

DEPARTMENT OF TRANSPORTATION**Coast Guard****33 CFR Part 164****[CGD 94-020]****RIN 2115-AE91****Navigation Safety Equipment for Towing Vessels****AGENCY:** Coast Guard, DOT.**ACTION:** Final rule.

SUMMARY: The Coast Guard here requires that towing vessels carry and properly use equipment such as radars, compasses, marine charts or maps, and publications and that they carefully choose, inspect, and maintain towlines. This final rule is necessary as part of a comprehensive initiative to improve navigational safety for towing vessels. The purpose of requiring navigational-safety equipment on towing vessels is to help prevent another catastrophic train wreck such as that of the *Sunset Limited* in Alabama during September, 1993, and another spill such as that off Puerto Rico during January, 1994.

DATES: This rule is effective on August 2, 1996. The Director of the Federal Register approves as of August 2, 1996 the incorporation by reference of certain publications listed in this rule.

ADDRESSES: Unless otherwise indicated, documents referred to 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., Washington, DC 20593-0001, between 8 a.m. and 3 p.m., Monday through Friday, except Federal holidays. The telephone number is (202) 267-1477.

FOR FURTHER INFORMATION CONTACT: Mr. Edward LaRue, Navigation Rules Division (G-MOV-3), (202) 267-0416, or LCDR Suzanne Englebert, Project Development Division (G-MSR-2), Office of Marine Safety and Environmental Protection, (202) 267-6490.

SUPPLEMENTARY INFORMATION:**Regulatory History**

Soon after the fatal accident on September 22, 1993, near Mobile, Alabama, in which a barge collided with a railroad bridge and caused the *Sunset Limited* to plunge into a bayou, the Secretary of Transportation directed that the Coast Guard and the Federal Railroad Administration review the circumstances of the accident and undertake initiatives to minimize the risk of any similar tragedy in the future.

A detailed review of marine-safety issues related to uninspected towing vessels appears in the notice of proposed rulemaking (NPRM) entitled "Navigation Safety Equipment for Towing Vessels" published on November 3, 1995 (60 FR 55890).

This final rule constitutes part of a comprehensive initiative by the Coast Guard to improve navigational safety for towing vessels. While other regulatory efforts are concentrating on reporting of casualties, on licensing, and on training on radar, this rule helps ensure that the mariner piloting a towing vessel has adequate equipment to safely navigate the waters being transited. It will impose the following: (1) Requirements for carriage of radars, searchlights, radios, compasses, swing-meters, echo depth-sounding devices, electronic position-fixing devices, marine charts or maps, and publications; (2) requirements for proper use of this navigational equipment; (3) requirements for maintenance, inspection, and serviceability of towlines, towing gear, and terminal gear; and (4) general requirements for navigational safety.

Thirty-seven letters were received in response to the NPRM. The Coast Guard has considered all of the comments and, in some instances, revised the proposed rule as appropriate. One comment requested that a public meeting be held. The Coast Guard determined that a public meeting was unnecessary for this rulemaking because the comments received were substantive and represented all aspects of both the industry and the public. The other comments have been grouped by issue and are discussed as follows:

Discussion of Comments and Changes**1. General**

Seven comments supported and applauded the Coast Guard in its efforts to improve safety in the towing industry. The Coast Guard acknowledges and appreciates these comments.

One comment recommended that the Coast Guard verify the availability of radar standards from the Radio Technical Commission for Maritime Services (RTCM). The comment claimed either that the standards are unavailable or that the RTCM is exhibiting an unwillingness to provide them. The Coast Guard verified that the standards are readily available from the RTCM.

One comment recommended that the term "gear" in § 164.80(a) be defined because it may be confused with "terminal gear." The Coast Guard reviewed § 164.80(a) and does not agree

that the two terms will be confused, because "gear" as used in paragraph (a) is a general term for the equipment and systems to be inspected onboard the vessel and is further qualified in the subordinate, numbered paragraphs.

One comment stated that the term "rivers and Western Rivers" as used in paragraph 2 of the Discussion of Proposed Rules of the preamble was confusing. The comment also noted that the proposed rule expanded the definition of "Western Rivers" to include waters not covered for purposes of the Inland Navigation Rules. The comment recommended that the definition of "other designated waterways" be consistent with that in 33 CFR 89.25. The Coast Guard agrees and has removed the term "river" from the definitions in § 164.70. The Coast Guard has also expanded the definition of "Western Rivers" to include all waters specified by §§ 89.25 and 89.27, and has added the words "and such other, similar waters as are designated by the COTP."

Four comments recommended that the definition of river include the Gulf Intracoastal Waterway (GIWW). By including all waters specified by §§ 89.25 and 89.27 in the definition of "Western Rivers", the Coast Guard has included the GIWW. This change should eliminate any confusion over the applicability of this rule on the GIWW.

One comment commended the Coast Guard for its efforts to exempt vessels engaged in assistance towing. The Coast Guard acknowledges and appreciates this comment.

Four comments noted the vast differences between the marine-assistance industry and the tug and barge industry. They also stated that few marine-assistance firms' vessels would meet the criteria for exclusion offered by the Coast Guard. They recommended that the applicability of this final rule be changed from towing vessels of 8 meters (26.25 feet) or more in length to towing vessels of 12 meters (39.4 feet) or more in length. The Coast Guard, knowing and understanding the differences between the marine-assistance and the tug and barge industries, asked its Towing Safety Advisory Committee (TSAC) to research the possibility of a regulatory threshold based on a risk analysis. A risk analysis was done by a TSAC working group; after reviewing the analysis, which was in turn based on both historical data and analysis of forces, the Coast Guard agrees with the comments and has applied this rule only to towing vessels of 12 meters (39.4 feet) or more in length rather than to those of 8 meters (26.25 feet) or more in length. This analysis by TSAC is

available in the docket, as described earlier in this preamble. This change should exempt the vast majority of vessels engaged in the marine-assistance industry from the requirements of this rule.

Four comments proposed that § 164.01(b)(2) contain a definition for a disabled vessel as follows: "Disabled vessel means a vessel that is in need of assistance, whether docked, underway, aground, sunk or abandoned. Disabled vessel does not include a barge or any vessel [that] is not regularly operated under its own power." The comments assert that, if this definition is accepted, then any comments by marine-assistance firms become academic since marine-assistance vessels will no longer be affected by this final rule. This rule, especially since the Coast Guard has changed the length of affected vessels from 8 to 12 meters, exempts the bulk of vessels engaged in marine assistance—helping people in disabled vessels on rivers, bays, or oceans. However, the Coast Guard must be careful not to exempt vessels that are performing commercial towing, even if the vessels are owned or operated by marine-assistance firms. The Coast Guard does not accept the four comments' definition of "disabled vessel" and has not amended the rule in the recommended manner.

Four comments concerned exemptions. Two recommended extending the proposed exemptions in § 164.01 to small, private work boats or tow boats involved in limited towing inside a limited geographical area, as other exemptions extend to work boats operating in fleeting areas and shipyards. A third recommended that the COTP be able to exempt vessels under certain traffic conditions and in restricted operating areas. The fourth recommended that the Coast Guard devise a method for exemption using speed and draft because of the differences in speeds and drafts between assistance vessels and tugs and pushboats. Seven comments recommended adding provision to § 164.01 specifying that the responsibility for determining applicability of an exemption besides with the COTP. In addition, they recommended a formal process to request a waiver. While it would be impossible to cover every possible exemption scenario, the Coast Guard agrees that an exemption process should be established and that the final exemption authority should rest with the COTP. The Coast Guard has amended § 164.01 to specify the availability of exemptions, the process to request them, and the final granting

authority of the COTP. The COTP will base the decision for exemption on such things as routes, traffic, and capabilities of vessels.

One comment raised the issue of moving an exempted vessel from one fleeting area to another. The comment asked whether permission would be needed and, if so, how it would be obtained and whether it would have to be reverified with the new COTP for any different fleeting area. After review, the Coast Guard does not see the need to grant permission for an exempted vessel to move from one fleeting area to another if it is not engaged in towing, but it does see the need to reverify the exemption if the fleeting area is in a different COTP zone. In any case, the owner, master, or operator of a towing vessel engaged in towing from one fleeting area to another would have to request an exemption in accordance with § 164.01(b)(4) of this final rule.

Three comments recommended that towing vessels covered by this final rule become inspected vessels. They also recommended that all towing gear on these vessels be inspected by the Coast Guard or an approved classification ("class") society. They recognized the time and financial constraints of annual boardings and recommended that towing vessels obtain certificates of inspection from entities such as approved class societies or from the National Association of Marine Surveyors. They also recommended that an initial exam occur within 24 months of the effective date of the rule and that the certificate be renewed every five years thereafter. Inspection of towing vessels has been studied by the Coast Guard and is outside the scope of this rulemaking.

