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§ 153.565 Special requirement for temperature sensors.

If a cargo listed in table 1 of this part refers to this section, temperature sensors must be used to monitor the cargo pump temperature to detect overheating due to pump failures, when carrying that cargo.

[CGD 94–900, 59 FR 45139, Aug. 31, 1994]

§ 153.602 Special requirements for cargoes reactive with water.

When Table 1 refers to this section, the air inlet to the pressure-vacuum valve for the cargo tank must be located at least 2m (approx. 6.6 ft) above the weatherdeck.

[CGD 78–128, 47 FR 21210, May 17, 1982]

TESTING AND INSPECTION

§ 153.806 Loading information.

Each tankship must have a manual containing information that enables the master to load and ballast the tankship while keeping structural stresses within design limits.

[CGD 79–023, 48 FR 51009, Nov. 4, 1983]

§ 153.808 Examination required for a Certificate of Compliance.

Before a vessel receives either an initial or a reissued Certificate of Compliance endorsed to carry a cargo from Table 1 of this part, the vessel must call at a U.S. port for an examination during which the Officer in Charge, Marine Inspection, determines whether or not the vessel meets the requirements of this chapter.

[CGD 81–052, 50 FR 8733, Mar. 5, 1985, as amended by CGD 95–027, 61 FR 26009, May 23, 1996]

§ 153.809 Procedures for having the Coast Guard examine a vessel for a Certificate of Compliance.

The owner of a foreign flag vessel wishing to have the Coast Guard conduct a Certificate of Compliance examination, as required by §153.808, must proceed as follows:

(a) Notify the Officer in Charge, Marine Inspection of the port where the vessel is to be inspected at least 7 days before the vessel arrives and arrange the exact time and other details of the examination. This notification is in addition to any other pre-arrival notice to the Coast Guard required by other regulations, but may be concurrent with the endorsement application in §153.9, and must include—

(1) The name of the vessel's first U.S. port of call;

(2) The date that the vessel is scheduled to arrive;

(3) The name and telephone number of the owner's local agent; and

(4) The names of all cargoes listed in table 1 of this part that are on board the vessel.

(b) Before the examination required by §153.808 is begun, make certain that the following plans are on board the vessel and available to the Marine Inspector. These plans include—

(1) A general arrangement (including the location of fire fighting, safety, and lifesaving gear);

(2) A capacity plan;

(3) A schematic diagram of cargo piping on deck and in tanks (including the location of all valves and pumps); and

(4) A schematic diagram of cargo tank vent piping (including the location of relief valves and flame screens).

[CGD 95–027, 61 FR 26009, May 23, 1996]

§ 153.812 Inspection for Certificate of Inspection.

The rules governing the issuance of Certificates of Inspection are contained in part 31 of this chapter.

Subpart C—Operations

DOCUMENTS AND CARGO INFORMATION

§ 153.900 Certificates and authorization to carry a bulk liquid hazardous material.

(a) Except as allowed in 33 CFR 151.33(a), no ship may carry a cargo of bulk liquid hazardous material or an NLS residue if the bulk liquid hazardous material or NLS is listed in Table 1 or carried under a written permission under paragraph (d) of this section unless the ship meets the following:

(1) The cargo must be carried in a cargo tank.

(2) If a United States ship, the ship must have a Subchapter D or I Certificate of Inspection that is endorsed to allow the cargo tank to carry the cargo.

(3) If a foreign ship, the ship must have a Certificate of Compliance that is endorsed to allow the cargo tank to carry the cargo.

(4) The ship must have an IMO Certificate of Fitness issued under § 153.12 that is endorsed to allow the cargo tank to carry the cargo if it is—

(i) A United States self-propelled ship in foreign waters; or

(ii) A United States non-self-propelled ship in the waters of another Administration signatory to MARPOL 73/78 and the cargo is a Category A, B, or C NLS.

(b) [Reserved]

(c) No ship may carry any bulk liquid cargo not listed in § 30.25–1 of this chapter, Table 151.05 of Part 151 of this chapter, Table 1 or Table 2 of this part, Table 4 of Part 154 of this chapter, 33 CFR 151.47, or 33 CFR 151.49 unless the cargo name is endorsed on the Certificate of Inspection or contained in a letter issued under paragraph (d) of this section.

(d) The Coast Guard at its discretion endorses the Certificate of Inspection with the name of or issues a letter allowing the carriage of an unlisted cargo described under paragraph (c) of this section if—

(1) The shipowner—

(i) Requests the Coast Guard to add the cargo; and

(ii) Supplies any information the Coast Guard needs to develop carriage requirements for the bulk liquid cargo; and

(2) The ship—

(i) Has a Certificate of Inspection, Certificate of Compliance, or IOPP Certificate as specified in this part;

(ii) Meets the design and equipment requirements of this part specified by the Coast Guard; and

(iii) Meets any additional requirements made by the Coast Guard.

[CGD 81–101, 52 FR 7783, Mar. 12, 1987, as amended by CGD 81–101, 53 FR 28975, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989]

§ 153.901 Documents: Posting, availability, and alteration.

(a) No person may operate a United States ship unless the endorsed Certificate of Inspection is readily available on the ship.

