization will not be permitted unless that function is endorsed by the Coast Guard in its pre-certification review.⁶¹ With respect to the appropriate timeline for phasing out devices that were approved by waiver but do not comply with the standard, we will prohibit the continued manufacture, importation, and sale of non-compliant devices as of one year after the effective date of the rules adopted herein, but will permit the continued use of those devices.⁶²

E. Automatic Identification System Search and Rescue Transmitters (AIS-SARTs)

21. Like EPIRBs, SARTs are carried on board ships and survival craft to alert others of a distress situation, and to assist SAR personnel in locating those in distress. Currently, the Part 80 rules authorize only traditional SARTs, which act as active reflectors of 9.2-9.5 GHz (9 GHz) radar signals.⁶³ Each time a 9 GHz SART detects a pulse from the radar of a searching vessel that is within approximately five nautical miles, the SART transmits a signal that is displayed on the screen of the radar that activated it.

22. An AIS-SART, as part of the AIS maritime navigation safety communications system, is used to locate a survival craft or distressed vessel by transmitting a unique identification code and GPS coordinates to all AIS-enabled devices within VHF radio range.⁶⁴ The International Maritime

⁵⁷ *Id.* at 2523 ¶ 21. Because MSLDs contribute to maritime safety but do not meet the technical requirements for EPIRBs, the Wireless Telecommunications Bureau has granted waivers of the Part 80 rules to permit the certification and use of MSLDs. *See, e.g., David Marshall*, note 54, *supra*.

⁵⁸ *See* RTCM Comments at 6; GMDSS Task Force at 5; ACR Comments at 5.

⁵⁹ After the *Notice* was released, RTCM revised the standard. *See* RTCM Standard 11901.1 with Amendment 1 for Maritime Survivor Locating Devices (MSLD), dated May 2, 2014. The amended standard adds an option permitting "open loop" operation allowing alerting of all vessels in the vicinity with Digital Selective Calling (DSC) radios of the alert situation. DSC is a digital signaling system that automatically allows ship and shore stations to call one another directly, similar to the use of a telephone, and establish contact. *See* Amendment of Parts 13 and 80 of the Commission's Rules to Implement the Global Maritime Distress and Safety System (GMDSS) to Improve the Safety of Life at Sea, *Report and Order*, PR Docket No. 90-480, 7 FCC Rcd 951 (1992). RTCM requests that we incorporate its amended MSLD standard, *see* RTCM Comments at 6, but we decline to authorize the "open loop" option without notice and comment. Instead, we incorporate by reference the 2012 version of RTCM's MSLD standard.

⁶⁰ *See* RTCM Comments at 6; GMDSS Task Force at 5; ACR Comments at 5.

⁶¹ RTCM Comments at 6-7.

⁶² *See* GMDSS Task Force Comments at 5 (proposing that manufacture of non-compliant devices be prohibited as of 2016).

⁶³ *See* 47 C.F.R. § 80.1101(c)(6). All cargo vessels over three hundred gross tons must carry survival craft equipment consisting of two handheld VHF radios and a 9 GHz SART; for cargo vessels over five hundred gross tons and passenger vessels, the requirement increases to three handheld VHF radios and two SARTs. *See* 47 C.F.R. § 80.1095(b).

⁶⁴ *See* Amendment of the Commission's Rules Regarding Maritime Automatic Identification Systems, *Memorandum Opinion and Order and Notice of Proposed Rule Making*, WT Docket No. 04-344, 19 FCC Rcd 20071, 20074 ¶ 5

Organization (IMO) has amended the GMDSS regulations to permit AIS-SARTs as an alternative to 9 GHz SARTs.⁶⁵ In addition, the International Electrotechnical Commission (IEC)⁶⁶ approved performance and technical specifications for AIS-SARTs.⁶⁷ In the *Notice*, the Commission proposed to incorporate by reference the IMO and IEC standards for AIS-SARTs into our rules, which would allow certification and use of AIS-SARTs meeting those standards, and to require manufacturers to coordinate AIS-SART equipment certification applications with the Coast Guard.⁶⁸

23. We agree with the commenters that AIS-SARTs represent an important tool for improving maritime safety and have gained international acceptance,⁶⁹ and therefore revise Part 80 to incorporate by reference the IMO and IEC standards for AIS-SARTs. We will require that AIS-SART equipment certification applications be coordinated with the Coast Guard, as is required for other AIS equipment.⁷⁰ We agree with RTCM's suggestion to use the term "search and rescue locating devices" when referring to both traditional SARTs and AIS-SARTs, but we decline, as beyond the scope of this proceeding, its request that we amend the rules regarding the stowage of these devices on ships equipped with free-fall lifeboats.⁷¹

F. Ship Radar

24. Section 80.273 of the Commission's Rules contains the technical requirements for radar equipment installed on ships, and incorporates by reference relevant international standards for such equipment, including IEC 62388⁷² for compulsory vessels⁷³ and IEC 62252⁷⁴ for voluntary vessels.⁷⁵ As

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(2004). AIS is a VHF maritime navigation safety communications system standardized by the International Telecommunication Union that "provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, and aircraft; receives automatically such information from similarly fitted ships; monitors and tracks ships; and exchanges data with shore-based facilities." 47 C.F.R. § 80.5; *see also* Amendment of the Commission's Rules Regarding Maritime Automatic Identification Systems, *Report and Order*, WT Docket No. 04-344, 21 FCC Rcd 8892, 8894-8901 ¶¶ 4-11 (2006).

⁶⁵ *See* IMO Resolution MSC.246(83), "Adoption of Performance Standards for Survival Craft AIS Search and Rescue Transmitters (AIS-SART) for Use in Search and Rescue Operations."

⁶⁶ The IEC is an international non-governmental organization engaged in the development of broadcast technology standards that works closely with SOLAS organizations in developing standards for GMDSS equipment. *See, e.g.*, ITU-R Resolution 41, "Collaboration with the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC)" 1997.

⁶⁷ *See* IEC 61097-14 Ed. 1.0 (2010-02), "Global maritime distress and safety system (GMDSS) – Part 14: AIS search and rescue transmitter (AIS-SART) – Operational and performance requirements, methods of testing and required test results."

⁶⁸ *See Notice*, 29 FCC Rcd at 2524 ¶ 25.

⁶⁹ *See* GMDSS Task Force Comments at 6; RTCM Comments at 7; ACR Comments at 5.

⁷⁰ *See* 47 C.F.R. §§ 80.231, 80.275; *see also* Amendment of Parts 13 and 80 of the Commission's Rules Concerning Maritime Communications, *Second Report and Order*, *Sixth Report and Order*, and *Second Further Notice of Proposed Rule Making*, WT Docket No. 00-48, 19 FCC Rcd 3120, 3155-56 ¶ 67 (2004) (*Maritime Second R&O*)

⁷¹ *See* RTCM Comments at 7.

⁷² IEC 62388, "Maritime navigation and radiocommunication equipment and systems—General requirements—Methods of testing and required test results," Edition 1.0, 2007-12.

