




16710
CG-ENG
Policy Letter 01-23
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From: 
Daniel H. Cost, CAPT
COMDT (CG-ENG)

To: Distribution

Subj: DESIGN BASIS AGREEMENT SUBMISSION GUIDANCE

- Ref:
- (a) Title 46, Code of Federal Regulations (CFR), chapter I
 - (b) Marine Safety Center Regulations Interpretation Responsibility, COMDTINST 16715.5A
 - (c) Navigation and Vessel Inspection Circular (NVIC) 2-95 CH-3, The Alternate Compliance Program (ACP)
 - (d) Single U.S. Supplement to International Conventions and Classification Society Rules for Ships Enrolled in the Alternate Compliance Program (ACP)
 - (e) Navigation and Vessel Inspection Circular (NVIC) 10-82 CH-2, Acceptance of Plan Review and Inspection Tasks Performed by the American Bureau of Shipping (ABS) for New Construction or Major Modification of U. S. Flag Vessels
 - (f) Navigation and Vessel Inspection Circular (NVIC) 10-92 Ch-1, Coast Guard Recognition of Registered Professional Engineer Certification of Compliance with Coast Guard Requirements International Maritime Organization
 - (g) MSC.1/Circ.1455, Guidelines for the Approval of Alternative and Equivalents as Provided for in Various IMO Instruments

1. Purpose. This policy letter provides guidance for vessel owners and operators when submitting design standard equivalency requests to the Coast Guard for consideration as a Design Basis Agreement (DBA). The regulations in reference (a) do not account for all acceptable design and construction methods for a vessel, outer continental shelf (OCS) facility, other installation or device (hereby abbreviated to **vessels or floating facilities** for the purpose of this document). To facilitate innovation in the maritime domain, the Commandant (CG-ENG) has the authority, delegated throughout specific sections in reference (a),¹ to consider equivalents to regulatory design standards. Through the DBA process, the Coast Guard will evaluate alternate arrangement or novel design proposals to ensure that the arrangement, fitting, appliance, apparatus, equipment, calculation, information, or test provides a level of safety equivalent to that established by applicable

¹For example, *E.g.*, 46 CFR §§ 30.15-1 (Tank Vessels), 70.15-1 (Passenger Vessels), 90.15-1 (Cargo and Miscellaneous Vessels), 114.540 (Small Passenger Vessels Carrying More Than 150 Passengers), 125.170 (Offshore Supply Vessels), 136.115 (Towing Vessels), and 175.540 (Small Passenger Vessels).

regulatory standards. If approved, a DBA serves as a standards framework for the design, plan review, inspection, and certification of novel vessels or floating facilities.

2. Action.

- a. Owners, operators, shipyards, vessel engineers, and members of the public involved in the design and construction of a vessel or floating facility, or their systems, under the jurisdiction of the Coast Guard should consider this guidance when submitting project proposals employing novel design and/or construction methods.
- b. The Coast Guard Office of Commercial Vessel Compliance (CG-CVC), the Marine Safety Center (MSC), local Officers in Charge, Marine Inspection (OCMI), and classification societies identified as recognized organizations (RO) of the United States should review this policy letter. The local OCMI, MSC or RO should consider this guidance as a potential best course of action when commercial stakeholders submit a design with equivalency requests authorized by reference (a). Per their agreements, the RO must seek review and approval for all exemptions, waivers, equivalencies, or relaxations from the administration prior to execution or the issuance of associated certificates or documentation.
- c. In accordance with reference (b), MSC has the authority to make interpretations of regulations during plan review of vessels. Generally, a request for interpretation or equivalence should be submitted to MSC via the cognizant OCMI. MSC will then determine if the request falls under its authority. If the MSC determines a conceptual design requires a unique and well documented framework of standards, it will coordinate with CG-ENG who will lead the review of any application for a DBA.
- d. Not all equivalencies will need to go through a DBA process. It is quite common for the Coast Guard to evaluate single system or equipment equivalencies on their own without the need for a larger design concept evaluation. During consideration of an equivalency, the Coast Guard will determine the need for a DBA.
- e. CG-ENG will work with the DBA applicant, OCMI, MSC, CG-CVC, and others, as appropriate, such as an RO or Third-Party Organization (TPO), during the review. After determining that the requested arrangement provides an equivalent level of safety, CG-ENG will issue an approved DBA and send copies to the submitter, OCMI, MSC, CG-CVC, and RO or TPO when applicable. Once issued, the DBA establishes the framework of engineering standards specific to a vessel or floating facility, which will be used by MSC or the delegated RO during the plan review process. The OCMI, RO, or TPO will utilize the DBA when inspecting the vessel during new construction, when conducting initial certification, and during subsequent compliance inspections.
- f. OCMI, ROs, and TPOs must note that applicable existing standards (contained in existing law and regulations) for a particular vessel remain effective unless a DBA is accepted and approved by the Coast Guard. Once the DBA is approved by the Coast Guard, the agreed upon equivalencies become part of the vessel's standards framework