(b) No person may operate a foreign ship unless the endorsed Certificate of Compliance or Certificate of Inspection is readily available on the ship.

(c) No person may operate a ship under an alternative or waiver granted under this part unless the document granting the alternative or waiver is attached to the ship's Certificate of Inspection or Certificate of Compliance.

(d) Except as allowed in paragraph (e) of this section, the Coast Guard does not accept the following if altered:

(1) Certificates of Inspection.

(2) Certificates of Compliance.

(3) Certificates of Fitness, unless the alteration is by the issuing authority.

(4) Approved Procedures and Arrangements Manuals, unless the alteration is approved by the issuing authority.

(5) NLS Certificates.

(e) A person wishing to change a Procedures and Arrangements Manual approved by the Coast Guard must submit a copy to the Coast Guard following the procedures for requesting an endorsed Certificate of Inspection in § 153.8.

[CGD 81–101, 52 FR 7783, Mar. 12, 1987]

§ 153.902 Expiration and invalidation of the Certificate of Compliance.

(a) The Certificate of Compliance shows its expiration date.

(b) The endorsement of a Certificate of Compliance under this part is invalid if the vessel does not have a valid IMO Certificate of Fitness.

(c) The endorsement on a Certificate of Compliance invalidated under paragraph (b) of this section, becomes valid again once the ship has the IMO Certificate of Fitness revalidated or reissued.

NOTE: See § 153.809 for procedures for having a Certificate of Compliance reissued.

[CGD 81–101, 52 FR 7784, Mar. 12, 1987; CGD 95–072, 60 FR 50465, Sept. 29, 1995; 60 FR 54106, Oct. 19, 1995; CGD 95–027, 61 FR 26009, May 23, 1996]

§ 153.903 Operating a United States ship in special areas: Categories A, B, and C.

No person may operate a United States ship that carries an NLS or NLS residue in a special area unless—

(a) The ship's Certificate of Inspection is endorsed in accordance with § 153.30; and

(b) The ship meets the operating requirements applying to special areas in Regulations 5, 5A, 8 and the Standards for Procedures and Arrangements of Annex II.

[CGD 81–101, 52 FR 7784, Mar. 12, 1987]

§ 153.904 Limitations in the endorsement.

No person may operate a tankship unless that person complies with all limitations in the endorsement on the tankship's Certificate of Inspection or Certificate of Compliance.

[CGD 81–052, 50 FR 8734, Mar. 5, 1985]

§ 153.905 Regulations required to be on board.

No person may operate a tankship unless the most recent editions of this part, and parts 35 and 150 of this chapter are on board.

[CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.907 Cargo information.

(a) The master shall ensure that the following information for each cargo carried under this part is readily available to those on the tankship engaged in cargo operations:

(1) The name of the cargo as listed in table 1.

(2) A description of the cargo's appearance and color.

(3) Hazards in handling the cargo.

(4) Any special handling procedures for the cargo, such as inerting.

(5) Procedures to follow if the cargo spills or leaks.

(6) Procedures for treating a person exposed to the cargo.

(7) A list of fire fighting procedures and extinguishing agents effective with cargo fires.

(8) Shipper's name.

(9) Loading point.

(10) Approximate quantity of cargo.

(11) Tank in which the cargo is located.

(12) The name of an agent in the United States authorized to accept service of legal process for the vessel.

(b) The master shall make sure that the following information for cargoes other than those carried under this part is readily available on the tankship:

(1) The name of the cargo as listed in Table 4 of Part 154 of this chapter or § 30.25–1 of this chapter if the cargo is listed in one of these two tables.

(2) The name of the cargo prescribed in the letter authorizing carriage of the cargo under § 153.900(d) if the cargo is a hazardous or flammable cargo authorized for carriage under that section.

(3) The shipper's name for the cargo and the name of the shipper if the cargo is neither a hazardous nor flammable cargo.

[CGD 81–078, 50 FR 21174, May 22, 1985; as amended by CGD 88–100, 54 FR 40042, Sept. 29, 1989]

§ 153.908 Cargo viscosity and melting point information; measuring cargo temperature during discharge: Categories A, B, and C.

(a) The person in charge of the ship may not accept a shipment of a Category A, B, or C NLS cargo having a reference to this paragraph in the ''Special Requirements'' column of Table 1 unless the person has, from the cargo's manufacturer or the person listed as the shipper on the bill of lading, a written statement of the following:

(1) For Category A or B NLS, the cargo's viscosity at 20 °C in mPa.s and, if the cargo's viscosity exceeds 25 mPa.s at 20 °C, the temperature at which the viscosity is 25 mPa.s.

(2) For Category C NLS, the cargo's viscosity at 20 °C in mPa.s and, if the cargo's viscosity exceeds 60 mPa.s at 20 °C, the temperature at which the viscosity is 60 mPa.s. If the cargo's viscosity varies from shipment to shipment, the maximum viscosity and maximum temperature values may be supplied.

(b) The person in charge of the ship may not accept a shipment of a Category A, B, or C cargo having a reference to this paragraph in the ''Special Requirements'' column of Table 1 unless the person has a written statement of the cargo's melting point in °C from the cargo's manufacturer or the person listed as the shipper on the bill of lading. If the cargo's melting point varies from shipment to shipment, the highest melting point may be supplied.

