AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

SUBCHAPTER N—DANGEROUS CARGOES

PARTS 140–146 [RESERVED]

PART 147—HAZARDOUS SHIPS' STORES

Subpart A—General Provisions

Sec.
147.1 Purpose and applicability.
147.3 Definitions.
147.5 Commandant (G–MSO); address.
147.7 Incorporation by reference.
147.8 OMB control numbers assigned pursuant to the Paperwork Reduction Act.
147.9 Waivers.
147.15 Hazardous ships' stores permitted on board vessels.
147.30 Labeling.
147.33 Right of appeal.

Subpart B—Stowage and Other Special Requirements for Particular Materials

147.35 Purpose of subpart.
147.40 Materials requiring Commandant (G–MSO) approval.
147.45 Flammable and combustible liquids.
147.50 Fuel for cooking, heating, and lighting.
147.60 Compressed gases.
147.65 Carbon dioxide and halon fire extinguishing systems.
147.70 Acetylene.
147.85 Oxygen.
147.90 Refrigerants.
147.95 Explosives.
147.100 Radioactive materials.
147.105 Anesthetics, drugs, and medicines.

AUTHORITY: 46 U.S.C. 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

SOURCE: CGD 84–044, 53 FR 7749, Mar. 10, 1988, unless otherwise noted.

Subpart A—General Provisions

§ 147.1 Purpose and applicability.

(a) This part prescribes regulations designating what hazardous materials may be on board vessels as ships' stores and prescribes requirements for the labeling, stowage, and use of those materials.

(b) This part applies to all vessels listed in 46 U.S.C. 3301 as subject to inspection under part B of 46 U.S.C. Subtitle II. On foreign vessels in the navigable waters of the United States, the Captain of the Port or District Commander may prohibit the unsafe use or stowage of hazardous ships' stores under 33 CFR 160.109.

(c) All certifications previously issued by the Coast Guard under this part permitting the use of particular materials or products as ships' stores are null and void.

§ 147.3 Definitions.

As used in this part:

Accommodation, control, or service spaces means living quarters, including walkways, dining rooms, galleys, pantries, lounges, lavatories, cabins, staterooms, offices, hospitals, cinemas, and game and hobby rooms; areas containing controls for equipment and navigation; workshops, other than those forming part of machinery spaces; and store rooms adjacent to these spaces.

Combustible liquid means *combustible liquid* as the term is defined in 49 CFR 173.120(b).

Compressed gas means *compressed gas* as the term is defined in 49 CFR 173.115.

Consumer commodity means a commodity, such as a polish, insecticide, cleaning compound, or distillate, that is packaged and distributed in a form and quantity intended for sale through retail sales establishments.

Flammable liquid means *flammable liquid* as the term is defined in 49 CFR 173.120(a).

Hazardous material means *hazardous material* as the term is defined in 49 CFR 171.8.

Hazardous ships' stores means ships' stores that are hazardous materials.

Proper shipping name means the name of the hazardous ships' stores shown in Roman print (not in italics) in 49 CFR 172.101.

Ships' stores means materials which are on board a vessel for the upkeep, maintenance, safety, operation, or navigation of the vessel (except for fumigants under part 147A of this chapter, for fuel and compressed air used for the vessel's primary propulsion machinery, or for fixed auxiliary equipment) or for the safety or comfort of the vessel's passengers or crew.

Technical name means the recognized chemical name used in scientific or technical publications.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 97–057, 62 FR 51048, Sept. 30, 1997]

§ 147.5 Commandant (G–MSO); address.

Commandant (G–MSO) is the Office of Operating and Environmental Standards, Marine Safety and Environmental Protection. The address is Commandant (G–MSO), U.S. Coast Guard Headquarters, Washington, DC 20593–0001, and the telephone number is (202) 267–0214.

[CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§ 147.7 Incorporation by reference.

(a) In this part, portions or the entire text of certain standards and specifications are incorporated by reference as the governing requirements for materials, equipment, tests, or procedures to be followed. These standards and specification requirements specifically referred to in this part are the governing requirements for the subject matters covered, unless specifically limited, modified, or replaced by the regulations.

(b) These materials are incorporated by reference into this part under 5 U.S.C. 552(a) with the approval of the Director of the Federal Register. The Office of the Federal Register publishes a table, ''Material Approved for Incorporation by Reference,'' which appears in the Finding Aids section of this volume. To enforce any edition other than the one listed in paragraph (c) of this section, notice of the change must be published in the FEDERAL REGISTER and the material made available. All approved material is on file at the Office of the Federal Register Information Center, 800 North Capitol Street, NW., suite 700, Washington, DC and at U.S. Coast Guard Headquarters, 2100 Second Street, SW., Washington, DC 20593–0001. Copies may be obtained from the sources indicated in paragraph (c) of this section.

(c) The materials approved for incorporation by reference in this part are:

American Boat and Yacht Council, Inc. (ABYC), P.O. Box 806, Amityville, NY 11701

ABYC H–25–81—Portable Fuel Systems and Portable Containers for Flammable Liquids, May 12, 1981.

American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE),

Publication Sales Department, 1791 Tullie Circle, NE, Atlanta, GA 30329

ANSI/ASHRAE 34–78—Number Designation of Refrigerants, approved 1978.

Public Health Service, Department of Health and Human Services (DHHS),

Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

DHHS Publication No. (PHS) 84–2024—The Ship's Medicine Chest and Medical Aid at Sea, revised 1984.

Underwriters Laboratories, Inc. (UL), 12 Laboratory Drive, Research Triangle Park, NC 27709–3995

UL 30—Standard for Metal Safety Cans, 7th Ed., March 11, 1985, revised March 12, 1985 and March 3, 1987.

UL 1185—Standard for Portable Marine Fuel Tanks, Second Edition, March 13, 1978, revised July 6, 1984.

UL 1313—Standard for Nonmetallic Safety Cans for Petroleum Products, 1st Ed., March 15, 1982, revised January 3, 1984 and March 22, 1985.

