



Appendix B

Coast Guard Regulations

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Title 46—Shipping

Chapter 1—Coast Guard, Dept. of Transportation

Part 147A—Interim Regulations For Shipboard Fumigation

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AUTHORITY: 46U.S.C. 170; (49 U.S.C. 1655(b)(1)); 49CFR 1.46(b).

SOURCE: CGD 74-144, 39 FR 32998, Sept. 13, 1974, unless otherwise noted.

General

Sec. 147A.1 Purpose.

The purpose of this part is to prescribe the requirements for shipboard fumigation that are critical for the health and safety of the crew and any other person who is on board a vessel during fumigation. These are interim rules pending further study and promulgation of comprehensive regulations on shipboard fumigation.

Sec. 147A.3 Applicability.

This part prescribes the rules for shipboard fumigation on vessels to which 49 CFR parts 171-179 apply under 49 CFR 176.5.

Sec. 147A.5 General requirement.

No person may cause or authorize shipboard fumigation contrary to the rules in this part.

Sec. 147A.7 Definitions.

As used in this part:

(a) Qualified person means a person who has experience with the particular fumigant or knowledge of its properties and is familiar with fumigant detection equipment and procedures, or an applicator who is certified by the Environmental Protection Agency if his certification covers the fumigant that is used.

(b) Fumigant means a substance or mixture of substances that is a gas or is rapidly or progressively transformed to the gaseous state though some nongaseous or particulate matter may remain in the space that is fumigated.

(c) Fumigation means the application of a fumigant on board a vessel to a specific treatment space.

Sec. 147A.9 Persons in charge of fumigation and the vessel; designation.

(a) The person, including any individual, firm, association, partnership, or corporation, that is conducting a fumigation operation shall designate a person in charge of fumigation for each operation.

(b) The operator of each vessel shall designate a person in charge of the vessel for each fumigation operation.

Sec. 147A.10 Notice to Captain of the Port.

Unless otherwise authorized by the Captain of the Port, at least 24 hours before fumigation the operator of the vessel shall notify the Coast Guard Captain of the Port, for the area where the vessel is to be fumigated, of the time and place of the fumigation, and the name of the vessel that is to be fumigated.

Before Fumigation

Sec. 147A.11 Person in charge of fumigation; before fumigation.

(a) The person in charge of fumigation shall notify the person in charge of the vessel of:

- (1) The space that is to be fumigated;
- (2) The name, address, and emergency telephone number of the fumigation company;
- (3) The dates and times of fumigation;
- (4) The characteristics of the fumigant;
- (5) The spaces that are determined to be safe for occupancy paragraph (b)(1)(i) of this section;
- (6) The maximum allowable concentration of fumigant in spaces, if any, that are determined to be safe for occupancy under paragraph (b)(1)(i) of this section;
- (7) The symptoms of exposure to the fumigant; and
- (8) Emergency first aid treatment for exposure to the fumigant.

(b) The person in charge of fumigation shall ensure that:

- (1) A marine chemist or other qualified person who has knowledge of and experience in shipboard fumigation evaluates the vessel's construction and configuration and determines:
 - (i) Which spaces, if any, are safe for occupancy during fumigation; and
 - (ii) The intervals that inspections must be made under Sec. 147A.21(a)(1);
- (2) No persons or domestic animals are in the space that is to be fumigated or the spaces that are designated as unsafe for occupancy under paragraph (b)(1)(i) of this section;

- (3) There is proper and secure sealing to confine the fumigant to the space that is to be fumigated, including blanking off and sealing any ventilation ducts and smoke detectors;
- (4) The personal protection and fumigation detection equipment for the fumigant that is to be used is on board the vessel;
- (5) Warning signs are:
 - (i) Posted upon all gangplanks, ladders, and other points of access to the vessel;
 - (ii) Posted on all entrances to the spaces that are designated as unsafe for occupancy under paragraph (b)(1)(i) of this section; and
 - (iii) In accordance with 49 CFR 173.9(c) or section 8.10 of the General Introduction of the International Maritime Dangerous Goods Code. The word "unit" on the warning sign may be replaced with "vessel," "barge," "hold," or "space," as appropriate.
- (6) Watchmen are stationed at all entrances to:
 - (i) Spaces that are not determined to be safe for occupancy under paragraph (b)(1)(i) of this section; or
 - (ii) The vessel, if no spaces are determined to be safe for occupancy under paragraph (b)(1)(i) of this section.