(c) The person in charge of the ship shall ensure that the cargo temperature is read and recorded in the Cargo Record Book following the procedures in paragraph (d) of this section when a cargo having a reference to paragraph (a) or (b) of this section in the ''Special Requirements'' column of Table 1 is unloaded.

(d) The cargo temperature measured in paragraph (c) of this section must be made using the following procedure:

(1) Each reading must be made with the sensor or thermometer required by §153.440(a)(3) or (c). If a portable thermometer is used, it must be located as prescribed for the temperature sensor in §153.440(a)(3).

(2) A total of 2 readings must be made, the first reading to be made no more than 30 minutes after cargo transfer begins and the second reading no more than 30 minutes before the main cargo pump is shut down.

(3) The cargo's temperature is the average of the 2 readings made under paragraph (d)(2) of this section.

[CGD 81–101, 52 FR 7784, Mar. 12, 1987]

§153.909 Completing the Cargo Record Book and record retention: Categories A, B, C, and D.

(a) The person in charge of a ship shall ensure that the Cargo Record Book required under §153.490 is completed immediately after any of the following occurs:

(1) An NLS cargo is loaded.

(2) An NLS cargo is transferred between tanks on a ship.

(3) An NLS cargo is unloaded from a tank.

(4) A tank that last carried an NLS cargo is prewashed under this part.

(5) A tank that last carried an NLS cargo is washed, except as reported under paragraph (a)(4) of this section, cleaned, or ventilated.

(6) Washings from a tank that last carried an NLS cargo are discharged to the sea.

(7) Tanks that last carried an NLS cargo are ballasted.

(8) Ballast water is discharged to the sea from a cargo tank that last carried an NLS.

(9) An NLS cargo or NLS residue is discharged to the sea by accident or except as allowed by this part.

(10) A Surveyor is present during an operation that this part requires the presence of a Surveyor.

(11) NLS residue or NLS cargo is transferred from cargo pumproom bilges or transferred to an incinerator.

(12) A waiver is issued to the ship, ship owner, ship operator, or person in charge of the ship under this part.

(13) The concentration of a Category A NLS residue is measured under §153.1120(a).

(14) Any discharge recording equipment required by §153.481(b)(2) fails.

(b) The person in charge of the ship shall ensure that the Cargo Record Book is on board and readily available for inspection and copying by the Coast Guard and when the ship is a U.S. ship in the waters of a foreign country whose Administration is signatory to MARPOL 73/78, the authorities of that country.

(c) Each officer in charge of an operation listed under paragraph (a) of this section, and each Surveyor observing an operation that this part requires the presence of a Surveyor, shall attest to the accuracy and completeness of each Cargo Record Book entry concerning those operations by signing after each entry.

(d) After all the entries on a page of the Cargo Record Book are completed, and if the person in charge of the ship agrees with the entries, the person in charge of the ship shall sign the bottom of that page.

(e) The ship owner or operator shall ensure that—

(1) Each Cargo Record Book is retained on board the ship for at least 3 years after the last entry; and

(2) Each discharge recording required by §153.1126(b)(1) is retained on board the ship for at least three years.

[CGD 81–101, 52 FR 7784, Mar. 12, 1987]

§153.910 Cargo piping plan.

No person may operate a tankship unless the tankship has a cargo piping plan that:

(a) Shows all cargo piping on the tankship;

(b) Shows all cargo valving, pumps, and other equipment that is used during cargo transfer;

(c) Shows the cargo tanks;

(d) Shows any modifications necessary to a containment system that is to be separated as prescribed under Part 150 of this subchapter, or §§ 153.525 and 153.1020;

(e) Emphasizes the piping and equipment described in paragraphs (a), (b) and (d) of this section by using contrasting colors, line widths, or similar methods; and

(f) Shows the cargo loading rates chosen under § 153.365(b) for all applicable cargo lines.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.912 Certificate of inhibition or stabilization.

(a) When a cargo in Table 1 is referred to this section, no person may operate a tankship carrying the cargo without a written certification, carried on the bridge of the tankship, from the shipper that the cargo is:

(1) Inhibited; or

(2) Stabilized.

(b) The certification required by this section must contain the following information:

(1) Whether the cargo is inhibited or stabilized.

(2) The name and concentration of the inhibitor or stabilizer.

(3) The date the inhibitor or stabilizer was added.

(4) The length of time the inhibitor or stabilizer is effective.

(5) Any temperature limitations qualifying the inhibitor's or stabilizer's effective lifetime.

(6) The action to be taken should the duration of the voyage exceed the inhibitor's or stabilizer's useful life.

GENERAL CARGO OPERATIONAL REQUIREMENTS

§ 153.920 Cargo quantity limitations.

(a) No person may load a cargo tank or operate a tankship that carries a cargo tank containing in excess of 1250 m^3 (approx. 44,138 ft^3) of cargo requiring a type I containment system.

(b) No person may load a cargo tank or operate a tankship that carries a cargo tank containing in excess of 3000 m^3 (approx. 105,932 ft^3) of a cargo requiring a type II containment system.

§ 153.921 Explosives.

No person may load, off-load, or carry a cargo listed in this part on board a vessel that carries explosives unless he has the prior written permission of the Commandant (G–MSO).