and shall be applied accordingly. All other applicable standards not covered by the DBA remain in effect. Any modifications to a vessel that affect the DBA should be reviewed by the Coast Guard and, if necessary, an updated DBA should be approved by CG-ENG. Coast Guard marine inspectors and authorized surveyors must verify compliance with the DBA during inspections and surveys.

3. Authorized Release. Internet release is authorized.
4. Directives Affected. None.
5. Background.
 - a. The Coast Guard has statutory authority under 46 U.S.C. § 3306(a) and (b) to prescribe regulations for the design and construction of commercial vessels. Title 43 U.S.C. § 1333(d)(1) and 1356 grant the Coast Guard statutory authority to promulgate and enforce reasonable regulations to promote the safety of life and property on offshore facilities. Reference (a) provides engineering design requirements for vessels or floating facilities operating in U.S. waters and allows the Commandant to grant subchapter specific equivalencies.²
 - b. Title 46 U.S.C. § 3316(b) and (d) allow recognized classification societies to review and approve plans required for the issuance of a certificate of inspection for vessels and offshore facilities. The Coast Guard delegates certain statutory authorities and services to ROs through established agreements. The Coast Guard administers these authorities through 46 CFR part 8.
 - c. The Coast Guard delegates authority for certain statutory certification and services on certain Alternative Compliance Program (ACP) vessels per reference (c) and limited instructions are provided in the applicable U.S. Supplement to International Conventions and Classification Society Rules for Ships Enrolled in the ACP. Paragraph M of enclosure (1) to reference (c) requires ROs to forward any equivalency requests to the MSC for appropriate action.
 - d. TPOs are authorized to conduct independent verifications to assess whether towing vessels or their Towing Safety Management System (TSMS) comply with applicable requirements in 46 CFR subchapter M.³ Requests for equivalencies described in 46 CFR § 136.115 would follow the same process described in paragraph 2.c of this policy. However, an OCMI may independently approve certain Special Considerations as explained in CVC-WI-010 (series) without further review.
 - e. This policy letter does not supersede any other policy letters or guidance published by the Coast Guard on vessel or floating facility design and approval.

² See *supra* note 1.

³ 46 CFR §§ 136.110, 136.130.