One comment recommended that § 164.01 be modified to exempt vessels used in response-related activities, including training, as well as vessels of opportunity, such as fishing vessels engaged in those activities. The comment continued that an exemption should not apply to those vessels actually engaged in traditional towing activities but only to those vessels used solely in oil-spill response. The Coast Guard agrees and has amended § 164.01 so it exempts vessels used solely for pollution response.

One comment alleged delay in the rulemaking. It held the neglect of the Coast Guard, as it thought, representative of the discharge of its responsibilities in support of the Oil Pollution Act of 1990 (OPA 90) and urged the Coast Guard to quickly institute this final rule. The Coast Guard notes that this rulemaking allowed for

early and meaningful public participation in its development.

Six comments stated that Coast Guard rules pertaining to towing vessels, now on the books, already provide navigational safety when properly enforced and followed. They also stated that more rules do not guarantee additional safety or prevention of accidents, especially in instances of major neglect by operators of towing vessels. Until now, few and minimal rules have applied to towing vessels 12 meters in length or over. This final rule is based in large measure on the general industry standard of care and sets a reasonable threshold consistent with this standard. This rule should raise the performance, of the few owners and operators who are hazardous, to that standard of care.

One comment questioned the Coast Guard's ability to enforce its rules. This final rule requires towboats to carry certain equipment and gear that usually are permanently installed. The Coast Guard anticipates that the verification of onboard, operational equipment and appropriately maintained gear will be achievable.

2. Carriage of navigational equipment

a. Radar

Two comments noted that proposed § 164.01(b)(1) may conflict with § 165.803(m)(2)(i), which requires radar-equipped fleeting boats, and with § 165.803(m)(2)(v), which requires continuous radar surveillance during periods of restricted visibility. The Coast Guard finds no conflict. A vessel that may not be required, under § 164.01(b)(1), to carry radar, may nonetheless be required, under § 165.803(m)(2), to carry radar when engaged in the activities described there.

Two comments recommended that the Coast Guard establish very limited local areas where towing would be permitted without radar-equipped towboats; this should prevent non-radar-equipped fleeting vessels from traveling large distances. The Coast Guard agrees that towing without radar should be conducted only within a company's fleeting area. Any other type of operations should be referred to the COTP for approval or exemption, if applicable.

Six comments concurred with radar as required equipment, yet expressed opposition to the development of minimum performance standards by a third-party technical organization. They recommended that the Coast Guard develop the standards with assistance of representatives from towing companies.

The RTCM, which developed radar standards, consists of members from industry, government, and manufacturers. The Coast Guard did participate in the development of the radar standards and maintains that the standards are reasonable.

One comment concurred with the radar requirement, but raised concerns about radar's being on harbor boats because of limited space in the pilot house, excessive vibration, and the constant facing and unfacing of tows. Harbor operations may qualify for an exemption that can be granted by the COTP. Masters, owners, and operators may present their particular operations to the COTP to consider for exemption.

Three comments supported the radar requirement, but recommended that it be for two marine radars. They also recommended that the grace period be reduced from 96 to 48 hours before notice to the COTP of the lack of an operating radar. The Coast Guard disagrees. On smaller vessels there may not be enough room for two radar consoles and their antennas. For some operations, it may also be cost-prohibitive. The Coast Guard has determined that a grace period of 96 hours is generous while it still secures safety.

One comment recommended that for an owner or operator of an existing radar some means of determining whether the existing radar conforms to RTCM standards needs to be developed. No formal certificate or sticker is affixed to the radar. The comment asked whether the Coast Guard would develop a list of approved radars, and recommended a list and some type of labelling requirement. Once the RTCM standards are referred to in this final rule, manufacturers will market radars that meet them. Manufacturers' self-certification is presently used successfully with regard to performance standards adopted by the International Maritime Organization (IMO). The deferred effective dates should provide enough time to determine whether an existing radar meets standards, and the Coast Guard expects lists of standards to be developed by various interested parties.

Two comments recommended reducing the grace period for having a radar that meets the display and stabilization requirements. One recommended from 5 to 3 years; the other recommended from 4 to 2 years. The Coast Guard has not implemented either of these timelines, because an accelerated implementation could put too much of an economic burden on owners or operators with small businesses. In addition, radar

manufacturers need time to gear up to RTCM standards.

b. Searchlight

Three comments supported a requirement for a searchlight. Two recommended that the language in § 164.72(a)(2) better define the searchlight's capability. One called for an effective beam of twice the length of the tow; the other called for an effective beam of three to four times the length of the tow. The Coast Guard agrees with a better defined capability for the searchlight and has amended § 164.72(a)(2) to indicate a capability of illuminating objects at a distance of at least two times the length of the tow. For vessels towing astern, this requirement should be met for the length of tow used during transits on waters subject to Inland Navigation Rules.

c. Radios

Two comments supported a requirement for radios. They also supported a requirement for either a backup power source for a permanently installed radio or a separate, portable, battery-powered VHF-FM marine radio with a capability of 24-hour continuous use. The Coast Guard notes the support; however, technical requirements such as those relating to power source are established by the Federal Communications Commission (FCC).

Three comments observed that in April, 1992, the FCC lifted the requirement that vessel captains and operators must have Restricted Radiotelephone operators' permits. The comments questioned whether § 164.72(a)(3) is incompatible with the FCC ruling. The Coast Guard verified with the FCC that the lifting of the requirement affected only noncompulsory vessels (those not required by convention, statute, or regulation to have ship radio-station licenses). This final rule still supports the requirement to have Restricted Radiotelephone operators' permits.

d. Compasses and Swing-meters

Three comments took exception to vessels' not being able to carry a fluxgate compass in lieu of a magnetic compass. They pointed out that some tugs cannot use a card-type magnetic compass, because of the magnetic field in the pilot house due to electric welding. They noted that a fluxgate compass is approximately 1/20th the cost of a gyrocompass. They challenged the reasoning of disallowing a fluxgate compass because it requires an external power source. They stated that most card-type compasses have light bulbs for

night use and that other navigational equipment, such as Long Range Aid to Navigation (LORAN) or Global Positioning System (GPS), need external power. The Coast Guard notes the exception, yet will not allow the substituting of a fluxgate compass for a magnetic one in this final rule. The fluxgate compass requires power to operate; a magnetic compass does not, and can be viewed with a flashlight should the vessel experience a power failure.

One comment wanted to know whether the Coast Guard was going to adopt "standards" for swing-meters. At the present time, the Coast Guard does not see the need to adopt "standards" for swing-meters.

Two comments supported a requirement for a magnetic compass, but also wanted a requirement for a gyrocompass equipped with an audible course-change indicator; they also recommended that both requirements cover towing vessels on Western Rivers as well as on all other waters. The Coast Guard does not agree with the requirement of a gyrocompass on all tug boats operating on all navigable waters of the U.S. It has set a swing-meter or magnetic compass as the minimum because either is cost-effective for all operators including small companies.

Two comments recommended that towing vessels pushing ahead and operating on Western Rivers be equipped with an audible swing-meter; this would be in addition to, not instead of, the magnetic compass proposed in § 164.72(a)(4)(i). The Coast Guard disagrees with the recommendation. One or the other should be more than sufficient to aid the vessel in its operations.

One comment recommended that § 164.72(a)(4) be modified, to allow a gyroscope. The Coast Guard has not set a gyroscope as an equivalent to a magnetic compass, because a gyroscope relies on an outside power source.

One comment opposed the requirement because a compass or swing-meter would not aid a harbor boat working in a small harbor or a fleeting area. Note that this final rule lets a vessel owner or operator seek from the COTP an exemption from this requirement.

e. Echo Depth-Sounding Device

Three comments supported the requirement. Two recommended compliance within 1 year from the effective date of this final rule; the other recommended compliance within 2 years. One comment also recommended the installation of two sounding devices. The Coast Guard disagrees with bringing

compliance forward from 5 years to 1 year. It notes that, while taken individually navigation equipment is relatively inexpensive, taken cumulatively the costs are not negligible. The 5-year implementation schedule is intended to lessen the impact of multiple requirements. The Coast Guard agrees that in some circumstances two sounding devices may be desirable; in general, however, one should give the operator or master adequate depth information.