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

§ 153.923 Inerting systems.

The master shall ensure that the inert gas systems for any cargo that this part requires to be inerted are operating correctly.

GENERAL VESSEL SAFETY

§ 153.930 Cargo antidotes.

No person may operate a tankship that carries a cargo listed in Table 1 unless the tankship has on board the antidotes described for the cargo in the *Medical First Aid Guide for Use in Accidents Involving Dangerous Goods*, published by IMO.

§ 153.931 Obstruction of pumproom ladderways.

The master shall ensure that all cargo pumproom ladderways are unobstructed at all times.

§ 153.932 Goggles and protective clothing.

(a) The master shall ensure that each person wear a face mask or tight-fitting goggles for eye protection against splashing or spraying liquids if that person is:

(1) Sampling cargo;

(2) Transferring cargo;

(3) Making or breaking a cargo hose connection;

(4) Gauging a cargo tank; or

(5) Opening a cargo tank by opening a Butterworth hatch, ullage hatch, cargo tank hatch, or similar opening.

(b) The master shall ensure that each person wear a face mask or tight-fitting goggles for eye protection against splashing or spraying liquids if the person is:

(1) In the area of the deck where the cargo tanks, cargo piping, and cargo pumprooms are located while a cargo transfer is taking place; or

(2) In a cargo pumproom, an enclosed space adjacent to a cargo tank, or a

space containing part of a cargo containment system.

(c) The master shall ensure that each person in paragraphs (a) and (b) of this section wear any additional protective clothing the master believes necessary to protect the person from the cargo's hazards.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.933 Chemical protective clothing.

When table 1 refers to this section, the following apply:

(a) The master shall ensure that the following chemical protective clothing constructed of materials resistant to permeation by the cargo being handled is worn by all personnel engaged in an operation listed in paragraph (b) of this section:

(1) Splash protective eyewear.

(2) Long-sleeved gloves.

(3) Boots or shoe covers.

(4) Coveralls or lab aprons.

NOTE: ''Guidelines for the Selection of Chemical Protective Clothing'', Third Edition, 1987, available from the American Conference of Governmental Industrial Hygienists, 6500 Glenway Ave., Cincinnati, OH 45211–4438, provides information on the proper clothing for the cargo being handled.

(b) This section applies during the following operations:

(1) Sampling cargo.

(2) Transferring cargo.

(3) Making or breaking cargo hose connections.

(4) Gauging a cargo tank, unless gauging is by closed system.

(5) Opening cargo tanks.

(c) Coveralls or lab aprons may be replaced by splash suits or aprons constructed of light weight or disposable materials if, in the judgment of the master—

(1) Contact with the cargo being handled is likely to occur only infrequently and accidentally; and

(2) The splash suit or apron is disposed of immediately after contamination.

(d) Splash protective eyewear must be tight-fitting chemical-splash goggles, face shields, or similar items intended specifically for eye protection from chemical splashing or spraying.

(e) The master shall ensure that each person in the vicinity of an operation listed in paragraph (b) of this section or in the vicinity of tanks, piping, or pumps being used to transfer the cargo wears splash protective eyewear under paragraph (d) of this section.

[CGD 88–100, 54 FR 40042, Sept. 29, 1989; 55 FR 17276, Apr. 24, 1990]

§ 153.934 Entry into spaces containing cargo vapor.

(a) No person may enter a cargo tank, cargo handling space, pumproom or enclosed space in the cargo area without the permission of the master.

(b) Before permitting anyone to enter a cargo tank, cargo handling space, pumproom or other enclosed space in the cargo area, the master shall make sure that:

(1) The space is free of toxic vapors and has sufficient oxygen to support life; or

(2) Those entering the space wear protective equipment with self-contained breathing apparatus as described in § 153.214(b) and an officer closely supervises the entire operation.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.935 Opening of tanks and cargo sampling.

(a) Except as provided in paragraph (b) of this section, the master shall ensure that all cargo tank hatches, ullage openings, and tank cleaning openings are tightly closed at all times.

(b) The master may not authorize the opening of a cargo tank, except:

(1) To clean a tank;

(2) To transfer a cargo that Table 1 allows in a containment system having an open gauging system;

(3) To sample a cargo that Table 1 allows in a containment system having an open gauging system; or

(4) To sample a cargo that Table 1 allows in a containment system having a restricted gauging system if:

(i) The tank is not being filled during sampling;

(ii) The vent system has relieved any pressure in the tank;

(iii) The person sampling the cargo wears the protective clothing required during cargo transfer; and

(iv) The tank is closed tightly following sampling.

(c) The master shall make sure that cargoes requiring closed gauging are sampled only through the controlled sampling arrangement required by § 153.404(d).

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.935a Storage of cargo samples.

(a) The master shall make sure that any cargo samples are stored in:

(1) A designated and ventilated space in the cargo area of the vessel; or

(2) An area approved by the Commandant (G–MSO) or the tankship's flag administration for the stowage of cargo samples.

(b) The master shall make sure that cargo sample bottles are stored:

(1) In a way that prevents shifting of the sample bottles when the vessel is at sea;

(2) In bins or containers constructed of materials that are resistant to the cargo samples; and

(3) Apart from other sample bottles containing incompatible liquids (See part 150, subpart A).

