

MSC Guidelines for Review of Inland/Ocean Tank Barge General Arrangements

Procedure Number: T1-16

Revision Date: 07/01/03

References

- a. 46 CFR Subchapter D, Tank Vessels
 - b. 46 CFR Subchapter O, Certain Bulk Dangerous Cargoes
 - c. 46 CFR Subchapter I, Cargo and Miscellaneous Vessels
 - d. 33 CFR Part 157, Rules for the Protection of the Marine Environment Relating to Tank Vessels Carrying Oil in Bulk, OPA 90
 - e. International Convention for the Prevention of Pollution from Ships, 1973, and its Protocol of 1978 (MARPOL 73/78)
 - f. 33 CFR 155, Oil or Hazardous Material Pollution Prevention Regulations for Vessels
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Disclaimer

These guidelines were developed by the Marine Safety Center staff as an aid in the preparation and review of vessel plans and submissions. They were developed to supplement existing guidance. They are not intended to substitute or replace laws, regulations, or other official Coast Guard policy documents. The responsibility to demonstrate compliance with all applicable laws and regulations still rests with the plan submitter. The Coast Guard and the U. S. Department of Homeland Security expressly disclaim liability resulting from the use of this document.

Contact Information

If you have any questions or comments concerning this document, please contact the Marine Safety Center by e-mail or phone. Please refer to the Procedure Number: **T1-16**

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General Review Guidance

- If the vessel is new and not a sister vessel, has the Application for Inspection been submitted? In general, no plan review will occur until receipt of a copy of the Application.
 - Is it clearly stated what is desired from the MSC? Are all plans requiring Coast Guard review and/or approval submitted in triplicate? Are there any special or unusual requests involved?
 - Are all spaces identified and designated on the plan?
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- ❑ Determine the applicable regulations. Use 46 CFR 151.01-10 for specific guidance.
- ❑ Integrated Tug-Barges (ITBs) on an ocean route should see NVIC 2-81, Ch. 1 for additional requirements.

For a vessel subject to Subchapter D or Subchapters O and D:

- ❑ Double Bottom (As required by reference (d), Parts 157.01 and 157.08, reference (a), 46 CFR 32.63-25, and reference (b) 46 CFR 151.15-3(d))
 - ❑ For an inland barge, a double bottom shall be fitted in accordance with 33 CFR 157.10d(d)(2) [2 foot requirement].
 - ❑ For an oceangoing barge, a double bottom shall be fitted in accordance with 33 CFR 157.10d(c)(2).
- ❑ Double Side (As required by 33 CFR 157.01 and 157.08, 46 CFR 32.63-25, and 46 CFR 151.15-3(d))
 - ❑ For a subchapter D and Type III O/D **inland** barge, a double side shall be fitted in accordance with 33 CFR 157.10d(d)(1) [2 foot requirement].
 - ❑ For a subchapter D and Type III O/D **ocean** barge, a double side shall be fitted in accordance with 33 CFR 157.10d(c)(3).
 - ❑ For a subchapter O/D Type I or II barge, a double side shall be fitted as follows (46 CFR 151.15-3(d):
 - ❑ Type I hull; 4 feet from the side shell and box end
25 feet from the headlog at the bow, for lead barge
 - ❑ Type II hull; 3 feet from the side shell and box end
25 feet from the headlog at the bow, for lead barge
- ❑ Size and arrangements of cargo tanks (**ocean going barges only**)
 - ❑ Ensure that the size and arrangement of cargo tanks are in compliance. For a barge operated only on domestic voyages, use the criteria in 33 CFR 157.19, Appendix A.4-5. For a barge operated on an international voyage, use the criteria in reference (e), MARPOL 73/78, Regulation 24. See NVIC 6-94, Ch. 1 for specific exemptions to tank size requirements.
- ❑ Prohibited Spaces reference (g) (33 CFR 155.470)
- ❑ Pollution Containment

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- Detail graphically the chosen means of compliance for reference (g) 33 CFR 155.310
- Means of Escape (**manned barges only**)
 - Two means of escape must be provided from accommodations, spaces normally manned, and machinery spaces, as required by 46 CFR 32.02-1.
- Segregation of Cargo (46 CFR 32.60-10 and 32.60-15)
 - Hatches and vents must extend to the weatherdeck.
- Crew Accommodations (**manned barges only**) (46 CFR 32.40-60)
- Guardrails and Bulwarks (manned barges only) (46 CFR 32.02-10)
- Pump room access (46 CFR 32.60-20)
- Slop tanks, verify slop tanks as required per 33 CFR 157.15 (1257 BBLS or more/200 m³) See 33 CFR 157.08 for additional applicability information. For a barge operated on an international voyage, see NVIC 6-94, Ch. 1 for specific exemptions to MARPOL 73/78 requirements.

For a vessel regulated under Subchapter O and I:

- Double Bottom (46 CFR 151.15-3(d))
 - For an ocean and inland barge, the double bottom height will be controlled by the ability of the submitter to show that the vessel can survive the damage stability requirements, as applicable. 46 CFR 151.15-3(d)(2) requires an inspection clearance of at least 15 inches. (Note: Most designers provide a double bottom height of at least 15 inches (the specified double bottom extent of damage on a Type I and II hull) to avoid having to damage the cargo tank.
- Double Side (46 CFR 151.15-3(d))
 - For a subchapter O/I barge, a double side shall be fitted as follows:
 - Type I hull; 4 feet from the side shell and box end
25 feet from the headlog at the bow, for lead barge
 - Type II hull; 3 feet from the side shell and box end
25 feet from the headlog at the bow, for lead barge
 - Type III hull; No double side requirement

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- Location of crew spaces (manned barges only) reference (c) (46 CFR 92.20-10)
- Means of Escape (**manned barges only**) reference (c) (46 CFR 92.10-5)
- Sleeping accommodations (**manned barges only**) reference (c) (46 CFR 92.20-20)
- Washrooms and toilet rooms (**manned barges only**) reference (c) (46 CFR 92.20-25)
- Messrooms (manned barges only) reference (c) (46 CFR 92.20-30)
- Hospital spaces (manned barges only) reference (c) (46 CFR 92.20-35) Other spaces (manned barges only) reference (c) (46 CFR 92.20-40)
- Guardrails and Bulwarks reference (c) (46 CFR 92.25)
- Pollution Containment
 - Detail graphically the chosen means of compliance for reference (g) 33 CFR 155.310

For a vessel regulated under Subchapter O:

- For open hopper barges, verify the coaming height requirements of 46 CFR 151.10-20:
- Ensure that each tank has an access openings at least 15 in. x 18 in. 46 CFR 151.15-3(d)(3); 153.217; .219; .254, .256, & .354

Definitions

Routes: Inland routes include vessel service on lakes, bays, sounds, rivers, and coastwise routes, including “special service voyages” and “limited coastwise, fair weather only.” Operation on the Great Lakes is not considered an inland route, unless specified in fair weather definition. Definitions for these terms can be found in the following sources:

Rivers:	46 CFR 30.10-61
Lakes, Bays, and Sounds:	46 CFR 30.10-41
Great Lakes:	46 CFR 30.10-33
Ocean:	46 CFR 30.10-45
Coastwise:	46 CFR 30.10-11
Special service voyages:	MSM, Volume IV, Chapter 6, Part F.3.g

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Fair weather voyages: MSM, Volume IV, Chapter 6, Part F.3.i

International Voyage: A voyage from a country to which the present Convention applies to a port outside such country, or conversely. (See SOLAS Chapter I, Part A, Regulation 2(d).)