UL 1314—Standard for Special-Propose Containers, 1st Ed., July 7, 1983, revised February 7, 1984 and September 23, 1986.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 97–057, 62 FR 51048, Sept. 30, 1997]

§ 147.8 OMB control numbers assigned pursuant to the Paperwork Reduction Act.

(a) *Purpose.* This section collects and displays the control numbers assigned to information collection and recordkeeping requirements in this subchapter by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). The Coast Guard intends that this section comply with the requirements of 44 U.S.C. 3507(f), which requires that agencies display a current control number assigned by the Director of the OMB for each approved agency information collection requirement.

(b) *Display.*

46 CFR part or section where identified or described	Current OMB control no.
§ 147.9	2115–0139
§ 147.30	2115–0139
§ 147.40	2115–0139
§ 147.60(c)(2)	2115–0139

[CGD 88–072, 53 FR 34298, Sept. 6, 1988; 88–072, 53 FR 37570, Sept. 27, 1988]

§ 147.9 Waivers.

(a) Any requirement in this part may be waived on a case by case basis if it is determined by Commandant (G–MSO) that the requirement is impracticable under the circumstances and that an acceptable level of safety can be maintained.

(b) Requests for issuance of a waiver must be in writing and contain a detailed explanation of—

(1) Why the requirement is impracticable; and

(2) What measures will be taken to maintain an acceptable or equivalent level of safety.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 95–072, 60 FR 50465, Sept. 29, 1995; CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§ 147.15 Hazardous ships' stores permitted on board vessels.

Unless prohibited under subpart B of this part, any hazardous material may be on board a vessel as ships' stores if the material—

(a) Is labeled according to § 147.30; and

(b) Meets the requirements, if any, in subpart B of this part applicable to the material.

§ 147.30 Labeling.

(a) Except as provided in paragraph (b) of this section, all immediate receptacles, containers, or packages containing hazardous ships' stores must be labeled in English with the following information concerning the contents:

(1) Technical name or proper shipping name.

(2) For hazardous ships' stores other than liquid fuels, manufacturer's or supplier's name and address.

(3) Hazard classification under 49 CFR 172.101, 173.2, and 173.2(a).

(4) For hazardous ships' stores other than liquid fuels, step by step procedures for proper use.

(5) First aid instructions in the event of personnel contact, including antidotes in the event of ingestion.

(6) Stowage and segregation requirements.

(b) Hazardous ships' stores that are consumer commodities labeled in accordance with the Federal Hazardous Substances Act Regulations in 26 CFR part 1500 need not be labeled as specified in paragraph (a) of this section.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 97–057, 62 FR 51048, Sept. 30, 1997]

§ 147.33 Right of appeal.

Any person directly affected by a decision or action taken under this part, by or on behalf of the Coast Guard, may appeal therefrom in accordance with subpart 1.03 of this chapter.

[CGD 88–033, 54 FR 50381, Dec. 6, 1989; 55 FR 21386, May 24, 1990]

Subpart B—Stowage and Other Special Requirements for Particular Materials

§ 147.35 Purpose of subpart.

This subpart prescribes special requirements applicable to particular, named materials. These requirements are in addition to the general requirements in subpart A applicable to those materials.

§ 147.40 Materials requiring Commandant (G–MSO) approval.

(a) Commandant (G–MSO) approval is required before the following hazardous materials may be on board a vessel as ships' stores:

(1) Poison gases of Class 2, Division 2.3 and toxic liquids of Class 6, Division 6.1 which are poisonous by inhalation in Hazard Zone A.

(2) Explosives of Divisions 1.1 or 1.2.

(3) Flammable gases, other than those addressed specifically in this subpart.

(4) Forbidden materials listed in 49 CFR 172.101.

(b) Request for approval must be submitted to the Commandant (G–MSO), identify the material, and explain the need for its use.

(c) Upon approval, the material is added to the list of materials approved

under this section. A copy of this list is available from the Commandant (G–MSO) at the address in § 147.5.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 95–072, 60 FR 50465, Sept. 29, 19955; CGD 96–041, 61 FR 50731, Sept. 27, 1996; CGD 97–057, 62 FR 51048, Sept. 30, 1997]

§ 147.45 Flammable and combustible liquids.

(a) This section applies to the stowage and transfer of flammable and combustible liquids (including gasoline and diesel oil), other than liquids used as fuel for cooking, heating, and lighting under § 147.50.

(b) No flammable or combustible liquids may be stowed in any accommodation, control, or service space (other than a paint locker).

(c) No more than 19 liters (five gallons) of flammable liquids may be stowed in any machinery space. The flammable liquids must be in containers of 3.8 liters (one gallon) or less.

(d) No more than 208 liters (55 gallons) of combustible liquids may be stowed in any machinery space.

(e) An aggregate of more than 7.6 liters (two gallons) of flammable or combustible liquids stowed outside of an accommodation, control, or service, space (other than a paint locker) or outside of a machinery space must be stowed in a paint locker that is marked with a warning sign indicating flammable or combustible liquid storage.

(f) Flammable and combustible liquids used as fuel for portable auxiliary equipment must be stored in—

(1) Integral tanks that form part of the vessel's structure;

(2) An independent tank meeting the requirements of subpart 58.50 of Part 58 of this chapter;

(3) A non-bulk packaging authorized for Class 3 (flammable) liquids or combustible liquids under 49 CFR 173.201, 173.202, or 173.203, as referenced for the specific liquid in column 8B of the Hazardous Materials Table of 49 CFR 172.101.

(4) A portable outboard fuel tank meeting the specifications of ABYC H–25-81 or one identified by Underwriters Laboratories as meeting the specifications of UL 1185;

(5) A portable safety container identified by Underwriters Laboratories as meeting the specifications of UL 30 or UL 1313; or

(6) A portable safety container identified by Underwriters Laboratories as meeting the requirements of UL 1314.

(g) Each portable container of flammable or combustible liquid used for portable auxiliary equipment must be stowed in a paint locker or an open location designated by the master.