[CGD 78–128, 47 FR 21211, May 17, 1982, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

§ 153.936 Illness, alcohol, drugs.

The master shall ensure that no person participates in cargo related operations who appears to be intoxicated by alcohol or drugs or to be so ill as to be unfit for the particular operation.

MARKING OF CARGO TRANSFER HOSE

§ 153.940 Standards for marking of cargo hose.

No person may mark a hose assembly as meeting the standards of this section unless the hose assembly meets the following requirements:

(a) Each hose assembly must have:

(1) Fully threaded connections;

(2) Flanges that meet ANSI B16.5, B16.24, or B16.31; or

(3) Class 1 quick-disconnect couplings that comply with ASTM F–1122, and are marked ''C1–1.''

(b) Each hose assembly must be marked with the:

(1) Date of manufacture;

(2) Working pressure discribed in paragraph (d) of this section;

(3) Date of the last test made as prescribed in paragraph (e) of this section; and

(4) Manufacturer's recommended maximum and minimum temperatures.

(c) A cargo hose assembly must have a minimum bursting pressure as stated by the manufacturer of at least 5152 kPa gauge (approx. 750 psig).

(d) The working pressure marked on a hose must meet the following:

(1) Be at least 1030 kPa gauge (approx. 150 psig).

(2) Not exceeded 20 per cent (one-fifth) of the manufacturer's stated bursting pressure.

(3) Not exceed the manufacturer's recommended working pressure.

(4) Not exceed the test pressure used in the latest test under paragraph (e)(3) of this section.

(e) A cargo hose assembly must be inspected and tested by placing it in a straight, horizontal position so that its entire external surface is accessible. It must be ascertained that the hose assembly:

(1) Has no loose covers, kinks, bulges, soft spots, and no gouges, cuts, or slashes that penetrate any hose reinforcement;

(2) Has no external and, to the extent internal inspection is possible with both ends of the hose open, no internal deterioration; and

(3) Does not burst, bulge, leak, or abnormally distort under static liquid pressure at least as great as the recommended working pressure.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21211, May 17, 1982; CGD 88–032, 56 FR 35827, July 29, 1991]

CARGO TRANSFER PROCEDURES

§ 153.953 Signals during cargo transfer.

The master shall ensure that:

(a) The tankship displays a red flag in the day and a red light at night when transferring cargo while fast to a dock;

(b) The tankship displays a red flag when transferring cargo while at anchor; and

(c) The red flag or the red light is visible from all sides of the tankship.

§153.955 Warning signs during cargo transfer.

(a) When transferring cargo while fast to a dock or at anchor in port, the master shall ensure that the tankship displays a warning sign at the gangway facing the shore so that it may be seen from the shore and another warning sign facing outboard toward the water so that it may be seen from the water. (See figure 1).

(b) Except as provided in paragraph (f) of this section, each warning sign must have the following legends:

(1) Warning.

(2) Dangerous Cargo.

(3) No Visitors.

(4) No Smoking.

(5) No Open Lights.

(c) Each letter must be block style, black on a white background.

(d) Each letter must:

(1) Be 7.5 cm (approx. 3 in.) high;

(2) Be 5 cm (approx. 2 in.) wide except for ''M'' and ''W'' which must be 7.5 cm (approx. 3 in.) wide and the letter ''I'' which may be 1.3 cm (approx. ½ in.) wide; and

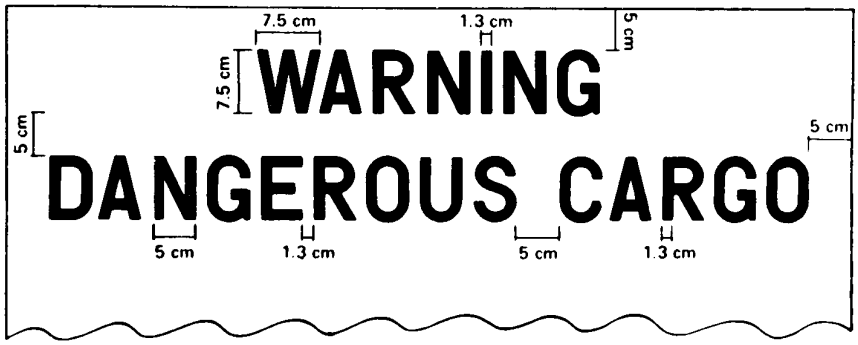

Figure 1 - Minimum Dimensions for Warning Sign

(3) Have 1.3 cm (approx. ½ in.) stroke width.

(e) The spacing must be:

(1) 1.3 cm (approx. ½ in.) between letters of the same word;

(2) 5 cm (approx. 2 in.) between words;

(3) 5 cm (approx. 2 in.) between lines; and

(4) 5 cm (approx. 2 in.) at the borders of the sign.

(f) Except as described in §153.1045, the legends ''No Smoking'' and ''No Open Lights'' are not required when the cargoes on board the tankship are neither flammable nor combustible.

§153.957 Persons in charge of transferring liquid cargo in bulk or cleaning cargo tanks.

