

the fee required by the analogous category for a single tolerance that is not a crop group tolerance, i.e., paragraphs (a) through (f) of this section, without a charge for each commodity where that would otherwise apply.

(i) Objections under section 408(d)(5) of the Act shall be accompanied by a filing fee of \$3,200.

(j)(1) In the event of a referral of a petition or proposal under this section to an advisory committee, the costs shall be borne by the person who requests the referral of the data to the advisory committee.

(2) Costs of the advisory committee shall include compensation for experts as provided in § 180.11 and the expenses of the secretariat, including the costs of duplicating petitions and other related material referred to the committee.

(3) An advance deposit shall be made in the amount of \$31,975 to cover the costs of the advisory committee. Further advance deposits of \$31,975 each shall be made upon request of the Administrator when necessary to prevent arrears in the payment of such costs. Any deposits in excess of actual expenses will be refunded to the depositor.

(k) The person who files a petition for judicial review of an order under section 408(d)(5) or (e) of the Act shall pay the costs of preparing the record on which the order is based unless the person has no financial interest in the petition for judicial review.

(l) No fee under this section will be imposed on the Inter-Regional Research Project Number 4 (IR-4 Program).

(m) The Administrator may waive or refund part or all of any fee imposed by this section if the Administrator determines in his or her sole discretion that such a waiver or refund will promote the public interest or that payment of the fee would work an unreasonable hardship on the person on whom the fee is imposed. A request for waiver or refund of a fee shall be submitted in writing to the Environmental Protection Agency, Office of Pesticide Programs, Registration Division (7505C), Washington, DC 20460. A fee of \$1,600 shall accompany every request for a waiver or refund, except that the fee shall not be imposed on any person who has no financial interest in any action requested by such person under paragraphs (a) through (k) of this section. The fee for requesting a waiver or refund shall be refunded if the request is granted.

(n) All deposits and fees required by the regulations in this part shall be paid by money order, bank draft, or certified

check drawn to the order of the Environmental Protection Agency. All deposits and fees shall be forwarded to the Environmental Protection Agency, Headquarters Accounting Operations Branch, Office of Pesticide Programs (Tolerance Fees), P.O. Box 360277M, Pittsburgh, PA 15251. The payments should be specifically labeled "Tolerance Petition Fees" and should be accompanied only by a copy of the letter or petition requesting the tolerance. The actual letter or petition, along with supporting data, shall be forwarded within 30 days of payment to the Environmental Protection Agency, Office of Pesticide Programs, Registration Division, (7504C) Washington, DC 20460. A petition will not be accepted for processing until the required fees have been submitted. A petition for which a waiver of fees has been requested will not be accepted for processing until the fee has been waived or, if the waiver has been denied, the proper fee is submitted after notice of denial. A request for waiver or refund will not be accepted after scientific review has begun on a petition.

(o) This fee schedule will be changed annually by the same percentage as the percent change in the Federal General Schedule (GS) pay scale. In addition, processing costs and fees will periodically be reviewed and changes will be made to the schedule as necessary. When automatic adjustments are made based on the GS pay scale, the new fee schedule will be published in the **Federal Register** as a Final Rule to become effective 30 days or more after publication, as specified in the rule. When changes are made based on periodic reviews, the changes will be subject to public comment.

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DEPARTMENT OF TRANSPORTATION

Coast Guard

46 CFR Parts 159, 160, and 199

[CGD 85-205]

RIN 2115-AC51

Inflatable Liferafts

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: The Coast Guard is revising its regulations for the approval and servicing of inflatable liferafts, and adding provisions for the approval of inflatable buoyant apparatuses. This final rule implements the 1983

Amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS), adds provisions for approval of a new "Coastal Service" liferaft for use on certain uninspected fishing vessels, introduces requirements for the stability of liferafts, and reduces direct Coast Guard involvement in inspections of liferaft production and servicing. This final rule will bring liferafts approved by the Coast Guard into compliance with SOLAS, improve the seaworthiness of approved liferafts, and increase manufacturers' flexibility in scheduling liferaft inspections while reducing the associated burden on the Coast Guard.

DATES: This final rule is effective June 9, 1997. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register on June 9, 1997.

ADDRESSES: Documents as indicated in this preamble are available for inspection or copying at the office of the Executive Secretary, Marine Safety Council (G-LRA/3406), U.S. Coast Guard Headquarters, 2100 Second Street SW., room 3406, Washington, DC 20593-0001, between 9:30 a.m. and 2 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-267-1477.

FOR FURTHER INFORMATION CONTACT: Mr. Kurt J. Heinz, Lifesaving and Fire Safety Standards Division (G-MSE-4), U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593-0001, telephone 202-267-1444, fax 202-267-1069, E-mail "kheinz@comdt.uscg.mil".

SUPPLEMENTARY INFORMATION:

Regulatory History

On October 18, 1994, the Coast Guard published a notice of proposed rulemaking entitled *Inflatable Liferafts in the Federal Register* (59 FR 52590). The Coast Guard received 51 letters commenting on the proposed rulemaking. These comprised 12 letters from commercial fishermen and a commercial fishermen's association, 17 form letters also apparently from commercial fishermen, 9 letters from liferaft servicing facilities, 4 letters from marine inspection and District offices of the Coast Guard, 2 letters from marine suppliers, a letter from the National Transportation Safety Board (NTSB), letters from an association representing U.S. liferaft manufacturers and servicing facilities and an association representing European lifesaving appliance manufacturers, a letter from a liferaft manufacturer, a letter from a vessel classification society, and a letter from the Icelandic maritime

administration. One letter, from the vessel classification society, suggested a public meeting on whether third parties involved in liferaft inspections should have the qualifications and quality control required for membership in IACS (International Association of Classification Societies). The Coast Guard does not believe that such a public meeting would aid this rulemaking, and accordingly will not conduct one.

Background and Purpose

On June 17, 1983, the International Maritime Organization (IMO) Maritime Safety Committee (MSC) approved the 1983 Amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS). The amended SOLAS, commonly referred to as "SOLAS 74/83," included a new Chapter III, "Life-saving Appliances and Arrangements."

Since no contracting governments objected, SOLAS 74/83 was deemed to be accepted on January 1, 1986, and subsequently came into force for the United States and all other contracting governments on July 1, 1986. Ships whose keels were laid or which were at a similar stage of construction on or after that date must comply with SOLAS 74/83 in order to qualify for a SOLAS Safety or Safety Equipment Certificate. Coast Guard-approved inflatable liferafts on these ships are also required to meet the inflatable liferaft requirements of SOLAS 74/83. In addition, any ship with a SOLAS Safety or Safety Equipment Certificate replacing a liferaft on or after July 1, 1986, is required to replace the raft with one meeting SOLAS 74/83.

Implementation of SOLAS 74/83 (hereinafter referred to simply as SOLAS for clarity) has been the subject of a series of Coast Guard rulemaking documents and public meetings, culminating in an NPRM published on October 18, 1994. This NPRM reflected most of the comments submitted in response to the previous rulemaking documents and those discussed at public meetings.

The Coast Guard announced the first series of meetings in the July 30, 1984, **Federal Register** (49 FR 30339) (CGD 84-051). These meetings were held in conjunction with the U.S. Lifesaving Manufacturers Association (now the United States Marine Safety Association) to discuss the impending implementation of SOLAS, including the implications of the new Chapter III requirements for Coast Guard-approved lifeboats, inflatable liferafts, and their launching equipment. Guidelines were also developed for lifesaving equipment

manufacturers regarding the additions and deviations from current Coast Guard regulations necessary to meet the new Chapter III requirements.

On December 31, 1984, the Coast Guard published an Advance Notice of Proposed Rulemaking (ANPRM) (49 FR 50745) describing major changes under consideration for implementation of SOLAS. The ANPRM proposed a revision of the regulations involving inflatable liferafts, but did not describe the revisions in detail.

On September 27, 1984, the Coast Guard published an NPRM which proposed rules for the approval and production testing of lifeboats, liferafts, and lifeboat launching equipment (49 FR 38151) (CGD 83-030). A public hearing on the proposal was also held at Coast Guard Headquarters in Washington, DC, on February 19, 1985. The NPRM published on October 18, 1994, incorporated the written comments submitted in response to CGD 83-030 and the comments made at the public hearing, and consequently, included approval and production testing procedures which replaced proposals made for inflatable liferafts under CGD 83-030. Separate rulemaking documents, to be published at a later date, will propose revisions to regulations involving inspection of lifeboats, davits, and winches.

Possible changes in liferaft servicing procedures were initially raised in an ANPRM published on August 14, 1986 (51 FR 29117) (CGD 81-010), and discussed at public meetings held on January 27, 1987, and March 20, 1987. The primary objectives of the changes to inspection and servicing of liferafts were to minimize the role of Coast Guard inspectors while maintaining Coast Guard oversight for quality control, and to allow private industry the flexibility necessary to meet the changing needs of the marine industry. An additional objective was to update Coast Guard regulations by implementing the relevant SOLAS requirements related to servicing. The proposals related to liferaft servicing which were contained in the October 18, 1994, NPRM addressed the issues discussed in the 1986 ANPRM. The comments at the public meetings were also considered in the development of these proposals.

Proposals concerning improved liferaft stability first appeared in an ANPRM in the **Federal Register** published on June 29, 1981 (46 FR 33341) (CGD 80-113). That ANPRM presented a summary of research efforts, sea trials, and yachting casualties from the U.S. and Europe, and invited comments from the public. A public

hearing was held on September 1, 1981. An NPRM published on January 11, 1985 (50 FR 1558) summarized the comments received on this ANPRM, and also proposed specific design and testing requirements to improve stability of inflatable liferafts. The proposals contained in the January 11, 1985, NPRM, as well as the comments to such proposals were refined and used as a basis for those contained in the October 18, 1994, NPRM. The Coast Guard notes that all subsequent references to an NPRM relate to the October 18, 1994, NPRM.

Discussion of Comments and Changes

General Approval Procedures

Confidentiality of Information

Proposed § 159.005-5(a)(4) required that a manufacturer submitting commercial information that could cause substantial commercial harm if released to the public, include a statement to that effect with the information. One comment suggested that a system should be developed within the Coast Guard to ensure that such information remains confidential. It is unclear what sort of a system the comment envisions; however, the Coast Guard does not and will not release proprietary commercial information to any party other than the original submitting party, except as may be required under the Freedom of Information Act [5 U.S.C. 552]. Exemption b(4) of the Freedom of Information Act, which is specifically referred to in § 159.005-5(a)(4), clearly exempts the release of material that could cause substantial competitive harm to the party submitting it. Consequently, in this final rule, new § 159.005-5(a)(4) is retained as proposed in the NPRM.

Approval of Equivalents

One comment questioned whether, in view of the lengthy and comprehensive process by which regulations are drafted, the Coast Guard needed provisions allowing for approval of equipment and material not meeting the letter of the regulations but having "equivalent performance characteristics." It further recommended that, in instances where the Coast Guard does approve materials or equipment on the basis of equivalency to the regulatory requirements, the Coast Guard notify members of the industry holding similar approvals to allow them the opportunity to exercise the same equivalency determination in their products if they desire.

The current situation in the liferaft industry is a good example of the need

to approve equivalents. The existing specifications for structural fabrics of liferafts are a combination of design and performance requirements. A majority of liferaft manufacturers currently use fabrics in their approved products that do not meet all of the design requirements specified in the regulations but provide equivalent performance. Those manufacturers have chosen to use these recently developed fabrics to reduce weight and manufacturing cost and to improve the performance of their products. The Coast Guard fully expects that future research may lead to the development of new fabrics and other materials and designs that, although they do not specifically comply with the design requirements in the regulations, have at least equivalent performance characteristics. By allowing the approval of equivalents, the Coast Guard can accommodate technological improvements without the need for cumbersome and lengthy regulatory changes. However, at the same time, the Coast Guard is working with the International Organization for Standardization (ISO) and other consensus standards organizations to develop suitable performance standards to replace existing design (and combined design-and-performance) standards to the extent possible, with the expectation of making approval of equivalents obsolete.

The Coast Guard already had the authority to approve equivalents to inflatable liferafts and liferaft components in existing regulations (46 CFR 160.051-2). The new § 159.005-7 merely streamlines the regulations by allowing a provision applicable to many items of approved equipment to be stated in a single location.

Concerning the suggestion that equivalency determinations be disseminated to the industry to allow a "level playing field," the Coast Guard agrees, and will develop a system internally to disseminate them. In view of the importance of dissemination as a means to ensure uniform application of the regulations by the Coast Guard, manufacturers should be aware that designs and materials submitted as "equivalents" cannot be considered confidential in terms of new § 159.005-5(a)(4).

Inflatable Buoyant Apparatuses

Design and Performance Requirements

The NPRM specified design and performance requirements for inflatable buoyant apparatuses in terms of the differences between it and the Coastal Service inflatable liferaft, the

requirements for which were, in turn, defined in terms of the differences between it and the SOLAS liferaft. This convention of defining inflatable buoyant apparatuses in terms of exceptions to exceptions was confusing, and so in this final rule, the design and performance requirements for inflatable buoyant apparatuses in § 160.010-3(a) are specified as direct exceptions to the corresponding SOLAS liferaft requirements in subpart 160.151. There are some editorial and paragraph numbering changes as a result of this change, but the substance of the affected paragraphs is unchanged.

Floor Drains

Proposed § 160.010-3(a)(3) required that every inflatable buoyant apparatus with a capacity of 25 or more persons be equipped with self-bailing floor drains. Citing the requirement for functionally similar inflatable liferafts to be equipped with bailers but not with floor drains, and the added cost of providing floor drains, one comment suggested that the Coast Guard permit inflatable buoyant apparatuses to be equipped with either bailers or floor drains.

The Coast Guard contends that it is not valid to compare a large inflatable liferaft, which is almost completely sheltered by a canopy, with an open inflatable buoyant apparatus, which has no protection against waves. It is very easy for an inflatable buoyant apparatus to be swamped by a single wave, after which a large apparatus (for example, one of 25 persons or more capacity) can have a substantial depth of water (well in excess of 1 meter) in its center. Bailers are of little use in removing such a quantity of water, particularly as more water is likely to be coming in during the process. However, floor drains, which are generally in the form of simple fabric tubes secured through the floor, are capable of quickly removing such a quantity of water on a continuous basis. In calm seas, where such heavy water-removing capability is not needed, the floor drains can be secured to prevent small quantities of water from entering the buoyant apparatus through them. Because floor drains are not capable of removing all water from the buoyant apparatus, bailers are needed as well.

The proposed requirement for floor drains is less stringent than the only corresponding international requirement, which is that for "open reversible liferafts" contained in the IMO International Code Of Safety For High-Speed Craft (HSC Code). The HSC Code requires an apparatus with a capacity of up to 30 persons to be

equipped with one floor drain, and an apparatus with a capacity of greater than 30 persons to be equipped with two floor drains. Since there is no evidence that water depth in an inflatable buoyant apparatus when swamped is a significant problem for an apparatus with a capacity of less than 25 persons, § 160.010-3(a)(7) in the final rule retains the floor drain requirements as proposed in the October 18, 1994, NPRM.

Boarding Ladders

One comment suggested that boarding ladders on inflatable buoyant apparatuses should meet construction standards similar to those required for SOLAS inflatable liferafts. They already do, since § 160.010-3(a) in the NPRM (the substance of which remains unchanged in the final rule) requires an inflatable buoyant apparatus to generally meet the design and performance requirements for SOLAS inflatable liferafts in subpart 160.151.

Position-Indicating Lamps

Several comments suggested that the wording of § 160.010-3(a)(8)(ii) was unclear as to whether one or two lamps are required on each side of a reversible inflatable buoyant apparatus. The Coast Guard agrees that the wording is ambiguous, and § 160.010-3(a)(11) in the final rule clarifies that one lamp is required on each of the two reversible sides of the apparatus.

Sea Anchors

Proposed § 160.010-3(a)(10), which prescribed required equipment for an inflatable buoyant apparatus, did not include a sea anchor. However, all manufacturers of currently approved inflatable buoyant apparatuses include sea anchors with those apparatuses, although the Coast Guard has not specifically required them. In addition, a sea anchor is required for "open reversible liferafts" under the IMO HSC Code. Therefore, in keeping with longstanding industry practice, and the comments on the NPRM supporting consistency with international requirements, § 160.010-3(a)(12) in the final rule includes a requirement that inflatable buoyant apparatuses be fitted with a sea anchor.

"Overloading" of Inflatable Buoyant Apparatuses

Proposed § 160.010-3(a)(11) required that the IMO Swamp Test be conducted on an inflatable buoyant apparatus with the apparatus loaded to 50% in excess of its rated capacity, rather than just to its rated capacity (as specified in the test procedure). This requirement was

proposed in anticipation of rulemaking projects (since completed) establishing, for some protected routes, carriage requirements based on the possibility of such overloading contained in 46 CFR subchapters K, T, and W.

Citing National Transportation Safety Board (NTSB) recommendations in the wake of the grounding of the PILGRIM BELLE in 1985 and the sinking of the COUGAR in 1988, one comment opposed this concept on the grounds that it would "make the out-of-water flotation device an in-water flotation device." The comment cautioned that overloading of survival equipment should not be acceptable in any waters, no matter how protected.

The Coast Guard disagrees with the premise of the comment concerning the effect of 50 percent overloading on an inflatable buoyant apparatus. The cases cited in the comment involved rigid buoyant apparatuses, not the inflatable type. Like an inflatable liferaft, an inflatable buoyant apparatus is designed with at least 100 percent excess buoyancy. Consequently, it remains an out-of-water flotation device even in conditions of overload far more extreme than anticipated in the proposed rule. Multiple swamp tests of inflatable buoyant apparatuses which have been conducted under the conditions specified in the proposed rule have verified that the devices remain effective under such conditions.

However, subsequent to the publication of the NPRM, the IMO MSC approved a change to Resolution A.689(17) which would effectively render the proposed overload test meaningless. Specifically, in order to address the potential personnel hazard and logistical problems associated with swamp testing of a large survival craft loaded with people, the Committee revised the Swamp Test procedure to require that the device be completely swamped, but without people inside, during the test. In view of the buoyancy of people wearing lifejackets, this test is considered to be at least as strenuous a test of the device in the swamped condition as the previous test. However, since the revised procedure calls for the device to be completely swamped, it is not possible to "overload" it as specified in the NPRM. Consequently, in view of the extensive successful test experience already obtained for a variety of inflatable buoyant apparatuses under overload conditions, and in the interest of remaining consistent with internationally accepted testing procedures, proposed § 160.010-3(a)(11) has not been included in this final rule. This will have the effect of requiring an inflatable buoyant apparatus to be

subjected to the same Swamp Test as an inflatable liferaft.

"Open Reversible Liferafts" Under the IMO HSC Code

On January 1, 1996, the IMO HSC Code entered into force. Annex 10 to the HSC Code contains requirements for an "open reversible liferaft" which are similar, but not identical to the requirements for inflatable buoyant apparatuses as specified in this final rule. Although the timing of the publication of the HSC Code did not allow for discussion of it in the NPRM, a new § 160.010-3(e) has been added to this final rule to provide guidance to those who wish to obtain approval for inflatable buoyant apparatuses which also comply with the requirements for open reversible liferafts under the HSC Code. This new section merely provides an alternative path to approval which manufacturers may utilize as they see fit.

Inflatable Liferafts

Incorporation by Reference

Proposed § 160.151-1 incorporated a number of technical documents by reference. One comment suggested that all material incorporated by reference should be published as an appendix with the final rules.

The Coast Guard contends that the purpose of incorporating lengthy technical documents by reference is to reduce repetition and, in keeping with ongoing government reinvention initiatives, to reduce the bulk of the Code of Federal Regulations. It would completely defeat the purpose of incorporating materials by reference to publish them as annexes to the final rule. Consequently, proposed § 160.151-1 is retained unchanged as § 160.151-5 (due to editorially interchanging § 160.151-1 and § 160.151-5) in the final rule.

Definitions

Proposed § 160.151-3 contained a definition of "SOLAS" which incorporated all amendments through the 1983 amendments. In the final rule, this definition has been revised to incorporate amendments through the 1988 Global Maritime Distress and Safety System (GMDSS) amendments. This will simplify SOLAS references for the user, since the most common published version of SOLAS is a 1992 Consolidated Edition which includes the 1988 amendments. The only substantive effect is that, as was discussed in the preamble to the NPRM, the GMDSS amendments removed the requirement for liferafts to be fitted with

portable lifeboat radio siting and securing arrangements as of August 1, 1993. The paragraph numbering in SOLAS regulation III/38.3 was slightly altered as a result.

Liferaft Capacity

One comment questioned why capacity requirements for liferafts were not included in the standards for design, performance, and construction contained in proposed §§ 160.151-7 and 160.151-15. The comment also questioned whether Navigation and Vessel Inspection Circular (NVIC) 1-92 would remain valid for capacity conversion of unapproved liferafts "grandfathered" for use on commercial fishing vessels.

Like many of the requirements in the NPRM, the capacity requirements for liferafts are included by reference to the corresponding SOLAS regulation—in this case, by reference to regulation III/39 in proposed § 160.151-7(c), which remains unchanged for this final rule. The standards for design, performance, and construction in the final rule apply only to new construction of approved liferafts, so all issues pertaining to the "grandfathering" of unapproved liferafts on commercial fishing vessels will continue to be covered by NVIC 1-92.

Liferafts of Less Than 6 Persons Capacity

Proposed § 160.151-7 prescribed construction requirements for SOLAS A and SOLAS B inflatable liferafts. By reference to SOLAS regulation III/38 (specifically regulation III/38.2.1), this section restricted inflatable liferafts to a minimum capacity of 6 persons, except as otherwise specified in the subpart (for example, for coastal service liferafts).

One comment noted that the Coast Guard has long approved, and that there continues to be a need for, 4-person liferafts as capable as SOLAS A and SOLAS B liferafts. These liferafts have particular application on some commercial fishing vessels, which are technically required to carry SOLAS A or SOLAS B liferafts but which have been permitted to carry approved 4-person liferafts if they carry 4 or fewer persons on board. In the past, the Coast Guard has allowed 4-person liferafts with the equivalent of SOLAS A and SOLAS B equipment packs to be marked as having "A" or "B" packs, avoiding the use of the term "SOLAS". These rafts were issued approval numbers in the 160.051/XXX series, as opposed to liferafts complying with SOLAS, which have been issued approval numbers in the 160.151/XXX series. The Coast Guard agrees that there continues to be

a need for approved 4-person liferafts comparable to SOLAS A and SOLAS B liferafts. Consequently, to maintain the longstanding approval-numbering convention, the final rule does not completely remove 46 CFR subpart 160.051 as was proposed in the NPRM. Instead, in the final rule existing subpart 160.051 is replaced by a new subpart 160.051, which covers standards for design, construction, performance, and equipment for liferafts not complying with SOLAS but which are approved for use in some domestic services. These include "A" and "B" inflatable liferafts of less than 6 persons capacity, and coastal service inflatable liferafts, which were addressed in §§ 160.151–19, 160.151–23, and portions of 160.151–27 in the NPRM. This is merely an editorial change; it does not affect the substance of the moved sections.

Oversight of Approval Testing

Proposed § 160.151–13 (c)–(f) required that approval testing of prototype liferafts be carried out under the oversight of a Coast Guard marine inspector. One comment suggested that this oversight be provided by qualified third parties such as classification societies that are members of the IACS, and noted that such third parties were competent to perform this function.

As discussed in the NPRM, the proposed rules struck a careful balance between delegation of suitable functions to third parties under Coast Guard oversight and direct Coast Guard participation in certain critical areas in order to fulfill our responsibility for the approval of equipment used on U.S. ships and for maintaining the knowledge and experience necessary to provide adequate oversight. The proposed rules allow for third-party involvement in inspection of prototype construction and in production inspection after approval. However, in light of the other proposed changes to the approval procedures, it is essential that the Coast Guard maintain its direct involvement in the required prototype testing to validate the basic design submitted for approval. Consequently, §§ 160.151–13 (c) through (f) are retained in the final rule as proposed in the NPRM.