Five comments disagreed with exempting tows on Western Rivers from having sounding devices; they stated there should be no exemptions. One of the five also stated that, at a minimum, sounding devices should be installed on vessels that move environmentally threatening cargoes. The Coast Guard holds that depth sounders are not so useful in pooled water as they are in open water where depths vary greatly. On towboats pushing ahead, they would be located too far aft to provide even a last-minute warning of shallow water. The Coast Guard has maintained the exemption as proposed.

One comment disagreed that a sounding device should be placed on every towing vessel. It recommended that ship-docking tugs operating in harbors, lakes, rivers, and bays be exempted from the requirement. Again, the owner or operator of a vessel may seek an exemption from this requirement.

f. Electronic Position-Fixing Device

No comments concerned the requirement for an electronic position-fixing device.

g. Marine Charts or Maps

One comment recommended that the words "reasonably available" remain in the definition of "currently corrected." This would allow for a delay in the entry of corrections because of late receipt of Notices to Mariners (NTMs). The Coast Guard agrees, and the wording remains.

Three comments recommended that § 164.72(b)(1) require the carriage of current or currently corrected charts or maps and that, to this end, the definition for "currently corrected" change. The Coast Guard agrees with the concept of allowing either current editions or currently corrected editions of charts and maps; however, it has achieved this end without amending the definition.

Three comments recommended that § 164.72(b)(2) refer to NTMs, but not to Local Notices to Mariners (LNMs), because of the impossibility of ensuring delivery of LNMs. The Coast Guard

partially agrees and has cast the final rule to include NTMs published by the Defense Mapping Agency. LNMs have remained because they are available for Western Rivers.

One comment recommended that a towing vessel on the Western Rivers be authorized to carry either a current edition of, or a currently corrected, river map from the U.S. Army Corps of Engineers (ACOE). It also recommended creating a new definition for "currently corrected", which would apply to Western Rivers and allow currently corrected charts to be used up to 5 years after their date of publication. The Coast Guard agrees and has amended the definition of "currently corrected" to include current editions of ACOE river maps and currently corrected editions provided it has not been over 5 years since their publication.

One comment recommended that § 164.72(b)(1)(i) be revised to reflect that "All towing vessels, both inland and seagoing, are required * * *." This section already covers "each towing vessel." The only variation allowed is in § 164.72(b)(1)(ii), which accommodates different routes.

One comment suggested that other sources of charts or maps, such as chartbooks published by State authorities or commercial publishers, be approved. The Coast Guard disagrees. Although these charts or maps may be updated annually, they conform to no hydrographic standard and therefore are not recognized by the Coast Guard as legal charts. In addition, these charts are usually advertised as "not for navigation."

Six comments opposed requiring towing vessels to be equipped with charts or maps that both are published by the National Ocean Service (NOS), the ACOE, or another authority and are either current editions or currently corrected charts or maps. They argued that, for lack of funding to the NOS, U.S. waterways are not regularly charted or mapped and stated that it is therefore unrealistic to require current editions or currently corrected charts or maps. They further recommended that the rule should include British Admiralty Charts as a possible alternative. NOS procures excellent nautical products, and the Coast Guard will continue to require their use. However, the Coast Guard also recognizes that there are charts produced by foreign governments of U.S. waters, such as British Admiralty charts, that are legally sufficient and could be acceptable alternatives. The Coast Guard has amended the rule as proposed to include charts published by a foreign government that will make safe navigation possible, that are based on

hydrographic standards similar to those used by NOS, and that are applicable to a vessel's transit.

One comment did not support the requirement of a chart or map and felt it an excessive burden on those vessels that work in the same operating area. The Coast Guard does not agree. Vessels are required only to have charts or maps for their areas of operation, so the number of charts or maps to maintain should be minimal: the smaller the area, the fewer the charts or maps. The local information these charts or maps provide to operate is valuable and should assist them in verification of their position along their voyages.

h. Publications

One comment noted that proposed § 164.72(b)(3) restated the requirement of 33 CFR 88.05 that self-propelled vessels of 12 meters or more must have on board and maintain for ready reference a copy of the Inland Navigation Rules. It recommended that this section be removed. The Coast Guard agrees, and it does not appear in this final rule.

Two comments disagreed with the selection of nautical publications that the proposed rule would have required to be on board. They stated that some, such as NTMs, were good but did not need to be physically on board. They also felt that the Coast Pilot was of little use to a captain in local waters; the captain's "local knowledge" was of far greater value. It is not the intent of the Coast Guard that a vessel maintain a huge library of nautical publications. Rather, the Coast Guard is requiring those publications that most prudent mariners would retain on board their vessels. The final rule also provides that latitude for an owner or operator to have only those publications or extracts from publications for the area(s) to be transited. The number of publications or extracts required to be on board is minimal, and should not be a burden to the owner or operator; and the publications or extracts do provide valuable port-specific information.

3. Proper Use of Navigational Equipment

Two comments recommended that the tug and barge industry adopt a system where three qualified watchstanders or operators are always on board. Two others also recommended that on all towing vessels, especially on those on oceangoing and coastwise transits, at least one crewmember be a licensed engineer. These are manning issues not within the scope of this rulemaking.

Three comments recommended that the licensing system be restructured

similar to that for vessels of unlimited tonnage, so that an individual would have to serve as a mate before becoming a master on tugs greater than 8 meters. Two other comments strongly recommended that training standards be incorporated either into the navigational sections of the final rule or into a new section in part 164. The Coast Guard has published an NPRM entitled, "Licensing and Manning for Officers of Towing Vessels" (61 FR 31332, June 19, 1996) and invites comments to that docket on these issues.

One comment recommended that, when in pilotage waters, all tank barges that are over a certain minimum (1,000 tons) and are subject to Federal jurisdiction have to be under the direction and control of a pilot holding a Federal license or pilotage endorsement for the waters being traversed. It further recommended that this requirement include the towing vessels propelling these barges. The placement of pilots in charge of barges and onboard tugs is another issue of manning not within the scope of this rulemaking.

4. Maintenance, Inspection, and Serviceability of Towlines and Terminal Gear

Two comments recommended that the responsibility for towing gear used in pushing ahead or towing alongside belong to just one party, the master or the operator. They stated that not making the master or the operator solely responsible might cause some decision between the owner and either the master or the operator, or result in no one's being responsible. The Coast Guard disagrees. As for vessels towing astern, for vessels towing alongside or pushing ahead the owner is included with the master or operator so that the responsibility is "several": Rests on each. If the owner and the master or operator are the same, then the responsibility rests on one individual. If a company owns a fleet, then it is appropriate that the company have adequate maintenance policies and appropriately empower the master or operator to ensure the requirements are met. In this way, all parties have a share of the responsibility for failing to meet the requirements—one for liability, either or both of the others for their licenses.

Two comments recommended that every owner of a towing vessel be required to have a prescribed Preventive Maintenance System (PMS) for all towing gear; this PMS should include maintenance and inspection schedules and a supply system that provides spare parts. In this final rule the Coast Guard

has outlined minimum factors for proper maintenance. The owner should base each vessel's PMS on the owner's experience and expertise and on the manufacturers' recommendations and suggestions rather than use one prescribed by the Coast Guard.

Two comments recommended that this final rule direct the carriage aboard the towing vessel of manufacturers' maintenance requirements and wear specifications for towlines. The Coast Guard agrees with TSAC that the requirements and specifications can be located in a company office, at a repair facility, or on the vessel, and deems it appropriate to allow this flexibility.

Four comments recommended that the Coast Guard specify sizes for towing wires. Two recommended that it establish minimum standards to ensure that the size of the wire, the bollard pull of the tug, and the maneuverability of the tug and tow are properly matched. Two others recommended that § 164.74(a)(1) include graphs or tables to assist the master, owner, or operator in determining minimum breaking strength of a towline and that these graphs or tables be guidelines, not minimum standards. The Coast Guard has determined that manufacturers' published specifications should provide the owner, master, or operator with the information needed to properly determine a towline's strength and appropriate use. The towing industry is diverse, operating in many different environments. By not specifying sizes, the Coast Guard has provided a flexible format to allow companies to assess their operations and choose their towlines appropriately.

Two comments recommended that every towing vessel operating on oceans or coastwise be required to have an emergency tow wire and that this rule prescribe its maintenance and repair. The Coast Guard disagrees. 33 CFR part 155 already requires emergency towlines aboard large oil barges; but duplicate towlines now appear unnecessary aboard most barges, since the competent repair of most towlines, at sea, is feasible. By recognizing and dictating the minimum acceptable repair, § 164.74(a)(2) should avoid incompetent repair such as that which caused the grounding of the T/B MORRIS J. BERMAN and yet also avoid the costly alternative of requiring duplicate towlines.