(a) The owner and operator of the vessel, and his or her agent, and each of them, shall ensure that—

(1) Enough ''Tankerman-PICs'' or restricted ''Tankerman-PICs'', and ''Tankerman-Assistants'', authorized for the classification of cargo carried, are on duty to safely transfer liquid cargo in bulk or to safely clean cargo tanks;

(2) Each transfer of liquid cargo in bulk and each cleaning of a cargo tank is supervised by a qualified person designated as a person in charge of the transfer or the cleaning under Subpart C of 33 CFR part 155;

(3) When cargo regulated under this part is due for transfer, the person in charge of the transfer has received special training in the particular hazards associated with the cargo and in all special procedures for its handling; and

(4) On each foreign vessel, the person in charge understands his or her responsibilities as described in this subchapter.

(b) Upon request by the Officer in Charge, Marine Inspection, in whose zone the transfer will take place, the owner and operator of the vessel, and his or her agent, and each of them, shall provide documentary evidence that the person in charge has received the training specified by paragraph (a)(3) of this section and is capable of competently performing the procedures necessary for the cargo.

[CGD 79–116, 60 FR 17158, Apr. 4, 1995]

§ 153.959 Approval to begin transfer operations required.

No person may make connections for cargo transfer or transfer cargo unless he has authorization from the person in charge of cargo transfer.

§ 153.964 Discharge by gas pressurization.

The person in charge of cargo transfer may not authorize cargo discharge by gas pressurization unless:

(a) The tank to be offloaded has an SR or PV venting system;

(b) The pressurization medium is either the cargo vapor or a nonflammable, nontoxic gas inert to the cargo; and

(c) The pressurizing line has:

(1) A pressure reducing valve whose setting does not exceed 90% of the tank's relief valve setting and a manual control valve between the pressure reducing valve and the tank; or

(2) For an inert gas medium:

(i) A safety relief valve with a cross sectional flow area at least equal to that of the pressurizing line and whose relieving pressure does not exceed 90 percent of the tank's relief valve setting;

(ii) A manual control valve between the safety relief valve and the tank; and

(iii) A check valve between the manual control valve and the tank.

§ 153.966 Discharge by liquid displacement.

The person in charge of cargo transfer may not authorize cargo discharge by liquid displacement unless the liquid supply line to the tank has:

(a) A safety relief or pressure reducing valve set to operate at no more than 80 percent of the tank's relief valve setting; and

(b) A manual control valve between the tank and the supply line's safety relief valve or pressure reducing valve.

§ 153.968 Cargo transfer conference.

(a) Before he may begin making connections for cargo transfer, the person in charge of cargo transfer shall confer with the person supervising the cargo transfer at the facility.

(b) The person in charge of cargo transfer shall discuss the important aspects of the transfer operation, such as the following, with the supervisor at the facility:

(1) The products to be transferred.

(2) The cargo loading rates marked on the cargo piping plan or the maximum safe transfer rates.

(3) The critical or hazardous stages of the transfer operation.

(4) The emergency procedures in case of a spill.

(5) If the vessel is equipped with the tank overflow alarm prescribed in §153.408(c), a procedure for shutdown of shore pumps, shore valves, and ship's valves that prevents piping system pressures from exceeding those for which the piping system is designed.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21211, May 17, 1982; CGD 81–078, 50 FR 21174, May 22, 1985]

§ 153.970 Cargo transfer piping.

The person in charge of cargo transfer shall ensure that:

(a) Cargo is transferred to or from a cargo tank only through the tankship's cargo piping system;

(b) Vapor not returned to shore through the tankship's vapor return system is discharged at the height required for the cargo's vent riser in Table 1, and

(c) All cargo vapor is returned to shore through the valved connection on the venting system if:

(1) The cargo requires closed gauging, is referenced to § 153.372 or is referenced to § 153.525;

(2) The transfer terminal has vapor return equipment; and

(3) In his estimation the vapor return equipment is adequate to handle the vapor expected from the tank.

§ 153.972 Connecting a cargo hose.

The person in charge of cargo transfer may not authorize the connection of a hose to a cargo containment system unless:

(a) He has ensured himself that the cargo will not weaken or damage the hose;

(b) The hose is marked as meeting the standards of § 153.940;

(c) The date of the hose's last pressure test is within one year of the date on which the hose is used to transfer cargo;

(d) The recommended working pressure marked on a hose used for discharge meets or exceeds the working pressure marked on the cargo piping at the hose connection; and

(e) The cargo's temperature is within the manufacturer's recommended maximum and minimum hose temperatures.

§ 153.975 Preparation for cargo transfer.

The person in charge of cargo transfer may not approve or continue cargo transfer unless the following conditions are met:

(a) No fires or open flames are on deck or in compartments near the hose connections when Table 1 requires the cargo's containment system to have a fire protection system.

(b) Any electrical bonding of the tankship to the transfer facility is made before the cargo transfer piping is joined.

(c) Any supplemental inert gas supply necessary to maintain the 3.5 kPa gauge (approx. 0.5 psig) pressure in the tank during offloading (see § 153.500) is connected to the inert gas pressure control system.

(d) The transfer connections have enough slack to allow for vessel movement.

(e) The transfer connections are supported by tackles.

(f) The cargo high level alarms, tank overflow alarms and overflow control systems are functioning correctly when the cargo is loaded.

(g) Joints and couplings are gasketed and mated tightly.