Liferaft Design and Performance

Proposed § 160.151–15(c) required that a protective liner or baffling arrangement be provided inside each inflatable compartment at the inflation gas inlet in order to protect the compartment fabric from the damaging effects of cold inflation gas. One comment suggested that advances in the technology of thermoplastic-coated

fabrics may result in the development of fabrics not as susceptible to damage from cold exposure as the fabrics currently used. Consequently, a liner or baffling arrangement would not necessarily be needed on rafts constructed of such fabrics. The comment suggested that the Coast Guard adopt a performance criterion to allow approval of such designs, but did not propose a specific test.

The Coast Guard agrees that the requirement as proposed is unnecessarily design-restrictive, and has revised the wording of § 160.151–15(c) in the final rule to allow means other than a liner or baffling arrangement to achieve the performance objective of protecting the compartment fabric from damaging effects of cold inflation gas. However, the Coast Guard does not have sufficient data to specify in this final rule a particular test to evaluate the adequacy of designs not incorporating a liner or baffling arrangement. The Coast Guard will evaluate such designs on a case-by-case basis to ensure that they provide performance equivalent to that of conventional designs using liners or baffling arrangements. It will be the responsibility of the manufacturer, in consultation with the Coast Guard, to develop a suitable test protocol to demonstrate such equivalence. The Coast Guard will notify all manufacturers of any designs approved under this system, and of the testing performed to validate them.

Color

Proposed § 160.151–15(e) required that the exterior of the liferaft canopy be of a highly visible color, such as vivid reddish orange. However, in a departure from existing § 160.051–4(e), which requires that the underside of the floor be of a dark color, the NPRM did not address the color of the outside of the raft other than the canopy. One comment, citing SOLAS regulation III/30.2.6, which requires that life-saving appliances be of a highly visible color "on all parts where this will assist detection," commented that both sides of the raft, and not just the canopy, should be of a color contrasting with the marine environment. The comment mentioned instances where a rescue unit was not able to detect a liferaft, because it had overturned.

The Coast Guard agrees that application of a highly visible color to the bottom of a liferaft can assist in detection if the liferaft is overturned. This concept recently gained the support of the international community as well. In the wake of the sinking of the Baltic ferry ESTONIA in September 1994, where a number of casualties

occurred due to difficulty in locating overturned liferafts, the 26th session of the IMO Lifesaving, Search and Rescue Sub-Committee in March 1995, adopted a proposal to require that water pockets affixed to the bottom of liferafts be of a highly visible color. This new requirement will take effect in July 1998, as part of the latest set of amendments to SOLAS Chapter III, and has been incorporated in § 160.151–17(a)(2)(vii) of this final rule. The effective date of the requirement in this final rule has been deferred to coincide with the effective date of the corresponding provision of SOLAS Chapter III.

Towing Connections

Proposed § 160.151–15(g), like existing § 160.051–7(b)(12), required towing connections at opposite ends of the inflatable liferaft. SOLAS regulation III/38.1.4 does not specify a number of towing connections, but rather requires only that the raft be so constructed as to enable it to be towed under specified conditions. Several comments suggested that there is no need for more than one towing connection on a liferaft since liferafts are maneuverable and can be repositioned for towing if necessary. One of these comments also noted that a requirement for two towing locations would add unnecessary costs and require further testing of the product.

The Coast Guard contends that one towing connection is not sufficient. Under SOLAS regulation III/20.3, the lifesaving arrangements for passenger ships include the "marshalling" of liferafts, i.e., using a rescue boat to gather liferafts together for the purpose of connecting them in order to facilitate their detection and long-term survival. In some cases, a single rescue boat can be assigned to marshal up to nine liferafts. However, it can be unwieldy to connect a liferaft with only one towing connection to many other liferafts. A second towing connection would considerably facilitate marshalling.

The Coast Guard also contends that the provision of a second towing connection would not necessitate any further testing of the product, or add any significant additional cost. Where multiple towing connections are provided, they are generally identical in design, and testing of one (which is required in any case) can stand for testing of both, or all. The only cost associated with a second towing connection is the cost of the materials involved and their assembly and installation. This cost would not represent any increase over present requirements, since existing 46 CFR 160.051–7(b)(12) already requires a

towing connection at each end of a liferaft.

Despite the above discussion, the Coast Guard has amended § 160.151–15(g) in the final rule to remove the requirement for towing connections at both ends of a liferaft in keeping with its policy of not imposing unilateral requirements in excess of SOLAS. However, the Coast Guard does intend to approach IMO with the concerns discussed above in order to generate discussion whether a future amendment to the relevant IMO requirement may be warranted.

Weight

Proposed § 160.151–15(h) would limit the weight of liferafts not served by launching appliances to 185 kilograms (kg) (407.8 pounds (lb)), a very slight increase from the 400-lb limit in existing 46 CFR 160.051–3(b). One comment noted the problems associated with manually launching a heavy liferaft, citing an NTSB recommendation pursuant to the fire and explosion on the tankship PUERTO RICAN in 1984, that liferafts be installed so that manual launching does not require any unnecessary lifting, such as over a railing. The Coast Guard is aware of the difficulties associated with launching liferafts near the weight limit when they are not served by launching appliances. However, the proposed increase in the allowable weight is trivial, essentially resulting from a metric conversion. Consequently, in the final rule § 160.151–15(h) is not changed from the NPRM. The issue of installing liferafts to avoid the necessity of lifting was addressed in the Subchapter W rulemaking project (CGD 84–069), and is now covered in 46 CFR 199.130(a)(7).

Strength of Lifeline Attachments

Proposed § 160.151–15(i) required that lifeline attachment patches have a minimum breaking strength of 1.5 kN (350 lb) pull exerted in a direction perpendicular to their bases. One comment contended that this breaking strength is excessive, since liferafts should be lifted out of the water by the towline rather than the lifelines, and since the buoyancy of human bodies reduces a liferaft's weight in the water.

The Coast Guard disagrees. This is not a new requirement, stemming as it does from paragraph 3.6.19 of military specification MIL–L–19496, which is referred to (for design guidance) in existing § 160.051–1(a)(1). In addition, the comment does not take into account that buoyancy effects are minimal when a person in the water pulls himself into a liferaft using the internal lifelines, that external lifelines may be used to carry

an inflated liferaft, and that the weight of a liferaft can make it difficult to handle (for example, while placing it in the water) by a towline attached at a single point. Although SOLAS does not specifically discuss using lifelines to carry a liferaft, the ability to do so is required by other responsible maritime safety administrations, such as in the European Free Trade Association's (EFTA) *Scheme for the Reciprocal Recognition of Tests and Inspections Carried Out on Ships' Equipment*. That document requires that, beyond being suitable for use as a lifeline, the grablines "be suitably arranged for carrying the inflated raft." For all of these reasons, § 160.151–15(i) is retained in the final rule as proposed in the NPRM.

Painter Length

The preamble to the NPRM discussed a pending change to SOLAS Chapter III which would reduce the painter length required by SOLAS to the greater of 15 meters or the liferaft's stowage height plus 10 meters. The NPRM indicated that if the change received final approval by the IMO MSC, it would be incorporated into the final rule. The change was approved as part of the most recent set of SOLAS amendments, to take effect July 1, 1998, and has been incorporated into the final rule as § 160.151–15(j). The effective date of the requirement is July 1, 1998, which conforms to the SOLAS effective date. However, manufacturers are encouraged to comply at the earliest possible date so as to reduce the operational problems associated with excessive painter lengths.

Boarding Ladders

Proposed § 160.151–15(l) required that the steps of a boarding ladder "be of rigid or semi-rigid tubing and secured against rotation to provide a suitable foothold." One comment suggested that this requirement is unnecessarily design restrictive, and that boarding ladders should be evaluated by their performance rather than on certain design properties. The comment noted that more critical than the design of the footholds themselves is that they be placed to prevent the user's legs from going underneath the hull, thereby preventing a vertical climb into the liferaft. The comment also noted that, although boarding ladders are required, they are a secondary boarding aid to the required boarding ramp.

The Coast Guard agrees with the general approach proposed in the comment. In the final rule, proposed § 160.151–15(l) has been replaced by a general performance requirement in

§ 160.151–15(m) that the steps of the boarding ladder "must provide a suitable foothold." As suggested in the comment, a new § 160.151–27(c)(4) has been added to the final rule to require that the IMO Boarding Test be performed using the boarding ladder (if installed) as well as the boarding ramp. The IMO Boarding Test is considerably more stringent than that in current § 160.051–5(e)(7) and so will ensure, through demonstrated performance, that boarding arrangements are adequate for those liferafts and inflatable buoyant apparatuses for which the boarding ladder is the primary means of boarding.

Liferaft Stability

Proposed § 160.151–17(a), and the associated requirements on prototype testing in proposed § 160.151–29(a) and (b), prescribed stability standards for SOLAS inflatable liferafts based upon the performance of currently approved designs of "heavily ballasted" liferafts. A number of comments disagreed with the proposed stability standards in their entirety. The comments questioned whether the benefits of improved liferaft stability would outweigh the costs, cited the adverse effect the proposed stability standards would have upon the cost-competitiveness of U.S.-manufactured liferafts in the international market, and questioned whether the available casualty history indicates that the stability of existing liferaft designs is inadequate. One of the comments noted that adoption of the standards would increase the weight of liferafts substantially. In many cases, the weight could increase to the extent that some shipowners would need to install launching appliances or expensive rack-mounting arrangements when they replace their current rafts, for which such appliances are not needed.

One comment agreed with the Coast Guard's position that international standards for liferafts are appropriate, and suggested that, if there is a stability problem with liferafts, it should be identified by the Coast Guard at the appropriate international forum and a solution reached based on input from the international community. Several related comments suggested adoption of the "European Liferaft Stability System" detailed in the EFTA *Scheme for the Reciprocal Recognition of Tests and Inspections Carried Out on Ships' Equipment*. Finally, one comment proposed that, if the Coast Guard were to unilaterally adopt a stability standard, it should be based on the volume (a minimum of 25 percent of buoyancy-tube volume) currently required for Coastal Service liferafts.

The Coast Guard agrees with the view that any regulatory requirements for liferaft stability should be based upon standards developed and accepted internationally. This is consistent with the Coast Guard's general position that U.S. requirements should not exceed the requirements of SOLAS. Until recently, however, SOLAS has been vague on the issue of liferaft stability, requiring only that liferafts be "stable in a seaway."

In that regard, the proposals made in the NPRM have been overtaken by international events. At its 26th session in March 1995, the IMO Lifesaving, Search and Rescue Sub-Committee approved standards for liferaft stability to include in the latest set of SOLAS amendments, which will become effective in 1998. These requirements are based upon a proposal by the United Kingdom (UK), and are generally consistent with those in the EFTA Scheme, which have been in effect in many countries (including most of Northern Europe) since the 1980-81 UK/Icelandic stability testing discussed in the NPRM. By U.S. intervention, the most design-restrictive portions of the original UK proposal were eliminated. The resulting SOLAS regulation requires stability appendages with an aggregate volume one fourth of that proposed in the NPRM, or 20 liters (.02 cubic meters) per person of capacity, for liferafts with a capacity of greater than 10 persons. This is around 20 percent of the required buoyancy-tube volume—slightly less than was proposed in the comments. For smaller liferafts, the regulation requires a minimum aggregate capacity of 220 liters (.22 cubic meters).

In this final rule, in place of the stability requirements proposed in the NPRM in proposed §§ 160.151-17(a) and 160.151-29(a)-(b), the Coast Guard has decided to incorporate the new SOLAS stability requirements, in their entirety, into § 160.151-17(a). In doing so, the Coast Guard adopts the comments received supporting conformance with international standards. The SOLAS requirements also substantially conform to the specific proposals in the comments concerning stability appendage volume. The effective date of the domestic requirements is July 1, 1998, to conform with the SOLAS effective date.

In addition to opposing the proposed stability requirements in the NPRM, several comments also opposed the Lift-Out Force Test and At-Sea Test, both of which were proposed to evaluate compliance with those requirements. Since the SOLAS requirements upon which the stability requirements in this final rule are based do not cover either

test, neither test is retained in this final rule. Instead, there is a test in § 160.151-29(a) to evaluate the filling time of the stability appendages against the standard in § 160.151-17(a)(2)(vi). The Coast Guard intends to continue research into test methods to evaluate liferaft stability, perhaps including some variation of the Lift-Out Force and At-Sea Tests, so it can evaluate, for equivalence to the regulatory requirements, the performance of novel stability designs that may be developed in the future.

One comment supported self-righting capability for liferafts "as required by SOLAS, the righting test specified in IMO Resolution A.689(17), and proposed 46 CFR 160.151-27(a)." However, none of those three documents requires self-righting capability, only the capability for the inverted liferaft to be righted by a single person in the water. Consistent with them, the final rule does not require that liferafts be self-righting. The same comment suggested that there should be a requirement that rafts always inflate right side up when deployed in water. This requirement already existed in proposed § 160.151-27(a), by reference to the Drop Test in IMO Resolution A.689(17), para. 1/5.1, which requires that the tested rafts inflate upright. This requirement is retained in the final rule. It should be recognized, however, that even a raft that inflates upright during approval testing may not always inflate upright if it has subsequently been packed incorrectly, for example, during servicing.

A number of identical comments suggested that the Coast Guard make a videotape of the various rafts in heavy seas available so that mariners can see how they react and select one they "feel comfortable with." This suggestion has not been adopted in the final rule. Such a comparative demonstration would entail essentially the same costs and logistical difficulties as the heavy weather sea trial strongly opposed by the liferaft industry, and further, would focus on only one aspect of a liferaft's performance when there are others which are also very important. The Coast Guard's position is that liferaft manufacturers are in the best position to market and establish brand differentiation for their products based on all of their features, and in fact actively do so.

Boarding Arrangements for Coastal Service Liferafts

Proposed § 160.151-19(f) indicated that boarding ramps are not required on Coastal Service liferafts if the combined diameter of the buoyancy chambers is

500 millimeters (mm) or less. One comment suggested that, although boarding ramps may not be necessary under these circumstances, some sort of boarding aid, such as strategically placed hand holds, may be.

The Coast Guard acknowledges the importance of adequate boarding arrangements for liferafts, particularly in light of the NTSB's investigation of the sinking of the bulk carrier MARINE ELECTRIC in 1983. As suggested by the NTSB, the NPRM proposed, and the final rule requires, by reference to SOLAS regulation III/39 (specifically regulation III/39.4.3 thereunder) in § 160.151-7, that "there shall be means inside the liferaft to assist persons to pull themselves into the liferaft from the ladder." In addition, the IMO Boarding Test required by reference to IMO Resolution A.689(17), para. 1/5.8, in § 160.151-27(a) is considerably more stringent than the existing test in § 160.051-5(e)(7), and is rigorous enough to ensure that boarding arrangements are adequate.

Fabric Valise Containers

Proposed § 160.151-19(i) allowed the use of fabric valise-type containers with Coastal Service inflatable liferafts, and by extension, with inflatable buoyant apparatuses. This provision has been deleted from the final rule, since it was substantially similar to § 160.151-15(n)(7) in the NPRM (retained as § 160.151-15(o)(7) in the final rule).

Liferaft Equipment

In an editorial change throughout § 160.151-21, for internal consistency and consistency with the terminology in Subchapter W, all references to specific subparts under which particular items of equipment are approved have been replaced with references to the "approval series" under which the item is approved.

One comment suggested that proposed § 160.151-21 may lead to confusion because it lists all of the equipment required for SOLAS A liferafts and implies that the same equipment is needed for SOLAS B liferafts. The comment suggested a clarification of the difference between SOLAS A and SOLAS B equipment packs, such as SOLAS regulation III/38.5.3 identifies those items in a SOLAS A Pack not required for a SOLAS B Pack.

Proposed § 160.151-21 was not intended to set forth a list of the required contents of equipment packs. The required contents of the SOLAS A and SOLAS B equipment packs are specified in proposed § 160.151-7(b), by reference to SOLAS regulation III/38.

Proposed § 160.151–21 is intended only to facilitate compliance by liferaft manufacturers and servicing facilities by supplementing the minimal descriptions of the various individual items of equipment in the SOLAS regulation. Consequently, it is retained generally intact in the final rule, subject to revisions to various individual subsections as discussed below.

Proposed § 160.151–21(b) contains requirements for jackknives carried in equipment packs. One comment questioned whether folding knives complied with the SOLAS requirements, since SOLAS regulation III/38.5.1.2 specifically requires a non-folding knife.

By reference in § 160.151–7, the proposed rules incorporated all of regulation III/38, including regulation III/38.5.1.2, which requires a buoyant non-folding knife. However, regulation III/38.5.1.2 also requires that liferafts of 13 persons or more capacity be equipped with a second knife, which may be of the folding variety. The requirement in § 160.151–21(b), which is retained unchanged in the final rule, applies only to situations where these allowable folding knives are permitted.

Proposed §§ 160.051–21(f) and 160.151–23(f) required that two paddles of the type used to pass the IMO Maneuverability Test be included in the equipment packs. A number of identical comments objected to the inclusion of paddles, since they provide no maneuverability on ocean waters and will only increase the pack size and increase the purchase price.

The Coast Guard disagrees. Paddles are essential to move away from burning wreckage, to avoid the turbulence associated with a sinking ship, and to assemble with other liferafts to facilitate survival. The fact that the required paddles are of the size and type used to pass the Maneuverability Test clearly demonstrates that they do provide for a degree of maneuverability. Since paddles have always had to be provided with inflatable liferafts, their inclusion in the equipment required by the NPRM does not represent any increase in the cost or the size of the equipment pack over those of existing liferafts. Consequently, §§ 160.051–9(f) (which was § 160.151–23(f) in the NPRM) and 160.151–21(f) are retained in the final rule as proposed in the NPRM.

Regulation III/38.5.1.7 of SOLAS, which was incorporated by reference into the NPRM, with a minor modification, in proposed § 160.151–21(g), requires the equipment pack of a SOLAS A liferaft to include three tin openers. One comment, while supporting the modification in proposed

§ 160.151–21(g) requiring sharp parts of tin openers to be fitted with guards, commented that tin openers should not be required unless a manufacturer specifies the carriage of canned water in its liferaft.

The Coast Guard disagrees. SOLAS does not provide for such an exemption; and in discussions on this issue at IMO it was agreed that, even if canned water is not packed in a liferaft, it is reasonable to assume that persons abandoning ship into liferafts will attempt to bring along as much canned food as possible, whereupon a tin opener will be indispensable. Consequently, the requirements for tin openers, and the associated modification, are retained in this final rule as originally proposed.

Pursuant to IMO MSC Circular (Circ.) 447, proposed § 160.151–21(n) waived the SOLAS requirement for liferafts to be equipped with an “efficient radar reflector.” The reason for the effective waiver in the 1983 IMO document was that no radar reflector suitable for packing in inflatable liferafts was known to be available at that time. One comment suggested that MSC/Circ. 447 is an “antiquated ruling that has been overcome by time and technology,” and that a radar reflector should be a fundamental piece of required equipment for all liferafts.

The Coast Guard disagrees. There have not been any significant advances in radar reflector technology since 1983. The Coast Guard is still not aware of any “efficient” radar reflectors suitable for extended storage in the tight confines of packed inflatable liferafts, and several proposals to cancel MSC/Circ. 447 have been rejected by the IMO Lifesaving, Search and Rescue Sub-Committee for that reason. It should be noted as well that, since 1983, the implementation of the GMDSS, incorporating portable satellite Emergency Position Indicating Radio Beacons (EPIRBs) and Search and Rescue Transponders (SARTs) on many ships, has largely overshadowed radar reflectors as locating aids.

A number of identical comments suggested requiring a “tape” on liferaft canopies that would make them more visible to radar. This suggestion has not been adopted in the final rule, since the principles of radar propagation and reflection would render such a product ineffective as a radar reflector.

Proposed § 160.151–21(u) required that the anti-seasickness medicine required by SOLAS regulation III/38.5.1.21 be one of two specified medicines carried onboard. Several comments noted that, because the two specified medicines are available only by prescription, this provision would

require a servicing facility to obtain DEA registration to distribute controlled substances. The comments also noted that the specified medicines can have serious side effects making their use dangerous without medical supervision.

The Coast Guard agrees that it would be impracticable to require liferaft-servicing facilities to handle controlled substances, and has amended § 160.151–21(u) in the final rule to remove the requirement for specific medicines. Any readily available over-the-counter medicine for motion sickness such as dimenhydrinate (generic formulation of Dramamine®) will be suitable.

Proposed § 160.151–21 (v) and (w) required instructions for survival and immediate action to be provided in English. One comment noted that in many areas the crews do not read or speak English, and suggested that the required instructions be in a language the crew understands.

The Coast Guard is very aware of the linguistic diversity of ships’ crews, particularly in the fishing industry. However, it would not be practical to require liferaft manufacturers to make the required instructions available in whatever language a particular customer (or his crew) may be able to read, particularly in view of the fact that the manufacturer generally does not know who the customer (let alone his crew) is until long after the liferaft is packed. We encourage liferaft manufacturers to make practical efforts to satisfy the linguistic needs of their customers, and have revised § 160.151–21 (v) and (w) in the final rule to make it clear that providing instructions in other languages along with English is acceptable.

Proposed § 160.151–21(x) required SOLAS A and SOLAS B inflatable liferafts to be equipped with thermal protective aids approved under approval series 160.174. One comment noted that these aids provide critical survival capability not currently available in Ocean Service or Limited Service equipment packs. The same comment further recommended either that those packs be replaced by the SOLAS A and SOLAS B packs, respectively, or that they have to be upgraded by the addition of thermal protective aids.

While the Coast Guard agrees that thermal protective aids can significantly enhance survival prospects in certain situations, the upgrading of existing approved liferafts is beyond the scope of this rulemaking. Consequently, the final rule does not include any requirement to upgrade such liferafts. At present, a liferaft owner desiring to add thermal

protective aids to its equipment pack may, so long as the addition is addressed in the manufacturer's servicing manual. Even notwithstanding such optional carriage, the Coast Guard anticipates that the proportion of liferafts equipped with thermal protective aids will slowly increase as existing Ocean and Limited Service liferafts are taken out of service and replaced by SOLAS A or SOLAS B liferafts equipped with these aids. It should be noted, however, that these aids are not a panacea for exposure, since a SOLAS liferaft need carry them for only ten percent of its rated capacity.

One comment questioned who would decide how many thermal protective aids would be provided in each liferaft, and how the addition of these protective aids would affect the re-packing of the liferaft. As discussed briefly above, the number of these aids in a SOLAS liferaft is specified by SOLAS regulation III/38.5.24 as the greater of ten percent of its rated capacity or two. This information would be included in the manufacturer's service manual, along with instructions for packing the aids in the equipment pack. The manufacturer would have performed all approval testing of a SOLAS liferaft with the required aids packed in the equipment pack.

Proposed § 160.151–21(y) required a repair kit called for by SOLAS regulation III/39.10.1.1 to include six or more sealing clamps or serrated conical plastic plugs, along with patches, cement, and a roughing tool for making more permanent repairs. The NPRM specifically requested comments concerning appropriate contents for repair kits, since SOLAS does not specify its contents.

One comment suggested that a combination of serrated plugs and sealing clamps should be accepted. The comment added that the serrated plugs should not have to be of plastic material, and that the Coast Guard should consider the possibility of using a quick-repair material such as a suitable self-adhesive tape in lieu of tube patches and cement. Two comments contended that tube patches and cement are virtually useless for making repairs on the water. One comment suggested that conical plugs should not be approved as substitutes for sealing clamps until they have been proven as effective as the clamps. Another comment suggested that sealing clamps are superior to serrated repair plugs, and should be used.