Sec. 147A.13 Person in charge of the vessel; before fumigation.

(a) After notice under Sec. 147A.11 (a)(5), the person in charge of the vessel shall notify the crew and all other persons on board the vessel who are **not** participating in the fumigation of the spaces that are determined to be safe for occupancy under Sec. 147A.11(b)(1)(i).

(b) If no spaces are determined to be safe for occupancy under Sec. 147A.11 (b)(1)(i), the person in charge of the vessel shall ensure that the crew and all persons who are **not** participating in the fumigation leave the vessel and remain away during fumigation.

During Fumigation

Sec. 147A.21 Person in charge of fumigation; during fumigation.

(a) Until ventilation begins, or until the vessel leaves port, the person in charge of fumigation shall ensure that a qualified person inspects the vessel as follows:

- (1) He must use detection equipment for the fumigant that is used to ensure that the fumigant is confined to:

(i) The space that is fumigated, if partial occupancy is allowed under Sec. 147A.11(b)(1)(i); or

(ii) The vessel, if no space is determined to be safe for occupancy under Sec. 147A.11(b)(1)(i).

(2) He must make inspections at the intervals that are determined to be necessary by the marine chemist or qualified person under Sec. 147A.11(b)(1)(ii).

(b) If leakage occurs, the person in charge of fumigation shall:

(1) Notify the person in charge of the vessel that there is leakage;

(2) Ensure that all necessary measures are taken for the health and safety of any person; and

(3) Notify the person in charge of the vessel when there is no danger to the health and safety of any person.

(c) After the exposure period, if the vessel is in port, the person in charge of fumigation shall ensure that fumigators or other qualified persons ventilate the space that is fumigated as follows:

(1) Hatch covers and vent seals must be removed, other routes of access to the atmosphere must be opened, and if necessary, mechanical ventilation must be used.

(2) Personal protection equipment that is appropriate for the fumigant that is used must be worn.

(d) If ventilation is completed before the vessel leaves port, the person in charge of fumigation shall:

(1) Ensure that a qualified person, who is wearing the personal protection equipment for the fumigant that is used if remote detection equipment is **not** used, tests the space that is fumigated and determines if there is any danger to the health and safety of any person, including a danger from fumigant that may be retained in bagged, baled, or other absorbent cargo;

(2) Notify the person in charge of the vessel of this determination; and

(3) If it is determined that there is a danger:

(i) Ensure that all measures are taken that are necessary for the health and safety of all persons; and

(ii) Notify the person in charge of the vessel when there is no danger to the health and safety of any person.

Sec. 147A.23 Person in charge of vessel; during fumigation.

(a) The person in charge of the vessel shall ensure that the crew and all other persons on board the vessel who are **not** participating in the fumigation restrict their movement during fumigation to the spaces that are determined to be safe for occupancy under Sec.

147A.11(b)(1)(i).

(b) The person in charge of the vessel shall ensure that the crew and all other persons who are **not** participating in the fumigation follow any instructions of the person in charge of fumigation that are issued under Sec. 147A.21(b)(2) or (d)(3)(i) and that the vessel does **not** leave port if he is notified under:

(1) Section 147A.21(b)(1) that there is leakage, unless the person in charge of fumigation notifies him under Sec. 147A.21(b)(3) of this subpart that there is no danger; or

(2) Section 147A.21(d)(2) that there is a danger after ventilation, unless the person in charge of the fumigation notifies him under Sec. 147A.21(d)(3)(ii) that there is no danger.