(h) Flanges are bolted tightly.

(i) No repair work is underway in areas where cargo or cargo vapors may collect.

(j) Cargo and sea valves are properly set, with those sea valves connected to cargo piping lashed or sealed shut.

(k) Venting system bypass valves are set for cargo transfer and are operating properly.

(l) All scuppers are plugged.

(m) Smoking is limited to safe places.

(n) Fire fighting and safety equipment is ready.

(o) He is in effective communication with the transfer terminal.

(p) The person in charge of the transfer terminal has acknowledged that he is ready to transfer.

(q) Pressures within the cargo transfer and containment systems do not exceed the pressure ranges for which the transfer hose and containment systems are designed.

(r) No vessels that would hazard cargo transfer are alongside the tankship.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21211, May 17, 1982]

§ 153.976 Transfer of packaged cargo or ship's stores.

The person in charge of cargo transfer may neither begin nor continue the transfer of a flammable or combustible cargo while packaged cargo or ship's stores are transferred unless transfer of the packaged cargo or ship's stores does not hazard transfer of the flammable or combustible cargo.

§ 153.977 Supervision of cargo transfer.

The person in charge of cargo transfer shall:

(a) Supervise the operation of cargo system valves;

(b) Monitor the cargo loading rate to ensure it does not exceed that stated on the cargo piping plan; and

(c) Monitor the cargo level in the tanks to make sure they do not overflow.

[CGD 78–128, 47 FR 21211, May 17, 1982]

§ 153.979 Gauging with a sounding tube.

(a) No person may remove the cover of a sounding tube unless he has authorization from the person in charge of cargo transfer.

(b) The person in charge of cargo transfer may not authorize removal of the cover from a sounding tube gauge unless all tank pressure has been relieved through the tank's venting system.

§ 153.980 Isolation of automatic closing valves.

The person in charge of cargo transfer may isolate automatic closing valves described in §153.408(b) from a cargo containment system if the following conditions are met:

(a) The containment system carries products to which §153.408 does not apply.

(b) The valves are isolated by:

(1) Removing the valves; or

(2) Installing removable pipes and blind flanges to by-pass the valves.

[CGD 78–128, 47 FR 21211, May 17, 1982]

§ 153.981 Leaving room in tank for cargo expansion.

The person in charge of cargo transfer shall ensure that the amount of cargo in a tank does not exceed the tank's capacity at any ambient temperature between −18°C (approx. 0° F) and 46° C (approx. 115° F).

§ 153.983 Termination procedures.

Upon completion of the transfer operation, the person in charge of cargo transfer shall ensure that:

(a) The cargo transfer connections are closed off;

(b) The transfer lines and hoses are drained of cargo, either into the tank or back to the transfer terminal;

(c) Any electrical bonding between the vessel and the shore facility is broken only after the cargo hose is disconnected and all spills removed; and

(d) Each vent system is returned to its nonloading configuration.

SPECIAL CARGO PROCEDURES

§ 153.1000 Special operating requirements for cargoes reactive with water.

When Table 1 refers to this section, the master must ensure that the cargo:

(a) Is carried only in a containment system completely isolated from any systems containing water, such as slop tanks, ballast tanks, cargo tanks containing slops or ballast, their vent lines or piping; and

(b) Is separated by double walls, such as cofferdams and piping tunnels, from any system containing water, as for example those described in paragraph (a) of this section.

§ 153.1002 Special operating requirements for heat sensitive cargoes.

When Table 1 refers to this section, the master shall make sure that:

(a) The cargo temperature is maintained below the temperature that would induce polymerization, decomposition, thermal instability, evolution of gas or reaction of the cargo;

(b) Any heating coils in the cargo tank are blanked off; and

(c) The cargo is not carried in uninsulated deck tanks.

[CGD 78–128, 47 FR 21211, May 17, 1982]

§ 153.1003 Prohibited carriage in deck tanks.

When Table 1 refers to this section, cargoes may not be carried in deck tanks.

[CGD 95–900, 60 FR 34050, June 29, 1995]

§ 153.1004 Inhibited and stabilized cargoes.

(a) Before loading a cargo containment system with a cargo referenced to this section in Table 1, the person in charge of cargo transfer shall make sure that the cargo containment system is free of contaminants that could:

(1) Catalyze the polymerization or decomposition of the cargo; or

(2) Degrade the effectiveness of the inhibitor or stabilizer.

(b) The master shall make sure that the cargo is maintained at a temperature which will prevent crystallization or solidification of the cargo.

[CGD 78–128, 47 FR 21211, May 17, 1982]

§153.1010 Alkylene oxides.

(a) Before each loading of a cargo containment system with a cargo referenced to this section in Table 1, the person in charge of cargo transfer shall:

(1) Unless the tankship is equipped with independent cargo piping that meets paragraph (d) of this section:

(i) Obtain verification from a Coast Guard Marine Inspector or from a representative of the tankship's flag administration that separation of the alkylene oxide piping system complies with alkylene oxide handling plans approved by the Coast Guard or the tankship's flag administration; and

(ii) Make sure that each spectacle flange and blank flange connection that is required to separate alkylene oxide piping systems from other systems has a wire and seal attached by a Coast Guard Marine Inspector or a representative of the tankship's flag administration.