The Coast Guard does not agree that sealing clamps are superior to plugs in all instances. The thickness and textures of fabrics of tubes of inflatable liferafts

vary widely. In light of the disparate effectiveness of sealing clamps and plugs with different fabrics for inflatable tubes, the Coast Guard contends that liferaft manufacturers are best able to determine a suitable combination for use with their liferafts through testing and operational experience. It expects that manufacturers will take effectiveness as well as economics into account when determining suitable contents for a repair kit. It agrees that wooden plugs should be accepted as well as plastic ones (and may be desirable in some cases), and that a suitable quick-repair material such as self-adhesive tape would be an acceptable and perhaps preferable substitute for patches, cement, and a roughing tool. Consequently, the wording of § 160.151–21(y) has been revised in the final rule to require six or more sealing clamps or serrated conical plugs, or a combination of the two; five or more tube patches at least 50 mm (2 inches (in.)) in diameter, compatible with the liferaft fabric; a roughing tool, if necessary to apply the patches; and, unless the patches are self-adhesive, cement as specified in the NPRM. The Coast Guard would like to be kept informed of the progress of manufacturers in developing or identifying suitable self-adhesive patches.

Float-Free Arrangements

One comment noted that there is no specific reference to float-free arrangements in the proposed rules other than by reference to SOLAS regulation III/38 (specifically regulation 38.6 thereunder) in proposed § 160.151–7, and that there is no mention of wire weak links for inflatable buoyant apparatuses. The comment also questioned whether hydrostatic release units used in float-free arrangements would have to be approved by the Coast Guard (as is the equipment in § 160.151–21).

As is the case in the bulk of the proposed rules, the requirements for float-free arrangements are not explicitly stated, but rather are incorporated by reference to the corresponding SOLAS requirements. Weak links for inflatable buoyant apparatuses are covered in § 160.010–3(a) in the NPRM (retained substantially unchanged in the final rule), which requires an inflatable buoyant apparatus to generally meet the standards of design and performance for SOLAS inflatable liferafts contained in subpart 160.151. Since they are of similar function and packed buoyancy to inflatable liferafts, the NPRM and the final rule require that buoyant apparatuses be fitted with the same

weak links used with inflatable liferafts, rather than the weaker weak links used with life floats and rigid buoyant apparatuses.

The requirement that hydrostatic releases used in float-free arrangements be approved is a vessel requirement which is beyond the scope of this equipment subpart and this rulemaking, but appears in the recently updated vessel regulations at §§ 28.125(c), 117.130 (b), 180.130(b), and 199.130(c)(7) of this part.

Carriage of Additional Equipment

Proposed § 160.151–25 provided guidelines for the carriage of additional equipment, beyond that required by the regulations, in liferaft equipment packs. The proposed rule required that such equipment be covered in the liferaft manufacturer's approved drawings and servicing manual, and that specified items meet the applicable Federal Communications Commission (FCC) regulations in 47 CFR part 80.

Two comments questioned the inclusion of the Class S EPIRB and the omission of the Class B EPIRB in the items specified in the proposed rule, since the class S EPIRB is not commonly used in liferafts. One comment questioned why only certain items were specified in the proposed rule, and two comments suggested substituting a generic statement that any additional equipment must meet any applicable Coast Guard or FCC requirements. The Coast Guard agrees that wording to that effect confers a more flexible approach. Accordingly, it has revised § 160.151–25 to require that any additional equipment for which performance or approval standards are prescribed in 46 CFR part 160 or 47 CFR part 80 must comply with those standards.

Although the proposed regulations permitted optional carriage of an EPIRB, ten identical comments suggested that EPIRB's should be required to be included in liferaft equipment packs. These comments noted that adding an EPIRB would result in quicker location of the liferaft, so that stability would not be as significant a factor. Several comments suggested adding a waterproof VHF radio.

The Coast Guard does not agree that EPIRBs and VHF radios should have to be included in liferaft equipment packs. As discussed above, the proposed rules allowed for adding equipment to that specifically required in the equipment pack. Anyone who wants to include an EPIRB, a VHF radio, or both in a liferaft may do so, provided that their packing is addressed in the liferaft manufacturer's service manual. However, portable versions of these

items generally already have to be carried on a ship outside of the liferaft, and a trained crew should know to retrieve them in the event of an emergency so as to be ready to carry them into the liferaft. Consequently, the final rule does not mandate the inclusion of EPIRBs or VHF radios in liferaft equipment packs.

Approval Inspections and Tests

By reference to IMO Resolution A.689(17), proposed § 160.151-27(a) required that all liferafts and inflatable buoyant apparatus be subjected to the same Cold Inflation Test, at a test temperature of -30°C . The preamble to the NPRM solicited comments as to whether the Coast Guard should approve Coastal Service liferafts and inflatable buoyant apparatus tested at a higher temperature, such as -18°C , since other countries approve them. One comment supported this suggestion, while another supported an increase in the testing temperature to -12°C in order to reduce costs by reducing the sizes of inflation cylinders and the dimensions of raft containers.

The Coast Guard agrees that an increase in the testing temperature for Coastal Service liferafts and inflatable buoyant apparatus is warranted, but finds the proposal to increase the testing temperature to -12°C excessive for the following reasons. These products are often used in areas where the temperature falls below -12°C . In addition, the HSC Code specifies a range of operational temperatures down to -18°C for open reversible liferafts, which are functionally similar to inflatable buoyant apparatus, and countries with climates similar to ours have substantial and successful operational experience with the test temperature of -18°C . Therefore, § 160.051-5(l) of the final rule has been revised to require the Cold Inflation Test in IMO Resolution A.689(17), para. 1/5.17.3.3.2, to be conducted at a test temperature of -18°C for Coastal Service inflatable liferafts, and § 160.010-3(a)(16) allows the same for inflatable buoyant apparatus.

The Cold Inflation Test in IMO Resolution A.689(17), para. 1/5.17.3.3.2, requires that the liferaft be exposed to the test temperature for at least 24 hours before the test. The Hot Inflation Test in para. 1/5.17.3.3.3 requires that the liferaft be exposed to the test temperature for at least 7 hours before the test. The existing procedures for these tests in 46 CFR 160.051-5(e)(11) require that the liferaft be fitted with thermocouples and exposed to the appropriate test temperature until the interior of the liferaft reaches that test

temperature, which often takes considerably in excess of 24 hours. One comment suggested that this "weakening" of the test procedure is unjustified and may not be an accurate determinant of the raft's ability to inflate hot or cold.

The Coast Guard disagrees. The tests in the IMO recommendation have been used worldwide for approval of liferafts for many years, and there has been no indication that the liferafts approved according to those or similar tests are deficient in hot or cold performance. In fact, it is misleading to evaluate these tests in terms only of the changes in the required temperature exposures. The IMO Cold Inflation Test, for example, is a more stringent test than the test in existing regulation, since it requires the raft to reach design pressure (as opposed to design shape) in the specified time. Most rafts approved to existing U.S. requirements will fail this test without upgrading of the gas charge. Similarly, the IMO Hot Inflation Test requires that the pressure-relief valves be sufficient to prevent the liferaft from reaching twice working pressure. There was no corresponding requirement in existing regulations. For these reasons, the Hot and Cold Inflation Tests are retained in the final rule as proposed by § 160.151-27(a), with reference to IMO Resolution A.689(17), paragraph 5.17.

Also with reference to IMO Resolution A.689(17), proposed § 160.151-27(a) would require a Towing Test at a speed of 3 knots, rather than 5 knots as at present. One comment questioned the validity of revising the requirement since no justification was provided for lowering the speed.

The Coast Guard does not agree that the lower speed of the Towing Test as proposed represents a drop of standards. The existing test in 46 CFR 160.051-5(e)(8) requires towing at 5 knots, but does not include any minimum distance. The IMO test, while at a lower specified speed, also includes a stringent minimum distance. Especially since it is extremely unlikely that a loaded liferaft would ever be towed at speeds in excess of 3 knots, the IMO test is a more realistic and more repeatable test. The test is retained in the final rule as proposed.

Proposed § 160.151-27(c)(5) would require that, when the Canopy Closure Test is performed, the accumulated water in the liferaft must not exceed 4 liters. One comment suggested that this requirement is extreme and unnecessary, since this quantity of water is so insignificant that it cannot even be bailed from the liferaft. The comment proposed that the wording in the IMO testing recommendation, that

there be no "significant accumulation" of water within the liferaft, be retained by reference without any elaboration.

The Coast Guard disagrees. The term "significant accumulation" is subjective and so is essentially meaningless. The Coast Guard considers that SOLAS regulation III/38.1.5.3, which requires that the canopy "exclude seawater," dictates that the canopy closure be watertight. The Coast Guard realizes, however, that complete watertightness is practically impossible for a product constructed of fabric, and that the nature of the test procedure dictates that a small amount of water will likely enter the raft if only as the canopy is opened to check the raft at the conclusion of the test. The specified 4-liter maximum is intended to be a generous allowance for this inevitable minor leakage, not to define the limit of a dangerous amount. The suggestion in the comment that this would not even be enough water to bail indirectly supports the choice of this figure, since the presence of enough water to require bailing would, based on experience with numerous tests performed in conjunction with other maritime safety administrations, certainly constitute a failure of the test. For these reasons, proposed § 160.151-27(c)(5) is retained unchanged in the final rule.

Production Tests and Inspections

By reference to IMO Resolution A.689(17), proposed § 160.151-31(d) would require each production liferaft to undergo an overpressure test at 1.5 times working pressure. The preamble to the NPRM noted that a change to this test, to make it consistent with the "Necessary Additional Pressure (NAP) Test" done during servicing, had been tentatively approved by the Lifesaving, Search and Rescue Sub-Committee of IMO, and would be incorporated in the final rule if it obtained final approval. That approval was given by the 66th session of the IMO MSC in Resolution MSC.54(66) of 30 May 1996.

One comment supported the reference to the existing overpressure test in Resolution A.689(17), and commented that the Coast Guard should ensure that the NAP Test is at least equivalent to that test before adopting it. Since the overpressure test currently in the IMO recommendation is at 1.5 times working pressure, and the NAP Test is at a minimum of twice working pressure, the Coast Guard is confident that the NAP Test is at least equivalent, and has incorporated it in this final rule by updating the incorporation by reference of Resolution A.689(17) to include amendments through and including Resolution MSC.54(66). Consequently,

the reference to Resolution A.689(17), part 2, paragraph 5.1.4 in § 160.151-31(d) now covers the updated test.

By reference to IMO Resolution A.689(17), proposed § 160.151-31 (d) and (e) would require inflatable compartments of liferafts to undergo a 1-hour air-holding test with an allowable pressure drop of 5 percent, rather than the 6-hour, 10 percent test in existing 46 CFR 160.051-5(c)(3). One comment suggested that the existing test should be retained unless the Coast Guard can show that the revised test will provide the same assurance of the liferaft's airtightness.

The Coast Guard has several years of experience with the IMO test, because it has been allowed for liferafts approved to the SOLAS requirements since its adoption by the IMO. The Coast Guard knows of no problems associated with the reduction of the testing period, and believes that the 1-hour test is an adequate measure of the airtightness of a liferaft, especially combined with the required NAP test. Consequently, the test is retained in the final rule in §§ 160.151-31 (d) and (e) as proposed in the NPRM.

Proposed § 160.151-31(a) would require that liferaft production inspections be performed under the oversight of an accepted independent laboratory. One comment strongly supported the use of third parties for this purpose, and suggested that such parties should be required to have the qualifications and quality control required for IACS membership.

Section 160.151-31(a) has been retained in this final rule as proposed. The Coast Guard does not intend to restrict acceptance as third parties for production inspections to classification societies or IACS members. The Coast Guard considers that the existing independent laboratory acceptance standards in § 159.010, which have been used successfully for years to accept numerous third parties to inspect a variety of approved products, are sufficient to evaluate and accept third parties for liferaft production inspections.

The Coast Guard recognizes that manufacturers will likely not be able to comply immediately with the requirement in proposed § 160.151-31(g) to arrange for periodic inspections by an accepted independent laboratory. Consequently, § 160.151-31(g) in the final rule has been revised to give manufacturers up to one year to comply with this requirement. A new § 160.151-31(h) has been added to the final rule to address procedures for the transitional period while manufacturers arrange for independent laboratory

inspection. This paragraph is similar to existing § 160.051-5(a), except that it allows the OCMI the option of attending or not when notified of final production inspections.

Liferaft Servicing

Servicing Intervals

Proposed § 160.151-35(a) would require that inflatable liferafts (and by extension, inflatable buoyant apparatus) be serviced "periodically" at a servicing facility approved by the Coast Guard. One comment suggested that the servicing interval should be definitively stated, perhaps by reference to SOLAS regulation III/19, which requires servicing annually.

A more definitive statement of servicing intervals appears in proposed § 160.151-57(n). Under § 160.151-57(n) in the NPRM and in this final rule, annual servicing is no longer applicable in all cases, since the first servicing of a new liferaft on a non-SOLAS ship can be delayed until the raft is two years old provided that dated survival equipment in the liferaft will not expire before the next servicing due date.

Multiple comments suggested that that annual servicing is unnecessary and costly. In support of this view, several of these comments cited the fact that most of the equipment in a liferaft's equipment pack remains serviceable for far longer than a year. One comment suggested that servicing intervals could be extended considerably by the placement of the liferaft equipment in a waterproof container. Nine of the comments proposed alternative servicing intervals, ranging from biennially to once every 5 years; however, none of these comments provided any justification for the proposed intervals or any evidence that they would not adversely affect the performance of the liferaft. One letter cited the difficulty of removing the liferaft from the vessel for servicing, and the potential for damage when doing so. Several comments noted that the choice of servicing facilities is limited, and the prices they charge exorbitant.

The Coast Guard does not agree that annual servicing is unnecessary. Servicing intervals do not derive exclusively from the need to examine and replace dated equipment, although some equipment, such as flashlight batteries and cement in repair kits, does typically require annual replacement. During servicing, in addition to having its emergency equipment examined, the liferaft itself is unfolded, inflated with air and tested for airtightness, and repaired if needed. The cylinder is weighed, and the liferaft fabric and

structure examined for damage and deterioration. The liferaft is then refolded and repacked, which serves to extend the life of the liferaft fabric by relocating the creases. This procedure has been the requirement in the U.S. for some decades, and is also the norm internationally, required by SOLAS regulation III/19.8.1. Although some manufacturers have done some developmental work on methods of extending service intervals, the Coast Guard is not currently aware of any methods shown to provide the same level of assurance of a raft's operational readiness as the currently required annual servicing. The Coast Guard is also not aware of any other maritime safety administrations currently allowing extension of servicing intervals. Consequently, the final rule does not extend intervals for liferaft servicing beyond those contained in existing regulation and in SOLAS, except for new liferafts on ships not certificated under SOLAS. This minimal extension was first permitted by 46 CFR 28.140(b) for new liferafts on commercial fishing vessels, as a way of mitigating the expense of compliance with the new regulations for safety of vessels in the commercial fishing industry. The Coast Guard considers this extension to be low-risk in view of the stringent production testing to which new liferafts are subjected, and so these final rules extend its application to new liferafts on all vessels not SOLAS-certificated. The Coast Guard may reexamine this position in the future with further experience and research by the industry.

One comment opposed allowing the first servicing of new liferafts to be extended to two years, citing dated items in the liferaft. Section 160.151-57(n) in the NPRM and in this final rule addresses this comment by permitting such extensions only if dated survival equipment in the liferaft will not expire before the next due date for servicing.

Servicing Costs

A number of comments discussed the limited choice of servicing facilities and the prices charged for servicing. The Coast Guard notes these comments, however the Coast Guard does not have any authority to regulate the economics of the liferaft-servicing industry. It would advise consumers to investigate the availability and suitability of servicing facilities before purchasing a liferaft. Although liferaft manufacturers are required as a condition of approval to demonstrate some reasonable geographic coverage of servicing facilities, the Coast Guard cannot require or guarantee that a servicing

facility will be conveniently located for every liferaft owner.

One comment suggested that liferaft servicing should be performed by the manufacturer, with servicing costs and schedules provided at the time of liferaft purchase. The final rule does not shift the burden of service onto the manufacturer. Most liferaft manufacturers are equipped primarily to manufacture liferafts, not to service them, and the costs and time associated with transporting the liferafts to the manufacturer for servicing would be enormous. The existing system better serves the owner of the liferaft by providing for reasonably local access to liferaft servicing. Advance notice of recurring servicing costs would be impossible to provide with any degree of certainty, since these costs vary from liferaft to liferaft depending on how and where the liferaft is stored and numerous other factors that cannot be determined in advance with any certainty.

Manufacturers' Responsibilities

Proposed § 160.151–35(b)(3) would require a manufacturer to make the servicing manual, servicing manual revisions, service bulletins, liferaft plans, and any unique parts and tools that may be necessary to service the manufacturer's liferafts available to each technician who has successfully completed the manufacturer's initial or refresher training course within the periods specified in § 160.151–41(e). Several comments opposed this requirement, since it implies that the specified items are the property of the technician rather than the servicing facility (which likely paid for the training). Several of the comments further noted that individual technicians may have no vested interest in the liferaft-servicing business, since not all facility owners are qualified technicians, and that the manufacturer has no relationship with or recourse against an individual technician. One comment suggested that it would be unduly burdensome for manufacturers to have to provide each technician, rather than each approved servicing facility, with updates. Two comments proposed that the wording of § 160.151–35(b)(3) be changed to require that the manufacturer make the specified items available to approved service facilities staffed by technicians who have been trained within the specified periods, rather than to the technicians themselves.

The Coast Guard agrees in concept with the suggested change to proposed § 160.151–35(b)(3), since it will accomplish substantially the same end

as the proposal in the NPRM. The change has been incorporated in § 160.151–35(b)(3) of the final rule with one minor revision; since § 160.151–41(e) already requires an approved servicing facility to employ at least one currently trained technician, it is not necessary to include that as a condition in this regulation. Consequently, § 160.151–35(b)(3) of the final rule requires that the items specified in the NPRM be made available to "each approved servicing facility" servicing the manufacturer's liferafts.

Proposed § 160.151–39(b) would require that the manufacturer "conduct a refresher training program for recertification of previously trained servicing technicians." Several comments disagreed with this requirement, since they do not believe a technician should have a right in perpetuity to be trained. One of the comments proposed wording that would indicate that the manufacturer will conduct a refresher training program "by invitation." Another comment suggested that manufacturers should have to open up their training courses to any technician from a facility approved by the Coast Guard, to ensure that the approval of servicing facilities is based upon the qualifications of the facility and its technicians, not upon business considerations. One comment suggested that a servicing technician's certification should be linked to a particular approved facility.

As indicated in the preamble to the NPRM, the proposed rule did not intend to mandate who must receive training, or that a manufacturer must provide training on demand. It intended to require only that a manufacturer have an established refresher-training program so that it is possible to maintain an approved servicing network in compliance with the training requirements in § 160.151–41(e). The Coast Guard does not intend to get involved in whom a manufacturer invites to attend the program. It has slightly refined the wording of § 160.151–39(b) in the final rule to clarify its intent.

The suggestion that a technician's certification be linked to a particular approved facility has not been adopted in the final rule. Subject to relevant legal considerations, a manufacturer can include such a linkage in its certifications, but the Coast Guard does not agree that there is any compelling reason why certification to service a particular make of liferaft should not be portable.

Approval Process for Servicing Facilities

Proposed § 160.151–41(b) would revise the process by which servicing facilities obtain Coast Guard approval. Rather than the manufacturer's designating a selected facility as at present under 46 CFR 160.051–6(d), a servicing facility would apply directly to the OCMI for approval. There would no longer be an explicit requirement for advance authorization by a manufacturer of a servicing facility.

A number of comments opposed this change. The reasons cited in the comments were that the proposed change does not allow for a manufacturer's "approval" of a servicing facility as is effectively the case at present, and does not require "manufacturer support as outlined in IMO Resolution A.761(18), Annex 2." One of the comments noted that it appeared the proposed rules would mandate a reduction in the manufacturer's control over the servicing of its product. One comment noted that any manufacturer must retain the right to determine who will distribute its products. One comment suggested that technicians must have manufacturer training, and suggested that the manufacturer should periodically visit a servicing facility to train and observe the servicing technicians.

The Coast Guard generally disagrees with all of the comments cited above. First, the IMO Resolution referred to does not require, as the comments wish, that servicing facilities be "accredited" by the manufacturer. The wording of the resolution was crafted carefully to avoid such a result. It does require that the manufacturer establish a servicing network by accrediting a sufficient number of servicing stations, that each of those stations be staffed with qualified personnel, and that the manufacturer provide the Administration with a list of them. However, it does not require that every facility approved by the Administration be so accredited.

The proposed rules have no effect on a manufacturer's selection of distributors for its products. They address only servicing facilities, which may or may not also be distributors. Distribution and servicing are distinct activities.

As it indicated in the NPRM, the Coast Guard desires to focus on the technical qualifications of the servicing facility, and not on the facility's business arrangements with the manufacturer. The IMO resolution upon which the proposed rules were based

clearly spells out the technical requirements for approval of a servicing facility: a suitable space, parts, tools, manuals, and appropriately trained personnel. If those requirements are met, there is no significant value added by an explicit business relationship with the manufacturer. Since such a relationship is not essential to the adequate functioning of a servicing facility, the Coast Guard sees no need to allow the liferaft manufacturing industry to control which members of the servicing industry have access to the program of Coast Guard approval.

Manufacturers' support of approved servicing facilities is required by the IMO recommendation on servicing and by § 160.151-35(b)(3) of the NPRM and the final rule. This rule actually represents a strengthening of the requirements for such support, not, as several comments implied, an abandonment of them.

One comment noted that "to remove the manufacturer approval would remove the manufacturer's quality control abilities." However, neither existing regulations nor the proposed rules give the manufacturer any explicit responsibility for control of quality of facilities servicing their liferafts. In fact, to do so, or to require, as suggested in one comment from a facility, that manufacturers visit all of their servicing facilities periodically to train and observe servicing technicians, could be burdensome to manufacturers. Under such requirements, manufacturers would have to give the same degree of attention to remote and overseas facilities that they give to local ones. Quality control is the responsibility of the facility itself, and the Coast Guard intends to continue adequate oversight over the facilities to ensure that quality control is adequate. Note that nothing in this final rule prevents a manufacturer from entering into or maintaining a relationship with an approved facility, which relationship may include quality-control arrangements.

Several comments suggested that if all servicing facilities had to compete with each other, a black market for manuals and parts would appear, and facilities would cut corners to maintain profits.

The Coast Guard disagrees. The Coast Guard has no authority or desire to restrict competition among liferaft-servicing facilities, and believes that the oversight required by these final rules will serve to inhibit those facilities from cutting corners for financial reasons. Concerning the creation of a black market for servicing manuals and parts, § 160.151-37(c) in the NPRM and in the final rule requires each manual to bear the original signature of a

manufacturer's representative attesting its consistency with the manual approved by the Commandant. Consequently, "bootleg" copies of manuals of questionable accuracy, as may be in circulation at present, should no longer exist. Provided that replacement parts used are genuine parts as specified in the manual, the Coast Guard is not concerned with where a facility obtains them. However, this should not be a problem in any case since, as discussed above, § 160.151-35(b)(3) of the final rule requires that the manufacturer make unique parts or tools required for servicing available to each facility approved by the Coast Guard to service the manufacturer's liferafts.

One comment noted that it appeared the proposed changes to the approval process for facilities may be driven in part by Coast Guard concern that current regulations may foster a monopoly in the servicing industry, and explained in detail how this is not the case at all at present. However, the premise of the comment is incorrect, since the Coast Guard is not concerned with nor has any authority over the regulation of business practices in the servicing industry.