One comment felt that it would be difficult, if not impossible, to keep records on towlines. Two recommended that the reference to "shock loading" in proposed § 164.74(a)(3)(iv)(C) be eliminated because the phenomenon is difficult to define or quantify. All three

also asked whether this provision would require a monitor of tow-wire tension with data-recording capability. The Coast Guard has reviewed the recording requirements and, with the exception of that on shock loading, finds them to be reasonable and valuable for the assessment of the towline's history. It never intended to require monitors of tow-wire tension, and it has removed the reference to shock loading.

One comment recommended that § 164.74(a)(3)(iv)(G) be revised to read "Results of a tensile test taken to confirm the residual strength of the towline, if necessary." The comment noted that tensile testing is an integral component of towline inspection and maintenance. But an operator may just as well determine that a towline or segment of towline must be removed without conducting a tensile test: It should not be implied that a tensile test must be conducted in every instance. The Coast Guard concurs and, although it has not adopted the suggested wording, in this final rule has revised the proposed wording.

Two comments recommended that the Coast Guard clarify the applicability to terminal gear of § 164.74(b)(4), which would have required a method for emergency release of towlines. One stated that the final rule should clarify whether this wording applies to synthetic towlines or towlines employed without a winch and should also specify whether the winch-brake requirement of § 164.74(b)(7) will satisfy the requirement of paragraph (b)(4) for a tugboat outfitted with a tow winch. The Coast Guard has clarified the release requirement by removing the term "emergency." This requirement is intended to ensure some manner of safety disengaging the towline. If a vessel has a winch, letting the cable run off the drum will be acceptable. If a vessel uses synthetic line, an axe will be acceptable provided there is a protected area where the person can stand while releasing the line. The winch-brake requirement is separate from this releasing requirement: It ensures that winch speed can be controlled, even if power is lost.

Two comments recommended that the towing-gear standards be more stringent than proposed. They considered the wording in § 164.74 too ambiguous, especially the term "appropriate." They recommended that what is appropriate should be some standard such as the AWO Responsible Carrier Program, the U.S. Navy Standards, or some manufacturers' recommendations. They urged that to be valid the final rule should incorporate specific standards by reference or spell them out. The Coast

Guard has not made this rule more specific than proposed, because it applies to a diverse industry and because no current standards adequately address every towing-vessel arrangement. The Coast Guard has allowed the owners and operators the flexibility of developing their own maintenance standards, but has outlined specific, minimal criteria to ensure an irreducible measure of safety.

Six comments stated that the requirements for towlines and terminal gear in general were not appropriate for small assistance-towing vessels. Other comments objected in particular to requirements on thimbles, poured sockets, wire cables, shackles, and metal fittings, because these items could damage light boats and injure personnel aboard disabled vessels; on the use of cotter pins or other means to secure connections of terminal gear, because such items are unacceptable and even dangerous; and on testing towlines and maintaining elaborate records of towlines' history, because these items impose a disproportionate burden. The Coast Guard has determined that these requirements are not appropriate for most small assistance-towing vessels. It has amended the applicability of this final rule from vessels of 8 meters in length to vessels of 12 meters in length and over. It developed these requirements to ensure that towlines remain intact and attached during towing especially for those combinations of tugs and barges that pose greater risk to the waterways.

5. Navigation; Tests and Inspections; Maintenance, Failure, and Reporting

Two comments expressed the opinion that § 164.80 was not appropriate for small assistance-towing vessels, since applying the same criteria to a 1,600-gross-ton (GT) vessel as to an 8-GT vessel is not reasonable (least of all when the latter uses an outboard motor). The Coast Guard has determined that § 164.80 indeed should not apply to small assistance-towing vessels. It has amended the applicability of this rule from vessels 8 meters in length to vessels of 12 meters in length and over. This change exempts smaller assistance-towing vessels, yet covers larger assistance-towing vessels (also engaged in commercial towing), which pose greater risk to the waterways.

Three comments noted that proposed § 164.80 would have required vessel operators to inspect and test equipment before departure from port or at least weekly. They supposed that the intent was to compel routine, walk-through inspections of a towing vessel's vital systems before its embarking on an

extended voyage. They contended that any periodic tests or inspections might fall mid-voyage while, in practice, all tests and inspections fall either upon embarkation or, by harbor tugs engaged in essentially continuous service, upon change of crew (weekly or biweekly). They asserted that industry practices are consistent with dictates of prudent navigation. The Coast Guard agrees, and has revised § 164.80 to ratify this frequency of tests and inspections.

Three comments expressed confusion over § 164.80(a)(2) due to the term "vessel-control alarms", which to them connoted autopilot or steering-system alarms. They stated that few towing vessels have either of these. They recommended either clarifying the meaning or changing the requirement to "vessel's installed alarm systems." The Coast Guard has kept the wording as proposed. If steering-system alarms or autopilot alarms are installed, it is appropriate to test them before departing from port; however, this final rule does not require installation of additional alarms.

One comment questioned whether § 164.80(b) should require that navigational equipment be checked by vessels under 1,600 GT. The Coast Guard did not propose to require this measure for towing vessels under 1,600 GT in the NPRM; however, it did state that this equipment must be operational. It is logical to include a test of this equipment for these vessels and it is consistent with the intent of the rulemaking. The Coast Guard has added a test of this equipment for towing vessels under 1,600 GT.

Two comments stated that proposed § 164.82 should be more stringent. One urge that § 164.82(d) have language strong enough to obligate a towing vessel's operator to moor or anchor the vessel if, in the operator's judgment, proceeding without radar would jeopardize the safety of the tow, of other vessels, or of the environment; at a minimum, a tow of environmentally hazardous cargoes should have to moor in hours of darkness when the towing vessel's radar is inoperative. One comment held that personnel who order a vessel to depart with a broken radar are ordering a "less seaworthy" vessel to go to sea and should be held responsible for doing so. The Coast Guard wrote this requirement to ensure that towing vessels' owners, operators, and masters address and correct equipment problems. But it is not necessarily unsafe to operate without a radar in some areas and weather. The operator or master certainly risks his or her license if he or she operates in poor weather, at night, or in congested traffic without an

operable radar. Section 164.82 of this final rule outlines clearly that an owner as well as an operator or master must consider the conditions before leaving port or continuing a transit once equipment fails—one for avoiding liability and each of the others for keeping the license.

One comment raised the question whether the COTP really wanted to know if a small assistance-towing vessel's radar was inoperable in accordance with § 164.82(d). The Coast Guard has changed the applicability of this final rule so most assistance-towing vessels are exempt from the rule. Those 12 meters in length and over that also operate as commercial towing vessels remain subject to it, and should. The Coast Guard has reviewed the reporting requirements and values reports of defective radars on all towing vessels of 12 meters or more in length engaged in commercial towing.

Three comments recommend that § 164.82 include the option of telephoning the COTP and requesting a deviation for an inoperative radar. Section 164.82(c) of this final rule allows a phoned-in request for deviation; but, because of the legal nature of this type of request, it also requires a written follow-up.

One comment recommended keeping the words "Failure of redundant * * *" in § 164.82(d). The Coast Guard concurs and has kept them.

Two comments recommended inserting the words "after entering a port" behind "96 hours" in § 164.82(d) because it is probable that a radar would fail during a sea voyage and would be inoperative more than 96 hours before a technician could get aboard. The two also felt that such a requirement would create a burden because it would mean that the vessel has to request a deviation from each COTP as the vessel passes through the zones. Information of an inoperative radar is critical when a vessel is under way, and services of a technician should not be difficult to obtain, least of all in the zones; therefore, the Coast Guard has not amended this requirement from the NPRM.

One comment noted that, if this final rule applied to foreign-flag vessels towing in U.S. waters, it would mandate equipment not now required by treaty such as the International Convention for the Safety of Life at Sea 74/78 (SOLAS), as amended; the comment argued that to impose regulations as a requirement of port entry without agreement of the IMO would be inappropriate. The comment offered as an example the proposed requirement for an illuminated swing-meter or magnetic compass: It is

conceivable (though unlikely) that a foreign-flag towing vessel not subject to SOLAS would not have a compass. The Coast Guard has determined that it could not require less in this final rule without defaulting on its duty to protect the U.S. navigable waters from the risk posed by towing vessels. These vessels can seek from the COTP an exemption if they enter U.S. navigable waters without the required equipment. By requiring this equipment, the Coast Guard ensures that these vessels will be adequately equipped while operating in U.S. navigable waters or, at a minimum, that the COTP will be aware of their substandard state.