(h) Fuel tanks for portable auxiliary equipment using flammable or combustible liquids may only be refilled on a vessel—

(1) By using a container described in paragraph (f)(2), (f)(3), or (f)(5) of this section which has a capacity not exceeding 23 liters (6 gallons); or

(2) In the case of portable outboard fuel tanks described in paragraph (f)(4) of this section, in accordance with paragraph (i) of this section.

(i) Portable containers or portable outboard fuel tanks may be refilled from a larger container of flammable or combustible liquid on the weather deck of a vessel, other than a small passenger vessel subject to Subchapter T of this chapter, provided that—

(1) A drip pan of adequate size is used to collect any drippings; and

(2) At least one Coast Guard approved Type B, Size I, fire extinguisher is within three meters (9.75 feet) of the refilling location.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 92–100, 59 FR 17001, Apr. 11, 1994; CGD 97–057, 62 FR 51048, Sept. 30, 1997]

§ 147.50 Fuel for cooking, heating, and lighting.

(a) Flammable and combustible liquids and gases not listed in this section are prohibited for cooking, heating, or lighting on any vessel, with the exception of combustible liquids on cargo vessels.

(b) Fluid alcohol is prohibited for cooking, heating, or lighting on ferry vessels. Fluid alcohol burners, where wet primed, must have a catch pan not less than ¾ of an inch deep secured inside of the frame of the stove or have the metal protection under the stove flanged up ¾ of an inch to form a pan.

(c) Containers of solidified alcohol must be secured on a fixed base.

(d) Liquefied or non-liquefied gas is prohibited for cooking, heating, and

lighting on ferry vessels, but may be used on other inspected vessels if the system in which it is used meets the applicable requirements of subpart 58.16 or subpart 184.05 of this chapter, as appropriate, or is approved by the Commandant (G–MSE).

(e) Kerosene and commercial standard fuel oil No. 1, No. 2, and No. 3 are prohibited for cooking, heating, or lighting on ferry or passenger vessels, unless the following conditions are met:

(1) Pressure or gravity feed must be used.

(2) Where wet priming is used in a cooking device, the device must have a catch pan not less than three fourths of an inch deep secured inside the frame of the device or a metal protector under the device with a least a three fourths inch flange to form a pan.

(3) Where wet priming is used, a nonflammable priming liquid must be used.

(4) Fuel tanks for fixed stoves must be separated from the stove and mounted in a location open to the atmosphere or mounted inside a compartment with an outside fill and vent.

(5) Fuel lines must have an easily accessible shut-off valve at the tank.

(6) If the fuel tank is outside of a stove compartment, a shut-off valve must be fitted at the stove.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 83–013, 54 FR 6402, Feb. 10, 1989; CGD 95–072, 60 FR 50465, Sept. 29, 1995; CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§ 147.60 Compressed gases.

(a) *Cylinder requirements.* Cylinders used for containing hazardous ships' stores that are compressed gases must be—

(1) Authorized for the proper shipping name of the gas in accordance with 49 CFR 172.101 and 49 CFR part 173;

(2) Constructed in accordance with subpart C of 49 CFR part 178 or exempted under 49 CFR part 107;

(3) Filled, marked, and inspected in accordance with 49 CFR 173.301 through 173.308; and

(4) Except as provided in § 147.65, maintained and retested in accordance with 49 CFR 173.34

(b) *Stowage and care of cylinders.* (1) Cylinders must always be secured and, when not in use, they must be stowed in a rack in an upright position, with the valve protection cap in place.

(2) Lockers or housings must be vented to the open air near the top and bottom for positive circulation of vapors.

(3) Cylinders must be protected from all sources of heat which may cause the cylinders to be heated to a temperature higher than 130° F.

(c) *Pressure vessels other than cylinders.* Pressure vessels, other than cylinders subject to paragraph (a) of this section, used for containing ships' stores that are compressed gases must—

(1) Be constructed and inspected in accordance with part 54 of this chapter; and

(2) Carry only nitrogen or air, unless permission is granted by Commandant (G–MSO) to do otherwise.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 95–072, 60 FR 50465, Sept. 29, 19955; CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§ 147.65 Carbon dioxide and halon fire extinguishing systems.

(a) Carbon dioxide or halon cylinders forming part of a fixed fire extinguishing system must be retested, at least, every 12 years. If a cylinder is discharged and more than five years have elapsed since the last test, it must be retested before recharging.

(b) Carbon dioxide or halon cylinders must be rejected for further service when they—

(1) Leak;

(2) Are dented, bulging, severely corroded, or otherwise in a weakened condition;

(3) Have lost more than five percent of their tare weight; or

(4) Have been involved in a fire.

(c) Cylinders which have contained carbon dioxide or halon and have not been tested within five years must not be used to contain another compressed gas on board a vessel, unless the cylinder is retested and re-marked in accordance with § 147.60 (a)(3) and (a)(4).

(d) Flexible connections between cylinders and distribution piping of semiportable or fixed carbon dioxide fire extinguishing systems and discharge hoses in semi-portable carbon dioxide fire extinguishing systems must be renewed or tested at a pressure of 6.9

MPa (1000 psig). At test pressure, the pressure must not drop at a rate greater than 1.03 MPa (150 psi) per minute for a two minute period. The test must be performed when the cylinders are retested.

(e) Flexible connections between cylinders and distribution piping of fixed halon fire extinguishing systems must be tested at a pressure of one and one-half times the cylinder service pressure as marked on the cylinder. At test pressure, the pressure must not drop at a rate greater than 1.03 MPa (150 psi) per minute for a two minute period. The test must be performed when the cylinders are retested.

§ 147.70 Acetylene.

(a) Seventeen cubic meters (600 standard cubic feet) or less of acetylene may be stowed on or below decks on any vessel.

(b) More than 17 m^3 (600 standard cubic feet) of acetylene may be on board a vessel engaged in industrial operations, if it is stowed on deck.

§ 147.85 Oxygen.

(a) Eighty five cubic meters (3000 standard cubic feet) or less of oxygen may be on board any vessel.