⁷³ Compulsory vessels are required by statute or treaty to be equipped with radiocommunication equipment. 47 C.F.R. § 80.5.

proposed in the *Notice*, we amend Part 80 to remove the incorporation by reference of IEC 62252 because manufacturers have not designed or built radar sets to this standard, and IEC has withdrawn the standard.⁷⁶ We understand that RTCM is in the process of drafting new ship radar standards for voluntary vessels and anticipates publishing these standards in the near future. Voluntary vessels are permitted to carry radar equipment intended for use solely on voluntary vessels, without reference to any particular standard, until appropriate standards are developed and adopted.⁷⁷ As proposed, we also correct a cross-reference to clarify that radar installations on compulsory vessels must meet IEC 62388.⁷⁸

G. Portable Marine VHF Radios on Shore

25. Section 80.115(a)(2) of the Commission's Rules prohibits the use on shore of a portable marine VHF radio associated with a vessel.⁷⁹ The GMDSS Task Force proposed that the rule be amended to allow persons on shore within three miles of the water to use portable marine VHF radios to communicate with the vessel that is subject to the ship station authorization.⁸⁰ The Commission, however, noted that limitations on the use of maritime frequencies are intended to minimize interference to maritime communications (particularly distress and safety messages), and tentatively concluded that permitting the use of portable marine VHF radio transmitters on shore would not further the public interest.⁸¹ We questioned the practical enforceability of a three-mile rule, and asked whether shore parties' communications needs could be met by commercial mobile radio service (CMRS) or PRS options.⁸² The Commission also asked commenters supporting the proposal to discuss what limitations would be appropriate to minimize the impact on maritime communications.⁸³

26. The GMDSS Task Force acknowledges that CMRS options likely will be preferred in areas with reliable coverage, and asserts that this makes it unlikely that use of low-powered portable marine VHF radio radios on land will interfere with maritime communications.⁸⁴ It also argues that permitting such use will further the public interest by encouraging more boaters to carry a VHF radio, which has safety benefits not available from CMRS or PRS options because marine VHF channels can be

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⁷⁴ IEC 62252, "Maritime navigation and radiocommunication equipment and systems—Radar for craft not in compliance with IMO SOLAS Chapter V—Performance requirements, methods of test and required test results," First edition, 2004–07.

⁷⁵ See 47 C.F.R. § 80.273.

⁷⁶ See http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/49303!openDocument; http://webstore.iec.ch/p-preview/info_iec62252%7Bed1.0%7Db.pdf; see also RTCM Comments at 7 (supporting the proposal).

⁷⁷ See Wireless Telecommunications Bureau Clarifies and Waives Requirements for Ship Stations Radar Equipment, *Public Notice*, 27 FCC Rcd 6046 (WTB MD 2012).

⁷⁸ See *Notice*, 29 FCC Rcd at 2527-28 ¶ 28. In addition, as suggested by commenters, we revise Section 80.273(b) to agree with the latest IEC 62388 standard and require "effective diameter of not less than 320 millimeters (12.6 inches)" for the radar display, rather than 340 millimeters (13.4 inches). See RTCM Comments at 7; Onoda Comments at 1.

⁷⁹ See 47 C.F.R. § 80.115(a)(2).

⁸⁰ See *Notice*, 29 FCC Rcd at 2518 ¶ 29.

⁸¹ See *id.* at 2518 ¶¶ 30-31.

⁸² See *id.* at 2518 ¶ 31.

⁸³ See *id.* at 2519 ¶ 32.

⁸⁴ See GMDSS Task Force Comments at 6; see also RTCM Comments at 8.

used to contact the Coast Guard and other nearby vessels in a distress situation, for bridge-to-bridge communications, and to receive maritime safety information broadcasts.⁸⁵

27. We agree with commenters that the public interest will be served by allowing the use of portable VHF radios ashore, so long as it is limited to enhancing the usefulness of marine VHF radios without negatively affecting maritime communications. Such limited onshore use will promote flexibility in the use of marine radio equipment in a manner that furthers maritime safety by encouraging more boaters to carry a VHF radio. Specifically, as suggested by ACR, we will permit use of portable marine VHF radios only in areas adjacent to the water, such as docks and beaches.⁸⁶ In addition, as suggested by RTCM, and consistent with our requirements for offshore use, onshore communications using such radios must relate to the operational and business needs of the associated vessel,⁸⁷ and must be limited to the minimum practicable transmission time.⁸⁸ We amend Section 80.115 accordingly.⁸⁹ We caution operators that the Commission's Enforcement Bureau will continue to investigate complaints against operators who improperly use marine VHF radios, particularly any violation that concerns unauthorized transmissions on 156.800 MHz (VHF Channel 16).

H. VHF Digital Small Message Services (VDSMS)

28. VDSMS is intended to provide short-distance digital messaging ship-to-ship, shore-to-ship and ship-to-shore. The International Telecommunication Union (ITU) has recognized the future need for worldwide systems to exchange data and email on maritime VHF channels and the availability of new digital data systems that provide this service efficiently and without harmful interference.⁹⁰ In the United States, however, maritime communications generally are limited to particular emission designators in order to avoid interference between users; a full range of data transmissions is permitted only on VHF Public Coast frequencies and one channel in Alaska.⁹¹

29. RTCM developed a technical standard for VDSMS that enables transmission of short digital messages without interfering with other communications on the same channel.⁹² In the *Notice*, the

⁸⁵ See GMDSS Task Force Comments at 6; see also ACR Comments at 5 (noting that portable marine VHF radios are more reliable than CMRS devices because they are better suited to the marine environment).

⁸⁶ See ACR Comments at 5; see also *id.* (“simply stepping from a boat onto shore should not suddenly prohibit[] the use of the radio for maritime communications”); RTCM Comments at 8 (“The point is that some ships are in possession of associated maritime VHF radios which are clearly allowed to be used on board, but are suddenly prohibited as soon as the user steps off the ship and onto the dock, even if the subject matter of the communication is exactly the same.”).

⁸⁷ See RTCM Comments at 8. This includes the transmission of safety communications. See 47 C.F.R. §§ 80.507(a), 80.515(c).

⁸⁸ Cf. 47 C.F.R. § 80.517. We remind all operators that superfluous radiocommunication is considered an unauthorized transmission in the Maritime Services. See 47 C.F.R. § 80.89(a).

⁸⁹ In addition, as suggested by RTCM, we amend the rule to clarify that portable VHF DSC radios should operate on frequency 156.525 MHz (Channel 70), which is the DSC Distress, Safety and Calling channel, see 47 C.F.R. § 80.373(f) note 15, but was not specifically listed in Section 80.115. See RTCM Comments at 8.

⁹⁰ See Recommendation ITU-R M.1842.1, Characteristics of VHF radio systems and equipment for the exchange of data and electronic mail in the maritime mobile service RR Appendix 18 channels; Report ITU-R M.2122, EMC assessment of shore-based electronic navigation (eNAV) infrastructure and new draft Standards for data exchange in the VHF maritime mobile band (156-174 MHz).

⁹¹ See 47 C.F.R. § 80.207(d); see also *Maritime Second R&O*, 19 FCC Rcd at 3156 ¶ 69.

⁹² RTCM Standard 12301.1 for VHF-FM Digital Small Message Services, dated July 10, 2009. The standard contains general requirements for VDSMS, e.g., operating frequencies, channel access method, receiver characteristics, and electromagnetic compatibility with other radio systems in the geographical/spectral vicinity of the VDSMS. See *id.* at 1. It allows for VDSMS to be integral to marine VHF receiving and transmitting

(continued...)