One comment suggested that the proposed rules appeared to indicate that the Coast Guard would hold a facility qualified to service one manufacturer's rafts qualified to service all manufacturer's rafts, and supported retaining the manufacturer in the approval process to ensure that proper repair techniques are used. The same comment pointed out the importance of manufacturers' knowing the identity of the facilities that service their rafts.

Under the proposed rules, servicing facilities would continue to be approved separately for each individual make of liferaft. For each make for which approval is sought, a facility would still need to have appropriately manufacturer-certified personnel, servicing manuals, and all parts and tools required by the manufacturer, and to demonstrate the proficiency of its technicians. The requirements for training would be strengthened from those at present by requiring that the training be current. Overall, the proposed rules strengthen the technical requirements for approval of a facility, so the Coast Guard is confident that the ability of facilities to properly service and repair liferafts will not be adversely affected by the removal of the requirement for a formal manufacturer's authorization. To keep manufacturers apprised of the facilities servicing their liferafts, the Coast Guard would continue the present practice of sending

a copy of each facility-approval letter to the manufacturer whose rafts it is approving a facility to service.

One comment suggested that facilities should submit a servicing report describing the servicing of liferafts performed outside of the United States to the Coast Guard. It offered no reason.

The Coast Guard approves servicing facilities outside the United States, and their servicing activities are subject to supervision by OCMI's just the same as servicing at any other approved facility. The Coast Guard does not believe that reporting requirements for liferaft servicing should vary with the geographic location of a servicing facility. The paperwork burden of reporting servicing performed outside the United States would not serve any useful purpose.

For the reasons discussed above, proposed § 160.151-41(b) is retained unchanged in the final rule. The Coast Guard realizes that manufacturers will retain a good deal of practical control over facilities servicing their rafts under that rule, for example through non-compete clauses and control of access to training. However, there will no longer be any reason for the Coast Guard to get involved in these sorts of business arrangements.

Proposed § 160.151-41(c) would require that, for a servicing facility to obtain Coast Guard approval, it would need to demonstrate the complete servicing of a liferaft of the type for which it seeks approval, in the presence of either the cognizant OCMI or a third-party inspector accepted by the OCMI. Several comments suggested that such a demonstration should not be necessary if a technician from the facility has already demonstrated his abilities to a Coast Guard inspector during initial or refresher training held at a different location (such as the manufacturer's plant).

The Coast Guard agrees, and amends § 160.151-41 in the final rule to indicate that certification by a Coast Guard inspector, or by a third-party inspector accepted by the OCMI, of completion of the specified demonstration at the time of initial or refresher training is acceptable in lieu of a demonstration at the facility seeking approval. In addition, this section in final form allows the certification to be made by the manufacturer's trainer, since the trainer would obviously be well enough qualified to be accepted by the OCMI in any case. However, the provision is not moved to § 160.151-39 as proposed in two comments, since, although § 160.151-39(c) requires notification of the cognizant OCMI before holding required training, that training may not

always be attended by a Coast Guard inspector. One comment suggested that a Coast Guard inspector should be present at every training course to ensure the thoroughness of the training and to enable the Coast Guard to better oversee liferaft servicing operations. However, resources and priorities of the Coast Guard do not always allow such attendance.

Proposed § 160.151-41(c)(8) would require that, for the Coast Guard to approve a servicing facility, the facility would need to demonstrate that it can repair a leak in a liferaft's main buoyancy chamber and then subject the repaired chamber to "the inflation test described in IMO Resolution A.689(17), para. 2/5.1.5." One comment suggested that the repaired chamber should be subjected to an overpressure test rather than an inflation test.

This comment stems in part from some imprecise wording in the NPRM, since para. 2/5.1.5 of Resolution A.689(17) is a test of leakage at working pressure, not an inflation test. The Coast Guard agrees that an inflation test is not necessary to ensure that a repair has been done properly, and that an overpressure test is a more appropriate test of a repair than either an inflation test or a test of leakage at working pressure. Section 160.151-41(c)(8) in the final rule requires that the repaired chamber be subjected to the Necessary Additional Pressure test in § 160.151-57(k).

Proposed § 160.151-45(a) would require a servicing facility to maintain "a complete set of the manufacturer's plans for each inflatable liferaft to be serviced." Two comments noted that complete sets of plans are generally not held by facilities, and that it is sufficient to have service manuals that give "all relevant information."

The Coast Guard agrees that a requirement for a servicing facility to hold a complete set of manufacturing plans would constitute an unnecessary record-keeping burden. The intention is made clearer in § 160.151-35(b)(3) of the NPRM and in the final rule. To eliminate any ambiguity, § 160.151-45(a) in the final rule has been revised to refer to the description of the necessary plans in § 160.151-35(b)(3).

Proposed § 160.151-47 contains requirements for the owner or operator of an approved servicing facility. Two comments suggested that the requirements should include an annual letter from the liferaft manufacturer(s) for which the facility is approved demonstrating their continued technical and consultative support.

The Coast Guard believes that such a letter would serve no useful purpose,

and would therefore represent an unnecessary paperwork burden. As discussed above, § 160.151-35(b)(3) of the final rule requires that a manufacturer make certain items available to facilities approved by the Coast Guard. Demonstration by an approved facility that it has those items is more substantive evidence of the required technical and consultative support than a letter. Consequently, the suggested requirement for an annual letter has not been incorporated into the final rule.

Service at Remote Sites

Proposed § 160.151-49 would allow for approval of servicing facilities to perform servicing at remote sites, such as on board ships or offshore facilities, rather than at the facilities themselves. One comment suggested that a facility must be specifically authorized in its letter of approval from the manufacturer to conduct servicing at remote sites.

As discussed above, in a change from the current regulation, this final rule does not require explicit manufacturer authorization as a condition for approval of a servicing facility. Consequently, the "letter of approval from the manufacturer" on which the comment proposes to require an authorizing endorsement for remote servicing does not exist. Therefore, the suggested requirement for manufacturer authorization to conduct servicing at remote sites has not been incorporated in this final rule. However, § 160.151-49 in the final rule now requires that a facility conducting servicing at remote sites be specifically authorized to do so in its letter of approval from the Coast Guard.

One comment suggested that the provisions on remote-site servicing should be deleted in their entirety, since the intended beneficiaries of those provisions (such as MODUs and quick-turnaround vessels) would in reality see little benefit under the proposed rules. The comment noted that the same difficulties faced by the raft owner in shipping the raft to an approved facility would be faced by the remote-site technician, who would have to import his tools, manuals, parts, etc. at great transportation cost. The comment also cited the difficulty of obtaining work permits in some areas.

The Coast Guard agrees that remote-site servicing may not be practicable or advantageous in many cases. However, the NPRM does not require remote-site servicing; it merely permits it as an option. The argument that it is inherently impracticable is belied by the fact that the Coast Guard has allowed remote-site servicing at the special

request of owners of offshore facilities and servicing facilities under existing regulations. Consequently, the suggestion to delete the provisions on remote-site servicing has not been incorporated in the final rule.

Referring to proposed § 160.151-49, one comment suggested that servicing facilities outside the United States should be specifically approved by the manufacturer since they will not be by the Coast Guard. This is incorrect, since the Coast Guard does and will continue to approve facilities outside the United States. For servicing at remote sites such as oil rigs, the facility performing the work will still have to be approved by the Coast Guard, and the provisions in the facility's letter of approval authorizing it to perform servicing at remote sites will signify that the Coast Guard has evaluated the facility's ability to perform proper servicing in the field.

Supervision of Liferaft Servicing

The NPRM proposed replacing the current system of universal Coast Guard witnessing of liferaft servicing with a system of Coast Guard supervision by means of periodic spot checks, with the frequency of the spot checks at the discretion of the OCMI.

One comment suggested that, rather than change its current system of inspection of servicing to use its resources more efficiently, the Coast Guard should ask Congress for additional personnel.

The Coast Guard does not believe it is realistic or desirable to maintain an existing inspection program that can be carried out just as effectively with a more efficient use of fewer resources of the Coast Guard. The proposed conversion from universal inspection of servicing to spot checks would not take place in a vacuum. Although Coast Guard presence at actual servicing would become less frequent under the rules proposed in the NPRM, the technical requirements for facility approval would be significantly strengthened, as would the training requirements for servicing technicians. Overall, the Coast Guard expects that the changes proposed in the NPRM, taken together, will ensure that liferaft servicing continues to be done properly and under adequate supervision.

One comment completely supported the conversion to spot checks, since servicing technicians at facilities are well trained and qualified, and scheduling a Coast Guard inspector to witness every liferaft servicing is not only burdensome on the Coast Guard's personnel resources but also a financial burden to facilities and an operational burden on ship operators awaiting

lifteraft servicing. The comment also noted that the NPRM is consistent with ongoing efforts toward Maritime Regulatory Reform and with the shifting of appropriate activities to the private sector.

One comment suggested that there should be a stated minimum frequency of spot checks, and that in no case should the number of spot checks be less than two a year. Another comment suggested that Coast Guard inspectors should observe the servicing or oversee the performance of third-party inspectors in some reasonable percentage of instances.

The Coast Guard agrees that spot checks by the OCMIs must be at some minimum frequency to provide adequate oversight. However, the Coast Guard does not believe that it is appropriate to impose an inflexible requirement upon itself through these regulations. It intends that, when this final rule takes effect, the Commandant will provide appropriate internal guidance to field units to implement the system of supervision by spot checks. In this way, the Coast Guard can take into account any unusual requirements or conditions of particular OCMIs zones, and can refine its administration of the program as it gains experience with the new system.

Proposed § 160.151-53(a) would require that a servicing facility taking in a liferaft to be serviced under its Coast Guard approval notify the OCMIs of the make, size, and age of the liferaft, and whether the liferaft is due for a 5-year inflation test. Acting on that information, the OCMIs would decide whether the servicing of the liferaft must be witnessed by an inspector.

One comment suggested that providing the specified information before servicing would be unnecessarily costly, since many vessels operate on extremely tight schedules. The comment proposed that the facility be required only to notify the OCMIs of its intent to service a liferaft, and to provide any information available at the time of notice (but not any particular information). Two comments suggested that proposed § 160.151-53 adds uncertain costs to the servicing of a liferaft, since a facility has no way of knowing in advance whether an individual raft will be subject to inspection where a user fee or third-party-inspection fee will be added. One of these comments suggested that the Coast Guard perform random inspections of every facility at no cost to that facility. Another comment suggested that, to make costs involved with servicing inspections predictable, the Coast Guard make periodic (e.g.,

quarterly or semi-annual) inspections, with or without notice.

None of these comments have been incorporated in the final rule. Because of constraints on the resources of the Coast Guard, the NPRM proposed to replace the current system of universal Coast Guard witnessing of liferaft servicing for inspected vessels with a system of spot checks by the OCMIs. Overall, that system should substantially decrease, for all servicing facilities, the burden associated with scheduling of Coast Guard inspectors for every liferaft servicing and, for foreign facilities, the travel and subsistence expenses of Coast Guard inspectors. However, for spot checks to provide effective supervision of liferaft servicing, it is essential that the Coast Guard focus its resources in the areas of greatest risk. In the case of liferaft servicing, the greatest risk will likely be in the areas of the oldest rafts, particularly those undergoing the five-year inflation test, and perhaps on makes of liferafts that have demonstrated reliability problems in the past. The required information should not be difficult to obtain, since it is all marked on the outside of the liferaft container. A facility called by a ship for the servicing of one of its liferafts would merely need to request that the ship provide the information marked on the outside of the container, whereupon the facility would pass that information to the OCMIs when giving the required notice of servicing.

The suggestions for random periodic inspections have not been adopted, because they do not allow for the Coast Guard's resources to be focused on the areas of highest risk. In addition, such a system would result in the lowest-volume facilities' being subjected to a proportionally much greater degree of supervision than the higher-volume facilities.

One comment questioned whether a servicing facility must notify the OCMIs when it plans to service a liferaft from a commercial fishing vessel. The NPRM and the final rule require notice whenever a facility is to service a liferaft for which it is approved by the Coast Guard, regardless of the source of the liferaft.

Proposed § 160.151-53(c)(2) would allow a servicing facility, when a Coast Guard marine inspector is not available in a timely manner to witness a servicing that needs to be witnessed, to engage a third-party inspector accepted by the OCMIs to witness the servicing on behalf of the OCMIs. Third-party inspection would be at the expense of the facility.

Two comments suggested that the OCMIs should retain sole responsibility for supervision of servicing of liferafts in their respective zones to maintain the Coast Guard's level of expertise in this area. Another comment stressed the importance of maintaining the Coast Guard's expertise, and suggested that Coast Guard inspectors should observe the servicing or oversee the performance of third-party inspectors in some reasonable percentage of instances.

The Coast Guard agrees with the comments that it is essential that the Coast Guard maintain its base of knowledge and experience in this highly specialized area. It is anticipated that most spot checks would in fact be conducted by Coast Guard marine inspectors. However, the nature of the spot-check system, in targeting areas of greatest risk, means there may be instances when the witnessing of a particular event is necessary and yet when the Coast Guard does not have adequate resources to attend in a timely manner. To minimize the scheduling burden on servicing facilities and ship operators, the proposed rule affords some flexibility in those instances. Therefore, the suggestion that all spot checks be conducted by a Coast Guard inspector has not been incorporated in the final rule.

One comment opposed third-party inspections, since unlike the Coast Guard, third-party inspectors would have an economic interest in the outcome of the inspection. A ship operator could influence a third-party inspector's decision about whether the liferafts fail the inspection because, if the liferafts fail the inspection, the operator may not hire the inspector again.

This comment appears to be based on a misunderstanding of what was proposed in the NPRM. A third-party inspector as described in the NPRM would be hired not by a ship operator but rather by the servicing facility; an operator might not even be aware that a third-party inspector is involved. The third-party inspector's function would be to oversee the performance of the facility, not to evaluate the condition of the liferaft. The presence of an independent third-party inspector during liferaft servicing would be expected to discourage a facility from allowing economic considerations to influence its evaluation of a liferaft, since the inspector would ensure adherence of the facility to the objective and quantitative criteria in the relevant regulations and in the manufacturer's servicing manual.

Four comments suggested that third-party inspection based on fee for profit

would greatly increase the cost of liferaft servicing, and one further commented that it would be an unfair system in terms of fees unless a nationwide fee could be agreed upon.

These rules have no effect on the cost of Coast Guard inspections; inspections at domestic servicing facilities continue to be provided at no charge, and foreign facilities continue to be billed for the inspector's travel and subsistence. The cost of any third-party inspections as allowed by these rules will be borne by the facility in all cases. However, these rules do not require such inspections; they are merely an option available to facilities in cases where constraints on resources of the Coast Guard may not allow response in time to meet a facility's desired delivery schedule. The Coast Guard does not have the authority to regulate fees for such services, and does not believe a uniform fee would be reasonable given the wide variety of parties who could be accepted as inspectors and the worldwide distribution of approved facilities in sometimes-remote locations.

Three comments expressed concern that untrained personnel might be assigned to oversee liferaft servicing, and asked what training or qualifications a third-party inspector would have to have in order to be able to perform this work.

As was discussed in the NPRM, third-party inspectors engaged to oversee liferaft servicing would be subject to acceptance by the OCMI. Like the proposed rule, this final rule does not require a third-party inspector to necessarily represent an independent laboratory fully compliant with 46 CFR subpart 159.010. Individuals such as experienced marine surveyors with appropriate practical training or background could be employed. And, like the proposed rule, this final rule gives OCMI's the authority to accept third-party inspectors in their respective zones (as opposed to central approval by the Commandant), since OCMI's will be better able, taking into account their local knowledge and conditions, to evaluate prospective local third-party inspectors of less-than-national scope. To maintain some uniformity of requirements, the Commandant will provide OCMI's with general guidelines for use in evaluating and accepting third-party inspectors where they are used.

One comment suggested that performance monitoring of accepted third-party organizations would have to be done by the OCMI, and questioned how this relationship would be any different from the current situation between facilities and the OCMI. The

difference is that, under the current system, the OCMI is in the facility for every servicing of a liferaft from an inspected vessel. Under the system proposed in the NPRM, the Coast Guard would be in the facility only for periodic spot checks, at which time it could audit records pertaining to any third-party inspections that may have been performed.

The same comment noted that problems may arise between a facility and third-party inspector, such as conflicts over personality, scheduling, and payment. Obviously, the Coast Guard has neither any intention nor any authority to regulate these areas. Since the facility selects and hires a third-party inspector, it can "fire" the inspector as well in the event of an irreconcilable conflict.

One comment suggested that the Coast Guard would need to establish a "complaint board" to address instances of "unfair actions taken by third party inspectors." The Coast Guard does not agree that such a dedicated body is needed in view of established appeal procedures in current regulations. Allegations of actions taken by a third-party inspector that are contrary to the terms of the OCMI's acceptance of the inspector would be evaluated by the OCMI, and corrective action (which could include termination of acceptance) taken as appropriate. A party reporting such allegations who is not satisfied with the OCMI's response can appeal the OCMI's decision to the District Commander and then to the Commandant, if necessary.

One comment suggested that the Coast Guard should attend every servicing of a "grandfathered" liferaft whose carriage on an uninspected commercial-fishing-industry vessel is permitted under 46 CFR part 28, because these rafts were not manufactured under supervision of the Coast Guard and thus their construction is suspect. The comment also suggests that the Coast Guard should assume the responsibility for monitoring the condition of these rafts, since it is allowing them to continue in use until they are no longer serviceable.

The Coast Guard disagrees. The guidelines used by the Coast Guard to allow grandfathering of these liferafts are very stringent, including a gas inflation test and a Necessary Additional Pressure Test, both at the first servicing. The Coast Guard considers these tests sufficient to screen out any rafts of questionable construction. In addition, although grandfathered rafts themselves are not formally approved by the Coast Guard, they have to be serviced at servicing

facilities approved by the Coast Guard. Since proposed § 160.151-53(a) would require a servicing facility to notify the OCMI of every liferaft taken in for servicing under its Coast Guard approval, grandfathered liferafts would be just as subject to an OCMI's spot check as any other liferaft.

The Coast Guard also disagrees that grandfathered rafts should be subject to special supervision because it lets them be used until they are no longer serviceable. This condition is not unique to grandfathered liferafts, since any liferaft may continue to be used until it is no longer serviceable.

Deviations From Procedures in the Servicing Manual

Proposed § 160.151-53(d) would allow servicing facilities to deviate from servicing manual procedures with the approval of the OCMI. As discussed in the NPRM preamble, this provision would include substitution of comparable equipment when survival equipment approved by the Coast Guard is not available for some reason. One comment suggested that equipment substitution should be permitted only if the substituted equipment meets or exceeds the Coast Guard-approved equipment, and also meets SOLAS approval requirements.

The Coast Guard agrees in principle with this comment. It is the Coast Guard's intention that any substitute survival equipment be at least comparable to Coast Guard-approved equipment. As was discussed in the NPRM, however, the wide variety of equipment available and the approval requirements for some types of equipment do not always allow for a definitive determination in the field whether a particular piece of equipment would meet all applicable requirements of the Coast Guard. Although it is anticipated that equipment substitutions will be quite rare in any case, there will no doubt be instances where the OCMI has to use his judgment and experience in determining whether a particular deviation is acceptable. Section 160.151-53(d) is retained in the final rule as proposed, since it adequately describes the general procedure for handling deviations subject to the OCMI's discretion.

Suspension and Withdrawal of Approval of Servicing Facilities

Proposed § 160.151-55 specifies conditions under which the Coast Guard can suspend or withdraw the approval of a servicing facility. Two comments suggested that this section should be revised to give manufacturers the right to withdraw approvals from facilities.

The Coast Guard does not agree. As discussed earlier, SOLAS requires a servicing facility to be approved by the Administration (i.e., the Coast Guard), not by the manufacturer. Under § 160.151–35(b)(3) of this final rule (which varies from the NPRM language because of a comment by the same association commenting on this provision), a manufacturer must provide technical support to each service station approved by the Coast Guard to service that manufacturer's liferafts. If a manufacturer is aware that a facility is not properly servicing liferafts, the manufacturer can report that to the Coast Guard; the Coast Guard will take appropriate action under § 160.151–55(a)(2). Alternatively, a manufacturer can discontinue providing refresher training for the facility's technician(s). However, this final rule does not allow a manufacturer to arbitrarily or unilaterally cause the withdrawal of a servicing facility's approval by the Coast Guard.

Servicing Procedures

Proposed § 160.151–57(b)(3) would require that, during annual servicing, an inflatable floor be inflated until firm, allowed to stand for one hour, then still be firm after two hours. Three comments suggested that this test is excessive, and proposed that the test should last one hour. The Coast Guard agrees that there is no reason why the floor test should last longer than the working pressure leakage test to which the rest of the liferaft is subjected, and § 160.151–57(b)(3) has been revised in the final rule to require only a one-hour test.

In place of the annual test currently required by 46 CFR 160.051–6(e), proposed § 160.151–57(f) would require a davit-launched liferaft to be subjected to a launching-load test at every other servicing. This is the same interval specified in IMO Resolution A.761(18). One comment suggested that this interval would be sufficient for newer liferafts, but suggested that the requirement should be annual testing for rafts over ten years old due to the possibility of deterioration of the materials.

The Coast Guard has not incorporated this comment in the final rule. Its policy is not to impose requirements in excess of SOLAS on U.S.-flag ships, and we are not aware of any data to suggest that the biennial test in § 160.151–57(f) is inadequate to identify, in a timely manner, liferafts deteriorating due to age. Consequently, § 160.151–57(f) is retained in the final rule as proposed in the NPRM.

Proposed § 160.151–57(g) would require that the 5-year gas inflation test be conducted with the liferaft still secured in its container, rather than after being removed from its container as required by current 46 CFR 160.051–6(f)(2). Several comments suggested that, because of the increased bottle charges and higher nitrogen content in the gas mixture necessary to comply with the requirements of SOLAS, performing the test in this manner raises concerns about safety as well as about unnecessary damage to the liferaft. Both comments proposed that the final rule allow the raft to be removed from its container for this test as is the current practice.

As was explained in the NPRM, the forces on a liferaft are significantly different when it is inflated in its container with the retaining bands in place from when it is removed from the container first. The Coast Guard continues to believe that performing the gas inflation test with the liferaft packed in its container is a useful means of detecting marginal or unsatisfactory structural connections in the liferaft in a realistic operating environment. However, the current IMO recommendation on servicing requires that the liferaft be removed from its container before performing the test. Because of concerns about the increased risk of damage to a liferaft when inflating it on the shop floor instead of in the water, there has been little support at IMO for modifying the test as proposed in the NPRM. Consequently, to remain consistent with the current internationally accepted requirement, § 160.151–57(g) in the final rule requires removing the folded raft from its container before actuating the inflation system, as was suggested in the comments.

Proposed § 160.151–57(i) would require that, when a liferaft ten or more years past its date of manufacture leaks extensively or shows fabric damage after a gas inflation test, it must be condemned. One comment suggested that "fabric damage" is a vague description, and that it is not unusual for liferafts exhibiting some signs of porosity to successfully pass all required testing.

The Coast Guard agrees that minor porosity, although it might technically be considered to be "fabric damage," should not necessarily mandate the condemnation of a liferaft that otherwise passes all of the required servicing tests. Particularly with the addition of the annual Necessary Additional Pressure test for liferafts over ten years old, the normal testing procedure between gas-inflation tests

should be adequate to identify fabric deficiencies serious enough to adversely affect the operational performance of the liferaft. The Coast Guard is concerned, though, about fabric damage other than minor porosity, such as cold cracking. Such damage would tend to be more aggressive and more progressive than simple porosity, and the fact that a liferaft with cold cracking might pass all of the required servicing tests would not necessarily guarantee that it would not fail catastrophically at its next inflation by its gas inflation system.