6. Logs

One comment recommended that the final rule require maintenance of more-comprehensive logbooks; the proposed rule would have authorized maintenance of a simple "diary", which the comment held insufficient because it could not prove that vessel personnel comply with the work-hour limitations of 46 U.S.C. 8104 and would not offer a comprehensive list of items to take account of. The same comment recommended that, because of the illiteracy of some operators, log books should have a minimal number of items that could be answered by initial, checkmarks, or numbers rather than call for long, narrative paragraphs. The same comment recommended that § 164.78(b) be streamlined to require a log entry only when a pre-departure test or inspection indicated a failure or malfunction of a component; this approach would be consistent with industry practice and would minimize unnecessary paperwork. The Coast Guard considers it appropriate for companies to determine the method of recordkeeping that meets the requirements in this rule and their own needs and that suits the capability of the operators and masters they employ. (Again, manning and rest hours are not within the scope of this rule.) To ensure compliance with this rule, the Coast Guard requires a record of tests even if nothing fails. In the interest of minimizing these reports, the Coast Guard has not dictated the format of the entry and will allow companies to continue to use their established procedures.

One comment recommended that the local Officer in Charge of Marine Inspection (OCMI) be authorized to approve a company's individual safety-certification process in lieu of establishing a new and inflexible regime of logging and reporting for ensuring that vessels' systems, gear, and the like are inspected and tested. The Coast

Guard has changed the language on inspecting and testing in this final rule to reflect companies' procedures. The Coast Guard sees no need for an OCMI's special approval of a company's individual process. However, the process must record at least the tests and inspections required by this rule.

A final comment recommended that retroreflective material be placed on both sides of barges to aid in seeing the barges, especially of a large tow. This is outside the scope of this rulemaking, but is under consideration by the Navigation Safety Advisory Council (NAVSAC). If found to be feasible, it may be the subject of a separate rulemaking or of standard agreed to by government and industry.

Incorporation by Reference

The Director of the Federal Register has approved the material in § 164.03 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 final rule 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 11040; February 26, 1979).

A final Regulatory Evaluation under paragraph 10e of the regulatory policies and procedures of DOT has been prepared and is available in the docket for inspection or copying where indicated under **ADDRESSES**. This final rule applies to all commercial towing vessels 12 meters or greater in length. An estimated 4,686 existing towing vessels currently operate on U.S. waters and are affected by this rule. The Coast Guard estimates that the one-time cost of implementing this rule is \$28 million. Summaries of the comments to the NPRM on its regulatory evaluation, of the anticipated benefits of this final rule, and of the estimated cost of this rule follow:

Summary of Comments

Two comments held the statement "this rule would not result of a significant economic impact on a substantial number of small entities" entirely false. They noted that the cost to upgrade a marine-assistance vessel valued at \$30,000 would be substantial. This rule in final form does not affect marine-assistance vessels; it affects only

those vessels engaged in commercial towing. It applies to all of the latter vessels 12 meters (39.25 feet) or greater in length operating in U.S. waters. These vessels will have to retain manufacturing specifications on towlines and regularly maintain and inspect the towlines. They will have to carry updated charts or maps and publications, marine radar, and searchlights. Some (depending on service) will also have to carry magnetic compasses or swing-meters, depth-sounders, and electronic position-fixing devices.

Summary of Benefits

The principal benefits of this final rule will be to enhance the safety of navigation and reduce the risk of collisions, allisions, and groundings.

The allision in September, 1993, of a tow with a fixed railroad bridge near Mobile, Alabama, established the necessity of navigational-safety equipment for towing vessels. These navigational-safety measures will reduce damage to the human and natural environments by increasing the number of tools at the disposal of a vessel operator, thereby decreasing the likelihood of an accident.

The preliminary findings of studies prepared after the derailment of the Sunset Limited indicate that many owners and operators of towing vessels voluntarily equip their vessels with much of the proposed equipment here required. Review of the kind and amount of equipment voluntarily installed suggests the desirability of the industry's taking these measures. In addition, reliability and performance of modern navigational equipment has improved, which also suggests that mariners can have available to them, at falling cost, valued, accurate information. The benefits of each piece of equipment are as follows:

A marine surface-navigation radar is an essential piece of navigational-safety equipment. Not only does it aid in detecting and avoiding other vessels; it helps in constricted waterways and during periods of decreased visibility.

A searchlight also helps in restricted waterways, and is essential in checking the condition of tows and warning other vessels of the presence of towlines.

A magnetic compass indicates headings, which are critical to safe navigation of a vessel in open waters. It allows dead-reckoning in restricted visibility, enables the vessel to fix its position, helps the vessel to determine the effect of winds and currents, and tells the rate of turn for the tow.

A swing-meter, or rate-of-turn indicator, tells the rate of turn for the

towing vessel itself, which is valuable for every vessel pushing ahead and is critical for every large, multiple-barge tow pushing ahead. TSAC has indicated the considerable value of this device to every vessel pushing ahead.

A depth-sounder decreases the risk of grounding. It provides immediate information on depth, and also helps fix the vessel's position.

An electronic position-fixing device has become a basic navigational tool on board both offshore and coastal vessels. It supplants plotting by traditional means, for which few towing vessels have either the time or the personnel.

Charts or maps, and publications, have always been a basic navigational tool. They give detailed, recent information on obstructions, routes, bridge clearances, communication channels, river currents, and hazards to navigation.

Finally, owners' and operators' retention of manufacturers' data on the breaking strength of towlines, together with minimal standards of inspection and serviceability, will help ensure that towlines remain intact throughout transits and are of the appropriate sizes or configurations. The desirability of keeping tugs made up to their barges appears self-evident.

All of these measures serve essentially the same purpose: to increase navigational safety for towing vessels and barges on U.S. waters. Although the Coast Guard recognizes that many prudent operators already practice them, this rule will codify them, provide basic performance standards for the equipment, and compel compliance for vessels not conforming to the sound practices of the majority of the industry.

The benefits from these measures are significant, but the Coast Guard cannot quantify them from available data.

Summary of Costs

The present value of the one-time costs to the towing industry of installing the required navigational equipment is, on a very conservative estimate, just under \$28 million. This estimate is based on Coast Guard research. It assumes that a high proportion of vessels do not already carry the equipment, and does not factor in the difference in requirements for the difference in routes. Therefore, although it does not include costs for maintenance and repair, the Coast Guard expects that the actual value of the costs to the industry will run appreciably lower than \$28 million.

The estimated one-time cost of towing vessels 20 meters (65.62 feet) or more in length totals \$10.2 million; this comes to about \$4,600 a vessel. That for those

between 12 and 20 meters totals \$17.4 million; this comes to about \$7,000 a vessel. The average cost for smaller vessels, paradoxically, is higher than that for larger ones because the Coast Guard's estimating methodology assumes that a larger proportion of smaller vessels do not already carry the required navigational-safety equipment.

This final rule will impose recurring costs in following years. There will be three annual components of recurring costs: updates, deviations, and towline testing. (a) Estimated cost of updates is \$468,000 a year for the purchase of new editions of charts or maps and publications as necessary. (b) Estimated costs of deviations is about \$43,000 a year, assuming 1,072 of them a year. This number is low because the rule will allow 96 hours to make any necessary repairs. This is to decrease the burden on industry, especially on small entities. (c) Finally, estimated cost of towline testing is about \$300 a test. At 937 tests a year (20 percent of vessels), this component will be \$281,000 a year. These three annual components of recurring costs will total \$792,000.

Small Entities

The costs to small entities will not be significant, because, unlike the proposed rule, this final rule exempts towing vessels of less than 12 meters in length, certain yard and fleeting craft, assistance-towing vessels, and pollution-response vessels; because of the large number of vessels already in compliance; and because of the phase-in periods for several provisions. Therefore, the Coast Guard certifies under section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) that this rule will not have a significant economic impact on a substantial number of small entities.

Collection of Information

Under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), the Office of Management and Budget (OMB) reviews each rule that contains a collection-of-information requirement to determine whether the practical value of the information is worth the burden imposed by its collection. Collection-of-information requirements include reporting, recordkeeping, notification, and other, similar requirements.

This final rule contains collection-of-information requirements in the following sections: 164.72(b), 164.74(a), 164.78(b), and 164.82(d). The following particulars apply:

DOT No.: 2115.

OMB Control No.: 2115-0628.

Administration: U.S. Coast Guard.

Title: Navigation Safety Equipment for Towing Vessels.