6. Guidance.

- a. Discussions with the cognizant OCMI on potential vessel design or arrangement equivalencies should occur as early as practicable. The OCMI should consider the scope of the proposal and contact the MSC regarding any regulatory deviations which may impact the plan review of a vessel or floating facility. If an OCMI zone has yet to be determined, owners or designers of vessels or floating facilities should contact the MSC for discussion on potential vessel design or arrangement equivalencies. The MSC will coordinate with CG-ENG as discussed in paragraph 2.c.
- b. CG-ENG considers each design concept on a case-by-case basis. As needed, CG-ENG may request submission of a DBA application. The DBA review process typically requires a thorough, holistic review of the application, ensuring that a suitable design framework is implemented on the novel vessel or floating facility.
- c. A DBA application should include a framework of design standards which a vessel or floating facility will use throughout its service life. The application should include an analysis of the framework, including alternative design and construction standards, regulations affected, and how the proposal meets an equivalent level of safety provided by the existing regulations. CG-ENG will evaluate the application by reviewing the vessel or floating facility design, risk factors, existing regulations and policy, and mitigation measures provided by the submitter. Submitters may consider the guidelines in reference (g) when developing a DBA application.
- d. To facilitate CG-ENG evaluation of the proposed equivalencies, the following are a list of recommended items to be addressed in a DBA application submission:
 - (1) Concept Synopsis:
 - i. Introduction of the vessel or floating facility including the vessel or floating facility's intended operations, and overview of the design features.
 - ii. Vessel or floating facility particulars.
 - iii. Full list of any certifications, equivalents, or exemptions (as applicable).
 - iv. General arrangement plans, and other plans or drawings that may be available at the time of application.
 - (2) Regulatory Analysis:
 - i. A matrix, organized by system and subsystem. The matrix provides sufficient detail to identify compliance or deviation from the applicable subchapter requirements found in reference (a) or those requirements, if applicable, associated with references (c), (d) or (e).
 - ii. Any international or generally accepted industry standards or practices used in the design, demonstrating an equivalent level of safety to the regulations found in reference (a). If no such standards exist, an analysis of the design criteria with considerations for any safety factors may be accepted.

- (3) Risk/Hazard Analysis:
- i. Discussion for each proposed element where a deviation from regulatory standards occurs, the risks involved, and risk mitigation measures necessary to provide the equivalent level of safety provided by regulatory requirements.
 - ii. Mitigation measures should identify the design standards, engineering solutions, operational restrictions, or additional crew training needed to reduce the risk. A DBA only establishes an agreed upon design standards framework; however, the holistic review of the systems and operations provides evidence that the DBA meets a level of safety consistent with that provided by existing regulations.
- e. The DBA does not substitute for, or detract from, other requirements that may be set forth in existing law or regulation. Other Coast Guard offices or duly appointed ROs may evaluate and grant additional requests made by the submitting party for special consideration, alternatives, and equivalencies within the scope of their respective authorities.
- f. As technology and novel design concepts are further refined, new standards and alternatives are often developed as a part of industry adoption. If the owner of a vessel or floating facility would like to adopt newly developed standards or make any departures from the approved DBA, they must send a request to CG-ENG through the local OCMI. The request should explain why a deviation from the approved DBA is appropriate. CG-ENG will assess the proposed modification and the level of analysis required.
7. Disclaimer. This policy is neither a substitute for applicable legal requirements, nor is it itself a rule. It is neither intended to nor does it impose legally binding requirements on any party. It represents the Coast Guard's current position on this topic and may assist industry, mariners, the public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. Alternative approaches for complying with these requirements may be considered. Information should be made available to Commandant (CG-ENG) to show that the approach satisfies the requirements of the applicable statutes and regulations.
8. Environmental Aspects and Impact Considerations.
- a. The development of this policy, and the general guidance contained within, have been thoroughly reviewed and it has been determined that this policy falls under the Department of Homeland Security (DHS) categorical exclusion A3.
 - b. This policy will not result in any substantial change to existing environmental conditions or violation of any applicable federal, state, or local laws relating to the protection of the environment. It is the responsibility of the action proponent to evaluate all future specific actions resulting from this policy for compliance with the National Environmental Policy Act (NEPA), other applicable environmental mandates, and the U.S. Coast Guard Environmental Planning Policy, COMDTINST 5090.1 (series).

9. Distribution. No paper distribution will be made of this policy letter. An electronic version will be located on the following Commandant (CG-ENG) website at <https://www.dco.uscg.mil/CG-ENG/>.
10. Questions. Questions concerning the DBA process or suggestions for improvements of this policy may be directed to the Coast Guard Office of Design and Engineering Standards (CG-ENG) at CGENG@uscg.mil.

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