Commission proposed to amend Part 80 to incorporate by reference the RTCM VDSMS standard in order to permit transmission of short data messages on VHF maritime private communications frequencies.⁹³ It tentatively concluded that accommodating VDSMS in the Commission's rules would advance the Commission's goal of promoting flexibility and efficiency in the use of marine radio equipment in a manner that would further maritime safety.⁹⁴

30. RTCM, the only commenter addressing this issue, agrees that Part 80 should be revised to incorporate by reference its VDSMS standard.⁹⁵ It argues that adopting a single VDSMS standard will avoid use of a variety of different and potentially incompatible data protocols, and ensure VDSMS communications are not disrupted.⁹⁶ We agree, and amend Part 80 to incorporate by reference the RTCM VDSMS standard. We note that VDSMS will not be permitted on or adjacent to marine safety and security channels and other channels excluded under Appendix 18 of the ITU Radio Regulations.⁹⁷ Further, VDSMS operation on the non-excluded VHF frequencies is subject to existing eligibility requirements.⁹⁸

I. Prohibition of Applications to Assign or Transfer Control of Ship Licenses

31. Under Section 1.948 of the Commission's Rules, ship station licenses may not be assigned or transferred.⁹⁹ Instead of efficiently assigning or transferring the license to another entity, ship station licensees must submit the ship station license to the Commission for cancellation; and the entity acquiring the vessel must instead apply for new ship licenses in its own name.¹⁰⁰ In the *Notice*, the Commission noted that most other types of wireless radio licenses may be assigned or transferred,¹⁰¹ and proposed to remove the prohibition on the assignment or transfer of ship station licenses.¹⁰² The Commission reasoned that "[t]he prohibition on assigning or transferring ship licenses . . . requires

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communications equipment, and specifies a channel access method that transmits data only when the channel is not being used, so that calls in progress are not disrupted.

⁹³ See *Notice*, 29 FCC Rcd at 2530-31 ¶ 36. Channels in the 156-162 MHz band in the international VHF Marine Band are made available according to the type of communication and the nature of the ship's operation. Private communications frequencies are available for safety communications, calling, control of ship movement, and navigational purposes. See 47 C.F.R. § 80.373(f).

⁹⁴ See *Notice*, 29 FCC Rcd at 2530 ¶ 36.

⁹⁵ See RTCM Comments at 8.

⁹⁶ *Id.* at 8-9.

⁹⁷ As suggested by NTIA, we include port operations channels among the marine safety channels on which VDSMS will not be permitted. Port operations communications are "[c]ommunications in or near a port, in locks or in waterways between coast stations and ship stations or between ship stations, which relate to the operational handling, movement and safety of ships and in emergency to the safety of persons." 47 C.F.R. § 80.5.

⁹⁸ See 47 C.F.R. § 80.373(f).

⁹⁹ See 47 C.F.R. § 1.948(b)(5).

¹⁰⁰ The applicant may request special temporary authorization to ensure that the existing ship radio stations may continue to be used without disruption during the interim before the new licenses are granted.

¹⁰¹ The only other types of wireless licenses that may not be assigned or transferred are Amateur, Commercial Operator and, except for the 218-219 MHz Service, Personal Radio Services licenses. See 47 C.F.R. § 1.948(b)(5). The Personal Radio Services generally are licensed by rule. See generally 47 C.F.R. Part 95. The bar on assigning or transferring Amateur and Commercial Operator licenses is a logical corollary of the requirement that applicants for such licenses pass an examination to demonstrate their qualifications. See 47 C.F.R. §§ 13.201 (examination requirement for Commercial Operator license applicants), 97.501 (examination requirement for Amateur Radio Service license applicants).

¹⁰² See *Notice*, 29 FCC Rcd at 2531 ¶ 38.

applicants and Commission licensing personnel to undertake a relatively cumbersome process when control of ship radio station assets are to change hands, and there appears to be little public interest benefit, if any, for continuing the prohibition.”¹⁰³

32. We believe that it would serve the public interest to permit the assignment and transfer of control of ship station licenses. Permitting the assignment and transfer of control of ship station licenses would be more administratively efficient than maintaining the current prohibition on applications to assign or transfer such licenses, and would reduce transactional costs for ship station licensees.¹⁰⁴ RTCM, the only commenter addressing this issue, agrees that it would be beneficial to permit the assignment and transfer of ship station licenses.¹⁰⁵ We will therefore amend Section 1.948(b)(5) to remove the prohibition of applications to assign or transfer control of ship station licenses. Ship station licensees and potential licensees are cautioned that failure to obtain Commission approval for an assignment or transfer of control of a ship station license may result in enforcement action being taken against the entities involved.¹⁰⁶

J. Editorial Corrections

33. As proposed, we correct certain Part 80 rules to change erroneous references to Title II of the Communications Act to refer to Title III, restore subparagraphs that were inadvertently deleted, and correct typographical errors.¹⁰⁷ No commenter addressed these corrections.

IV. CONCLUSION

34. The decisions we have made in this *Report and Order* will permit the maritime community to make use of the most advanced and reliable communications technologies available for the alerting of search and rescue authorities when a vessel is in distress. Our decisions herein also further the Commission’s goal of ensuring that the spectrum allocated for maritime communications is used effectively and efficiently.

V. PROCEDURAL MATTERS

A. Regulatory Flexibility Act

35. As required by the Regulatory Flexibility Act (RFA),¹⁰⁸ the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the rules adopted in this *Report and Order*. The FRFA is contained in Appendix A. The Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of the *Report and Order*, including the FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. In addition, the Commission will send a copy of the *Report and Order*, including the FRFA, in a report to Congress pursuant to the Congressional Review Act.¹⁰⁹

¹⁰³ *See id.*

¹⁰⁴ In addition, we discern no basis to treat ship station licenses differently in this regard from the other types of wireless licenses for which assignment and transfer of control applications are accepted.

¹⁰⁵ *See* RTCM Comments at 9.

¹⁰⁶ *See* 47 C.F.R. § 1.948(a).

¹⁰⁷ *See Notice*, 29 FCC Rcd at 2532 ¶ 39. Other changes to these rules suggested by NTIA are beyond the scope of this proceeding.

¹⁰⁸ *See* 5 U.S.C. § 604.

¹⁰⁹ *See* 5 U.S.C. § 801(a)(1)(A).

B. Congressional Review Act

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

C. Paperwork Reduction Act

37. This document contains new information collection requirements 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 new or modified information collection requirements contained in this proceeding. In addition, we note 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 addition, we have described impacts that might affect small businesses, which includes most businesses with fewer than 25 employees, in the FRFA in Appendix A, *infra*.

38. Specifically, in the *Report and Order*, we establish requirements for the certification of MSLDs and AIS-SARTs. The rules would require, *inter alia*, that applicants for certification submit specified information, including copies of test reports and test data, to the United States Coast Guard prior to filing their applications with the Commission, and that they include with their applications to the Commission copies of letters from the United States Coast Guard stating that the device in question satisfies all of the requirements of the pertinent standard, for MSLDs RTCM 1190.11,¹¹⁰ and for AIS-SARTs IMO Resolution MSC.246(83), “Adoption of Performance Standards for Survival Craft AIS Search and Rescue Transmitters (AIS-SART) for Use in Search and Rescue Operations”, and IEC 61097-14 Ed. 1.0 (2010-02), “Global maritime distress and safety system (GMDSS) – Part 14: AIS search and rescue transmitter (AIS-SART) – Operational and performance requirements, methods of testing and required test results.”¹¹¹ We do not believe that the requirement to submit this information would impose a significant increased administrative burden on businesses with fewer than 25 employees, primarily because such businesses would need to submit the same or similar information in order to obtain certification for devices under international requirements. By incorporating the international standard into the Commission’s rules, rather than establishing a different standard, the Commission’s proposed rule would avoid subjecting businesses to disparate equipment certification requirements for these devices. In addition, whatever burden the Commission’s proposed rule might impose on businesses with fewer than 25 employees is justified by the underlying purpose of the rule, which to ensure that these devices operate effectively and safely, and are interoperable with other devices. Given the important role these devices play in promoting maritime safety, the public interest in establishing rules for the certification of these devices outweighs the minimal burden it might impose on businesses with fewer than 25 employees.