(b) More than 85 m^3 (3000 standard cubic feet) of oxygen may be on board a vessel engaged in industrial operations, if it is stowed on deck or in a well ventilated space.

§ 147.90 Refrigerants.

(a) Only refrigerants listed in ANSI/ASHRAE 34–78 may be carried as ships' stores.

(b) Refrigerants contained in a vessel's operating system are not considered as being carried as ship's stores.

§ 147.95 Explosives.

(a) *Explosives—general.* Except as provided for elsewhere in this subchapter, explosives, as defined in 49 CFR 173.50, which are hazardous ships' stores must be stowed in a magazine which is constructed and located in accordance with 49 CFR 176.122 through 176.138.

(b) *Small arms ammunition.* (1) No person shall bring, have in their possession, or use on board a vessel any small arms ammunition, except by express permission of the master of the vessel.

(2) All small arms ammunition must be stowed in a locked metal magazine or locker. The key to the locker must be kept in the possession of the master or a person designated by the master.

(c) *Ships' signals and emergency equipment.* (1) Explosive ships' signals and emergency equipment, including pyrotechnic distress signals and line throwing equipment, must be stowed in watertight containers or wood lined magazine chests.

(2) All pyrotechnic distress signals, rockets, and line throwing guns must be stowed in accordance with the requirements of 49 CFR 176.140 through 176.146.

[CGD 84–044, 53 FR 7749, Mar. 10, 1988, as amended by CGD 92–100, 59 FR 17001, Apr. 11, 1994; CGD 97–057, 62 FR 51048, Sept. 30, 1997]

§ 147.100 Radioactive materials.

(a) Radioactive materials must not be brought on board, used in any manner, or stored on the vessel, unless the use of the materials is authorized by a current license issued by the Nuclear Regulatory Commission (NRC) under 10 CFR parts 30 and 34.

(b) Stowage of radioactive materials must conform to the requirements of the NRC license.

§ 147.105 Anesthetics, drugs, and medicines.

Anesthetics, drugs, and medicines must be stowed and dispensed in accordance with the DHHS Publication No. (PHS) 84–2024.

PART 147A—INTERIM REGULATIONS FOR SHIPBOARD FUMIGATION

GENERAL

Sec.
147A.1 Purpose.
147A.3 Applicability.
147A.5 General requirement.
147A.6 Right of appeal
147A.7 Definitions.
147A.9 Persons in charge of fumigation and the vessel; designation.
147A.10 Notice to Captain of the Port.

BEFORE FUMIGATION

147A.11 Person in charge of fumigation; before fumigation.
147A.13 Person in charge of the vessel; before fumigation.

DURING FUMIGATION

147A.21 Person in charge of fumigation; during fumigation.
147A.23 Person in charge of vessel; during fumigation.
147A.25 Entry.

AFTER VENTILATION

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

SPECIAL REQUIREMENTS FOR FLAMMABLE FUMIGANTS

147A.41 Person in charge of fumigation; flammable fumigants.
147A.43 Other sources of ignition; flammable fumigants.

AUTHORITY: 46 U.S.C. 5103; 49 CFR 1.46.

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

GENERAL

§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.

§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.

[CGD 86–033, 53 FR 36026, Sept. 16, 1988]

§147A.5 General requirement.

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

§147A.6 Right of appeal.

Any person directly affected by a decision or action taken under this part, by or on behalf of the Coast Guard, may appeal therefrom in accordance with subpart 1.03 of this chapter.

[CGD 88–033, 54 FR 50381, Dec. 6, 1989]

§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.

§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.

§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

§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 § 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.

[CGD 74–144, 39 FR 32998, Sept. 13, 1974; 39 FR 37771, Oct. 24, 19745; CGD 96–041, 61 FR 50731, Sept. 27, 1996; CGD 97–057, 62 FR 51048, Sept. 30, 1997]

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

(a) After notice under § 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 § 147A.11(b)(1)(i).

(b) If no spaces are determined to be safe for occupancy under § 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

§ 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 § 147A.11(b)(1)(i); or

(ii) The vessel, if no space is determined to be safe for occupancy under § 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 § 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.

§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 §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 §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 §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 §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 §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 §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.

§ 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 § 147A.21(a)(2) or § 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

§ 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 § 147A.21(d) or § 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

§ 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]

§ 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 § 147A.11(b)(1)(i).

PART 148—CARRIAGE OF SOLID HAZARDOUS MATERIALS IN BULK

Subpart 148.01—General

Sec.

148.01–1 Purpose and applicability.
148.01–7 Permitted cargoes.
148.01–9 Filing of special petition for special permit.
148.01–11 Special permits; standard conditions.
148.01–13 Assignment and certification.
148.01–15 Right of appeal.

Subpart 148.02—Vessel Requirements

148.02–1 Shipping papers.
148.02–3 Dangerous cargo manifest.
148.02–5 Report of hazardous materials incidents.

Subpart 148.03—Minimum Transportation Requirements

148.03–1 General.
148.03–3 Direction and observation.
148.03–5 Prior to loading.
148.03–7 During transport.
148.03–11 Stowage conditions.
148.03–13 Completion of off-loading.

Subpart 148.04—Special Additional Requirements for Certain Materials

148.04–1 Radioactive material, Low Specific Activity (LSA).
148.04–9 Fishmeal or scrap, ground or pelletized; fishmeal or scrap, ground and pelletized (mixture).
148.04–13 Ferrous metal borings, shavings, turnings or cuttings (excluding stainless steel).
148.04–15 Petroleum coke, uncalcined; petroleum coke, uncalcined and calcined (mixture).
148.04–17 Petroleum coke, calcined, at 130° F or above.
148.04–19 Tankage, garbage or rough ammoniate, solid.
148.04–20 Sulfur.
148.04–21 Coconut meal pellets (also known as copra pellets).
148.04–23 Unslaked lime in bulk.

AUTHORITY: 49 U.S.C. 5103; 49 CFR 1.46.

SOURCE: CGD 83–067a, 49 FR 16794, Apr. 20, 1984, unless otherwise noted.

Subpart 148.01—General

§ 148.01–1 Purpose and applicability.