(c) If fumigation is **not** completed before the vessel leaves port, the person in charge of the vessel shall ensure that personal protection and fumigant detection equipment for the fumigant that is used is on board the vessel.

(d) If the vessel leaves port before fumigation is completed, the person in charge of the vessel shall ensure that a qualified person makes periodic inspections until ventilation is completed and this person shall use detection equipment for the fumigant that is used to determine if:

(1) There is leakage of fumigant; or

(2) There is a concentration of fumigant that is a danger to the health and safety of any person.

(e) If the qualified person determines under paragraph (d) of this section that there is leakage or a concentration of fumigant that is a danger to the health and safety of any person, the person in charge of the vessel shall take all measures that are, in his discretion, necessary to ensure health and safety of all persons who are on board the vessel. If the danger is due to leakage, he shall also ensure that qualified persons immediately ventilate in accordance with paragraphs (c)(1) and (2) of Sec. 147A.21.

(f) If the vessel leaves port during the exposure period, the person in charge of the vessel shall ensure that the space that is fumigated is ventilated by qualified persons after the exposure period in accordance with paragraphs (c) (1) and (2) of Sec. 147A.21.

(g) If ventilation is completed after the vessel leaves port, the person in charge of the vessel shall ensure that a qualified person, who is wearing the personal protection equipment for the fumigant that is used if remote detection equipment is **not** used, tests the space that is fumigated to determine if there is a danger to the health and safety of any person, including a danger from fumigant that may be retained in bagged, baled, or other absorbent cargo. If the qualified person determines that there is a danger, the person in charge of the vessel shall take all measures that are, in his discretion, necessary to ensure the health and safety of all persons who are on board the vessel.

Sec. 147A.25 Entry.

(a) No person may enter the spaces that immediately adjoin the space that is fumigated during fumigation unless entry is for emergency purposes or the space is tested and declared safe for human occupancy by a marine chemist or other qualified person and is inspected under Sec. 147A.21(a)(2) or Sec. 147A.23(d).

(b) If entry is made for emergency purposes:

(1) No person may enter the space that is fumigated or any adjoining spaces during fumigation unless he wears the personal protection equipment for the fumigant that is in use;

(2) No person may enter the space that is fumigated unless the entry is made by a two person team; and

(3) No person may enter the space that is fumigated unless he wears a lifeline and safety harness and each life-line is tended by a person who is outside the space and who is wearing the personal protection equipment for the fumigant that is in use.

After Ventilation

Sec. 147A.31 Removal of fumigation material and warning signs.

After ventilation is completed and a marine chemist or other qualified person determines that there is no danger to the health and safety of any person under Sec. 147A.21(d) or Sec. 147A.23(g), the person in charge of fumigation, or, if the vessel has left port, the person in

charge of the vessel, shall ensure that all warning signs are removed and fumigation containers and materials are removed and disposed of in accordance with the manufacturer's recommendations.

Special Requirements for Flammable Fumigants

Sec. 147A.41 Person in charge of fumigation; flammable fumigants.

(a) The person in charge of fumigation shall ensure that:

- (1) Before the space that is to be fumigated is sealed, it is thoroughly cleaned, and all refuse, oily waste, and other combustible material is removed;
- (2) Before fumigation, all fire fighting equipment, including sprinklers and fire pumps, is in operating condition; and
- (3) Before and during fumigation, electrical circuits that are in the space that is fumigated are de-energized.

(b) [Reserved]

Sec. 147A.43 Other sources of ignition; flammable fumigants.

While the space that is fumigated is being sealed or during fumigation, no person may use matches, smoking materials, fires, open flames, or any other source of ignition in any spaces that are **not** determined to be safe for occupancy under Sec. 147A.11(b)(1)(i).