D. Further Information

39. For further information, contact James Shaffer, Mobility Division, Wireless Telecommunications Bureau, (202) 418-0687, or TTY (202) 418-7233, or via electronic mail at james.shaffer@fcc.gov.

¹¹⁰ *See* Appendix B, *infra*, Section 95.1043.

¹¹¹ *See* Appendix B, *infra*, Section 80.233.

40. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty). This *Report and Order* can also be downloaded at: <http://www.fcc.gov/>.

VI. ORDERING CLAUSES

41. Accordingly, IT IS ORDERED, pursuant to Sections 4(i), 303(r), and 332(a)(2) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), 332(a)(2), that Parts 1, 25, 80, and 95 of the Commission's Rules ARE AMENDED as set forth in the attached Appendix B, and such rule amendments SHALL BE EFFECTIVE thirty (30) days after publication of the rules amendments in the Federal Register, except for 47 C.F.R. §§ 80.233, 95.1043, which contain new information collection requirements that require approval by the OMB under the PRA and which WILL BECOME EFFECTIVE after such approval, on the effective date specified in a notice that the Commission publishes in the Federal Register announcing such approval and effective date.

42. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Final Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rule Making (Notice)* in this proceeding.² The Commission sought written public comment on the proposals in the *Notice*, including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

A. Need for, and Objectives of, the Report and Order

The rules adopted in the *Report and Order* are intended update the rules and requirements for technologies used to locate and rescue distressed ships and individuals in distress at sea or on land to provide better and more accurate data to rescue personnel. Specifically, in the *Report and Order* the Commission amends its rules to (a) require emergency position indicating radio beacons (EPIRBs) to be capable of broadcasting position data when activated, which will improve the ability of rescue personnel to locate distressed ships; (b) update the equipment standards for Personal Locator Beacons (PLBs) to ensure that PLBs meet updated functional and technical parameters; (c) provide that only devices that meet the RTCM standard for Satellite Emergency Notification Devices (SENDs) may be marketed for use in the United States as SENDs, in order to promote the reliability of devices used for tracking in emergency situations; (d) permit equipment certification and use of Maritime Survivor Locating Devices (MSLDs) that comply with RTCM standards, in order to enhance maritime safety; (e) provide for equipment certification and use of Automatic Identification System Search and Rescue Transmitters (AIS-SARTs) that comply with international standards, which will contribute to maritime safety; (f) clarify the rules regarding ship radar equipment; (g) permit the use of portable marine VHF radio transmitters by persons on shore that are on or adjacent to the dockside of the associated vessel; (h) permit VHF digital small message services (VDSMS) on certain maritime VHF channels; (i) allow assignment or transfer of control of ship station licenses, removing a regulatory hurdle to secondary market transactions; and (j) correct certain typographical errors.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

No comments were submitted specifically in response to the IRFA. Nonetheless, we have considered the potential economic impact on small entities of these rules and the other rules discussed in the IRFA, and we have considered alternatives that would reduce the potential economic impact on small entities of the rules enacted herein.

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.⁴

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601–612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See Amendment of the Commission's Rules Regarding Maritime Radio Equipment and Related Matters, *Notice of Proposed Rule Making*, WT Docket No. 14-36, 29 FCC Rcd 2516 (2014).

³ See 5 U.S.C. § 604.

⁴ 5 U.S.C. § 604(a)(3).

The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

D. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.⁵ The RFA defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁶ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁷ 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).⁸

Wireless Telecommunications Carriers (except satellite). This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.⁹ The appropriate size standard under SBA rules for the category Wireless Telecommunications Carriers (except satellite) is that a business is small if it has 1,500 or fewer employees.¹⁰ Census data for 2007 show that there were 1,383 firms that operated for the entire year.¹¹ Of this total, 1,368 firms had employment of fewer than 1000 employees.¹² Thus under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small.¹³

Marine Radio Services. Small businesses in the aviation and marine radio services use a marine very high frequency (VHF), medium frequency (MF), or high frequency (HF) radio, any type of emergency position indicating radio beacon (EPIRB) and/or radar, an aircraft radio, and/or any type of emergency locator transmitter (ELT). The Commission has not developed a definition of small entities

⁵ 5 U.S.C. § 603(b)(3).

⁶ 5 U.S.C. § 601(6).

⁷ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in 15 U.S.C. § 632). Pursuant to the RFA, 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 U.S.C. § 601(3).

⁸ Small Business Act, 15 U.S.C. § 632 (1996).

⁹ U.S. Census Bureau, North American Industry Classification System, Definition of “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210, available at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2007%20NAICS%20Search>.

¹⁰ See 13 C.F.R. 121.201, NAICS Code 517210.

¹¹ U.S. Census Bureau, 2007 Economic Census of the United States, Table EC0751SSSZ5, Information: Subject Series - Estab and Firm Size: Employment Size of Firms for the United States: 2007, NAICS Code 517210, available at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ5&prodType=table.

¹² *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees. The largest category provided is for firms with “1,000 employees or more”.

¹³ *Id.*

specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category Wireless Telecommunications Carriers (except satellite),” which is 1,500 or fewer employees. Census data for 2007, which supersede data contained in the 2002 Census, show that there were 1,383 firms that operated that year. Of those 1,383, 1,368 had fewer than 100 employees, and 15 firms had more than 100 employees. Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a “small” business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$15 million dollars. In addition, a “very small” business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$3 million dollars. There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as “small” businesses under the above special small business size standards and may be affected by rules adopted pursuant to the *Report and Order*.

Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The U.S. Census defines this industry as comprising “establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by the establishments are transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.”¹⁴ The SBA has established a size standard for this industry which classifies any businesses in this industry as small if it has 750 or fewer employees.¹⁵ Census data for 2007 indicate that 939 such businesses operated in that year. Of that number, 912 businesses operated with fewer than 500 employees.¹⁶ Based on this data, we conclude that a majority of businesses in this industry are small by the SBA standard.

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

In the *Report and Order* we adopt six rule amendments that may affect reporting, recordkeeping or other compliance requirements for small entities. First, we amend Section 80.1061 of the rules¹⁷ to require that EPIRBs comply with the RTCM Standard 11000.3, and to mandate that vessels that are required to carry EPIRBs replace their existing radiobeacons with EPIRBs that meet the new standard within six years of the effective date of the rule amendment.¹⁸ This rule amendment could affect small entities that manufacturer EPIRBs. Second, we amend Section 95.1402 of the rules¹⁹ to require that PLBs comply with the RTCM Standard 11010.2.²⁰ This rule amendment could affect small entities that manufacturer PLBs.

¹⁴ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹⁵ 13 C.F.R. 121201 (NAICs Code 334220).

¹⁶

http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_31SG3&prodType=table.

¹⁷ 47 C.F.R. § 80.1061.

¹⁸ See para. 5, *supra*.

¹⁹ 47 C.F.R. § 95.1402.

²⁰ See para. 10, *supra*.