In view of the above, the Coast Guard has decided to partially adopt the suggestion in the comment. Proposed § 160.151–57(i) in the final rule requires that a liferaft more than ten years old that leaks extensively or shows fabric damage "other than minor porosity" after the gas-inflation test must be condemned.

Liferaft Markings as an Aid to Search and Rescue

Proposed § 160.151–57(m)(2) would require a servicing facility to mark the liferaft canopy, or the device required by proposed § 160.151–17(c), with the name of the vessel on which the liferaft will be installed or the name of the vessel owner (if the information is known). One comment suggested that providing this marking can be a problem, since companies sometimes trade liferafts among different vessels. Another comment questioned how important it is to know what ship a liferaft is from, since generally only one ship sinks at any particular time. The same comment suggested that the ship identification could not be attached to the painter, since the painter is generally cut at the raft after deployment.

As discussed in the NPRM under heading entitled "Raft Markings as an Aid to Search and Rescue", this requirement is pursuant to IMO Resolution A.759(18). Its main intent is to address the too-frequent situation of a liferaft being found adrift with no persons aboard and no identifying markings, e.g., a liferaft which is inadvertently released from a ship in heavy seas. Such a liferaft will obviously have no one aboard to cut the painter, and so an identification device attached to the painter will remain intact to serve its purpose.

Knowing which ship a liferaft found adrift came from lets SAR forces check to ensure that the ship is safe. An unmarked and unmanned liferaft found adrift naturally leads to speculation whether the ship it is from experienced a sudden casualty with no opportunity

to signal distress, which can result in expensive and fruitless searches.

Concerning the trading of liferafts by companies or cooperatives, § 160.151-57(m)(2) requires a servicing facility to apply the marking only if the information is known. However, manufacturers will have to include in their servicing manuals instructions for facilities to retrofit the device required by § 160.151-17(c) on existing liferafts so that vessel operators will have a means of specifying the identity of the vessel on which a liferaft is fitted without the necessity of anyone's opening the liferaft container. Such identification could be easily changed as a liferaft is traded within a company or cooperative.

In view of the above discussion, § 160.151-57(m)(2) is retained in the final rule as proposed in the NPRM. The effective date for the requirement is July 1, 1998, which is the date the requirement will become mandatory under SOLAS.

Inspection Stickers and Certificates

Proposed § 160.151-57(m)(3) would require a servicing facility to affix an inspection sticker to each liferaft it services, indicating the manufacturer of the liferaft, the identification of the facility, and the expiration date of the servicing. This sticker would replace the metal inspection plate currently required by 46 CFR 160.051-8(a).

One comment opposed the replacement of the metal inspection plate by a sticker, since the sticker would not show what kind of equipment is in the liferaft, would wear or fade easily, and would come off the container easily. Two comments suggested that it was unsatisfactory that the sticker would not show the inspection record. Another comment cited the added cost to the customer and noted that, if the sticker were to replace the servicing certificate, the customer would not know the expiration dates of the equipment inside the liferaft.

The Coast Guard disagrees with the substance of these comments in their entirety. First, the sticker would not replace, but would be in addition to, the container markings otherwise required by SOLAS and by proposed § 160.151-33(b), which include specification of the type of equipment pack in the liferaft. The inspection record will continue to appear on the liferaft itself per proposed § 160.151-57(m)(1). The sticker would not replace the servicing certificate, which is required by proposed § 160.151-57(p); however, the certificate need not indicate the expiration dates of the packed equipment in any case. Note that, notwithstanding the information

required on the sticker, a manufacturer can require or allow the marking of any other relevant information by including it in the servicing manual. The durability of the sticker and its attachment to the liferaft container are specifically addressed in proposed § 160.151-57(m)(3), which requires the sticker to be of a type that will remain legible for two years in a marine environment and that cannot be removed without being destroyed. Such stickers are readily available, and their cost is nominal.

One comment noted that, since the stickers do not require specific identification by Coast Guard inspector, they could be affixed to liferafts whose servicing was not witnessed by the Coast Guard. Consequently, a facility could affix a sticker to a liferaft that it had not even opened. The same comment also noted that not requiring a Coast Guard inspector's identification on the service record marking required by proposed § 160.151-57(m)(1) would allow a facility to repack a raft without even inflating it.

The Coast Guard believes that the vast majority of servicing facilities are professional organizations dedicated to high-quality liferaft servicing in accordance with all relevant laws, regulations, and manufacturers' instructions, who perform high-quality work whether the Coast Guard witnesses it or not. Nevertheless, there are documented instances where unscrupulous facilities have engaged in acts such as those described in the comment discussed above, even under existing regulations. A facility wishing to avoid supervision by the Coast Guard need only fail to notify the Coast Guard of a liferaft taken in for servicing. A requirement for Coast Guard identification on stickers or on servicing record markings has not deterred in the past, and would not deter in the future, a facility intent on not performing the work for which it is paid.

In view of the above discussion, § 160.151-57(m)(3) is retained in the final rule as proposed in the NPRM. The requirement has an effective date 6 months from the date of publication in the **Federal Register**, so as to allow those manufacturers who have not yet begun using the stickers to obtain and distribute them.

Proposed § 160.151-57(p) would require that a servicing facility issue a certificate to the liferaft owner or owner's agent for each liferaft it services. One comment proposed that this section be revised to require also that the facility provide a copy of the servicing certificate to the manufacturer.

The Coast Guard disagrees. While it is obvious that providing the liferaft owner with a certificate facilitates demonstration to the relevant authorities that a liferaft has been properly serviced, the Coast Guard knows of no compelling reason (and the comment did not offer any) why the certificate should be required by regulation to be provided to the manufacturer as well. If the manufacturer wants a copy of each servicing certificate, that can be arranged by agreement between the manufacturer and the facilities servicing the manufacturer's rafts, or by requiring it in the manufacturer's approved servicing manual. Consequently, the proposal in the comment has not been adopted in the final rule.

One comment suggested that servicing certificates should be supplied, controlled, and serialized by manufacturers to inhibit counterfeiting and to ensure that only approved and authorized facilities conduct servicing. The Coast Guard disagrees that it is necessary to regulate the form and substance of the certificates in such detail. As discussed above, manufacturers desiring to do so can accomplish the same end by agreement between themselves and the facilities servicing their rafts, or by specifying particular certificates in the approved servicing manuals. If a manufacturer demands in the manual particular certificates as part of the servicing procedure, § 160.151-35(b)(3) will require that the manufacturer make those certificates available to approved facilities.

Reporting Damage and Defects

Proposed § 160.151-57(r) would require, in accordance with the IMO recommendation on liferaft servicing, that servicing facilities transmit to the OCMI, at least annually, information concerning damage and defects found in liferafts during servicing and repair. This information would be used by the OCMI and the Commandant to identify recurring problems, and to correct them by requiring manufacturers to make appropriate modifications to their equipment or their procedures.

One comment suggested that the specified information should be provided to the affected manufacturer(s) as well. It also suggested that the information should be provided quarterly rather than annually, though it offered no reason for the increase in frequency.

The Coast Guard disagrees that it is necessary or even desirable for servicing facilities to have to provide the same information to several different parties.

The IMO recommendation requires only that the information be made available to the "Administration." As discussed above, a manufacturer desiring to obtain complete servicing records from facilities servicing its liferafts can accomplish that either by agreement with the affected facilities or by simply requiring it in the approved servicing manual. As was noted in another comment, the Coast Guard expects that OCMIs who identify recurring problems in liferafts or their servicing on the basis of the data submitted to them will inform the Commandant, who will evaluate the information and bring it to the attention of the affected manufacturer(s) for action as appropriate. Consequently, the suggestions in the comment have not been adopted in the final rule.

Penalty for Improper Servicing

One comment noted that there is currently no civil penalty regulation associated with liferaft servicing, and asked what penalty is available for a facility performing improper servicing. When the NPRM was published, there was indeed no established penalty. Since then, section 310 of the Coast Guard Authorization Act of 1996 amended 46 U.S.C. 3318(b) to make servicing or alteration of lifesaving equipment so as to intentionally render that equipment unsafe or unfit for its purpose a Class D felony.

Instructions for Training and Maintenance

Proposed § 160.151–59 would require the manufacturer to prepare "training and maintenance instructions" to comply with SOLAS regulations III/18.2, 19.3, 51, and 52. One comment suggested that all references to "training" in this section should be modified to "operating" or "operating and maintenance." The reason given was that liferaft manufacturers are not in the business of training, and should not be responsible for preparation of training materials.

The Coast Guard believes the suggestion in the comment has merit, since the terminology used in the referenced SOLAS regulations may lead to some confusion. What is required by SOLAS regulation III/51 is the placement in a ship's training manual of not strictly training material but rather "instructions and information, in easily understood terms illustrated wherever possible": a simple set of operating instructions for the education and ready reference of the ship's crew. To minimize ambiguity, in the final rule proposed § 160.151–59 is broken into both a new § 160.151–59 (Operating

instructions and information for the ship's training manual) and a new § 160.151–61 (Maintenance instructions), and all references in the final rule to "training material" have been amended appropriately.

Consequential Revisions

Currently, in 46 CFR 199.190(g)(3) refers to subpart 160.051 for servicing requirements for inflatable liferafts. This final rule revises the reference to subpart 160.151, and expands its application to include inflatable buoyant apparatuses.

Incorporation by Reference

The Director of the Federal Register has approved the material in § 160.151–5 for incorporation by reference under 5 U.S.C. 552 and 1 CFR part 51. The material is available as indicated in that section.

Regulatory Evaluation

This rulemaking is not a significant regulatory action under section 3(f) of Executive Order 12866 and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. It has not been reviewed by the Office of Management and Budget under that Order. It is not significant under the regulatory policies and procedures of the Department of Transportation (DOT) (44 FR 11034; February 26, 1979).

A draft Regulatory Evaluation under paragraph 10e of the regulatory policies and procedures of DOT is available in the docket for inspection or copying where indicated under ADDRESSES. A summary of the Evaluation follows.

The draft evaluation estimated a total one-time cost of \$710,000 for liferaft manufacturers to comply with the proposed rule, including about \$560,000 for them to individually complete the proposed at-sea test for stability. This final rule does not require the at-sea test proposed in the NPRM, and consequently the cost of the test is not included in this final regulatory evaluation. The total anticipated one-time cost for compliance with this rule is therefore \$150,000, or approximately \$60 per new SOLAS liferaft.

This final rule should result in a net recurring annual cost of about \$156,000. Annual saving of almost \$500,000 in servicing costs are possible as a result of the revisions to the servicing procedures in this rule, but some of those savings are offset by an increase of \$218,000 in the annual cost of new SOLAS equipment that will have to be replaced during annual servings. New liferafts will incur an annual increase of \$214,000 needed to comply with the new SOLAS requirements, and \$22,000

in fees for inspections by independent laboratories. In addition, the NPRM projected a cost of \$200,000 for stability appendages, which will be reduced to about \$100,000 by the revisions to the stability requirements in this rule. All of these increases, totalling \$336,000 or about \$672 per new SOLAS liferaft, should fall on manufacturers and presumably be passed through to purchasers. With both one-time and recurring costs taken into account, the acquisition cost of a new SOLAS liferaft would be increased by about \$732, still one-third less than the \$1156 increase projected in the NPRM. The average cost of annual servicing will drop by about \$62 per year per liferaft, as projected in the NPRM. The regulatory evaluation discounts costs at 7 percent to determine future costs. On the basis of this analysis, the evaluation estimates that the cost of compliance with this rule will be about \$1,264,000 over 10 years. Economic research indicates that \$2.7 million per statistical life saved is a reasonable estimate of people's willingness to pay for safety. Therefore, this rule will be cost-effective even if it saves only one life over a 10 year period. The recent history of casualties involving liferafts, such as the MARINE ELECTRIC in 1983 (with loss of life due to difficulty in boarding the liferaft), and the 1992 NETTIE H. and 1993 TRUE LIFE casualties (both with loss of life, where overturned liferafts could not be easily located due to dark bottoms), strongly suggest that liferaft improvements such as the boarding ramps, stability systems, and highly visible coloring on the underside mandated by SOLAS and by this rule will result in the saving of one or more lives.

The regulatory evaluation also discusses other benefits than the saving of lives. First, liferafts approved by the Coast Guard will meet the requirements of SOLAS. This will ensure that U.S.-registered vessels are not being penalized or delayed in foreign ports because of non-compliance. Second, as a signatory to the SOLAS Convention, the United States is obligated to make sure its vessels comply. This final rule will also enhance the lifesaving potential and operational efficiency of inflatable liferafts by making them easier to board from the water, by increasing their stability in heavy seas, and by various other improvements required by the 1983 and subsequent SOLAS amendments.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), the Coast Guard considered whether this rule will have

a significant economic impact on a substantial number of small entities. "Small entities" include small businesses and not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations less than 50,000. All seven U.S. manufacturers of inflatable liferafts and all (approximately 105) U.S. facilities servicing inflatable liferafts qualify as small entities. (Foreign manufacturers and servicing facilities are not considered small entities for the purposes of this analysis.) This final rule would affect all manufacturers and servicing facilities to about the same degree. U.S. firms (the small entities) may already hold a small cost advantage over their foreign counterparts in that the Coast Guard does not require reimbursement for travel and subsistence expenses to conduct inspections at their facilities. Any additional costs incurred as a result of this rule are expected to be passed through to the consumer, resulting in a negligible economic impact on manufacturers and servicing facilities.

Most consumers of liferafts will probably be small entities as well. As discussed above, the acquisition cost of a new SOLAS inflatable liferaft should increase by less than 20 percent under this rule. This increase should not create a substantial hardship for most consumers. In fact, for the regulated market, liferaft production has shifted predominantly toward liferafts complying with SOLAS since approximately 1987, and the Coast Guard is unaware of any significant adverse effects of any price increases associated with SOLAS compliance. Further, as noted above, the average cost of annual servicing will drop by \$62 over the life of the raft, resulting in a negligible difference in lifetime cost.

The Coast Guard has developed these rules to provide for compliance with relevant international treaties and internationally accepted standards at the lowest possible cost to the regulated public. In response to the many comments received on the issue of cost, the most costly provisions in the NPRM, concerning stability testing, were practically eliminated in favor of compliance with relevant international standards. There were no public comments concerning the initial regulatory flexibility analysis in the NPRM, which concluded that the proposed rules would not have a significant economic impact on a substantial number of small entities. This final rule substantially reduces the financial burden on small entities

relative to the proposed rules. The reporting, recordkeeping, and other compliance requirements of this rule are substantially similar to those which have been in long standing effect and industry practice, and require no particular professional skills for compliance. Therefore, the Coast Guard certifies under section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) that this final rule will not have a significant economic impact on a substantial number of small entities.

Assistance for Small Entities

In accordance with section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104-121), the Coast Guard offers to assist small entities in understanding the rule so it can evaluate its effects on them and allow them to participate in the rulemaking process. If your small business or organization is affected by this rule and you have questions concerning its provisions or options for compliance, please contact Kurt Heinz, at either telephone 202-267-1444, fax 202-267-1069, or E-mail address "kheinz@comdt.uscg.mil".

Collection of Information

This final rule provides for a collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). As required by 5 U.S.C. 3507(d) the Coast Guard has submitted a copy of this rule to the Office of Management and Budget (OMB) for review of the collection of information. The Coast Guard will publish a notice in the **Federal Register** when they have been approved. There were no comments on the information collection requirements proposed in the NPRM, and this final rule does not impose any information collection requirements other than those which were proposed in the NPRM. The section numbers of information collection requirements which are either new or have not yet been approved by OMB are as follows:

- a. § 160.151-21(n).
- b. § 160.151-21(u).
- c. § 160.151-21(y)(4).
- d. § 160.151-33.
- e. § 160.151-39(c).
- f. § 160.151-41(b).
- g. § 160.151-45.
- h. § 160.151-53.
- i. § 160.151-57(m).
- j. § 160.151-57(p).
- k. § 160.151-57(r).
- l. § 160.151-59.
- m. § 160.151-61 (was part of § 160.151-59 in the NPRM).

Federalism

The Coast Guard has analyzed this final rule under the principles and criteria contained in Executive Order 12612 and has determined that this rule does not have sufficient implications for federalism to warrant the preparation of a Federalism Assessment. The authority to establish standards for the approval of lifesaving equipment to be carried on board vessels has been committed to the Coast Guard by Federal statutes. Further, because liferafts are distributed in a national marketplace, divergent requirements regarding their manufacture would lead to confusion, added expense, and reduced safety. Therefore, the Coast Guard intends to preempt State and local regulations on the same subject that are inconsistent with this rule. There were no comments concerning the federalism implications of this rule as proposed in the NPRM.

Environment

The Coast Guard considered the environmental impact of this final rule and concluded that under section 2.B.2.e(34)(e) of Commandant Instruction M16475.1B, this rule is categorically excluded from further environmental documentation. The requirements in this final rule affect the design and servicing of inflatable liferafts. This rule will have a positive impact on safety, and clearly have no impact on the environment. A "Categorical Exclusion Determination" is available in the docket for inspection and copying where indicated under **ADDRESSES**. There were no comments concerning the environmental impacts of this rule as proposed in the NPRM.

List of Subjects

46 CFR Part 159

Business and industry, Laboratories, Marine safety, Reporting and recordkeeping requirements.

46 CFR Part 160

Marine safety, Reporting and recordkeeping requirements, Incorporation by reference.

46 CFR Part 199

Cargo vessels, Marine safety, Oil and gas exploration, Passenger vessels, Reporting and recordkeeping requirements, Vessels.

For the reasons set out in the preamble, the Coast Guard amends 46 CFR parts 159, 160, and 199 as follows:

PART 159—APPROVAL OF EQUIPMENT AND MATERIALS

1. The authority citation for part 159 continues to read as follows:

Authority: 46 U.S.C. 3306, 3703; 49 CFR 1.45, 1.46; Section 159.001-9 also issued under the authority of 44 U.S.C. 3507.

2. In § 159.005-5, add paragraph (a)(4) to read as follows:

§ 159.005-5 Preapproval review: Contents of application.

(a) * * *

(4) If the material submitted under paragraph (a)(2) of this section contains confidential commercial information that could cause substantial competitive harm if released to the public, a statement to the effect that the material is considered privileged and confidential under exemption (b)(4) of the Freedom of Information Act (5 U.S.C. 552), and that it should not be released to anyone other than the original submitter.

* * * * *

3. In § 159.005-7, add paragraph (c) to read as follows:

§ 159.005-7 Preapproval review: Coast Guard action.

* * * * *

(c) An item of equipment or material that does not meet all of the requirements of this subchapter for design or performance may be approved by the Commandant if it has equivalent performance characteristics. The item has equivalent performance characteristics if the application and any approval tests prescribed by the Commandant, in place of or in addition to the approval tests required by this subchapter, demonstrate to the satisfaction of the Commandant that the item is at least as effective as one that meets the requirements of this subchapter.

4. In § 159.005-13, revise the introductory text of paragraph (a) to read as follows:

§ 159.005-13 Equipment or material: Approval.

(a) If from analysis of the material and data required to be submitted under this subpart, the Commandant determines that the equipment or material meets the applicable subpart or has equivalent performance characteristics in accordance with § 159.005-7(c), the Commandant—

* * * * *

5. In § 159.007-9, add paragraph (d) to read as follows:

§ 159.007-9 Production inspections and tests.

* * * * *

(d) The manufacturer shall admit a Coast Guard inspector to any place where approved equipment is manufactured, for the purpose of

verifying that the equipment is being manufactured in accordance with the approved plans and the requirements of this subchapter.

PART 160—LIFESAVING EQUIPMENT

6. The authority citation for part 160 continues to read as follows:

Authority: 46 U.S.C. 2103, 3306, 3703, and 4302; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

7. In § 160.010-2, remove paragraph designators (a) through (d) and add the definition for *inflatable buoyant apparatus* at the end of the section to read as follows:

§ 160.010-2 Definitions.

* * * * *

Inflatable buoyant apparatus. An inflatable buoyant apparatus is flotation equipment that depends on inflated compartments for buoyancy and is designed to support a specified number of persons completely out of the water.

8. Sections 160.010-3 and 160.010-4 are redesignated, as §§ 160.010-4 and 160.010-5 respectively, and a new § 160.010-3 is added to read as follows:

§ 160.010-3 Inflatable buoyant apparatus.

(a) *Design and performance.* To obtain Coast Guard approval, an inflatable buoyant apparatus must comply with subpart 160.151, with the following exceptions:

(1) *Canopy requirements (SOLAS Chapter III, regulation 38, paragraph 1.5 (III/38.1.5)).* It does not need a canopy.

(2) *Capacity (Regulation III/38.2.1).* The carrying capacity must be not less than four persons.

(3) *Floor insulation (Regulation III/39.2.2).* The floor may be uninsulated.

(4) *Stability (Regulation III/39.5.1).* It does not need stability pockets.

(5) *Righting (Regulation III/39.5.2).* A reversible one does not need arrangements for righting.

(6) One with a capacity of 13 or more persons must be reversible, with the floor arranged between the buoyancy chambers so that the apparatus can, floating either side up, accommodate the number of persons for which it is approved. One with a capacity of 12 or fewer persons must either be reversible in the same manner, or be designed so that it can be readily righted by one person.

(7) One with a capacity of 25 or more persons must be provided with self-bailing floor drains. If the floor of a reversible one includes one or more drains, each drain must be arranged to completely drain the floor of water when the device is fully loaded, and must prevent water from flowing back onto the floor.

(8) If the buoyancy tubes are not vivid reddish orange, vivid yellow, or a fluorescent color of a similar hue, panels of such hue must be secured to the buoyancy chambers so that a minimum of 1 m² (11 ft²) is visible from above the apparatus when it is floating either side up.

(9) *Boarding ramp (Regulation III/39.4.1).* Boarding ramps are not required if the combined cross-section diameter of the buoyancy chambers is 500 millimeters (mm) (19.5 in.) or less. An apparatus with a combined cross-section diameter greater than 500 mm (19.5 in.) requires boarding ramps as follows:

(i) For an apparatus with a capacity of less than 25 persons, at least one ramp must be provided;

(ii) For an apparatus with a capacity of 25 or more persons, at least two ramps must be provided; and

(iii) The boarding ramps required by this paragraph must allow persons to board with either side of a reversible apparatus floating up, or the full number of ramps required must be installed on each side.

(10) *Boarding ladder (Regulation III/39.4.2).* Boarding ladders must be provided on each inflatable buoyant apparatus as follows:

(i) One ladder must be provided on each apparatus with a capacity of less than 25 persons, except that, for an apparatus with a capacity of 13 or more persons that is not equipped with a boarding ramp, two ladders must be provided.

(ii) Two ladders must be provided on each apparatus with a capacity of 25 or more persons.

(iii) The ladders required by this paragraph must allow persons to board with either side of a reversible apparatus floating up, or the full number of ladders required must be installed on each side.

(11) One or more exterior canopy lamps meeting the requirements of § 160.151-15(n) of this subchapter must be provided such that—

(i) On a non-reversible inflatable buoyant apparatus, one lamp is mounted so that it is on the uppermost surface of the floating apparatus; and

(ii) On a reversible apparatus, two lamps are mounted so that one lamp is on the uppermost surface of the apparatus, whichever side is floating up.