(a) This part prescribes regulations under which bulk solid hazardous materials may be transported. Each master, person in charge of the vessel, owner, charterer and agent shall ensure compliance with this part and communicate the requirements of this part to every person performing any function covered by this part. Each person involved in the transportation of bulk solid hazardous materials shall comply with the requirements of this part within the scope of his job responsibilities.

(b) For the purposes of this part, the term *bulk* applies only to cargoes transported on board cargo vessels or barges without mark or count and which are to be directly loaded into the holds of such vessels or barges without containers or wrappers.

(c) For purposes of this part, the term *vessel* means a ''cargo vessel or barge'' which is not exempted under 49 U.S.C. 5107(d).

(d) For the purposes of this part, the term *transported* includes the various operations associated with the cargo transportation such as, loading, offloading, handling, storing, stowing, carrying, conveying, using, etc.

(e) The term *hazardous materials* includes a number of specific classes, the definitions of which are contained in 49 CFR parts 170–189.

[CGD 83–067a, 49 FR 16794, Apr. 20, 1984, as amended by CGD 95–028, 62 FR 51208, Sept. 30, 1997]

EFFECTIVE DATE NOTE: At 62 FR 51208, Sept. 30, 1997, § 148.01–1(c) was revised by CGD 95–028, effective Oct. 30, 1997. For the convenience of the user, the superseded text is set forth as follows:

§ 148.01–1 Purpose and applicability.

* * * * *

(c) For the purposes of this part, the term *vessel* means a ''cargo vessel or barge'' which is not exempted under 49 U.S.C. 1806(b).

* * * * *

§ 148.01–7 Permitted cargoes.

(a) The solid hazardous materials cargoes listed here may be transported in bulk on board vessels if they comply with the regulations in this part. Unlisted cargoes may be transported only if express authority is given by the Commandant in accordance with § 148.01–9 of this subpart.

Shipping name of the hazardous material	Hazard class of the hazardous materials	Characteristic properties of the material
Aluminum dross	Flammable solid	Contact with water may cause self heating and the evolution of flammable gas.
Aluminum nitrate	Oxidizing materials	If involved in a fire will greatly intensify the burning of combustible materials.
Ammonium nitrate containing not more than 80 pct ammonium nitrate and not less than 20 pct calcium carbonate with no more than 2 pct inorganic coating, in the form of uniform and nonsegregatable granular particles.	Oxidizing material	Do.
Ammonium nitrate fertilizer, formulation or mixture containing less than 60 pct ammonium with no organic filler.	.....do	Do.
Ammonium sulfate nitrate	ORM–C	If involved in a fire will intensify the burning of combustible materials.

Shipping name of the hazardous material	Hazard class of the hazardous materials	Characteristic properties of the material
Barium nitrate	Oxidizing material	If involved in a fire will greatly intensify the burning of combustible materials.
Calcium nitrate	.....do	Do.
Charcoal briquets	Flammable solid	Contact with water may cause self heating.
Coconut meal pellets (or copra pellets) containing at least 6 pct and not more than 13 pct moisture and not more than 10 pct residual fat content.	ORM–C	Subject to spontaneous heating by biological decay or by oxidation.
Copra, dry	.....do	Susceptible to spontaneous heating or fire from spark or open flame.
Ferrophosphorus	ORM–A	May evolve poisonous gas (phosphine) in contact with moisture.
Ferrosilicon, containing less than 45 pct or more than 70 pct silicon.	.....do	May evolve poisonous and flammable gases (arsine/phosphine) in contact with water, acids or alkalines.
Ferrous metal borings, shavings, turnings, or cuttings (excluding stainless steel).	ORM–C	Susceptible to spontaneous heating and ignition.
Fishmeal or scrap, ground and pelletized (mixture), containing 6 to 12 pct moisture and no more than 18 pct fat by weight.	.....do	Do.
Lead nitrate	Oxidizing material	If involved in a fire will greatly intensify the burning of combustible materials.
Lime, unslaked	ORM–B	Evolves heat on contact with water.
Magnesium nitrate	Oxidizing material	If involved in fire will greatly intensify the burning of combustible materials.
Petroleum coke, calcined, at 130° F or above	ORM–C	Susceptible to spontaneous heating and ignition.
Petroleum coke, uncalcined	.....do	Do.
Postassium nitrate	Oxidizing material	If involved in a fire will greatly intensify the burning of combustible materials.
Radioactive material, low specific activity (LSA)	Radioactive material	Radiation hazard from ingestion, inhalation and contact with mucous membranes.
Sawdust	ORM–C	Susceptible to fire from sparks or open flames.
Sodium nitrate	Oxidizing material	If involved in a fire will greatly intensify the burning of combustible materials.
Sodium nitrate, potassium nitrate mixture; 67 pct Sodium nitrate, 30 pct Postassium nitrate and not more than 3 percent miscellaneous inorganic compounds.	.....do	Do.
Strontium nitrate (not radioactive)	.....do	Do.
Sulfur	ORM–C	Dust forms explosive mixtures with air.
Tankage, garbage or rough ammoniate solid, containing 7 pct or more moisture.	.....do	Susceptible to spontaneous heating and ignition.

NOTE: Definitions of hazard classes of hazardous materials are found in 49 CFR 171.8 and 49 CFR 173.500.

(b) A mixture or blend of two or more cargoes, one or more of which is listed in paragraph (a) of this section, will be treated as an unlisted cargo and specific authorization by the Commandant, in accordance with §148.01–9, for shipment in bulk is required.

§148.01–9 Filing of special petition for special permit.

(a) A petition for authorization to transport an unlisted cargo or to use alternative procedures must be submitted to the U.S. Coast Guard (G–MSO), Washington, DC 20593, and must contain the following minimum information:

(1) The regulatory provisions involved.

(2) The justification for the proposed shipments or alternative procedure, including any reasons why the current regulations are not appropriate, why the public interest would be served by the proposal, and the basis upon which the proposal would provide an equivalent degree of safety to those shipments conducted in accordance with the current regulations.