Third, we adopt Section 25.301 of the rules to specify that the term SEND refers only to a device that meets the requirements set forth in the RTCM SEND Standard 12800.0 and make it unlawful to market for use in the United States a non-compliant device as a SEND. This rule amendment could affect small entities that manufacture devices that are capable of transmitting an emergency distress alert. Fourth, we amend Section 95.1043 of the rules²¹ to require that MSLDs comply with the RTCM Standard 11901.1²². This rule amendment could affect small entities that manufacturer that are capable of transmitting an emergency distress alert. Fifth, we amend Section 80.233 of the rules²³ to require that AIS-SARTs comply with the IEC Standard 61097-14 Ed. 1.0 (2010-02) and IMO Resolution MSC.246(83). This rule amendment could affect small entities that manufacture AIS-SARTs. Sixth, we amend Section 80.364 of the rules²⁴ to require that VDSMS equipment comply with the RTCM Standard 12301.1²⁵. This rule amendment could affect small entities that manufacturer VDSMS equipment. We conclude that none of these matters will have a direct, significant economic impact on a substantial number of small entities. The equipment standards are in use internationally, so it imposes no additional burden on manufacturers to meet those standards for equipment to be used in the United States. Moreover, most boat owners replace their EPIRBs at the battery replacement date, which is typically five years after the EPIRB is sold, so a six-year deadline for certain vessels will not have a significant impact.

F. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The RFA requires an agency to describe any significant alternatives that it has considered in developing its approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”²⁶

With respect to all of the rules adopted in the *Report and Order* that may affect reporting, recordkeeping and other compliance requirements for small entities, as identified in Section D of this FRFA, *supra*, we have considered how we might minimize the economic impact on small entities, and we have considered alternative measures that might minimize that impact. As a general matter, the alternatives considered, and in many cases adopted, include exempting small entities from the requirement; providing “grandfathering” protection from the requirement; providing a transition period to give either small entities or all affected entities additional time to come into compliance; and imposing a less burdensome requirement, either for small entities or for all affected entities. In addition, to the extent we establish here new standards for authorization of marine radio equipment, we have generally required compliance with performance standards, rather than prescribing a particular equipment design. In the IRFA in this proceeding, we specifically requested comment addressing particular alternatives that may be appropriate for particular rules proposed or discussed in the *Notice*. Although we received no comments specifically addressed to the IRFA, we have considered all comments to the *Notice* addressing the impact of any proposed change on small entities and all suggestions for alternative measures that would have a less significant impact on small entities. Moreover, even where we received no comments of this nature with

²¹ 47 C.F.R. § 95.1043.

²² See para. 20, *supra*.

²³ 47 C.F.R. § 80.233.

²⁴ 47 C.F.R. § 80.364.

²⁵ See para. 30, *supra*.

²⁶ 5 U.S.C. § 603(c)(1)-(4).

regard to a particular new requirement, we considered the potential impact of the requirement on small entities, and considered alternatives.

G. Report to Congress

The Commission will send a copy of the *Report and Order* in WT Docket No. 14-36, including the Final Regulatory Flexibility Analysis, in a report to be sent to Congress and the Congressional Budget Office pursuant to the Congressional Review Act.²⁷ In addition, the Commission will send a copy of the *Report and Order* in WT Docket No. 14-36, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order* in WT Docket No. 14-36 and the Final Regulatory Flexibility Analysis (or summaries thereof) will also be published in the Federal Register.²⁸

²⁷ See 5 U.S.C. § 801(a)(1)(A).

²⁸ See *id.* § 604(b).

APPENDIX B**Final Rules**

Chapter I of Title 47 of the Code of Federal Regulations, Parts 1, 25, 80 and 95, are amended as follows:

PART 1 – PRACTICE AND PROCEDURE

1. The authority citation for Part 1 continues to read as follows:

AUTHORITY: 15 U.S.C. 79 et seq; 47 U.S.C. 151, 154(i), 154(j), 155, 157, 225, 227, 303(r), and 309, Cable Landing License Act of 1921, 47 U.S.C. 35-39, and the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96.

2. Section 1.948 is amended by revising paragraph (b)(5) to read as follows:

§ 1.948 Assignment of authorization or transfer of control, notification of consummation.

* * * * *

(b)(5) Licenses, permits, and authorizations for stations in the Amateur, Commercial Operator and Personal Radio Services (except 218–219 MHz Service) may not be assigned or transferred, unless otherwise stated.

* * * * *

PART 25 - SATELLITE COMMUNICATIONS

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

AUTHORITY: Interprets or applies sections 4, 301, 302, 303, 307, 309, 310, 319, 332, 705, and 721 of the Communications Act, as amended, 47 U.S.C. 154, 301, 302, 303, 307, 309, 310, 319, 332, 605, and 721, unless otherwise noted.

4. Section 25.301 is added under a new Subpart E-Miscellaneous to read as follows:

§ 25.301 Satellite Emergency Notification Devices (SENDS).

No device described by the marketer or seller using the terms “SEND” or “Satellite Emergency Notification Device” may be marketed or sold in the United States unless it complies with the requirements of RTCM Standard 12800.0 for Satellite Emergency Notification Devices (SENDS), dated August 1, 2011. This RTCM document is incorporated by reference in accordance with 5 U.S.C. 552(a), and 1 CFR part 51. Copies of the document are available and may be obtained from the Radio Technical Commission for Maritime Services, 1611 N. Kent Street, Suite 605, Arlington, Virginia 22209. The document is available for inspection at Commission headquarters at 445 12th Street SW., Washington, DC 20554. Copies may also be inspected at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

PART 80 – STATIONS IN THE MARITIME SERVICES

5. The authority citation for Part 80 continues to read as follows:

AUTHORITY: Secs. 4, 303, 307(e), 309, and 332, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, 307(e), 309, and 332, unless otherwise noted. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609; 3 UST 3450, 3 UST 4726, 12 UST 2377.

6. Section 80.7 is amended by removing paragraphs (d)(17), (g), (g)(1), and (g)(2), redesignating current paragraphs (d)(14) through (16) as (d)(15) through (17), adding new paragraphs (d)(14), (f)(4), and (b)(28), and revising paragraphs (d)(5), (8), (12), (f)(2), (3) to read as follows:

§ 80.7 Incorporation by reference.

* * * * *

(b) * * *

(28) IMO Resolution MSC.246(83), (“IMO Resolution MSC.246(83)”) “Adoption of Performance Standards for Survival Craft AIS Search and Rescue Transmitters (AIS-SART) for Use in Search and Rescue Operations,” IBR approved for § 80.233.

(c) * * *

(d) * * *

(5) IEC 61097-3:1994 (“IEC 61097-3”), First edition, 1994-06, “Global maritime distress and safety system (GMDSS)–Part 3: Digital selective calling (DSC) equipment–Operational and performance requirements, methods of testing and required testing results,” with Annexes, IBR approved for § 80.1101.

* * *

(8) IEC 61097-7:1996 (“IEC 61097-7”), First edition, 1996-10, “Global maritime distress and safety system (GMDSS)–Part 7: Shipborne VHF radiotelephone transmitter and receiver–Operational and performance requirements, methods of testing and required test results,” IBR approved for § 80.1101.

* * *

(12) IEC 61097-12:1996(E) (“IEC 61097-12”), First edition, 1996-11, “Global maritime distress and safety system (GMDSS)–Part 12: Survival craft portable two-way VHF radiotelephone apparatus–Operational and performance requirements, methods of testing and required test results,” IBR approved for § 80.1101.