(12) *Equipment (Regulation III/38.5.1).* All equipment required by this paragraph must be either packed in a container accessible to the occupants, or otherwise secured to the apparatus. Duplicate equipment must be provided, for each side of a reversible inflatable buoyant apparatus, if the equipment is

not accessible from both sides. In lieu of the equipment specified in § 160.151–7(b) and Regulation III/38.5.1, each apparatus must be provided with—

(i) *Rescue quoit and heaving line*. One rescue quoit and a heaving line as described in § 160.151–21(a) on each apparatus with a capacity of less than 25 persons; or two on each apparatus for a capacity of 25 or more persons. The heaving line(s) must be mounted adjacent to a boarding ramp (or boarding ladder, if no ramps are installed), and ready for immediate use;

(ii) *Knives*. Two buoyant safety knives ready for use near the painter attachment;

(iii) *Bailer*. One bailer as described in § 160.151–21(c) on each apparatus with a capacity of less than 25 persons; or two bailers on each apparatus with a capacity of 25 or more persons, except that no bailers are necessary if both sides of the floor of a reversible apparatus are equipped with drains;

(iv) *Sponge*. One sponge as described in § 160.151–21(d) on each apparatus with a capacity of less than 25 persons, or two sponges on each apparatus with a capacity of 25 or more persons;

(v) *Paddles*. Two paddles as described in § 160.151–21(f) on each apparatus with a capacity of less than 25 persons, or four paddles on each apparatus with a capacity of 25 or more persons;

(vi) *Flashlight*. One flashlight with spare batteries as described in § 160.151–21(m);

(vii) *Signaling mirror*. One signaling mirror as described in § 160.151–21(o);

(viii) *Repair outfit*. One set of sealing clamps or plugs as described in § 160.151–21(y)(1);

(ix) *Pump or bellows*. One pump or bellows as described in § 160.151–21(z); and

(x) *Sea anchor*. One sea anchor as described in § 160.151–21(e), attached so as to be readily deployable when the apparatus inflates.

(13) *Marking and labeling* (Regulations III/39.7.3.4, III/39.7.3.5, and III/39.8.6). Marking and labeling of inflatable buoyant apparatus must be in accordance with the requirements of § 160.151–33, except that the device must be identified as an “INFLATABLE BUOYANT APPARATUS”, and no “SOLAS” markings shall be placed on the container of the apparatus. The capacity marking specified in regulation III/39.8.6 must be applied to the top of each buoyancy tube.

(14) *Drop test*. The drop test required under paragraph 1/5.1 of IMO Resolution A.689(17) and § 160.151–27(a) may be from a lesser height, if that height is the maximum height of stowage marked on the container.

(15) *Loading and seating test*. For the loading and seating test required under paragraph 1/5.7 of IMO Resolution A.689(17) and § 160.151–27(a), the loaded freeboard of the apparatus must be not less than 200 mm (8 in.).

(16) *Cold-inflation test*. The cold-inflation test required under paragraph 1/5.17.3.3.2 of IMO Resolution A.689(17) and § 160.151–27(a) must be conducted at a test temperature of –18°C (0°F).

(b) *Production inspections and tests*. Production inspections and tests for inflatable buoyant apparatus must be performed in accordance with the applicable requirements of § 160.151–31.

(c) *Servicing*. Inflatable buoyant apparatus must be serviced periodically at approved servicing facilities in accordance with the applicable requirements of §§ 160.151–35 through 160.151–57.

(d) *Instruction placard*. An instruction placard meeting the requirements of § 160.151–59(c), giving simple procedures and illustrations for inflating, launching, and boarding the inflatable buoyant apparatus, must be made available to the operator or master of each vessel on which the apparatus is to be carried.

(e) *Requirements for “open reversible liferafts” under the IMO International Code of Safety for High-Speed Craft (HSC Code)*. To be approved as meeting the requirements for open reversible liferafts in Annex 10 to the HSC Code, an inflatable buoyant apparatus must meet all of the requirements in paragraphs (a) through (d) of this section, with the following exceptions:

(1) The apparatus must be reversible regardless of size.

(2) The surface of the buoyancy tubes must be of a non-slip material. At least 25 percent of the surface of the buoyancy tubes must meet the color requirements of § 160.151–15(e).

(3) The length of the painter should be such that the apparatus inflates automatically upon reaching the water.

(4) An additional bowing-in line must be fitted to an apparatus with a capacity of more than 30 persons.

(5) The apparatus must be fitted with boarding ramps regardless of size.

(6) An apparatus with a capacity of 30 or fewer persons must be fitted with at least one floor drain.

(7) In addition to the equipment specified in § 160.010–3(a)(12), the apparatus must be provided with—

(i) *Sponge*. One additional sponge as described in § 160.151–21(d) on each apparatus with a capacity of less than 25 persons;

(ii) *First-aid kit*. A first-aid kit approved by the Commandant under approval series 160.054;

(iii) *Whistle*. A ball-type or multi-tone whistle of corrosion-resistant construction;

(iv) *Hand flares*. Two hand flares approved by the Commandant under approval series 160.121.

(8) Marking and labeling of the apparatus must be in accordance with § 160.151–33, except that the device must be identified as a “NON-SOLAS REVERSIBLE”, and the equipment pack must be identified as an “HSC Pack”.

9. Subpart 160.051, consisting of §§ 160.051–0 through 160.051–9, is removed, and replaced with a new subpart 160.051 to read as follows:

Subpart 160.051—Inflatable Liferafts for Domestic Service

Sec.

160.051–1 Scope.

160.051–3 Definitions.

160.051–5 Design and performance of Coastal Service inflatable liferafts.

160.051–7 Design and performance of A and B inflatable liferafts.

160.051–9 Equipment required for Coastal Service inflatable liferafts.

Subpart 160.051—Inflatable Liferafts for Domestic Service

§ 160.051–1 Scope.

This subpart prescribes requirements for approval by the Coast Guard of A, B, and Coastal Service inflatable liferafts for use only in domestic service. These liferafts must comply with all of the requirements for SOLAS A and SOLAS B liferafts in subpart 160.151 except as specified in this subpart.

§ 160.051–3 Definitions.

In this subpart, the term:

A or B liferaft means an inflatable liferaft that meets the requirements prescribed in subpart 160.151 for a SOLAS A or SOLAS B liferaft, respectively, except that the capacity is less than 6 persons and the liferaft cannot contain SOLAS markings.

Coastal Service liferaft means a liferaft that does not meet the all of the requirements prescribed in subpart 160.151 for a SOLAS A or SOLAS B liferaft, but that instead meets the requirements of this subpart and is approved for use on certain uninspected vessels under subchapter C of this chapter.

§ 160.051–5 Design and performance of Coastal Service inflatable liferafts.

To obtain Coast Guard approval, each Coastal Service inflatable liferaft must comply with subpart 160.151, with the following exceptions:

(a) *Canopy requirements (Regulation III/38.1.5).* The canopy may—

(1) Be of a type that is furled when the liferaft inflates and that can be set in place by the occupants. A furled canopy must be secured to the buoyancy tubes over 50 percent or more of the liferaft's circumference;

(2) Be of an uninsulated, single-ply design; and

(3) Have an interior of any color.

(b) *Viewing port (Regulation III/38.1.5.5).* The liferaft need not have the viewing port described in Regulation III/38.1.5.5.

(c) *Rainwater collection (Regulation III/38.1.5.6).* The liferaft need not have the means of rainwater collection described in Regulation III/38.1.5.6.

(d) *Capacity (Regulation III/38.2.1).* The carrying capacity must be not less than four persons.

(e) *Floor insulation (Regulation III/39.2.2).* The floor may be uninsulated.

(f) *Boarding ramps (Regulation III/39.4.1).* The liferaft need be provided with boarding ramps only if the combined cross-section diameter of the buoyancy chambers is greater than 500 mm (19.5 in).

(g) *Stability (Regulation III/39.5.1).* Each Coastal Service inflatable liferaft must either meet the stability criteria in § 160.151-17(a) or be fitted with water-containing stability pockets meeting the following requirements:

(1) The total volume of the pockets must be not less than 25 percent of the minimum required volume of the principal buoyancy compartments of the liferaft.

(2) The pockets must be securely attached and evenly distributed around the periphery of the exterior bottom of the liferaft. They may be omitted at the locations of inflation cylinders.

(3) The pockets must be designed to deploy underwater when the liferaft inflates. If weights are used for this purpose, they must be of corrosion-resistant material.

(h) *Lamp (Regulation III/39.6.3).* The liferaft need not have the manually controlled interior lamp described in Regulation III/39.6.3.

(i) *Markings (Regulations III/39.7.3.4 and III/39.7.3.5).* The words "COASTAL SERVICE" must appear on the container, and the type of equipment pack must be identified as "Coastal Service". No "SOLAS" markings may appear on the container.

(j) *Drop test.* The drop test required under paragraph 1/5.1 of IMO Resolution A.689(17) and 160.151-27(a) may be from a lesser height, if that height is the maximum height of stowage marked on the container.

(k) *Loading and seating test.* For the loading and seating test required under paragraph 1/5.7 of IMO Resolution A.689(17) and § 160.151-27(a), the loaded freeboard of the liferaft must be not less than 200 mm (8 in.).

(l) *Cold-inflation test.* The cold-inflation test required under paragraph 1/5.17.3.3.2 of IMO Resolution A.689(17) and § 160.151-27(a) must be conducted at a test temperature of -18°C (0°F).

§ 160.051-7 Design and performance of A and B inflatable liferafts.

To obtain Coast Guard approval, each A and B inflatable liferaft must comply with the requirements in subpart 160.151, with the following exceptions:

(a) *Capacity (Regulation III/38.2.1).* The carrying capacity must be not less than four persons.

(b) *Markings (Regulations III/39.7.3.4 and III/39.7.3.5).* The type of equipment pack must be identified as "A" or "B", respectively, instead of "SOLAS A" or "SOLAS B". No "SOLAS" markings may appear on the container.

§ 160.051-9 Equipment required for Coastal Service inflatable liferafts.

In lieu of the equipment specified in § 160.151-21, the following equipment must be provided with a Coastal Service inflatable liferaft:

(a) *Rescue quoit and heaving line.* One rescue quoit and a heaving line as described in § 160.151-21(a).

(b) *Knife.* One knife, of a type designed to minimize the chance of damage to the inflatable liferaft and secured with a lanyard.

(c) *Bailer.* One bailer as described in § 160.151-21(c).

(d) *Sponge.* One sponge as described in § 160.151-21(d).

(e) *Sea anchor.* One sea anchor as described in § 160.151-21(e).

(f) *Paddles.* Two paddles of the same size and type as used to pass the maneuverability test in paragraph 1/5.10 of IMO Resolution A.689(17).

(g) *Whistle.* One whistle as described in § 160.151-21(i) of this part.

(h) *Flashlight.* One flashlight with spare batteries as described in § 160.151-21(m).

(i) *Signalling mirror.* One signalling mirror as described in § 160.151-21(o).

(j) *Survival instructions.* Instructions on how to survive as described in § 160.151-21(v).

(k) *Instructions for immediate action.* Instructions for immediate action as described in § 160.151-21(w).

(l) *Repair outfit.* One set of sealing clamps or plugs as described in § 160.151-21(y)(1).

(m) *Pump or bellows.* One pump or bellows as described in § 160.151-21(z).

(n) *Plugs for pressure-relief valves.* Plugs for pressure-relief valves as described in § 160.151-21(aa).

10. Subpart 160.151, consisting of §§ 160.151-1 through 160.151-59, is added to read as follows:

Subpart 160.151—Inflatable Liferafts (SOLAS)

Sec.

- 160.151-1 Scope.
- 160.151-3 Definitions.
- 160.151-5 Incorporation by reference.
- 160.151-7 Construction of inflatable liferafts.
- 160.151-9 Independent laboratory.
- 160.151-11 Approval procedure.
- 160.151-13 Fabrication of prototype inflatable liferafts for approval.
- 160.151-15 Design and performance of inflatable liferafts.
- 160.151-17 Additional requirements for design and performance of SOLAS A and SOLAS B inflatable liferafts.
- 160.151-21 Equipment required for SOLAS A and SOLAS B inflatable liferafts.
- 160.151-25 Additional equipment for inflatable liferafts.
- 160.151-27 Approval inspections and tests for inflatable liferafts.
- 160.151-29 Additional approval tests for SOLAS A and SOLAS B liferafts.
- 160.151-31 Production inspections and tests of inflatable liferafts.
- 160.151-33 Marking and labeling.
- 160.151-35 Servicing.
- 160.151-37 Servicing manual.
- 160.151-39 Training of servicing technicians.
- 160.151-41 Approval of servicing facilities.
- 160.151-43 Conditions at servicing facilities.
- 160.151-45 Equipment required for servicing facilities.
- 160.151-47 Requirements for owners or operators of servicing facilities.
- 160.151-49 Approval of servicing facilities at remote sites.
- 160.151-51 Notice of approval.
- 160.151-53 Notice to OCMI of servicing.
- 160.151-55 Withdrawal of approval.
- 160.151-57 Servicing procedure.
- 160.151-59 Operating instructions and information for the ship's training manual.
- 160.151-61 Maintenance instructions.

Subpart 160.151—Inflatable Liferafts (SOLAS)

§ 160.151-1 Scope.

This subpart prescribes standards, tests, and procedures for approval by the Coast Guard of SOLAS A and SOLAS B inflatable liferafts, and for their periodic inspection and repair at approved facilities ("servicing"). Certain provisions of this subpart also apply to inflatable buoyant apparatus as specified in § 160.010-3 and to inflatable liferafts for domestic service as specified in subpart 160.051.

§ 160.151-3 Definitions.

In this subpart, the term:

Commandant means the Commandant (G-MSE), United States Coast Guard, 2100 Second Street, SW., Washington, DC 20593-0001.

Servicing means periodic inspection, necessary repair, and repacking by a servicing facility approved by the Coast Guard. Requirements for periodic inspection and repair of inflatable liferafts approved by the Coast Guard are described in §§ 160.151-35 through 160.151-57.

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended by the International Maritime Organization through the 1988 (GMDSS) amendments, dated 9 November 1988.

SOLAS A Liferaft means a liferaft that meets the requirements of this subpart for an inflatable liferaft complying with SOLAS and equipped with a SOLAS A equipment pack.

SOLAS B Liferaft means a liferaft that meets the requirements of this subpart for an inflatable liferaft complying with SOLAS and equipped with a SOLAS B equipment pack.

§ 160.151-5 Incorporation by reference.

(a) Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish notice of change in the **Federal Register** and make the material available to the public. All approved material is on file at the Office of the Federal Register, 800 North Capitol Street NW., Suite 700, Washington, DC, and at the U.S. Coast Guard, Office of Design and Engineering Standards (G-MSE), 2100 Second Street SW., Washington, DC 20593-0001, and is available from the sources indicated in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this subpart and the sections affected are as follows:

American Society for Testing and

Materials (ASTM), 1916 Race St., Philadelphia, PA 19103

ASTM F1014—Standard Specification for Flashlights on Vessels, 1986—160.151-21

International Maritime Organization

(IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, England

Resolution A.689(17)—

Recommendation on Testing of Life-saving Appliances, 27 November 1991, including

amendments through Resolution MSC.54(66), adopted 30 May 1996—160.151-21; 160.151-27; 160.151-31; 160.151-57

Resolution A.657(16)—Instructions for Action in Survival Craft, 19 November 1989—160.151-21

Resolution A.658(16)—Use and Fitting of Retro-reflective Materials on Life-saving Appliances, 20 November 1989—160.151-15; 160.151-57.

National Institute of Standards and Technology (formerly National Bureau of Standards), c/o National Technical Information Service, Springfield, VA 22161

NBS Special Publication 440 (Order No. PB265225) Color: Universal Language and Dictionary of Names, 1976—160.151-15

Naval Forms and Publications Center, Customer Service, Code 1052, 5801 Tabor Ave., Philadelphia, PA 19120 MIL-C-17415E—(Ships)—Cloth, Coated, and Webbing, Inflatable Boat and Miscellaneous Use—160.151-15

§ 160.151-7 Construction of inflatable liferafts.

Except as specified in this subpart, each SOLAS A and SOLAS B inflatable liferaft must meet the requirements of Chapter III of SOLAS. To be approved under this subpart, inflatable liferafts must be constructed in accordance with the following provisions of SOLAS:

(a) Chapter III, Regulation 30, paragraph 2 (III/30.2), General requirements for life-saving appliances.

(b) Chapter III, Regulation 38 (III/38) General requirements for liferafts.

(c) Chapter III, Regulation 39 (III/39) Inflatable liferafts.

(d) Chapter III, Regulation 51 (III/51) Training manual.

(e) Chapter III, Regulation 52 (III/52) Instructions for on-board maintenance.

§ 160.151-9 Independent laboratory.

Tests and inspections that this subpart requires to be conducted by an independent laboratory must be conducted by an independent laboratory accepted by the Coast Guard under subpart 159.010 of part 159 of this chapter to perform such tests and inspections. A list of accepted laboratories is available from the Commandant.

§ 160.151-11 Approval procedure.

(a) A manufacturer seeking approval of an inflatable liferaft must comply with the procedures in part 159, subpart 159.005, of this chapter and in this section.

(b) A manufacturer seeking approval of an inflatable liferaft must submit an

application meeting the requirements of § 159.005-5 of this chapter for preapproval review. To meet the requirements of § 159.005-5(a)(2) of this chapter, the manufacturer shall submit—

(1) General-arrangement drawing including principal dimensions;

(2) Seating-arrangement plan;

(3) Plans for subassemblies;

(4) Plans for carriage and, in detail, stowage of equipment;

(5) Plans for the inflation system;

(6) Plans for the outer container;

(7) Plans for any lifting shackle or ring, including diameter in cross-section, used for connecting the suspension tackle of a davit-launched inflatable liferaft to the automatic disengaging device used for its hoisting and lowering;

(8) Other drawing(s) necessary to show that the inflatable liferaft complies with the requirements of this subpart;

(9) Description of methods of seam and joint construction;

(10) Samples and identification of each material used in the buoyancy chambers, floor, and canopy, including the identity of their manufacturers, and segments of each type of seam made from such materials; and

(11) Complete data pertinent to the installation and use of the proposed inflatable liferaft, including the maximum proposed height of its installation above the water, and the maximum length of the sea painter installed in the inflatable liferaft.

§ 160.151-13 Fabrication of prototype inflatable liferafts for approval.

If the manufacturer is notified that the information submitted in accordance with § 160.151-11 is satisfactory to the Commandant, fabrication of a prototype inflatable liferaft must proceed in the following sequence:

(a) The manufacturer shall arrange for an independent laboratory to inspect the liferaft during its fabrication and prepare an inspection report meeting the requirements of § 159.005-11 of this chapter. The independent laboratory shall conduct at least one inspection during layup of the buoyancy tubes of the liferaft, at least one inspection of the finished liferaft when fully inflated, and as many other inspections as are necessary to determine that the liferaft—

(1) Is constructed by the methods and with the materials specified in the plans;

(2) Passes the applicable inspections and tests required by § 160.151-31; and

(3) Conforms with the manufacturer's plans.

(b) The manufacturer shall submit the independent laboratory's inspection report to the Commandant for review.

(c) If, after review of the inspection report of the independent laboratory, the Commandant notifies the manufacturer that the liferaft is in compliance with the requirements of this subpart, the manufacturer may proceed with the approval tests required under §§ 160.151–27 and 160.151–29.

(d) The manufacturer shall notify the cognizant OCMI of where the approval tests required under §§ 160.151–27 and 160.151–29 will take place and arrange with the OCMI a testing schedule that allows for a Coast Guard inspector to travel to the site where the testing is to be performed.

(e) The manufacturer shall admit the Coast Guard inspector to any place where work or testing is performed on inflatable liferafts or their component parts and materials for the purpose of—

(1) Assuring that the quality-assurance program of the manufacturer is satisfactory;

(2) Witnessing tests; and

(3) Taking samples of parts or materials for additional inspections or tests.

(f) The manufacturer shall make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of inflatable liferafts, together with records identifying the lot numbers of the liferafts in which such materials were used.

(g) On conclusion of the approval testing, the manufacturer shall comply with the requirements of § 159.005–9(a)(5) of this chapter by submitting the following to the Commandant:

(1) The report of the prototype testing prepared by the manufacturer. The report must include a signed statement by the Coast Guard inspector who witnessed the testing, indicating that the report accurately describes the testing and its results.

(2) The final plans of the liferaft as built. The plans must include—

(i) The servicing manual described in § 160.151–37;

(ii) The instructions for training and maintenance described in §§ 160.151–59 and 160.151–61, respectively;

(iii) The final version of the plans required under § 160.151–11(b), including—

(A) Each correction, change, or addition made during the construction and approval testing of prototypes;

(B) Sufficient detail to determine that each requirement of this subpart is met;

(C) Fabrication details for the inflatable liferaft, including details of the method of making seams and joints; and

(D) Full details of the inflation system.

(h) A description of the quality-control procedures that will apply to the production of the inflatable liferaft. These must include—

(1) The system for checking material certifications received from suppliers;

(2) The method for controlling the inventory of materials;

(3) The method for checking quality of seams and joints; and

(4) The inspection checklists used during various stages of fabrication to assure that the approved liferaft complies with the approved plans and the requirements of this subpart.

§ 160.151–15 Design and performance of inflatable liferafts.

To satisfy the requirements of the regulations of SOLAS indicated in § 160.151–7, each inflatable liferaft must meet the following requirements of this section:

(a) *Workmanship and materials* (Regulation III/30.2.1). Each liferaft must be constructed of the following types of materials meeting MIL–C–17415E, or materials accepted by the Commandant as equivalent or superior—

(1) Type 2, Class B, for the canopy;

(2) Type 8 for seam tape;

(3) Type 11 for the inflatable floor; and

(4) Type 16, Class AA, for all other inflatable compartments and structural components.

(b) *Seams* (Regulation III/30.2.1). Each seam must be at least as strong as the weakest of the materials joined by the seam. Each seam must be covered with tape where necessary to prevent lifting of and damage to fabric edges.

(c) *Protection from cold inflation-gas* (Regulation III/30.2.1). Each inflatable compartment must be provided with a protective liner or baffling arrangement at the inflation-gas inlet, or other equally effective means to prevent damage from exposure to cold inflation-gas.

(d) *Compatibility of dissimilar materials* (Regulation III/30.2.4). Where dissimilar materials are combined in the construction of a liferaft, provisions must be made to prevent loosening or tightening due to differences in thermal expansion, freezing, buckling, galvanic corrosion, or other incompatibilities.

(e) *Color* (Regulation III/30.2.6). The primary color of the exterior of the canopy must be vivid reddish orange (color number 34 of NBS Special Publication 440), or a fluorescent color of a similar hue.

(f) *Retroreflective material* (Regulation III/30.2.7). Each inflatable liferaft must be marked with Type I retroreflective material approved under part 164,

subpart 164.018, of this chapter as complying with SOLAS. The arrangement of the retroreflective material must comply with IMO Resolution A.658(16).

(g) *Towing attachments* (Regulation III/38.1.4). Each towing attachment must be reinforced strongly enough to withstand the towing strain, and marked to indicate its function.

(h) *Weight* (Regulation III/38.2.2). The weight of the liferaft including its container and equipment may not exceed 185 kg (407.8 lb), unless the liferaft is intended for launching into the water directly from its stowed position using an inclined or hand-tilted rack, or is served by a launching appliance approved by the Commandant under approval series 160.163.

(i) *Lifelines* (Regulation III/38.3.1). Each lifeline must be made of nylon tubular webbing with a minimum diameter of 14 mm (9/16-inch), rope with a minimum diameter of 10 mm (3/8-inch), or equivalent. Each lifeline-attachment patch must have a minimum breaking strength of 1.5 kN (350 lb) pull exerted perpendicular to the base of the patch. Each bight of an exterior lifeline must be long enough to allow the lifeline to reach to the waterline of the liferaft when it is afloat.

(j) *Painter length* (Regulation III/38.3.2). On or before July 1, 1998, the length of the liferaft painter shall be not less than 10 meters (33 feet) plus the liferaft's maximum stowage height, or 15 meters (49 feet), whichever is greater.