(3) A detailed description of the proposal, including when appropriate, drawings, plans, calculations, procedures, test results, previous approvals or permits, and any other supporting information.

(4) The chemical name, common name, hazard classification for properties (chemical and physical), and characteristics of the materials covered by the proposal, including composition and ingredient percentages (specified by weight) if a mixture.

(5) Any relevant shipping or accident experience.

(6) A description of the vessel or vessels to be employed for the shipments and the U.S. ports to be involved.

(7) A statement or recommendation regarding any changes to the regulations which would be desirable to obviate the need for similar permission from the Commandant.

(b) Unless there is a good reason for priority treatment, each proposal is considered in the order in which it is received. To permit timely consideration, proposals should be submitted at least 45 days before the requested effective date.

[CGD 83–067a, 49 FR 16794, Apr. 20, 1984, as amended by CGD 95–072, 60 FR 50465, Sept. 29, 19955; CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§148.01–11 Special permits; standard conditions.

(a) Each person to whom a special permit is issued under the terms of §148.01–9 shall comply with all requirements of this part except as specifically provided by the terms of the special permit.

(b) Unless otherwise specified in the special permit, each shipment made under special permit must comply with the following:

(1) Each shipping paper issued and the dangerous cargo manifest prepared in connection with such shipment must bear the notation ''CG Special Permit No. *'' with the * to be filled in with the assigned special permit number.

(2) Each person to whom a special permit is issued shall furnish a summary of experience to the U.S. Coast Guard (G–MSO), Washington, DC 20593, before the date of expiration of the permit and when any amendment to the special permit is requested. The information must include the number of shipments made, tonnage of each shipment, and what vessel's and U.S. Ports were involved. In addition, an immediate report must be submitted the U.S. Coast Guard (G–MSO) in the event of any casualty, accident, or damaging incident which occurs when transporting solid hazardous materials in bulk under the terms of a special permit.

(3) A copy of the special permit, kept current, and any amendments thereto, must be on board each vessel while transporting solid hazardous materials in bulk under the terms of a special permit. The special permit must be kept with the dangerous cargo manifest (§148.02–3).

(c) Each permit is subject to suspension or revocation for cause by the U.S. Coast Guard before its expiration date.

[CGD 83–067a, 49 FR 16794, Apr. 20, 1984, as amended by CGD 95–072, 60 FR 50465, Sept. 29, 19955; CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§148.01–13 Assignment and certification.

(a) The National Cargo Bureau, Inc., is authorized to assist the U.S. Coast Guard in administering the provisions contained in this part that are applicable to the transportation of solid hazardous materials in bulk on vessels with respect to:

(1) Inspection of vessels for suitability for loading such materials in bulk;

(2) Examination of stowage of such materials loaded in bulk on board vessels;

(3) Making recommendations as to stowage requirements applicable to the transportation of such materials in bulk; and

(4) Issuing of certificates of loading, setting forth that the stowage of such materials in bulk is in accordance with applicable regulations contained in this part.

(b) Certificates of loading from the National Cargo Bureau, Inc., are accepted as evidence of compliance with the applicable provisions of this part with respect to the transportation of solid hazardous materials in bulk on board vessels.

§148.01–15 Right of appeal.

Any person directly affected by a decision or action taken under this part, by or on behalf of the Coast Guard, may appeal therefrom in accordance with subpart 1.03 of this chapter.

[CGD 88–033, 54 FR 50381, Dec. 6, 1989]

Subpart 148.02—Vessel Requirements

§ 148.02–1 Shipping papers.

(a) Carriers may not accept for transportation nor transport by vessel in bulk any solid hazardous materials listed in § 148.01–7(a) of this part, unless the hazardous materials offered for such shipment is accompanied by a shipping paper on which the following information is shown:

(1) The shipping name and hazard class of the hazardous material as listed in § 148.01–7(a) of this part.

(2) The quantity of the hazardous material to be transported.

(3) The name and address of the U.S. shipper or his authorized representative.

(4) A certification which bears the following statement, signed by the shipper or his authorized representative: ''This is to certify that the above-named hazardous material is properly named, prepared, and otherwise in proper condition for bulk shipment by vessel in accordance with the applicable regulations of the U.S. Coast Guard''.

(b) For import shipments, the consignee shall advise the carrier or foreign shipper (consignor) of the applicable U.S. Coast Guard regulations. The carrier or foreign shipper (consignor) shall then furnish the information required in paragraph (a) of this section, as advised by the consignee, either on the shipping papers or dangerous cargo manifest.

(c) The shipping paper required in paragraph (a) of this section must be kept on board the towing vessel along with the dangerous cargo manifest (§ 148.02–3 of this subpart) except when the shipment is by an unmanned barge in which case it may be kept on board the towing vessel. When an unmanned barge is moored, the shipping paper must remain on board the barge, in a readily retrievable location, such as a metal tube attached to the barge.

§ 148.02–3 Dangerous cargo manifest.

(a) Each vessel, except for unmanned barges, transporting solid hazardous materials in bulk under the terms of this part must have on board a dangerous cargo manifest, kept in a conspicuous place on or near the bridge house, on which the following information is entered:

(1) Name of vessel and official number. (If the vessel has no official number, the international radio call sign must be substituted.)

(2) Nationality of vessel.

(3) The name of the hazardous material as listed in § 148.01–7(a) of this part.

(4) The hold(s) in which the material is being transported.

(5) The quantity of the material loaded in each hold.

(6) Date and signature of Master of the vessel's owner or his authorized representative to acknowledge correctness of the dangerous cargo manifest.

(b) [Reserved]

§ 148.02–5 Report of hazardous materials incidents.

In the event of an incident involving hazardous materials, an immediate report must be sent in accordance with 49 CFR 171.15.

Subpart 148.03—Minimum Transportation Requirements

§ 148.03–1 General.

The regulations in this subpart apply to each bulk shipment of a solid hazardous material listed in § 148.01–7 of this part.

§ 148.03–3 Direction and observation.

