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CG-ENG Policy Letter
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To: Distribution

Subj: APPROVAL OF EQUIVALENCIES TO THE REQUIREMENTS FOR ODORIZING UNITS ON FIXED CARBON DIOXIDE FIRE EXTINGUISHING SYSTEMS

Ref: (a) Carbon Dioxide Fire Suppression Systems on Commercial Vessels; Final Rule, 77 FR 33860, Thursday, June 7, 2012.

1. Purpose. This policy letter clarifies application of the requirements for odorizing units in 46 CFR 108.446, 46 CFR 118.410 (h) and 46 CFR 181.410 (f)(7), as implemented by reference (a).

2. Directives affected. None.

3. Background. Reference (a) amended the vessel regulations in Title 46 CFR, effective July 9, 2013, to require all carbon dioxide extinguishing systems installed or altered after that date to be fitted with odorizing units arranged to inject a wintergreen scent into the carbon dioxide extinguishing agent during discharge to alert personnel to the presence of carbon dioxide.

4. Discussion.

(a) Carbon dioxide is a colorless, odorless gas than cannot be detected without the addition of the wintergreen marker. The intent of the new requirement is to ensure that any personnel that may be exposed to the carbon dioxide discharge are aware of the presence of the carbon dioxide agent. Warning sirens are required on approved systems to sound prior to and during discharge. However, after the system is discharged, the wintergreen scent is needed to allow personnel to detect the continued presence of carbon dioxide that might remain in the protected space or in any adjacent areas where the gas may have migrated. Carbon dioxide is heavier than air and will migrate to the lowest levels of a space, typically the bilge area.

(b) There are certain applications where the additional olfactory safeguard would provide no meaningful contribution to safety. These applications include systems that are installed for the protection of limited volume spaces that cannot normally be entered by personnel, either due to the restricted size of the space or the presence of hazardous operating machinery; and systems

protecting spaces that are located where the release of gas is unlikely to affect occupied areas. Examples of such applications include engine compartments on amphibious DUKW boats, and engine boxes on vessels with open passenger areas where carbon dioxide could not migrate to enclosed occupied spaces.

(c) Requests for approval on an equivalency basis of carbon dioxide systems without odorizing units for use in these limited applications on Subchapter T and K vessels may be handled by the local OCMI without plan review by the Commandant or the Marine Safety Center under the equivalency provisions in 46 CFR 114.540 and 46 CFR 175.540, provided the following three conditions are met:

(1) The system contains no more than 100 lbs of carbon dioxide;

(2) The protected space cannot normally be entered by personnel; and

(3) The carbon dioxide cannot migrate to enclosed occupied spaces.

(d) Carbon dioxide systems for gas turbine enclosures located on the open decks of offshore facilities meeting the conditions in paragraphs (c)(2) and (3) above may similarly be approved without odorizing units under the equivalency provisions in 46 CFR 108.105 if the system contains no more than 300 lbs of carbon dioxide.

5. Disclaimer. While the guidance contained in this document may assist the industry, public, Coast Guard, and other Federal and State regulators in applying statutory and regulatory requirements, this policy is not a substitute for applicable legal requirements nor is it a regulation itself. Thus, it is not intended to nor does it impose legally binding requirements on any party outside the Coast Guard.

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