(k) *Painter system* (Regulation III/38.6.1). The painter protruding from the liferaft container must be inherently resistant, or treated to be resistant, to deterioration from sunlight and salt spray, and resistant to absorption and wicking of water.

(l) *Inflation cylinders* (Regulation III/39.2.3). Each compressed-gas inflation cylinder within the liferaft must meet the requirements of § 147.60 of this chapter, and be installed so that—

(1) Slings and reinforcements of sufficient strength retain the inflation cylinders in place when the liferaft is dropped into the water from its stowage height and during inflation; and

(2) The painter and the inflation cylinders of the liferaft are linked to start inflation when the painter is pulled by one person exerting a force not exceeding 150 N (34 lb).

(m) *Boarding ladders* (Regulation III/39.4.2). The steps of each boarding ladder must provide a suitable foothold.

(n) *Canopy lamps* (Regulation III/39.6.2). The exterior liferaft canopy lamp must be approved by the Commandant under approval series 161.101.

(o) *Containers (Regulation III/39.7.1).* Each container for packing liferafts—

(1) Must include a telltale made with a seal-and-wire, or equivalent, method for indicating whether the liferaft has been tampered with or used since packing;

(2) Must be designed so that the liferaft breaks free of the container when inflation is initiated, without the need to manually open or remove any closing arrangement;

(3) Must have an interior surface smooth and free from splinters, barbs, or rough projections;

(4) Must be of rigid construction where the liferaft is intended for float-free launching or for exposed stowage on deck;

(5) If rigid, must be designed to facilitate securing the inflatable liferaft to a vessel to permit quick release for manual launching;

(6) If constructed of fibrous-glass-reinforced plastic, must be provided with a means to prevent abrasion of the liferaft fabric, such as by using a gel-coated interior finish of the container, enclosing the liferaft in an envelope of plastic film, or equivalent means; and

(7) Except as provided in paragraph (o)(4) of this section, may be of fabric construction. Each container of fabric construction must be made of coated cloth, include carrying handles and drain holes, and be adaptable to stowage and expeditious removal from lockers and deck-mounted enclosures adjacent to liferaft-launching stations. The weight of a liferaft in a fabric container including its container and equipment may not exceed 100 kg (220 lb).

§ 160.151–17 Additional requirements for design and performance of SOLAS A and SOLAS B inflatable liferafts.

To satisfy the requirements of the indicated regulations of SOLAS, each SOLAS A and SOLAS B inflatable liferaft must be manufactured in accordance with §§ 160.151–7 and 160.151–15, and must comply with the following additional requirements:

(a) *Stability (Regulation III/39.5.1).* (1) Each liferaft with a capacity of more than 8 persons must have a waterplane of circular or elliptical shape. A hexagonal, octagonal, or similar outline approximating a circular or elliptical shape is acceptable.

(2) Each liferaft manufactured under this subpart must have water-containing stability appendages on its underside to resist capsizing from wind and waves. On or before July 1, 1998, these appendages must meet the following requirements:

(i) The total volume of the appendages must not be less than 220 liters (7.77 ft³)

for liferafts approved to accommodate up to 10 persons. The volume of an appendage is calculated using the bottom of the lowest opening in an appendage as the height of the appendage, and by deducting the volume of any objects inside the appendage. No opening designed to close as water is forced out of an appendage is an opening for the purpose of this calculation.

(ii) The total volume of the appendages for liferafts approved to accommodate more than 10 persons must be not less than $20 \times N$ liters (0.706 $\times N$ ft³), where N = the number of persons for which the liferaft is approved.

(iii) The appendages must be securely attached and evenly distributed around the periphery of the exterior bottom of the liferaft. They may be omitted at the locations of inflation cylinders.

(iv) The appendages must consist of at least two separate parts so that damage to one part will permit at least half of the required total volume to remain intact.

(v) Openings in or between the appendages must be provided to limit the formation of air pockets under the inflatable liferaft.

(vi) The appendages must be designed to deploy underwater when the liferaft inflates, and to fill to at least 60 percent of their capacity within 25 seconds of deployment. If weights are used for this purpose, they must be of corrosion-resistant material.

(vii) The primary color of the appendages must be vivid reddish orange (color number 34 of NBS Special Publication 440), or a fluorescent color of a similar hue.

(b) *Boarding ramp (Regulation III/39.4.1).* The boarding ramp must have sufficient size and buoyancy to support one person weighing 100 kg (220 lb), sitting or kneeling and not holding onto any other part of the liferaft.

(c) *Marking (Regulation III/39.8).* On or before July 1, 1998, means must be provided for identifying the liferaft with the name and port of registry of the ship to which it is to be fitted, so that the identification can be changed without opening the liferaft container.

§ 160.151–21 Equipment required for SOLAS A and SOLAS B inflatable liferafts.

To obtain Coast Guard approval, the equipment in each SOLAS A and SOLAS B inflatable liferaft must meet the following specific requirements when complying with the indicated regulations of SOLAS:

(a) *Heaving line (Regulation III/38.5.1.1).* The buoyant heaving line described by Regulation III/38.5.1.1

must have a breaking strength of not less than 1.1 kN (250 lb), and must be attached to the inflatable liferaft near the entrance furthest from the painter attachment.

(b) *Jackknife (Regulation III/38.5.1.2).* Each folding knife carried as permitted by Regulation III/38.5.1.2 must be a jackknife approved by the Commandant under approval series 160.043.

(c) *Bailer (Regulation III/38.5.1.3).* Each bailer described by Regulation III/38.5.1.3 must have a volume of at least 2 L (125 in³).

(d) *Sponge (Regulation III/38.5.1.4).* Each sponge described by Regulation III/38.5.1.4 must have a volume of at least 750 cm³ (48 in³) when saturated with water.

(e) *Sea anchors (Regulation III/38.5.1.5).* Sea anchors without the swivels described by Regulation III/38.5.1.5 may be used if, during the towing test, a sea anchor of their design does not rotate when streamed. The sea anchors need not have the tripping lines described by Regulation III/38.5.1.5 if, during the towing test, a sea anchor of their design can be hauled in by one person.

(f) *Paddles (Regulation III/38.5.1.6).* The paddles must be at least 1.2 m (4 ft) long and must be of the same size and type as used to pass the maneuverability test in paragraph 1/5.10 of IMO Resolution A.689(17).

(g) *Tin-opener (Regulation III/38.5.1.7).* Each sharp part of a tin-opener described by Regulation III/38.5.1.7 must have a guard.

(h) *First-aid kit (Regulation III/38.5.1.8).* Each first-aid kit described by Regulation III/38.5.1.8 must be approved by the Commandant under approval series 160.054.

(i) *Whistle (Regulation III/38.5.1.9).* The whistle described by Regulation III/38.5.1.9 must be a ball-type or multi-tone whistle of corrosion-resistant construction.

(j) *Rocket parachute flare (Regulation III/38.5.1.10).* Each rocket parachute flare described by Regulation III/38.5.1.10 must be approved by the Commandant under approval series 160.136.

(k) *Hand flare (Regulation III/38.5.1.11).* Each hand flare described by Regulation III/38.5.1.11 must be approved by the Commandant under approval series 160.121.

(l) *Buoyant smoke signal (Regulation III/38.5.1.12).* Each buoyant smoke signal described by Regulation III/38.5.1.12 must be of the floating type approved by the Commandant under approval series 160.122.

(m) *Electric torch (Regulation III/38.5.1.13).* The waterproof electric torch

described by Regulation III/38.5.1.13 must be a Type I or Type III flashlight constructed and marked in accordance with ASTM F1014. Three-cell-size flashlights bearing Coast Guard approval numbers in the 161.008 series may continue to be used as long as they are serviceable.

(n) *Radar reflector (Regulation III/38.5.1.14)*. The radar reflector may be omitted if the outside of the container of the inflatable liferaft includes a notice near the "SOLAS A" or "SOLAS B" marking indicating that no radar reflector is included.

(o) *Signalling mirror (Regulation III/38.5.1.15)*. Each signalling mirror described by Regulation III/38.5.1.15 must be approved by the Commandant under approval series 160.020.

(p) *Lifesaving signals (Regulation III/38.5.1.16)*. If not provided on a waterproof card or sealed in a transparent waterproof container as described in Regulation III/38.5.1.16, the table of lifesaving signals may be provided as part of the instruction manual.

(q) *Fishing tackle (Regulation III/38.5.1.17)*. The fishing tackle must be in a kit approved by the Commandant under approval series 160.061.

(r) *Food rations (Regulation III/38.5.1.18)*. The food rations must be approved by the Commandant under approval series 160.046.

(s) *Drinking water (Regulation III/38.5.1.19)*. The fresh water required by Regulation III/38.5.1.19 must be "emergency drinking water" approved by the Commandant under approval series 160.026. The desalting apparatus described in Regulation III/38.5.1.19 must be approved by the Commandant under approval series 160.058. After July 1, 1998, 1.0 liter/person of the required water may be replaced by an approved manually powered reverse osmosis desalinators capable of producing an equal amount of water in two days.

(t) *Drinking cup (Regulation III/38.5.1.20)*. The drinking cup described in Regulation III/38.5.1.20 must be graduated in ounces or milliliters or both.

(u) *Anti-seasickness medicine (Regulation III/38.5.1.21)*. The anti-seasickness medicine required by Regulation III/38.5.1.21 must include instructions for use and be marked with an expiration date.

(v) *Survival instructions (Regulation III/38.5.1.22)*. The instructions required by Regulation III/38.5.1.22 on how to survive in a liferaft must—

- (1) Be waterproof;
- (2) Whatever other language or languages they may be in, be in English;

(3) Meet the guidelines in IMO Resolution A.657(16); and

(4) Be suspended in a clear film envelope from one of the arch tubes of the canopy.

(w) *Instructions for immediate action (Regulation III/38.5.1.23)*. The instructions for immediate action must—

- (1) Be waterproof;
- (2) Whatever other language or languages they may be in, be in English;
- (3) Meet the guidelines in IMO Resolution A.657(16);

(4) Explain both the noise accompanying the operation of any provided pressure-relief valves, and the need to render them inoperable after they complete venting; and

(5) Be suspended from the inside canopy, so they are immediately visible by survivors on entering the inflatable liferaft. They may be contained in the same envelope with the instructions on how to survive if the instructions for immediate action are visible through both faces of the envelope.

(x) *Thermal protective aid (Regulation III/38.5.1.24)*.

Each thermal protective aid described by Regulation III/38.5.1.24 must be approved by the Commandant under approval series 160.174.

(y) *Repair outfit (Regulation III/39.10.1.1)*. The repair outfit required by Regulation III/39.10.1.1 must include—

(1) Six or more sealing clamps or serrated conical plugs, or a combination of the two;

(2) Five or more tube patches at least 50 mm (2 in) in diameter;

(3) A roughing tool, if necessary to apply the patches; and

(4) If the patches are not self-adhesive, a container of cement compatible with the liferaft fabric and the patches, marked with instructions for use and an expiration date.

(z) *Pump or bellows (Regulation III/39.10.1.2)*. The pump or bellows required by Regulation III/39.10.1.2 must be manually operable and arranged to be capable of inflating any part of the inflatable structure of the liferaft.

(aa) *Plugs for pressure-relief valves*. Plugs for rendering pressure-relief valves inoperable must be provided in any liferaft fitted with such valves, unless the valves are of a type that can be rendered inoperable without separate plugs. If provided, plugs for pressure-relief valves must be usable with hands gloved in an immersion suit, and must either float or be secured to the liferaft by a lanyard.

§ 160.151–25 Additional equipment for inflatable liferafts.

The manufacturer may specify additional equipment to be carried in inflatable liferafts if the equipment is identified in the manufacturer's approved drawings and if the packing and inspection of the equipment is covered in the servicing manual. Any such additional equipment for which performance or approval standards are prescribed in this part or in 47 CFR part 80 must comply with those standards.

§ 160.151–27 Approval inspections and tests for inflatable liferafts.

(a) Except as provided in paragraph (b) of this section, to satisfy the testing requirements of: IMO Resolution A.689(17), part 1, paragraphs 5.1 through 5.15 inclusive; paragraph 5.16 for a davit-launched inflatable liferaft; and paragraph 5.17, a prototype inflatable liferaft of each design submitted for Coast Guard approval must meet the additional specific requirements and tests specified in paragraphs (c) and (d) of this section.

(b) The Commandant may waive certain tests for a liferaft identical in construction to a liferaft that has successfully completed the tests, if the liferafts differ only in size and are of essentially the same design.

(c) Tests must be conducted in accordance with the indicated paragraphs of IMO Resolution A.689(17), except:

(1) *Jump test (Paragraph 1/5.2)*. One-half of the jumps must be with the canopy erect, and the remainder with the canopy furled or deflated. If a "suitable and equivalent mass" is used, it must be equipped with the shoes described in paragraph 1/5.2.1 of Resolution A.689(17), and arranged so the shoes strike the liferaft first.

(2) *Mooring-out test (Paragraph 1/5.5)*. Initial inflation may be with compressed air.

(3) *Loading and seating test (Paragraph 1/5.7)*. For a liferaft not intended for use with a launching or embarkation appliance, the persons used to determine seating capacity shall wear insulated buoyant immersion suits rather than lifejackets.

(4) *Boarding test (Paragraph 1/5.8)*. This test must be performed using each boarding ramp or boarding ladder which is installed on the liferaft.

(5) *Canopy-closure test (Paragraph 1/5.12)*. This test is required only for SOLAS A and SOLAS B inflatable liferafts. For a davit-launched liferaft, any opening near the lifting eye should be sealed during the test to prevent the ingress of water. The water accumulated

within the liferaft at the end of the test must not exceed 4 liters (1 gallon).

(6) *Detailed inspection (Paragraph 1/5.14).* The independent laboratory's inspection of the prototype liferaft under § 160.151–13(a) satisfies the requirements of paragraph 1/5.14.

(7) *Davit-launched liferafts—strength test (Paragraph 1/5.16.1).* The calculation of combined strength of the lifting components must be based on the lesser of—

(i) The lowest breaking strength obtained for each item; or

(ii) The component manufacturer's ultimate strength rating.

(d) The boarding ramp on each liferaft equipped with one must be demonstrated capable of supporting one person weighing 100 kg (220 lb), sitting or kneeling and not holding onto any other part of the liferaft.

§ 160.151–29 Additional approval tests for SOLAS A and SOLAS B inflatable liferafts.

To verify compliance with the requirements of Regulation III/39.5.1, on or before July 1, 1998, the following test must be conducted for SOLAS A and SOLAS B inflatable liferafts in addition to those required by § 160.151–27 and IMO Resolution A.689(17):

(a) *Test of filling time for stability appendages.* A representative sample of each type and size of stability appendage to be fitted to a liferaft must be tested as follows:

(1) The appendage must be attached to a testing jig similar in material and construction to the appendage's intended location on a liferaft. The method of attachment must be the same as used on a liferaft. The appendage and jig must be attached to a scale capable of recording peak readings, and suspended over a pool of calm water. The dry weight must be recorded.

(2) The appendage and jig must then be quickly lowered into the water until the appendage is completely submerged. When the appendage has been in the water for 25 seconds, it must be smoothly lifted completely out of the water, and the peak weight after the appendage is removed from the water recorded.

(3) The difference in weights measured according to paragraphs (a)(1) and (2) of this section must be at least 60 percent of the appendage's volume, calculated in accordance with § 160.151–17(a)(2)(i).

(b) [Reserved]

§ 160.151–31 Production inspections and tests of inflatable liferafts.

(a) Production inspections and tests of inflatable liferafts must be carried out in accordance with the procedures for

independent laboratory inspection in part 159, subpart 159.007, of this chapter and with those of this section.

(b) Each liferaft approved by the Coast Guard must be identified with unique lot and serial numbers as follows:

(1) Each lot must consist of not more than 50 liferafts of the same design and carrying capacity.

(2) A new lot must begin whenever the liferafts undergo changes of design, material, production method, or source of supply for any essential component.

(3) The manufacturer may use a running-lot system, whereby the fabrication of the individual liferafts of a lot occurs over an extended interval under an irregular schedule. Each running lot must comprise not more than 10 liferafts of the same design and carrying capacity. Each running-lot system must be in accordance with a procedure proposed by the manufacturer and approved by the Commandant.

(4) Unless a lot is a running lot, each lot must consist of liferafts produced under a process of continuous production.

(c) Among the records required to be retained by the manufacturer under § 159.007–13 of this chapter, are affidavits or invoices from the suppliers identifying all essential materials used in the production of approved liferafts, together with the lot numbers of the liferafts constructed with those materials.

(d) Each approved liferaft must pass each of the inspections and tests described in IMO Resolution A.689(17), part 2, paragraphs 5.1.3 through 5.1.6 inclusive, and prescribed by paragraphs (e) through (g) of this section. For a davit-launched liferaft, these tests must be preceded by the test described in IMO Resolution A.689(17), part 2, paragraph 5.2.

(e) The test described in IMO Resolution A.689(17), Paragraph 2/5.1.5, must be conducted under the following conditions:

(1) The test must last 1 hour, with a maximum allowable pressure drop of 5 percent after compensation for changes in ambient temperature and barometric pressure.

(2) For each degree Celsius of rise in temperature, 0.385 kPa must be subtracted from the final pressure reading (0.031 psig per degree Fahrenheit). For each degree Celsius of drop in temperature, 0.385 kPa must be added to the final pressure reading (again, 0.031 psig per degree Fahrenheit).

(3) For each mm of mercury of rise in barometric pressure, 0.133 kPa must be added to the final temperature-corrected

pressure reading (0.049 psig per 0.1 inch of mercury). For each mm of mercury of drop in barometric pressure, 0.133 kPa must be subtracted from the final temperature-corrected pressure reading (again, 0.049 psig per 0.1 inch of mercury). Corrections for changes in ambient barometric pressure are necessary only if a measuring instrument open to the atmosphere, such as a manometer, is used.

(f) One liferaft from each lot of fewer than 30 liferafts, and two from each lot of 30 to 50 liferafts, must pass the test described in IMO Resolution A.689(17), part 2, paragraphs 5.1.1 and 5.1.2. If any liferaft fails this test—

(1) The reason for the failure must be determined;

(2) Each liferaft in the lot must be examined for the defect and repaired if reparable, or scrapped if irreparable; and

(3) The lot test must be repeated, including random selection of the liferaft or liferafts to be tested. If any liferafts from the lot have left the place of manufacture, they must be recalled for examination, repair, and testing as necessary; or else the required actions must take place at an approved servicing facility.

(g) On or before May 11, 1998, the manufacturer shall arrange for inspections by an accepted independent laboratory at least once in each calendar quarter in which production of liferafts approved by the Coast Guard takes place. The time and date of each inspection must be selected by the independent laboratory, to occur when completed liferafts are in the manufacturing facility and others are under construction. The manufacturer shall ensure that the inspector from the independent laboratory—

(1) Conducts the inspection and witnesses the tests required by paragraph (f) of this section, and further conducts a visual inspection to verify that the liferafts are being made in accordance with the approved plans and the requirements of this subpart;

(2) Examines the records of production inspections and tests for liferafts produced since the last inspection by an independent laboratory to verify that each required inspection and test has been carried out satisfactorily;

(3) Conducts a design audit on at least one liferaft approved by the Coast Guard each year. If possible, different models of liferafts must be examined in the design audit from year to year. To retain Coast Guard approval, the manufacturer shall demonstrate to the inspector during each design audit that—

(i) Each part used in the liferaft matches the part called for by the approved plans;

(ii) Each part and subassembly are of the materials and components indicated on the approved plans or their bills of materials; and

(iii) Each critical dimension is correct as shown either by measurement or by proper fit and function in the next-higher assembly.

(h) Until such time as the manufacturer has arranged for inspections by an accepted independent laboratory in accordance with paragraph (g) of this section, the manufacturer shall notify the cognizant OCMi whenever final production inspections and tests are to be performed so that the OCMi may, at his option, assign a marine inspector to the factory to witness the applicable tests and satisfy himself that the quality assurance program of the manufacturer is satisfactory.

§ 160.151-33 Marking and labeling.

(a) Whatever other languages they may be in, markings required on each inflatable liferaft and its container must be in English.

(b) The markings required on the liferaft container under Regulation III/39.7.3 of SOLAS must be on a plate or label sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the liferaft. In addition, the container must be marked with the—

(1) Manufacturer's model identification; and

(2) U.S. Coast Guard approval number.

(c) In addition to the markings required on the inflatable liferaft under Regulation III/39.8 of SOLAS, the liferaft must be marked with the—

(1) Manufacturer's model identification;

(2) Lot number; and

(3) U.S. Coast Guard approval number.

§ 160.151-35 Servicing.

(a) *Inspection and repair.* Inflatable liferafts carried under the regulations in this chapter, and in chapter I of title 33 CFR, must be inspected periodically by a servicing facility approved by the Coast Guard, repaired as necessary, and repacked. Requirements for periodic inspection and repair of liferafts approved by the Coast Guard appear in §§ 160.151-37 through 160.151-57.

(b) *Manufacturer's requirements.* To retain Coast Guard approval of liferafts, the manufacturer must:

(1) Prepare a servicing manual or manuals complying with § 160.151-37

to cover each model and size of liferaft that the manufacturer produces. The manual or manuals must be submitted to the Commandant for approval.

(2) At least once each year, issue a list of revisions to the manual or manuals, and issue a list of bulletins affecting the manual or manuals, that are in effect.

(3) Make available to each servicing facility approved by the Coast Guard the manual or manuals, the revisions, the bulletins, the plans, and any unique parts and tools that may be necessary to service the liferaft. The plans may be either the manufacturing drawings, or special plans prepared especially for use by servicing technicians. They may be incorporated into the manual or manuals.

(4) Have a training program complying with § 160.151-39 for the certification of servicing technicians.

(5) Notify the OCMi for the zone in which the servicing facility is located whenever the manufacturer becomes aware of servicing at approved facilities that is not in accordance with the requirements of this subpart, or aware of falsification by an approved facility of records required by this subpart.

(c) A manufacturer of liferafts not approved by the Coast Guard may establish servicing facilities approved by the Coast Guard for such liferafts in the United States if the manufacturer meets the requirements of paragraph (b) of this section.

§ 160.151-37 Servicing manual.

(a) The servicing manual must provide instructions on performing the following tasks:

(1) Removing the inflatable liferaft from the container for testing without damaging the liferaft or its contents.

(2) Examining the liferaft and its container for damage and wear including deteriorated structural joints and seams.

(3) Determining the need for repairs.

(4) Performing each repair which can be made by a servicing facility.

(5) Identifying repairs that the manufacturer must perform.

(6) Determining when liferaft equipment must be replaced.

(7) Conducting tests required by § 160.151-57.

(8) Repacking the liferaft.

(9) Changing the maximum height of stowage of the liferaft by changing the length of the painter.

(10) Special equipment limitations or packing instructions, if any, necessary to qualify the liferaft for a particular height of stowage.

(11) Changing the service of the liferaft by changing the contents of the equipment pack.

(12) Proper marking of the liferaft container, including approval number, persons' capacity, maximum height of stowage, service (equipment pack), and expiration date of servicing.

(13) A list of parts for—

(i) Survival equipment;

(ii) Compressed-gas cylinders;

(iii) Inflation valves;

(iv) Relief valves; and

(v) Repair equipment.

(14) The necessary pressures for each size of approved liferaft for conducting the "Necessary Additional Pressure" test required by § 160.151-57(k).

(b) Each revision to a servicing manual, and each bulletin, that authorizes the modification of a liferaft, or that affects the compliance of a liferaft with any requirement under this subpart, must be submitted to and approved by the Commandant. Other revisions and bulletins need not be approved, but a copy of each must be submitted to the Commandant when issued.

(c) Each manual provided under this section must bear the original signature of a representative of the manufacturer attesting that it is a true copy of the manual approved by the Commandant.