Loading or off-loading of a solid hazardous material in bulk within the navigable waters of the U.S. must be conducted only under the direction and observation of a person assigned or employed for such duty by the vessel's master or owner or authorized representative.

§ 148.03–5 Prior to loading.

Prior to loading any solid hazardous material in bulk on board a vessel:

(a) Each hold must be thoroughly cleaned of all loose debris and dunnage; but permanent wooden battens or sheathing may remain in the hold; and

(b) Each hold and each bilge of that hold must be dry.

§ 148.03–7 During transport.

During the transport of a solid hazardous material in bulk, except for unmanned vessels, cargo shall be periodically inspected to ensure that there are no undetected increases in temperature in that cargo and that no other changes in the cargo are occurring that might affect the safety of his vessel and the results of these inspections shall be recorded in a log.

§ 148.03–11 Stowage conditions.

(a) Other hazardous materials cargo must not be stowed in the same hold or on deck above a hold in which a solid hazardous material in bulk is loaded.

(b) No explosive Class C, flammable liquid, flammable solid, flammable or nonflammable compressed gas, organic peroxide, or extremely dangerous poison may be stowed in any hold adjacent to a hold in which a solid hazardous material in bulk is loaded.

(c) All explosive Class A and B materials must be stowed longitudinally at least one hold (or an equivalent longitudinal distance if on deck) from any hold in which hazardous material in bulk is loaded.

(d) Combustible cargo must not be stowed in a hold in which a solid hazardous material in bulk is loaded.

§ 148.03–13 Completion of off-loading.

Upon the completion of off-loading of a solid hazardous material in bulk, each hold must be thoroughly cleaned of all residue of such material.

Subpart 148.04—Special Additional Requirements for Certain Material

§ 148.04–1 Radioactive material, Low Specific Activity (LSA).

(a) Authorized materials are limited to:

(1) Uranium or thorium ores and physical or chemical concentrates of such ores;

(2) Uranium metal, natural thorium metal and alloys of these metals; and

(3) Material of low radioactive concentration, if the estimated radioactivity concentration dose not exceed 0.001 millicurie per gram and the contribution from Group I material (See title 49 CFR parts 170 to 189, inclusive) does not exceed 1 percent of the total radioactivity.

(b) Each hold used for the transportation of any of these materials must be surveyed with appropriate radiation-detection instruments after the completion of off-loading. Such holds must not again be used for the transportation of any cargo until the radiation dose rate at any accessible surface is less than 0.5 millirem per hour and until there is no significant removable radioactive surface contamination according to 49 CFR 173.443.

(c) Each hold or barge used for transportation of any of these materials must be effectively closed or covered to prevent dispersal of the material during transportation.

§ 148.04–9 Fishmeal or scrap, ground or pelletized; fishmeal or scrap, ground and pelletized (mixture).

(a) The fishmeal or scrap, ground or pelletized and fishmeal or scrap, ground and pelletized mixture must contain at least 6 percent moisture by weight but not more than 12 percent moisture by weight.

(b) The material must not contain more than 18 percent fat by weight.

(c) At the time of production of the material, it must be treated with at least 400 ppm antioxidant (ethoxyquin); in the case where the material contains more than 12 percent fat by weight, it must be treated with at least 1000 ppm antioxidant (ethoxyquin) at the time of production.

(d) Shipment of the material in bulk must take place within twelve months of the date of production.

(e) The temperature of the material to be loaded must not, at the time of loading exceed 35° C (95° F), or 5° F above ambient temperature, whichever is greater.

(f) The material must contain at least 100 ppm antioxidant (ethoxyquin) at the time of shipment.

(g) Each shipment of the material in bulk must be accompanied by a statement in which the shipper certifies:

(1) The moisture content of the material;

(2) The fat content of the material;

(3) The concentration of antioxidant (ethoxyquin) in the material in ppm at

the time the material is loaded on a vessel in bulk;

(4) Date and place of production of the material; and

(5) The physical state of the material (ground, pelletized, or mixture).

(h) Temperature readings must be taken three times a day and recorded. If the temperature of the cargo exceeds 130° F and continues to increase, ventilation to the hold must be restricted.

§ 148.04–13 Ferrous metal borings, shavings, turnings, or cuttings (excluding stainless steel).

(a) This section applies to the stowage and transportation in bulk of hazardous materials described as ferrous metal borings, shavings, turnings, or cuttings on board vessels (excluding stainless steel). However, unmanned barges on which the article is stowed for or transported on a voyage entirely on the navigable waters of the United States are exempt from the requirements of this section. Ferrous metal borings, shavings, turnings, or cuttings (excluding stainless steel) must not be stowed and transported in bulk unless the following conditions are met:

(1) [Reserved]

(2) All wooden sweat battens, dunnage and debris must be removed from the hold before the article is loaded.

(3) During loading and transporting, the bilge of each hold in which the article is stowed or is to be stowed must be as dry as practicable.

(4) During loading, the article must be compacted in the hold as frequently as practicable with a bulldozer or means that provide equivalent surface compaction. Upon completion of loading, the article must be trimmed to eliminate peaks or mounds and compacted.

(5) Other cargo must not be loaded in a hold containing the article if:

(i) The cargo to be loaded in the same hold with the article is another hazardous material as defined in this part or a combustible material;

(ii) The loading of the article is not completed first; and

(iii) The temperature of the article in the hold is above 130° F or has increased within eight hours before loading of the other cargo.

(6) During loading, the temperature of the article in the pile being loaded must be less than 130° F.

(7) Upon completion of loading, the vessel may not leave the port unless:

(i) The temperature of each article in each hold is less than 150° F and, if the temperature of the article in a hold has been more than 150° F during loading, the temperature of each article has shown a downward trend below 150° F for at least eight hours after completion of loading of the hold; or

(ii) The vessel intends to sail directly to another port that is no further than twelve hours sailing time for the vessel concerned, for the purpose of loading more of the article in bulk or to completely off-load the article, and the temperature of the article is less than 190° F and has shown a downward trend for a least eight hours after completion of loading.