* * *

(14) IEC 61097-14 Ed. 1 (“IEC 61097-14”), “Global maritime distress and safety system (GMDSS) – Part 14: AIS search and rescue transmitter (AIS-SART) – Operational and performance requirements, methods of testing and required test results.” ED 1.0 (2010-02), IBR approved for § 80.233.

* * *

(f) * * *

(2) RTCM Standard 11000.3 (“RTCM 11000”), “RTCM Standard 11000.3 for 406 MHz Satellite Emergency Position-Indicating Radiobeacons (EPIRBs),” June 12, 2012, IBR approved for § 80.1061.

(3) RTCM Standard 11020.1 (“RTCM 11020”), “RTCM Standard 11020.1, Ship Security Alert Systems (SSAS) Using the Cospas-Sarsat System,” October 9, 2009, IBR approved for § 80.277.

(4) RTCM Standard 12301.1 (“RTCM 12301”), VHF-FM Digital Small Message Services, July 10, 2009, IBR approved for § 80.364.

7. Section 80.59 is amended by revising the note in paragraph (a)(1) to read as follows:

§ 80.59 Compulsory ship inspections.

* * * * *

(a) * * *

(1) * * *

Note: Nothing in this section prohibits Commission inspectors from inspecting ships. The mandatory inspection of U.S. vessels must be conducted by an FCC-licensed technician holding an FCC General Radiotelephone Operator License, GMDSS Radio Maintainer's License, Second Class Radiotelegraph Operator's Certificate, First Class Radiotelegraph Operator's Certificate, or Radiotelegraph Operator License in accordance with the following table:

* * * * *

8. Section 80.115 is amended by revising paragraphs (a)(1)-(4) to read as follows:

§ 80.115 Operational conditions for use of associated ship units.

(a) * * *

(1) It must only be operated on the safety and calling frequency 156.800 MHz or 156.525 MHz or on commercial or noncommercial VHF intership frequencies appropriate to the class of ship station with which it is associated.

(2) Except for safety purposes, it must only be used to communicate with the ship station with which it is associated or with associated ship units of the same ship station. Such associated ship units may be used from shore only adjacent to the waterway (such as on a dock or beach) where the ship is located. Communications from shore must relate to the operational and business needs of the ship including the transmission of safety information, and must be limited to the minimum practicable transmission time.

(3) It must be equipped to transmit on the frequency 156.800 MHz or 156.525 MHz and at least one appropriate intership frequency.

(4) Calling must occur on the frequency 156.800 MHz or 156.525 MHz unless calling and working on an intership frequency has been prearranged.

* * * * *

9. Section 80.157 is amended to read as follows:

§ 80.157 Radio officer defined.

A *radio officer* means a person holding a First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, or Radiotelegraph Operator License issued by the Commission, who is employed to operate a ship radio station in compliance with Part II of Title III of the Communications Act. Such a person is also required to be licensed as a *radio officer* by the U.S. Coast Guard when employed to operate a ship radiotelegraph station.

10. Section 80.159 is amended by revising paragraph (b) as follows:

§ 80.159 Operator requirements of Title III of the Communications Act and the Safety Convention.

* * * * *

(b) Each cargo ship equipped with a radiotelegraph station in accordance with Part II of Title III of the Communications Act and which has a radiotelegraph auto alarm must carry a radio officer holding a First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, or Radiotelegraph Operator License who has had at least six months service as a radio officer on board U.S. ships. If the radiotelegraph station does not have an auto alarm, a second radio officer who holds a

First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, or Radiotelegraph Operator License must be carried.

* * * * *

11. Section 80.203 is amended by adding paragraphs (b)(3)(i)-(iv) to read as follows:

§ 80.203 Authorization of transmitters for licensing.

* * * * *

(b) * * *

(3) * * *

(i) Internal adjustments of the transmitter;

(ii) Use of controls normally inaccessible to the station operator;

(iii) Use of external devices or equipment modules made available only to service and maintenance personnel through a service company; and

(iv) Copying of a channel selection program directly from another transmitter (cloning) using devices and procedures made available only to service and maintenance personnel through a service company.

* * * * *

12. Section 80.231 is amended by revising paragraph (c) introductory paragraph and paragraph (e) to read as follows:

§ 80.231 Technical requirements for Class B Automatic Identification System equipment.

* * * * *

(c) Prior to submitting a certification application for a Class B AIS device, the following information must be submitted in duplicate to typeapproval@uscg.mil or the Commandant (CG-ENG-4), U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Ave. SE, Washington, DC 20593-7509:

* * * * *

(e) A certification application for an AIS device must contain a copy of the U.S. Coast Guard letter stating that the device satisfies all of the requirements specified in IEC 62287-1, a copy of the technical test data, and the instruction manual(s).

13. Section 80.233 is added to read as follows:

§ 80.233 Technical requirements for Automatic Identification System Search and Rescue Transmitters (AIS-SART) equipment.

(a) Automatic Identification System Search and Rescue Transmitter (AIS-SART) equipment must meet the technical requirements of IEC 61097-14 and IMO Resolution MSC.246(83) (incorporated by reference, *see* § 80.7(b)).

(b) Prior to submitting a certification application for an AIS-SART device, the following information must be submitted in duplicate to the U.S. Coast Guard, 2703 Martin Luther King Jr. Ave. SE, Stop 7126, Washington, DC 20593-7126:

(1) The name of the manufacturer or grantee and the model number of the AIS-SART device; and

(2) Copies of the test report and test data obtained from the test facility showing that the device complies with the environmental and operational requirements identified in IEC 61097-14.

(c) After reviewing the information described in paragraph (b) of this section, the U.S. Coast Guard will issue a letter stating whether the AIS-SART device satisfies all of the requirements specified in IEC 61097-14.

(d) A certification application for an AIS-SART device must contain a copy of the U.S. Coast Guard letter stating that the device satisfies all of the requirements specified in IEC 61097-14, a copy of the technical test data, and the instruction manual(s).

14. Section 80.273 is amended by removing paragraph (b), redesignating paragraphs (c) and (d) as paragraphs (b) and (c), and revising paragraph (b) to read as follows:

§ 80.273 Radar standards.

* * * * *

(b) For any ship of 10,000 tons gross tonnage and upwards or that is otherwise required to be equipped with two radar systems, each of the two radar systems must be capable of operating independently and must comply with the specifications, standards and general requirements set forth on paragraph (a) of this section. One of the systems must provide a display with an effective diameter of not less than 320 millimeters (12.6 inches), (16-inch cathode ray tube). The other system must provide a display with an effective diameter of not less than 250 millimeters (9.8 inches), (12-inch cathode ray tube).

* * * * *

15. Section 80.277 is amended by revising paragraph (a)(1) to read as follows:

§ 80.277 Ship Security Alert System (SSAS).

(a) * * *

(1) Equipment that complies with RTCM 11020 (incorporated by reference, § 80.7); or

* * * * *

16. The first heading under Subpart H and Section 80.351 are amended to read as follows:

RADIOTELEGRAPHY AND DATA

§ 80.351 Scope.

The following sections describe the carrier frequencies and general uses of radiotelegraphy and data transmission with respect to the following:

- Distress, urgency, safety, call and reply.
- Working.
- Digital selective calling (DSC).
- Narrow-band direct-printing (NB-DP).
- Facsimile.
- VHF-FM digital small message services (VDSMS).