Need for Information: This final rule will require the mariner to log or otherwise record information necessary for the safe operation of the vessel, including (1) Updating navigational charts or maps and publications to ensure that they accurately reflect local conditions; (2) keeping documentation on the vessel's towline to verify its strength and recording regular inspections of it to ensure that it remains sound; (3) recording tests of the navigation and towing equipment to ensure that they are functioning properly; and (4) requesting a deviation from the COTP if the vessel's radar is inoperative to ensure that this essential equipment is repaired. These recordkeeping requirements are thoroughly consistent with good commercial practice and the dictates of good seamanship for safe navigation and maintenance of critical navigational-safety equipment.

Proposed Use of Information

The primary use of this information will be to ensure that the mariner records information necessary for the safe operation and maintenance of the vessel. The secondary use will be to help Coast Guard inspectors determine whether a vessel is in compliance or, in the case of a casualty, whether failure to comply with this final rule contributed to the casualty. The Coast Guard has no specific plan to collect these data for statistical analysis.

Frequency of Response: The various information called for by this final rule will be recorded at different intervals. Updates of charts or maps and publications under § 164.72(b) bill occur at least weekly. Towline verification will entail, for each towline, keeping a record of the initial manufacturing data indefinitely. Entries in inspection logs or other documentation for towlines under § 164.74(a) will entail recording at least monthly. The recording under § 164.78(b) of tests and inspection of equipment will be frequent, and consistent with the underway schedule of the vessel. Finally, the submittal of requests for deviations under § 164.82(d) should occur infrequently, only when certain navigational-safety equipment fails and remains inoperative for greater than 96 hours.

Burden Estimate: 302,663 hours.

Respondents: 4,686 owners, masters, or operators of towing vessels.

Average Burden Hours a respondent: 64.6 annual hours a respondent.

Persons need not respond to an information collection unless it displays a currently valid control number from

OMB. This final rule contains information collections that have been approved by OMB.

Federalism

The Coast Guard has analyzed this final rule under the principles and criteria contained in Executive Order 12612 (October 26, 1987) and has determined that this rule does not have sufficient implications for federalism to warrant the preparation of a Federal Assessment.

Environment

The Coast Guard considered the environmental impact of this final rule and concluded that, under paragraphs 2.B.2.e(34) (d) and (e) of Commandant Instruction M16475.1B, this rule is categorically excluded from further environmental documentation. A "Categorical Exclusion Determination" is available in the docket for inspection or copying where indicated under **ADDRESSES**.

List of Subjects in 33 CFR Part 164

Marine safety, Navigation (water), Reporting and recordkeeping requirements, Waterways, Incorporation by reference.

For the reasons set out in the preamble, the Coast Guard amends 33 CFR part 164 as follows:

PART 164—NAVIGATION SAFETY REGULATIONS

1. The authority citation for part 164 is revised to read as follows:

Authority: 33 U.S.C. 1223, 1231; 46 U.S.C. 2103, 3703; 49 CFR 1.46. Sec. 164.13 also issued under 46 U.S.C. 8502. Sec. 164.61 also issued under 46 U.S.C. 6101.

2. In § 164.01, paragraph (b) is added to read as follows:

§ 164.01 Applicability.

* * * * *

(b) Sections 164.70 through 164.82 of this part apply to each towing vessel of 12 meters (39.4 feet) or more in length operating in the navigable waters of the United States other than the St. Lawrence Seaway; except that a towing vessel is exempt from the requirements of § 164.72 if it is—

- (1) Used solely within a limited geographic area, such as a fleeting-area for barges or a commercial facility, and used solely for restricted service, such as making up or breaking up larger tows;
 - (2) Used solely for assistance towing as defined by 46 CFR 10.103;
 - (3) Used solely for pollution response;
- or
- (4) Any other vessel exempted by the Captain of the Port (COTP). The COTP,

upon written request, may, in writing, exempt a vessel from § 164.72 for a specified route if he or she decides that exempting it would not allow its unsafe navigation under anticipated conditions.

3. Section 164.03 is amended by revising paragraph (b) to read as follows:

§ 164.03 Incorporation by reference.

* * * * *

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

- American Petroleum Institute (API)*, 1220 L Street NW., Washington, DC 20005
API Specification 9A, Specification for Wire Rope, Section 3, Properties and Tests for Wire and Wire Rope, May 28, 1984 164.74
- American Society for Testing and Materials (ASTM)*, 1916 Race Street, Philadelphia, PA 19103
ASTM D4268-93, Standard Test Method for Testing Fiber Ropes 164.74
- Cordage Institute*, 350 Lincoln Street, Hingham, MA 02043
CIA-3, Standard Test Methods for Fiber Rope Including Standard Terminations, Revised, June 1980 164.74
- International Maritime Organization (IMO)*, 4 Albert Embankment, London SE1 7SR, U.K.
IMO Resolution A342(IX), Recommendation on Performance Standards for Automatic Pilots, adopted November 12, 1975 164.13
- International Telecommunication Union Radiocommunication Bureau (ITU-R)*, Place de Nations CH-1211 Geneva 20 Switzerland
(1) ITU-R Recommendation M.821, Optional Expansion of the Digital Selective-Calling System for Use in the Maritime Mobile Service, 1992 164.43
- (2) ITU-R Recommendation M.825, Characteristics of a Transponder System Using Digital Selective-Calling Techniques for Use with Vessel Traffic Services and Ship-to-Ship Identification, 1992 164.43
- Radio Technical Commission for Maritime Services*, 655 Fifteenth Street, NW., Suite 300, Washington, DC 20005
(1) RTCM Paper 12-78/DO-100, Minimum Performance Standards, Loran C Receiving Equipment, 1977 164.41

- (2) RTCM Paper 194-93/SC104-STD, RTCM Recommended Standards for Differential NAVSTAR GPS Service, Version 2.1, 1994 ... 164.43
- (3) RTCM Paper 71-95/SC112-STD, RTCM Recommended Standards for Marine Radar Equipment Installed on Ships of Less Than 300 Tons Gross Tonnage, Version 1.1, October 10, 1995 164.72
- (4) RTCM Paper 191-93/SC112-X, RTCM Recommended Standards for Maritime Radar Equipment Installed on Ships of 300 Tons Gross Tonnage and Upwards, Version 1.2, December 20, 1993 164.72

4. Sections 164.70, 164.72, 164.74, 164.76, 164.78, 164.80, and 164.82 added to read as follows:

§ 164.70 Definitions.

For purposes of §§ 164.72 through 164.82, the term—
Current edition means the most recent published version of a publication, chart, or map required by § 164.72.

Currently corrected edition means a current or previous edition of a publication required by § 164.72, corrected with changes that come from Notices to Mariners (NTMs) or Notices to Navigation reasonably available and that apply to the vessel's transit. Hand-annotated river maps from the U.S. Army Corps of Engineers (ACOE) are currently corrected editions if issued within the previous 5 years.

Great Lakes means the Great Lakes and their connecting and tributary waters including the Calumet River as far as the Thomas J. O'Brien Lock and Controlling Works (between miles 326 and 327), the Chicago River as far as the east side of the Ashland Avenue Bridge (between miles 321 and 322), and the Saint Lawrence River as far east as the lower exit of Saint Lambert Lock.

Swing-meter means an electronic or electric device that indicates the rate of turn of the vessel on board which it is installed.

Towing vessel means a commercial vessel engaged in or intending to engage in pulling, pushing or hauling alongside, or any combination of pulling, pushing, or hauling alongside.

Western Rivers means the Mississippi River, its tributaries, South Pass, and Southwest Pass, to the navigational-demarcation lines dividing the high seas from harbors, rivers, and other inland waters of the United States, and the Port Allen-Morgan City Alternative Route, and that part of the Atchafalaya River above its junction with the Port Allen-Morgan City Alternative Route

including the Old River and the Red River and those waters specified by §§ 89.25 and 89.27 of this chapter, and such other, similar waters as are designated by the COTP.

§ 164.72 Navigational-safety equipment, charts or maps, and publications required on towing vessels.

(a) Except as provided by § 164.01(b), each towing vessel must be equipped with the following navigational-safety equipment:

(1) *Marine Radar*. By August 2, 1997, a marine radar that meets the following applicable requirements:

(i) For a vessel of less than 300 tons gross tonnage that engages in towing on navigable waters of the U.S., including Western Rivers, the radar must meet—

(A) The requirements of the Federal Communications Commission (FCC) specified by 47 CFR part 80; and

(B) RTCM Standard for Marine Radar Equipment Installed on Ships of Less Than 300 Tons Gross Tonnage, RTCM Paper 71-95/SC112-STD, Version 1.1, display Category II and stabilization Category Bravo.