(b) For the purposes of each temperature requirement of this section, the temperature of the article is the highest temperature taken between eight and fourteen inches below the surface at ten-foot intervals over its length and width.

(c) The master or person in charge of a vessel that is loading or transporting the article must ensure that the temperature of the article is taken:

(1) Before loading;

(2) During loading, in each hold and in the pile being loaded at least every twenty-four hours and, if the temperature is rising, as often as necessary to ensure the conditions in this section are met; and

(3) After loading, in each hold at least every twenty-four hours.

(d) During loading, if the temperature of the article in a hold is 200° F or higher, the master or person in charge of the vessel must notify the Coast Guard Captain of the Port and suspend loading until the temperature of the article is less than 190° F.

(e) After loading:

(1) If the temperature of the article is 150° F or above, the master or person in charge must notify the Captain of the Port and ensure that the vessel remains in the port area until the conditions of paragraph (a)(7)(i) of this section are met; or

(2) In the case of a short-duration voyage to which paragraph (a)(7)(ii) of this section applies, if the temperature of the article in a hold is 190° F or above, the master or person in charge must notify the Captain of the Port and ensure that the vessel remains in the port area until the conditions of paragraph (a)(7)(ii) of this section are met.

(f) Except for shipments of the article in bulk which leave the port of loading under the conditions specified in paragraphs (a)(7)(ii) of this section, after the vessel leaves the port, if the temperature of the article in the hold rises above 149° F, the master must notify the nearest Coast Guard Captain of the Port as soon as possible of:

(1) The name, nationality, and position of the vessel;

(2) The most recent temperature taken;

(3) The length of time that the temperature has been above 149° F and the rate of rise, if any;

(4) The port where the article was loaded and the destination of the article;

(5) The last port of call of the vessel and its next port of call;

(6) What action has been taken; and

(7) Whether any other cargo is endangered.

(g) To meet the conditions of this section, the master of a vessel that is transporting the article must ensure that each temperature taken is recorded.

§148.04–15 Petroleum coke, uncalcined; petroleum coke, uncalcined and calcined (mixture).

The material at 130° F or above must not be loaded in bulk on any vessel.

§148.04–17 Petroleum coke, calcined, at 130° F or above.

(a) The requirements of this part do not apply to bulk shipments of petroleum coke, calcined, on any vessel when the material is less than 130° F.

(b) The material must not be loaded in cargo vessels when temperatures exceed 225° F.

(c) Other hazardous materials must not be stowed in any hold adjacent to any other containing this material except as provided in paragraph (d) of this section.

(d) In holds over tanks containing fuel or material having a flashpoint under 200° F, a two-to-three foot layer of the material at a temperature not greater than 110° F must be first loaded into that hold. Only then may the material at 130° F or above be loaded into that hold.

(e) The loading of the material must be as follows:

(1) For shipments in holds over fuel tanks, the loading of the two-to-three foot layer of the material at a temperature not greater than 110° F (as required by paragraph (d) of this section) in these holds must be completed prior to the loading of the material at 130° F or above in any hold of the vessel.

(2) Upon completion of the loading described in paragraph (e)(1) of this section, a two-to-three foot layer of the material at 130° F or above must first be loaded in each hold (including those holds, if any, already containing a layer of the material at a temperature not greater than 110° F) in which the material is to be loaded in accordance with this section.

(3) Upon the completion of the loading of the two-to-three-foot layer of the material at 130° F or above in each hold, as required in paragraph (e)(2) of this section, the normal loading of the material at 130° F or above may proceed to completion.

(f) Personnel must be warned by the Master of the vessel or his authorized representative that calcined petroleum coke loaded and transported under the terms of this section is hot and that injury due to burns is possible.

§148.04–19 Tankage, garbage or rough ammoniate, solid.

(a) The material must contain at least 7 percent moisture by weight.

(b) The material must not be loaded if the temperature in the material, before loading, exceeds 100° F.

§148.04–20 Sulfur.

(a) When sulfur is loaded in a deep hold with general cargo in the 'tween deck hold above the sulfur, a dust proof wooden bulkhead enclosure must be built in the hatchways from the over deck of the lower hold to the weather

deck forming a tight enclosure capable of preventing sulfur dust from entering the 'tween decks during loading.

(b) Ceiling must be made tight to prevent sulfur dust from entering the bilges; any chinking necessary in the way of tank tops or bilges must be made of noncombustible material.

(c) Cowl ventilators serving the hold into which sulfur is being loaded or discharged must be opened to provide circulation of air.

(d) No smoking is permitted on board the vessel and ''No Smoking'' signs must be conspicously posted.

(e) If a metal chute is used it must be grounded using a flexible cable.

(f) Upon completion of loading, the sulfur must be leveled off. Any decks, bulkheads, or overheads containing sulfur dust must be swept clean or washed down.

(g) Other cargo, which is oxygen bearing, must not be stowed in the same hold with sulfur.

(h) An oxygen breathing apparatus, or proper gas mask, must be made available.

(i) A fire hose, preferably supplied with fresh water from a shore supply source, must be available at each hatch through which sulfur is being loaded.

§ 148.04–21 Coconut meal pellets (also known as copra pellets).

(a) Coconut meal pellets;

(1) Must contain at least 6 percent and not more than 13 percent moisture and not more than 10 percent residual fat contents;

(2) Must not be loaded if the temperature exceeds 120° F;

(3) Must not be stowed within 4 feet of any bulkheads subject to artificial heat; and

(4) Must not be overstowed with any other cargo.

(b) A clear space of at least 1 foot must be provided between the top of the cargo and underside of deck beams.

§ 148.04–23 Unslaked lime in bulk.

(a) Unslaked lime in bulk must be transported in unmanned, all steel, double-hulled barges equipped with weathertight hatches or covers. The barge must not carry any other cargo while unslaked lime is on board.

(b) The originating shipping order and transfer shipping paper requirement in § 148.02–1 and the dangerous cargo manifest requirements in § 148.02–3 do not apply to the transportation of unslaked lime under paragraph (a) of this section.

PART 149 [RESERVED]