17. Section 80.364 is added under the heading for Radiotelegraphy and Data to read as follows:

§ 80.364 Frequencies for VHF digital small message services (VDSMS).

(a) Except as set forth in paragraph (b), frequencies in the 156-162 MHz band may be used for VHF digital small message services (VDSMS) complying with RTCM 12301 (incorporated by reference, *see* § 80.7).

(b)

VHF-FM CHANNELS NOT AVAILABLE FOR DIGITAL SMALL MESSAGE SERVICE

Channel	Frequency (MHz)
01A	156.050
63A	156.175
05A	156.250
65A	156.275
06	156.300
66A	156.325
67	156.375
70	156.525
12	156.600
13	156.650
73	156.675
14	156.700
74	156.725
15	156.750
75	156.775
16	156.800
76	156.825
17	156.850
77	156.875
20A	157.000
22A	157.100
AIS 1/2	161.975/162.025

18. Section 80.1005 is amended to read as follows:

§ 80.1005 Inspection of station.

The bridge-to-bridge radiotelephone station will be inspected on vessels subject to regular inspections pursuant to the requirements of Parts II and III of Title III of the Communications Act, the Safety Convention or the Great Lakes Agreement at the time of the regular inspection. If after such inspection, the Commission determines that the Bridge-to-Bridge Act, the rules of the Commission and the station license are met, an endorsement will be made on the appropriate document. The validity of the endorsement will run concurrently with the period of the regular inspection. Each vessel must carry a certificate with a valid endorsement while subject to the Bridge-to-Bridge Act. All other bridge-to-bridge stations will be inspected from time to time. An inspection of the bridge-to-bridge station on a Great Lakes Agreement vessel must normally be made at the same time as the Great Lakes Agreement inspection is conducted by a technician holding one of the following: a General Radiotelephone Operator License, a GMDSS Radio Maintainer's License, a Radiotelegraph Operator License, a Second Class Radiotelegraph Operator's Certificate, or a First Class Radiotelegraph Operator's Certificate. Additionally, the technician must not be the vessel's owner, operator, master, or an employee of any of them. Ships subject to the Bridge-to-Bridge Act may, in lieu of an endorsed certificate, certify compliance in the station log required by section 80.409(f).

19. Section 80.1053 is amended to read as follows:

§ 80.1053 Prohibition on certification, manufacture, importation, sale or use of Class A, Class B, Class S, and INMARSAT-E EPIRBs.

The manufacture, importation, sale or use of Class A, Class B, Class S, or INMARSAT-E EPIRBs is prohibited. New Class A, Class B, Class S, or INMARSAT-E EPIRBs will no longer be certified by the Commission.

20. Section 80.1061 is amended to revise paragraphs (a), (c) introductory paragraph, (c)(1), (c)(1)(ii), (d), and (e) to read as follows:

§ 80.1061 Special requirements for 406.0-406.1 MHz EPIRB stations.

(a) Notwithstanding the provisions in paragraph (b) of this section, 406.0-406.1 MHz EPIRBs must meet all the technical and performance standards contained in RTCM 11000 (incorporated by reference, *see* § 80.7), and must also comply with the standards specified in § 80.1101(c)(5). Beginning **[insert date one year after effective date]**, all new applications for certification of 406.0-406.1 MHz EPIRBs must demonstrate compliance with the requirements of RTCM 11000 (incorporated by reference, *see* § 80.7). 406.0-406.1 MHz EPIRBs that do not meet the requirements of RTCM 11000 (incorporated by reference, *see* § 80.7) shall not be manufactured, imported, or sold in the United States beginning **[insert date three years after effective date]**. Operation of 406.0-406.1 MHz EPIRBs that do not meet the requirements of RTCM 11000 (incorporated by reference, *see* § 80.7) shall be prohibited on vessels subject to 47 CFR subparts R, S, or W beginning **[insert date six years after effective date]**. Existing 406.0-406.1 MHz EPIRBs that do not meet the requirements of RTCM 11000 (incorporated by reference, *see* § 80.7) must be operated as certified.

* * * * *

(c) Prior to submitting a certification application for a 406.0-406.1 MHz radiobeacon, the radiobeacon must be certified by a test facility recognized by one of the COSPAS-SARSAT Partners that the equipment satisfies the design characteristics associated with the measurement methods incorporated in RTCM Standard 11000 (incorporated by reference, *see* § 80.7). Additionally, the radiobeacon must be subjected to the environmental and operational tests associated with the test procedures described in Appendix A of RTCM Standard 11000 (incorporated by reference, *see* § 80.7), by a test facility accepted by the U.S. Coast Guard for this purpose. Information regarding accepted test facilities may be obtained from Commandant (CG-ENG-4), U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Ave. SE, Washington, DC 20593-7126, <http://cgmix.uscg.mil/EQLabs/EQLabsSearch.aspx>.

(1) After a 406.0-406.1 MHz EPIRB has been certified by the recognized test facilities the following information must be submitted in duplicate to typeapproval@uscg.mil or the Commandant (CG-ENF-4), U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Ave. SE, Washington, DC 20593-7509:

* * *

(d) A certification application for a 406.0-406.1 MHz EPIRB must also contain a copy of the U.S. Coast Guard letter that states the radiobeacon satisfies all RTCM Recommended Standards, a copy of the technical test data, and the instruction manual(s).

* * *

(ii) Copies of the certificate and test data obtained from the test facility recognized by a COSPAS/SARSAT Partner showing that the radiobeacon complies with the COSPAS-SARSAT design characteristics associated with the measurement methods incorporated in RTCM 11000 (incorporated by reference, *see* § 80.7);

* * *

(e) An identification code, recognized by the National Oceanic and Atmospheric Administration (NOAA), the United States Program Manager for the 406.0-406.1 MHz COSPAS/SARSAT satellite system, must be programmed in each EPIRB unit to establish a unique identification for each EPIRB station. With each marketable EPIRB unit, the manufacturer or grantee must include a postage pre-paid registration card printed with the EPIRB identification code addressed to: NOAA/SARSAT Beacon Registration, NSOF, E/SPO53, 1315 East West Hwy, Silver Spring, MD 20910-9684. The registration card must request the owner's name, address, telephone number, type of ship, alternate emergency contact and other information as required by NOAA. The registration card must also contain information regarding the availability to register the EPIRB at NOAA's online web-based registration database at:<http://www/beaconregistration.noaa.gov>. In addition, the following statement must be included: "WARNING—failure to register this EPIRB with NOAA before installation could result in a monetary forfeiture being issued to the owner."

* * * * *

21. Section 80.1085 is amended by revising paragraph (a)(3) to read as follows:

§ 80.1085 Ship radio equipment—General.

* * * * *

(a) * * *

(3) A radar transponder capable of operating in the 9 GHz band or an AIS-SART, which must be stowed so that it is easily utilized (this device may be one of those required by § 80.1095(b) for a survival craft);

* * * * *

22. Section 80.1095 is amended by revising paragraph (b) to read as follows:

§ 80.1095 Survival craft equipment.

* * * * *

(b) At least one radar transponder or AIS-SART (collectively, "search and rescue locating devices") must be carried on each side of every passenger ship and every cargo ship of 500 tons gross tonnage and upwards. At least one search and rescue locating device must be carried on every cargo ship of 300 tons gross tonnage and upwards but less than 500 tons gross tonnage. Such search and rescue locating devices must conform to performance standards as specified in § 80.233 for AIS-SARTs or § 80.1101 for radar transponders. The search and rescue locating devices must be stowed in such locations that they can be rapidly placed in any survival craft other than liferafts required on cargo ships in forward and aft areas (see Regulation III/26.1.4 of the SOLAS Convention). Alternatively, one search and rescue locating device must be stowed in each survival craft other than those required by Regulation III/26.1.4 of the SOLAS Convention. One of these search and rescue

locating devices may be the search and rescue locating device required by § 80.1085(a)(3).