(ii) For a vessel of less than 300 tons gross tonnage that engages in towing seaward of navigable waters of the U.S. or more than three nautical miles from shore on the Great Lakes, the radar must meet—

(A) The requirements of the FCC specified by 47 CFR part 80; and

(B) RTCM Standard for Marine Radar Equipment Installed on Ships of Less Than 300 Tons Gross Tonnage, RTCM Paper 71-95/SC112-STD, Version 1.1, display Category I and stabilization Category Alpha.

(iii) For a vessel of 300 tons gross tonnage or more that engages in towing, the radar must meet RTCM

Recommended Standards for Marine Radar Equipment Installed on Ships of 300 Tons Gross tonnage and Upwards, RTCM Paper 191-93/SC112-X, Version 1.2.

(iv) A vessel with an existing radar must meet the applicable requirements of paragraphs (a)(1) (i) through (iii) of this section by August 2, 1998; except that a vessel with an existing radar must meet the display and stabilization requirements of paragraph (a)(1)(ii)(B) of this section by August 2, 2001.

(2) *Searchlight*. A searchlight, directable from the vessel's main steering station and capable of illuminating objects at a distance of at least two times the length of the tow.

(3) *VHF-FM Radio*. An installation or multiple installations of VHF-FM radios as prescribed by part 26 of this chapter and 47 CFR part 80, to maintain a continuous listening watch on the designated calling channel, VHF-FM Channel 13 (except on portions of the Lower Mississippi River, where VHF-FM Channel 67 is the designated calling channel), and to separately monitor the International Distress and Calling Channel, VHF-FM Channel 16, except when transmitting or receiving traffic on other VHF-FM channels or when participating in a Vessel Traffic Service (VTS) or monitoring a channel of a VTS. (Each U.S. towing vessel of 26 feet (about 8 meters) or more in length, except a public vessel, must hold a ship-radio-station license for radio transmitters (including radar and EPIRBs), and each operator must hold a restricted operator's license or higher. To get an application for either license, call (800) 418-FORM or (202) 418-FORM, or write to the FCC; Wireless Bureau, Licensing Division; 1270 Fairfield Road; Gettysburg, PA 17325-7245.)

(4) *Magnetic Compass*. Either—

(i) An illuminated swing-meter or an illuminated car-type magnetic steering compass readable from the vessel's main steering station, if the vessel engages in towing exclusively on Western Rivers; or

(ii) An illuminated card-type magnetic steering compass readable from the vessel's main steering station.

(5) *Echo Depth-Sounding Device*. By August 2, 2001, an echo depth-sounding device readable from the vessel's main steering station, unless the vessel engages in towing exclusively on Western Rivers.

(6) *Electronic Position-Fixing Device*. An electronic position-fixing device, either a LORAN-C receiver or a satellite navigational system such as the Global Positioning System (GPS) as required by § 164.41, if the vessel engages in towing seaward of navigable waters of the U.S. or more than three nautical miles from shore on the Great Lakes.

(b) Each towing vessel must carry on board and maintain the following:

(1) *Charts or maps*. Marine charts or maps of the areas to be transited, published by the National Ocean Service (NOS), the ACOE, or a river authority that satisfy the following requirements:

(i) The charts or maps must be of a large enough scale and have enough

detail to make safe navigation of the areas possible.

(ii) The charts or maps must be either—

(A) Current editions or currently corrected editions, if the vessel engages in towing exclusively on navigable waters of the U.S., including Western Rivers; or

(B) Currently corrected editions, if the vessel engages in towing seaward of navigable waters of the U.S. or more than three nautical miles from shore on the Great Lakes.

(iii) The charts or maps may be, instead of charts or maps required by paragraphs (b)(1) (i) and (ii) of this section, currently corrected marine charts or maps, or applicable extracts, published by a foreign government. These charts or maps, or applicable extracts, must contain information similar to that on the charts or maps required by paragraphs (b)(1) (i) and (ii) of this section, be of large enough scale, and have enough detail to make safe navigation of the areas possible, and must be currently corrected.

(3) *General publications*. A currently corrected edition of, or an applicable currently corrected extract from, each of the following publications for the area to be transited:

(i) If the vessel is engaged in towing exclusively on Western Rivers—

(A) U.S. Coast Guard Light List;

(B) Applicable Notices to Navigation published by the ACOE, or Local Notices to Mariners (LNMs) published by the Coast Guard, for the area to be transited, when available; and

(C) River-current tables published by the ACOE or a river authority, if available.

(ii) If the vessel is engaged other than in towing exclusively on Western Rivers—

(A) Coast Guard Light List;

(B) Notices to Mariners published by the Defense Mapping Agency, or LNMs published by the Coast Guard;

(C) Tidal-current tables published by the NOS, or river-current tables published by the ACOE or a river authority;

(D) Tide tables published by the NOS; and

(E) U.S. Coast Pilot.

(c) Table 164.72, following, summarizes the navigational-safety equipment, charts or maps, and publications required for towing vessels of 12 meters or more in length:

TABLE 164.72.—EQUIPMENT, CHARTS OR MAPS, AND PUBLICATIONS OF TOWING VESSELS OF 12 METERS OR MORE IN LENGTH

	Western rivers	U.S. navigable waters other than Western rivers	Waters seaward of navigable waters and 3 NM or more from shore on the Great Lakes
<i>Marine Radar:</i> Towing vessels of less than 300 GT.	RTCM Paper 71–95/SC112–STD Version 1.1, Display Category II ¹ Stabilization Category BRAVO.	RTCM Paper 71–95/SC112–STD Version 1.1, Display Category II ¹ Stabilization Category BRAVO.	RTCM Paper 71–95/SC112–STD Version 1.1, Display Category I ² Stabilization Category ALPHA.
Towing vessels of 300 GT or more.	RTCM Paper 191–93/SC112–X Version 1.2. ¹	RTCM Paper 191–93/SC112–X Version 1.2. ¹	RTCM Paper 191–93/SC112–X Version 1.2. ¹
Searchlight	X	X	X.
VHF–FM radio	X	X	X.
Magnetic compass.	X ³	X	X.
Swing-meter	X ³ .....	.....	.....
Echo depth-sounding device.	.....	X	X.
Electronic position-fixing device.	.....	.....	X.
Charts or maps	(1) Large enough scale	(1) Large enough scale	(1) Large enough scale.
	(2) Current edition or currently corrected edition.	(2) Current edition or currently corrected edition.	(2) Currently corrected edition.
General publications.	(1) U.S. Coast Guard Light List	(1) U.S. Coast Guard Light List	(1) U.S. Coast Guard Light List.
	(2) Notices to Navigation or Local Notice to Mariners.	(2) Local Notices to Mariners	(2) Local Notices to Mariners.
	(3) River-current Tables	(3) Tidal-current Tables	(3) Tidal-current Tables.
	.....	(4) Tide Tables	(4) Tide Tables.
	.....	(5) U.S. Coast Pilot	(5) U.S. Coast Pilot.

NOTES:

¹ Towing vessels with existing radar must meet this requirement by August 2, 1998.

² Towing vessels with existing radar must meet this requirement by August 2, 1998, but do not need to meet the display and stabilization requirement until August 2, 2001.

³ A towing vessel may carry either a swing-meter or a magnetic compass.

§ 164.74 Towline and terminal gear for towing astern.

(a) *Towline.* The owner, master, or operator of each vessel towing astern shall ensure that the strength of each towline is adequate for its intended service, considering at least the following factors:

- (1) The size and material of each towline must be—
 - (i) Appropriate for the horsepower or bollard pull of the vessel;
 - (ii) Appropriate for the static loads and dynamic loads expected during the intended service;
 - (iii) Appropriate for the sea conditions expected during the intended service;
 - (iv) Appropriate for exposure to the marine environment and to any chemicals used or carried on board the vessel;
 - (v) Appropriate for the temperatures of normal stowage and service on board the vessel;
 - (vi) Compatible with associated navigational-safety equipment; and
 - (vii) Appropriate for the likelihood of mechanical damage.
- (2) Each towline as rigged must be—
 - (i) Free of knots;

(ii) Spliced with a thimble, or have a poured socket at its end; and

(iii) Free of wire clips except for temporary repair, for which the towline must have a thimble and either five wire clips or as many wire clips as the manufacturer specifies for the nominal diameter and construction of the towline, whichever is more.