§ 160.151-39 Training of servicing technicians.

(a) The training program for certification of servicing technicians must include—

(1) Training and practice in packing an inflatable liferaft, repairing buoyancy tubes, repairing inflation-system valves, and other inspections and operations described in the approved servicing manual;

(2) An evaluation at the end of the training to determine whether each trainee has successfully completed the training; and

(3) Issuance of a certificate of competence to each technician who successfully completes the training.

(b) The manufacturer shall maintain refresher training for recertification of previously trained servicing technicians. This training must include—

(1) Checking the performance of the technicians in the inspections and operations described in the manual;

(2) Retraining of the technicians in inspections and operations for which they are deficient;

(3) Training and practice in new inspections and operations;

(4) An evaluation at the end of the training to determine whether or not each trainee has successfully completed the training; and

(5) Issuance of a certificate of competence to each technician who successfully completes the training.

(c) Each time the manufacturer holds a course for servicing technicians who will perform servicing on liferafts approved by the Coast Guard, the manufacturer shall notify the cognizant OCMI sufficiently in advance to allow, at the option of the OCMI, for a Coast Guard inspector or inspectors to travel to the site where the training is to occur.

§ 160.151-41 Approval of servicing facilities.

(a) To obtain and maintain Coast Guard approval as an "approved servicing facility" for a particular manufacturer's inflatable liferafts, a facility must meet the requirements, and follow the procedures, of this section.

(b) The owner or operator of a servicing facility desiring Coast Guard approval shall apply to the cognizant OCMI. The application must include—

- (1) The name and address of the facility;
- (2) The name(s) of its competent servicing technician(s);
- (3) Identification of the manufacturer(s) of the liferafts the facility will service; and
- (4) Any limits or special conditions that should apply to the approval of the facility.

(c) The owner or operator of the servicing facility shall arrange for an inspection with the OCMI to whom the owner or operator applied under paragraph (b) of this section. A currently trained servicing technician shall successfully demonstrate the complete service to each make and type of liferaft for which approval as a servicing facility is sought, in the presence of a Coast Guard inspector or of a third-party inspector accepted by the OCMI, or such technician shall present evidence of having performed such service at the time of initial or refresher training. The service must include:

- (1) Removing the liferaft from the container for testing without damaging the liferaft or its contents;
- (2) Examining the liferaft and its container for damage and wear;
- (3) Determining the need for repairs;
- (4) Determining whether equipment must be replaced;
- (5) Conducting the tests required by § 160.151-57;
- (6) Repacking the liferaft;
- (7) Inflating the fully packed liferaft using its inflation mechanism; and
- (8) Repairing a leak in a main buoyancy chamber, and subjecting the repaired chamber to the Necessary Additional Pressure test described in § 160.151-57(k). This repair may be done on a liferaft that actually needs it, on one condemned, or on an inflatable chamber fabricated of liferaft material

specifically for this purpose. (An otherwise serviceable liferaft should not be damaged for this purpose.)

(d) Whenever servicing of liferafts takes place, each servicing facility must allow Coast Guard inspectors or third-party inspectors accepted by the OCMI access to the place where the servicing occurs.

(e) Each servicing facility must employ at least one servicing technician who has successfully completed the manufacturer's training described in § 160.151-39 (a) or (b), including training in the servicing of davit-launched liferafts if the facility will service these. The training must have been completed within the preceding—

- (1) 12 months for the facility to obtain its approval to service the liferafts of a particular manufacturer; or
- (2) 36 months for the facility to retain approval to service the liferafts of a particular manufacturer.

§ 160.151-43 Conditions at servicing facilities.

(a) Each facility must maintain a room to service inflatable liferafts that—

- (1) Is clean;
- (2) Is fully enclosed;
- (3) Has enough space to service the number of liferafts likely to be present for service at one time;
- (4) Has a ceiling high enough to hold and allow overturning of a fully inflated liferaft of the largest size to be serviced, or is furnished with an equally efficient means to facilitate the inspection of bottom seams;
- (5) Has a smooth floor that will not damage a liferaft, can be easily cleaned, and is kept clean and free from oil, grease, and abrasive material;
- (6) Is well lit but free from direct sunlight;
- (7) Is arranged to maintain an even temperature and low humidity in each area where liferafts are pressure tested, including by mechanical air-conditioning equipment in climates where it is necessary;
- (8) Is arranged so that stored liferafts are not subjected to excessive loads and, if stacked one directly on top of another, does not have them stacked more than two liferafts high;
- (9) Is efficiently ventilated but free of drafts; and
- (10) Is a designated no-smoking area.

(b) In addition to the room required by paragraph (a) of this section, each facility must maintain areas or rooms for storage of liferafts awaiting servicing, repair, or delivery; for repair and painting of reinforced plastic containers; for storage of pyrotechnics and other materials, such as spare parts and required equipment; and for administrative purposes.

§ 160.151-45 Equipment required for servicing facilities.

Each servicing facility approved by the Coast Guard must maintain equipment to carry out the operations described in the manufacturer's servicing manual approved in accordance with § 160.151-35(b)(1), including—

- (a) A set of plans, as specified in § 160.151-35(b)(3), for each inflatable liferaft to be serviced;
- (b) A current copy of this subpart;
- (c) A current copy of the manual approved in accordance with § 160.151-35(b)(1), including all revisions and bulletins in effect as indicated on the annual list issued in accordance with § 160.151-35(b)(2);
- (d) Hot presses (if applicable);
- (e) Safety-type glue pots or equivalents;
- (f) Abrasive devices;
- (g) A source of clean, dry, pressurized air; hoses; and attachments for inflating liferafts;
- (h) A source of vacuum; hoses; and attachments for deflating liferafts;
- (i) Mercury manometer, water manometer, or other pressure-measurement device or pressure gauge of equivalent accuracy and sensitivity;
- (j) Thermometer;
- (k) Barometer, aneroid or mercury;
- (l) Calibrated torque-wrench for assembling the inflation system;
- (m) Accurate weighing scale;
- (n) Repair materials and equipment, and spare parts as specified in the applicable manual, except that items of limited "shelf life" need not be stocked if they are readily available;
- (o) A complete stock of the survival equipment required to be stowed in the liferafts, except for items of equipment that are readily available;
- (p) A means for load-testing davit-launched liferafts, unless the facility services only non-davit-launched liferafts;
- (q) A supply of parts for all inflation components and valves specified in the applicable manual; and
- (r) A tool board that clearly indicates where each small tool is stored, or has an equivalent means to make sure that no tools are left in the liferaft when repacked.

§ 160.151-47 Requirements for owners or operators of servicing facilities.

To maintain Coast Guard approval, the owner or operator of each servicing facility approved by the Coast Guard must—

- (a) Ensure that servicing technicians have received sufficient information and training to follow instructions for changes and for new techniques related

to the inflatable liferafts serviced by the facility, and have available at least one copy of each manufacturer's approved servicing manual, revision, and bulletin;

(b) Calibrate each pressure gauge, mechanically-operated barometer, and weighing scale at intervals of not more than 1 year, or in accordance with the equipment manufacturer's requirements;

(c) Ensure that each liferaft serviced under the facility's Coast Guard approval is serviced by or under the direct supervision of a servicing technician who has completed the requirements of either § 160.151-39(a) or (b);

(d) Ensure that each liferaft serviced under the facility's Coast Guard approval is serviced in accordance with the approved manual;

(e) Specify which makes of liferafts the facility is approved to service when representing that the facility is approved by the Coast Guard; and

(f) Ensure that the facility does not service any make of liferaft for an inspected vessel of the U.S. or any other U.S.-flag vessel required to carry approved liferafts, unless the facility is approved by the Coast Guard to service that make of liferafts.

§ 160.151-49 Approval of servicing facilities at remote sites.

A servicing facility may be approved for servicing liferafts at a remote site, provided that appropriate arrangements have been made to ensure that each such site meets the requirements of §§ 160.151-41(e), 160.151-43, and 160.151-45. The facility must have a portable assortment of test equipment, spare parts, and replacement survival equipment to accompany the technician doing the servicing. However, if repair of liferafts will not be attempted at a remote site, equipment needed for repair does not need to be available at that site. A facility must be specifically authorized in its letter of approval to conduct servicing at a remote site.

§ 160.151-51 Notice of approval.

If the cognizant OCMI determines that the servicing facility meets the applicable requirements of §§ 160.151-39 through 160.151-47, the OCMI notifies the facility that it is approved and notifies the Commandant. The Commandant issues an approval letter to the servicing facility with copies to the OCMI and to the manufacturer(s) whose liferafts the facility is approved to service. The letter will specify any limits on the approval, and will assign the facility's approval code for use on the inspection sticker required by § 160.151-57(m)(3). The Commandant

will maintain a current list of approved facilities.

§ 160.151-53 Notice to OCMI of servicing.

(a) Before servicing an inflatable liferaft under the servicing facility's Coast Guard approval, the owner or operator of the facility must tell the cognizant OCMI for each liferaft to be serviced—

- (1) The make and size of the liferaft;
- (2) The age of the liferaft; and
- (3) Whether the liferaft is due for a five-year inflation test.

(b) The OCMI will inform the servicing facility whether the servicing of the liferaft must be witnessed by an inspector.

(c) If the OCMI requires the servicing of the liferaft to be witnessed by an inspector—

(1) The servicing facility must arrange a schedule with the OCMI that will allow a Coast Guard inspector to travel to the site where the servicing is to occur;

(2) The owner or operator of the servicing facility, by permission of the OCMI, may arrange for the servicing to be witnessed instead by a third-party inspector accepted by the OCMI if a Coast Guard marine inspector is not available in a timely manner; and

(3) The servicing facility must not begin servicing the liferaft until the inspector arrives at the site.

(d) No deviation from servicing-manual procedures may occur without the prior approval of the OCMI. To request the approval of a deviation, the owner or operator of the servicing facility shall notify the OCMI of the proposed deviation from the procedures, and must explain to the OCMI the need for the deviation.

§ 160.151-55 Withdrawal of approval.

(a) The OCMI may withdraw the approval of the servicing facility, or may suspend its approval pending correction of deficiencies, if the Coast Guard inspector or accepted third-party inspector finds that—

(1) The facility does not meet the requirements of §§ 160.151-41 through 160.151-47, or

(2) The servicing is not performed in accordance with § 160.151-57.

(b) A withdrawal of approval may be appealed in accordance with part 1, subpart 1.03, of this chapter.

(c) The OCMI may remove a suspension pending correction of deficiencies if the servicing facility demonstrates that the deficiencies have been corrected.

§ 160.151-57 Servicing procedure.

(a) Each inflatable liferaft serviced by a servicing facility approved by the

Coast Guard must be inspected and tested in accordance with paragraphs (b) through (r) of this section, and the manufacturer's servicing manual approved in accordance with § 160.151-35(b)(1).

(b) The following procedures must be carried out at each servicing:

(1) The working-pressure leakage test described in IMO Resolution A.689(17), paragraph 2/5.1.5, must be conducted.

(2) Inflation hoses must be pressurized and checked for damage and leakage as part of the working-pressure leakage test, or in a separate test.

(3) An inflatable floor must be inflated until it is firm, and let stand for one hour. The inflatable floor must still be firm at the end of the hour.

(4) The seams connecting the floor to the buoyancy tube must be checked for slippage, rupture, and lifting of edges.

(5) Each item of survival equipment must be examined, and—

(i) Replaced if its expiration date has passed; and

(ii) Otherwise, repaired or replaced if it is damaged or unserviceable.

(6) Each battery must be replaced with a fresh one if—

(i) Its expiration date has passed;

(ii) It has no expiration date; or

(iii) It is to return to service in an item of survival equipment, but its measured voltage is less than its rated voltage.

(7) Each power cell for the top and inside canopy lights must be inspected and tested as prescribed in the servicing manual unless it is a battery serviced in accordance with paragraph (b)(6) of this section. Each cell that is tested and found satisfactory may be reinstalled. Each cell that is outdated, is not tested, or fails the test must be replaced.

(8) If the liferaft is equipped with an Emergency Position-Indicating Radio Beacon (EPIRB) or a Search and Rescue Transponder (SART), the EPIRB or SART must be inspected and tested in accordance with the manufacturer's instructions. An EPIRB must be tested using the integrated test circuit and output indicator to determine whether it is operative. Each EPIRB or SART not operative must be repaired or replaced.

(9) The manual inflation-pump must be tested for proper operation.

(10) Each damaged, faded, or incorrect instruction label or identification label on the liferaft or its container must be replaced.

(11) Each liferaft must be examined to ensure that it is properly marked with retroreflective material. The arrangement of the retroreflective material must meet the requirements of IMO Resolution A.658(16). Damaged or missing retroreflective material must be

replaced with Type I material approved under part 164, subpart 164.018, of this subchapter as complying with SOLAS.

(12) Each inflation cylinder must be weighed. If its weight loss exceeds five percent of the weight of the charge, it must be recharged.

(c) When an inflation cylinder is recharged for any reason, the following inflation-head components must be renewed:

(1) The poppet-pin assembly, if any.

(2) Each plastic or elastomeric seal, and each other part that deteriorates with age.

(d) Each recharged inflation cylinder must stand for at least two weeks and be checked for leakage by weighing before being installed in a liferaft. An alternative mechanical or chemical test for fast detection of leakage may be used if the servicing manual approved by the Commandant in accordance with § 160.151-35(b)(1) provides for it.

(e) Each inflation cylinder that requires a hydrostatic test under 49 CFR 173.34 must be tested and marked in accordance with that section.

(f) At every second servicing of a davit-launched liferaft, the launching-load test in paragraph 2/5.2 of IMO Resolution A.689(17) must be conducted.

(g) At every fifth annual servicing, before the conduct of the tests and inspections required in paragraphs (b) through (f) of this section, each liferaft must be removed from its container and, while still folded, inflated by the operation of its gas-inflation system.

(h) Each liferaft showing minor leaks during the gas inflation test conducted in accordance with paragraph (g) of this section, may be repaired.

(i) Each liferaft ten or more years past its date of manufacture must be condemned if it leaks extensively, or shows fabric damage other than minor porosity, during the gas inflation test conducted in accordance with paragraph (g) of this section.

(j) After the gas inflation test conducted in accordance with paragraph (g) of this section, the liferaft may be evacuated and refilled with air for the tests in paragraphs (b) through (f) of this section.

(k) At each annual servicing of a liferaft ten or more years past its date of manufacture during which the gas-inflation test in paragraph (g) of this section is not conducted, a "Necessary Additional Pressure" (NAP) test must be conducted. Before the tests and inspections required in paragraphs (b) through (f) of this section are conducted, the NAP test must be completed, using the following procedure:

(1) Plug or otherwise disable the pressure-relief valves.

(2) Gradually raise the pressure to the lesser of 2 times the design working pressure, or that specified in the manufacturer's servicing manual as sufficient to impose a tensile load on the tube fabric of 20 percent of its minimum required tensile strength.

(3) After 5 minutes, there should be no seam slippage, cracking, other defects, or pressure drop greater than 5 percent. If cracking in the buoyancy tubes is audible, accompanied by pressure loss, condemn the liferaft. If it is not, reduce the pressure in all buoyancy chambers simultaneously by enabling the pressure-relief valves.

(l) At each annual servicing of a liferaft 10 or more years past its date of manufacture, the integrity of the seams connecting the floor to the buoyancy tube must be checked by the following procedure, or an equivalent procedure specified in the manufacturer's approved servicing manual:

(1) With the buoyancy tube supported a sufficient distance above the floor of the servicing facility to maintain clearance during the test, a person weighing not less than 75 kg (165 lb) shall walk or crawl around the entire perimeter of the floor of the liferaft.

(2) The seams connecting the floor to the buoyancy tube must then be inspected for slippage, rupture, and lifting of edges.

(m) The servicing facility must complete the following for each liferaft that passes these inspections and tests:

(1) Permanently mark the liferaft on its outside canopy, or on a servicing-record panel on an interior portion of one of its buoyancy tubes near an entrance, with—

(i) The date of the servicing;

(ii) The identification and location of the servicing facility; and

(iii) If applicable, an indication that the special fifth-year servicing was performed.

(2) On or before July 1, 1998, permanently and legibly mark on the identification device provided in accordance with § 160.151-17(c), or on the outside canopy of the liferaft, the name, if known, of the vessel on which the raft will be installed or the name, if known, of the vessel owner.

(3) On or before November 10, 1997, affix an inspection sticker to the liferaft container or valise. The sticker must be of a type that will remain legible for at least 2 years when exposed to a marine environment, and that cannot be removed without being destroyed. The sticker must be about 100 mm x 150 mm (4 by 6 inches), with the last digit of the year of expiration superimposed over a

background color that corresponds to the colors specified for the validation stickers for recreational-boat numbers in 33 CFR 174.15(c), and be marked with the Coast Guard identifying insignia in accordance with the requirements of 33 CFR 23.12. The sticker must also contain the following:

(i) The name of the manufacturer of the liferaft.

(ii) The year and month of expiration determined in accordance with paragraph (n) of this section.

(iii) Identification of the servicing facility, printed on the sticker or indicated on the sticker by punch using an approval code issued by the Commandant.

(n) The expiration date of the servicing sticker is 12 months after the date the liferaft was repacked, except that:

(1) For a new liferaft, the expiration date may be not more than two years after the date the liferaft was first packed, if—

(i) Dated survival equipment in the liferaft will not expire before the sticker expiration date; and

(ii) The liferaft will not be installed on a vessel certificated under SOLAS.

(2) For a liferaft stored indoors, under controlled temperatures (between 0 °C (32 °F) and 45 °C (113 °F)), for not more than 6 months from the date it was serviced or first packed, the expiration date may be extended up to the length of time the liferaft remained in storage.

(3) For a liferaft stored indoors, under controlled temperatures (between 0 °C (32 °F) and 45 °C (113 °F)), for not more than 12 months from the date it was serviced or first packed, the expiration date may be extended up to the length of time the liferaft remained in storage, if the liferaft is opened, inspected, and repacked in a servicing facility approved in accordance with §§ 160.151-49 and 160.151-51. When the liferaft is opened—

(i) The condition of the liferaft must be visually checked and found to be satisfactory;

(ii) The inflation cylinders must be checked and weighed in accordance with paragraph (b)(12) of this section;

(iii) All survival equipment whose expiration date has passed must be replaced; and

(iv) All undated batteries must be replaced.

(o) The servicing facility must remove and destroy the markings of Coast Guard approval on each liferaft condemned in the course of any servicing test or inspection.

(p) The servicing facility must issue a certificate to the liferaft owner or

owner's agent for each liferaft it services. The certificate must include—

(1) The name of the manufacturer of the liferaft;

(2) The serial number of the liferaft;

(3) The date of servicing and repacking;

(4) A record of the fifth-year gas-inflation test required in paragraph (g) of this section, whenever that test is performed;

(5) A record of the hydrostatic test of each inflation cylinder required in paragraph (e) of this section, whenever that test is performed;

(6) A record of any deviation from the procedures of the manufacturer's servicing manual authorized by the OCMi in accordance with § 160.151-53(d);

(7) The identification of the servicing facility, including its name, address, and the approval code assigned by the Commandant in accordance with § 160.151-51;

(8) The name, if known, of the vessel or vessel owner receiving the liferaft; and

(9) The date the liferaft is returned to the owner or owner's agent.

(q) The servicing facility must keep a record of each liferaft approved by the Coast Guard that it services for at least five years, and must make those records available to the Coast Guard upon request. Those records must include—

(1) The serial number of the liferaft;

(2) The date of servicing and repacking;

(3) The identification of any Coast Guard or third-party inspector present;

(4) The name, if known, of the vessel or vessel owner receiving the liferaft; and

(5) The date the liferaft is returned to the owner or owner's agent.

(r) The servicing facility must prepare and transmit to the OCMi, at least annually, statistics showing the nature and extent of damage to and defects found in liferafts during servicing and repair. The facility must notify the OCMi immediately of any critical defects it finds that may affect other liferafts.

§ 160.151-59 Operating instructions and information for the ship's training manual.

(a) The liferaft manufacturer shall make operating instructions and information for the ship's training manual available in English to purchasers of inflatable liferafts approved by the Coast Guard, to enable vessel operators to meet regulations III/18.2, 19.3, 51, and 52 of SOLAS.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material

for hydrostatic releases or launching equipment, and must explain—

(1) Release of the inflatable liferaft from its stowage position;

(2) Launching of the liferaft;

(3) Survival procedures, including instructions for use of survival equipment aboard; and

(4) Shipboard installations of the liferaft.

(c) The operating instructions required by paragraphs (a) and (b) of this section must also be made available in the form of an instruction placard. The placard must be not greater than 36 cm (14 in.) by 51 cm (20 in.), made of durable material and suitable for display near installations of liferafts on vessels, providing simple procedures and illustrations for launching, inflating, and boarding the liferaft.

(d) The placard must be not greater than 36 cm (14 in.) by 51 cm (20 in.), made of durable material and suitable for display near installations of liferafts on vessels, providing simple procedures and illustrations for launching, inflating, and boarding the liferaft.

§ 160.151-61 Maintenance instructions.

(a) The liferaft manufacturer shall make maintenance instructions available in English to purchasers of inflatable liferafts approved by the Coast Guard, to enable vessel operators to meet regulations III/19.3 and III/52 of SOLAS.

(b) The maintenance instructions required by paragraph (a) of this section must include—

(1) A checklist for use in monthly, external, visual inspections of the packed liferaft;

(2) An explanation of the requirements for periodic servicing of the liferaft by an approved servicing facility; and

(3) A log for maintaining records of inspections and maintenance.

PART 199—LIFESAVING SYSTEMS FOR CERTAIN INSPECTED VESSELS

11. The authority citation for part 199 continues to read as follows:

Authority: 46 U.S.C. 3306, 3703; 46 CFR 1.46.

12. In § 199.190, revise paragraphs (g)(3) introductory text and (g)(3)(i) to read as follows:

§ 199.190 Operational readiness, maintenance, and inspection of lifesaving equipment

* * * * *

(g) *Servicing of inflatable lifesaving appliances, inflated rescue boats, and marine evacuation systems.* * * *

(3) Each inflatable liferaft and inflatable buoyant apparatus must be serviced—

(i) In accordance with servicing procedures meeting the requirements of part 160, subpart 160.151 of this chapter; and

* * * * *

Dated: May 2, 1997.

Joseph Angelo,

Acting Assistant Commandant for Marine Safety and Environmental Protection.

[FR Doc. 97-11897 Filed 5-8-97; 8:45 am]

BILLING CODE 4910-14-P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MM Docket No. 90-66, RM-7139, 7368 and 7369]

Radio Broadcasting Services; Lincoln, Osage Beach, Steelville and Warsaw, MO

AGENCY: Federal Communications Commission.

ACTION: Final rule; petition for reconsideration.

SUMMARY: This document dismisses in part the petition for reconsideration in this proceeding filed by Twenty One Sound Communications, Inc. of our *Memorandum Opinion and Order*, 61 FR 29311 (June 10, 1996) as repetitious under Section 1.429 of the Commission's Rules. In all other respects, this document denies Twenty One Sound's reconsideration petition and affirms the dismissal of its counterproposal. With this action, this proceeding is terminated.

EFFECTIVE DATE: May 9, 1997.

FOR FURTHER INFORMATION CONTACT:

Arthur D. Scrutchins, Mass Media Bureau, (202) 418-2180.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's *Memorandum Opinion and Order*, MM Docket No. 90-66, adopted April 23, 1997 and released May 2, 1997. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (Room 239), 1919 M Street, NW, Washington, D.C. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, Inc., (202) 857-3800, 2100 M Street, N.W., Suite 140, Washington, D.C. 20037.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Federal Communications Commission.

Douglas W. Webbink,

Chief, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 97-12170 Filed 5-8-97; 8:45 am]

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