* * * * *

PART 95 – PERSONAL RADIO SERVICES

23. The authority citation for part 95 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303.

24. Subpart K is amended to revise the title to read as follows:

Subpart K — Personal Locator Beacons (PLBs) and Maritime Survivor Locating Devices (MSLDs)

25. Section 95.1400 is amended to read as follows:

§ 95.1400 Basis and purpose.

The rules in this subpart are intended to provide individuals in the water or in remote areas a means to alert others of an emergency situation and to aid search and rescue personnel in locating those in distress.

26. Section 95.1401 is amended to read as follows:

§ 95.1401 Frequency.

The frequency band 406.0-406.1 MHz is an emergency and distress frequency band available for use by Personal Locator Beacons (PLBs). Personal Locator Beacons that transmit on the frequency band 406.0-406.1 MHz must use G1D emission. Use of these frequencies must be limited to transmission of distress and safety of life communications.

27. Section 95.1402 is amended by revising paragraphs (a)-(f) to read as follows:

§ 95.1402 Special requirements for 406 MHz PLBs.

(a) All 406 MHz PLBs must meet all the technical and performance standards contained in the Radio Technical Commission for Maritime (RTCM) Service document “RTCM Standard 11010.2 for 406 MHz Satellite Personal Locator Beacons (PLBs),” with Amendment 1, and with Amendment 2, dated June 8, 2012 (RTCM 11010). This RTCM document is incorporated by reference in accordance with 5 U.S.C. 552(a), and 1 CFR part 51. Copies of the document are available and may be obtained from the Radio Technical Commission for Maritime Services, 1611 N. Kent Street, Suite 605, Arlington, Virginia 22209. The document is available for inspection at Commission headquarters at 445 12th Street SW., Washington, DC 20554. Copies may also be inspected at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(b) Beginning [insert date one year after effective date], all new applications for certification of 406 MHz PLBs must demonstrate compliance with the requirements of RTCM 11010. 406 MHz PLBs that do not meet the requirements of RTCM 11010 shall not be manufactured, imported, or sold in the United States beginning [insert date three years after effective date].

(c) Before a 406 MHz PLB certification application is submitted to the Commission, the applicant must have obtained certification from a test facility recognized by one of the COSPAS/SARSAT Partners that the PLB satisfies the standards incorporated in RTCM 11010. Additionally, an independent test must certify that the PLB complies with the electrical and environmental standards associated with the RTCM Recommended Standards.

(d) The procedures of Notification by the equipment manufacturer and Certification from the designated Telecommunications Certification Body are contained in subpart J of part 2 of this chapter.

(e) An identification code, recognized by the National Oceanic and Atmospheric Administration

(NOAA), the United States Program Manager for the 406 MHz COSPAS/SARSAT satellite system, must be programmed in each PLB unit to establish a unique identification for each PLB station. With each marketable PLB unit, the manufacturer or grantee must include a postage pre-paid registration card printed with the PLB identification code addressed to: NOAA/SARSAT Beacon Registration, NSOF, E/SPO53, 1315 East West Hwy, Silver Spring, MD 20910-9684. The registration card must request the owner's name, address, telephone number, alternate emergency contact and include the following statement: "WARNING" failure to register this PLB with NOAA could result in a monetary forfeiture order being issued to the owner."

(f) To enhance protection of life and property, it is mandatory that each 406 MHz PLB be registered with NOAA and that information be kept up-to-date. In addition to the identification plate or label requirements contained in §§ 2.925 and 2.926 of this chapter, each 406 MHz PLB must be provided on the outside with a clearly discernable permanent plate or label containing the following statement: "The owner of this 406 MHz PLB must register the NOAA identification code contained on this label with the National Oceanographic and Atmospheric Administration (NOAA) whose address is: NOAA/SARSAT Beacon Registration, NSOF, E/SPO53, 1315 East West Hwy, Silver Spring, MD 20910-9684." Owners shall advise NOAA in writing upon change of PLB ownership, or any other change in registration information. NOAA will provide registrants with proof of registration and change of registration postcards. In the alternative to registration by postcard, users may register 406 MHz PLBs online at www.beaconregistration.noaa.gov.

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28. Section 95.1403 is added to read as follows:

§ 95.1403 Special requirements for Maritime Survivor Locating Devices.

(a) Maritime Survivor Locating Devices (MSLDs) are devices intended to aid in the location of persons in the water. Use on land is not authorized.

(b) MSLDs must meet all the technical and performance standards contained in RTCM document "RTCM Standard 11901.1 for Maritime Survivor Locating Devices (MSLD), dated June 4, 2012" (RTCM 11901). This RTCM document is incorporated by reference in accordance with 5 U.S.C. 552(a), and 1 CFR part 51. Copies of the document are available and may be obtained from the Radio Technical Commission for Maritime Services, 1611 N. Kent Street, Suite 605, Arlington, Virginia 22209. The document is available for inspection at Commission headquarters at 445 12th Street SW., Washington, DC 20554. Copies may also be inspected at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(c) No device may be marketed or sold in the United States as a "MSLD" or "Maritime Survivor Locating Device" unless it complies with the requirements of RTCM 11901. Previously approved devices intended to aid in the location of persons in the water that do not meet the requirements of this section shall not be manufactured, imported, or sold in the United States beginning [insert date one year after effective date].

(d) All MSLDs must:

(1) Transmit on at least one of the following frequencies: 121.5 MHz, 156.525 MHz, 156.750 MHz, 156.800 MHz, 156.850 MHz, 161.975 MHz, 162.025 MHz; or

(2) Include a function intended to send a distress message directly to the U.S. Coast Guard or any other search and rescue organization.

(e) Before an MSLD certification application is submitted, the applicant must obtain a test report from a test laboratory which shows that the MSLD complies with the electrical and environmental standards associated with RTCM 11901. The test laboratory must be accredited to ISO/IEC 17025 with a scope covering the applicable requirements and test procedures.

(1) After the MSLD has been certified by a test laboratory, the following information must be submitted in duplicate to the U.S. Coast Guard, 2703 Martin Luther King Jr. Ave. SE, Stop 7126, Washington, DC 20593-7126:

- (i) The name of the manufacturer or grantee and model number of the MSLD;
- (ii) Copies of the test report and test data showing that the MSLD complies with the electrical and environmental standards associated with RTCM 11901; and
- (iii) Instruction manuals associated with the MSLD, description of the test characteristics of the MSLD including assembly drawings, electrical schematics, description of parts list, specifications of materials and the manufacturer's quality assurance program.

(2) After reviewing the information described in paragraph (e)(1) of this section, the U.S. Coast Guard will issue a letter stating whether the MSLD satisfies all RTCM Recommended Standards. In the case of an MSLD that includes a function intended to send a distress message directly to the U.S. Coast Guard or any other search and rescue organization, the letter will also state whether the U.S. Coast Guard endorses that function.

(f) A certification application for an MSLD must contain a copy of the U.S. Coast Guard letter stating that the device satisfies all RTCM Recommended Standards, a copy of the technical test data, and the instruction manual(s).