(3) The condition of each towline must be monitored through the—

- (i) Keeping on board the towing vessel or in company files of a record of the towline's initial minimum breaking strength as determined by the manufacturer, by a classification ("class") society authorized in § 157.04 of this chapter, or by a tensile test that meets API Specification 9A, Specification for Wire Rope, Section 3; ASTM D4268–93, Standard Test Method for Testing Fiber Ropes; or Cordage Institute CIA 3, Standard Test Methods for Fiber Rope Including Standard Terminations;

(ii) If the towline is purchased from another owner, master, or operator of a vessel with the intent to use it as a towline or if it is retested for any reason, keeping on board the towing vessel or

in company files of a record of each retest of the towline's minimum breaking strength as determined by a class society authorized in § 157.04 of this chapter or by a tensile test that meets API Specification 9A, Section 3; ASTM D4268–93; or Cordage Institute CIA 3, Standard Test Methods;

(iii) Conducting visual inspections of the towline in accordance with the manufacturer's recommendations, or at least monthly, and whenever the serviceability of the towline is in doubt (the inspections being conducted by the owner, master, or operator, or by a person on whom the owner, master, or operator confers the responsibility to take corrective measures appropriate for the use of the towline);

(iv) Evaluating the serviceability of the whole towline or any part of the towline, and removing the whole or part from service either as recommended by the manufacturer or a class society authorized in § 157.04 of this chapter or in accordance with a replacement schedule developed by the owner, master, or operator that accounts for at least the—

(A) Nautical miles on, or time in service of, the towline;

(B) Operating conditions experienced by the towline;

(C) History of loading of the towline;

(D) Surface condition, including corrosion and discoloration, of the towline;

(E) Amount of visible damage to the towline;

(F) Amount of material deterioration indicated by measurements of diameter and, if applicable, measurements of lay extension of the towline; and

(G) Point at which a tensile test proves the minimum breaking strength of the towline inadequate by the standards of paragraph (a)(1) of this section, if necessary; and

(v) Keeping on board the towing vessel or in company files of a record of the material condition of the towline when inspected under paragraphs (a)(3)(iii) and (iv) of this section. Once this record lapses for three months or more, except when a vessel is laid up or out of service or has not deployed its towline, the owner, master, or operator shall retest the towline or remove it from service.

(b) *Terminal gear.* The owner, master, or operator of each vessel towing astern shall ensure that the gear used to control, protect, and connect each towline meets the following criteria:

(1) The material and size of the terminal gear are appropriate for the strength and anticipated loading of the towline and for the environment;

(2) Each connection is secured by at least one nut with at least one cotter pin or other means of preventing its failure;

(3) The lead of the towline is appropriate to prevent sharp bends in the towline from fairlead blocks, chocks, or tackle;

(4) There is provided a method, whether mechanical or non-mechanical, that does not endanger operating personnel but that easily releases the towline;

(5) The towline is protected from abrasion or chafing by chafing gear, lagging, or other means;

(6) Except on board a vessel towing in ice on Western Rivers or one using a towline of synthetic or natural fiber, there is fitted a winch that evenly spools and tightly winds the towline; and

(7) If a winch is fitted, there is attached to the main drum a brake that has holding power appropriate for the horsepower or bollard pull of the vessel and can be operated without power to the winch.

§ 164.76 Towline and terminal gear for towing alongside and pushing ahead.

The owner, master, or operator of each vessel towing alongside or pushing

ahead shall ensure that the face wires, spring lines, and push gear used—

(a) Are appropriate for the vessel's horsepower;

(b) Are appropriate for the arrangement of the tow;

(c) Are frequently inspected; and

(d) Remain serviceable.

§ 164.78 Navigation under way: Towing vessels.

(a) The owner, master, or operator of each vessel towing shall ensure that each person directing and controlling the movement of the vessel—

(1) Understands the arrangement of the tow and the effects of maneuvering on the vessel towing and on the vessel, barge, or object being towed;

(2) Can fix the position of the vessel using installed navigational equipment, aids to navigation, geographic reference-points, and hydrographic contours;

(3) Does not fix the position of the vessel using buoys alone (Buoys are aids to navigation placed in approximate positions either to alert mariners to hazards to navigation or to indicate the orientation of a channel. They may not maintain exact charted positions, because strong or varying currents, heavy seas, ice, and collisions with vessels can move or sink them or set them adrift. Although they may corroborate a position fixed by other means, they cannot fix a position; however, if no other aids are available, buoys alone may establish an estimated position.);

(4) Evaluates the danger of each closing visual or radar contact;

(5) Knows and applies the variation and deviation, where a magnetic compass is fitted and where charts or maps have enough detail to enable this type of correction;

(6) Knows the speed and direction of the current, set, drift, and tidal state for the area to be transited; and

(7) Proceeds at a speed prudent for the weather, visibility, traffic density, tow draft, possibility of wake damage, speed of the current, and local speed-limits.

(b) The owner, master, or operator of each vessel towing shall ensure that the tests and inspections required by § 164.80 are conducted and that the results are entered in the log or other record carried on board.

§ 164.80 Tests and inspections.

(a) The owner, master, or operator of each towing vessel of less than 1,600 GT shall ensure that the following tests and inspections of gear occur before the vessel embarks on a voyage of more than 24 hours or when each new master or operator assumes command:

(1) *Steering-systems.* A test of the steering-gear-control system; a test of

the main steering gear from the alternative power supply, if installed; a verification of the rudder-angle indicator relative to the actual position of the rudder; and a visual inspection of the steering gear and its linkage.

(2) *Navigational equipment.* A test of all installed navigational equipment.

(3) *Communications.* Operation of all internal vessel control communications and vessel-control alarms, if installed.

(4) *Lights.* Operation of all navigational lights and all searchlights.

(5) *Terminal gear.* Visual inspection of tackle; of connections of bridle and towing pendant, if applicable; of chafing gear; and of the winch brake, if installed.

(6) *Propulsion systems.* Visual inspection of the spaces for main propulsion machinery, of machinery, and of devices for monitoring machinery.

(b) The owner, master, or operator of each towing vessel of 1,600 GT or more shall ensure that the following tests of equipment occur at the frequency required by § 164.25 and that the following inspections of gear occur before the vessel embarks on a voyage of more than 24 hours or when each new master or operator assumes command:

(1) *Navigational equipment.* Tests of onboard equipment as required by § 164.25.

(2) *Terminal gear.* Visual inspection of tackle; of connections of bridle and towing pendant, if applicable; of chafing gear; and of the winch brake, if installed.

§ 164.82 Maintenance, failure, and reporting.

(a) *Maintenance.* The owner, master, or operator of each towing vessel shall maintain operative the navigational-safety equipment required by § 164.72.

(b) *Failure.* If any of the navigational-safety equipment required by § 164.72 fails during a voyage, the owner, master, or operator of the towing vessel shall exercise due diligence to repair it at the earliest practicable time. He or she shall enter its failure in the log or other record carried on board. The failure of equipment, in itself, does not constitute a violation of this rule; nor does it constitute unseaworthiness; nor does it obligate an owner, master, or operator to moor or anchor the vessel. However, the owner, master, or operator shall consider the state of the equipment—along with such factors as weather, visibility, traffic, and the dictates of good seamanship—in deciding whether it is safe for the vessel to proceed.

(c) *Reporting.* The owner, master, or operator of each towing vessel whose

equipment is inoperative or otherwise impaired while the vessel is operating within a Vessel Traffic Service (VTS) Area shall report the fact as required by 33 CFR 161.124. (33 CFR 161.124 requires that each user of a VTS report to the Vessel Traffic Center as soon as practicable:

(1) Any absence or malfunction of vessel-operating equipment for navigational safety, such as propulsion machinery, steering gear, radar, gyrocompass, echo depth-sounding or other sounding device, automatic dependent surveillance equipment, or navigational lighting;

(2) Any condition on board the vessel likely to impair navigation, such as shortage of personnel or lack of current nautical charts or maps, or publications; and

(3) Any characteristics of the vessel that affect or restrict the maneuverability of the vessel, such as arrangement of cargo, trim, loaded condition, under-keel clearance, and speed.)

(d) *Deviation and authorization.* The owner, master, or operator of each towing vessel unable to repair within 96 hours an inoperative marine radar required by § 164.72(a) shall so notify the Captain of the Port (COTP) and shall seek from the COTP both a deviation from the requirements of this section and an authorization for continued operation in the area to be transited. Failure of redundant navigational-safety equipment, including but not limited to failure of one of two installed radars, where each satisfies § 164.72(a), does not necessitate either a deviation or an authorization.

(1) The initial notice and request for a deviation and an authorization may be spoken, but the request must also be written. The written request must explain why immediate repair is impracticable, and state when and by whom the repair will be made.

(2) The COTP, upon receiving even a spoken request, may grant a deviation and an authorization from any of the provisions of §§ 164.70 through 164.82 for a specified time if he or she decides that they would not impair the safe navigation of the vessel under anticipated conditions.

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