(2) Purge the containment system until the oxygen content of the cargo tank is less than 2% by volume.

(b) The person in charge of an alkylene oxide cargo transfer shall ensure that:

(1) No alkylene oxide vapor or liquid is released to the atmosphere during cargo transfer;

(2) No vapor return system connected to an alkylene oxide containment system is at the same time connected to another containment system;

(3) Alkylene oxide is discharged only by an intank cargo pump or inert gas displacement;

(4) Transfer hose is approved by the Commandant (G–MSO) under §153.530(o) for alkylene oxide transfer and is marked ''For Alkylene Oxide Transfer Only''; and

(5) A water hose is laid out on deck with water pressure to the nozzle, and all alkylene oxide spillages are washed away immediately.

(c) While alkylene oxides are onboard the vessel, the master shall make sure that the oxygen content of the vapor space above the alkylene oxide and those spaces specified in §153.530 (k) and (l) is maintained below 2% by volume.

(d) Tankships with independent piping for alkylene oxides must have onboard:

(1) Alkylene oxide handling plans approved by the Coast Guard or the tankship's flag administration; and

(2) Certification from the Coast Guard or the tankship's flag administration that the cargo piping for alkylene oxides is independent.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21211, May 17, 1982; CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

§153.1011 Changing containment systems and hoses to and from alkylene oxide service.

(a) The person in charge of cargo transfer shall make sure that:

(1) No alkylene oxide is loaded into a containment system that last carried a cargo other than an alkylene oxide unless the containment system has been cleaned and inspected to make sure it is in good condition with no heavy rust accumulations or traces of previous cargoes;

(2) No alkylene oxide is loaded into a containment system that within the previous three loadings carried a cargo listed in paragraph (b) of this section unless the containment system has been cleaned to the satisfaction of a Coast Guard Marine Inspector or a person specifically authorized by the Commandant (G–MSO) to approve alkylene oxide tank cleaning;

(3) No cargo but an alkylene oxide is loaded into a containment system which last carried an alkylene oxide unless the containment system has been cleaned of alkylene oxide to the satisfaction of a Coast Guard Marine Inspector or person specifically authorized by the Commandant (G–MSO) to approve alkylene oxide tank cleaning; and

(4) No hose marked ''For Alkylene Oxide Transfer Only'' is used for the transfer of a cargo other than an alkylene oxide.

(b) The following cargoes are particularly reactive with alkylene oxides:

(1) Non-oxidizing mineral acids (e.g. hydrochloric, phosphoric);

(2) Sulfuric acid;

(3) Nitric acid;

(4) Organic acids (e.g. acetic, formic);

(5) Halogenated organic acids (e.g. chloroacetic);

(6) Sulfonic acids (e.g. alkyl benzene sulfonic);

(7) Caustic alkalies (e.g. caustic soda, caustic potash; sodium hydrosulfide);

(8) Ammonia and ammonia solutions;

(9) Aliphatic amines;

(10) Alkanolamines; and

(11) Oxidizing substances.

[CGD 78–128, 47 FR 21211, May 17, 1982, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983; CGD 81–078, 50 FR 21174, May 22, 1985]

§ 153.1020 Unusually toxic cargoes.

(a) No person may load or carry a cargo referenced to this section in Table 1 unless the cargo's piping and venting systems are separated from piping and venting systems carrying cargoes not referred to this section.

(b) The master shall ensure that no heat transfer medium that has been circulated through a cargo referenced to this section in Table 1 is circulated through a cargo not referenced to this section unless he determines the medium to be uncontaminated with cargo.

(c) No person may discharge overboard condensed steam from the heating system of a cargo referenced to this section in Table 1 unless he first determines the condensate to be uncontaminated with cargo.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21212, May 17, 1982]

§ 153.1025 Motor fuel antiknock compounds.

(a) No person may load or carry any other cargo in a containment system approved for motor fuel antiknock compounds containing lead alkyls except a cargo to be used solely in the manufacture of motor fuel antiknock compounds.

(b) The master shall ensure that no person enter a pumproom or void space that contains piping from a containment system approved for motor fuel antiknock compounds containing lead alkyls unless:

(1) The pumproom or void space atmosphere has been analyzed for its lead (as Pb) content and found to be less than 0.075 mg/m^3 ; or

(2) The person follows the procedures for entering a cargo tank described in paragraph (c) of this section.

(c) No person may enter a cargo tank endorsed for motor fuel antiknock compounds containing lead alkyls without prior specific authorization from the Commandant (G–MSO). This authorization may be obtained by telephone ((202) 267–1217) if the person has previously obtained approval for the cargo tank entry procedure from the Commandant (G–MSO).

(d) No person may enter a cargo tank endorsed for motor fuel antiknock compounds if he does not follow the conditions in the authorization under paragraph (c) of this section.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21212, May 17, 1982; CGD 82–063b, 48 FR 4782, Feb. 3, 1983; CGD 88–100, 54 FR 40042, Sept. 29, 1989]

§ 153.1035 Acetone cyanohydrin or lactonitrile solutions.

No person may operate a tankship carrying a cargo of acetone cyanohydrin or lactonitrile solutions, unless that cargo is stabilized with an inorganic acid.

[CGD 88–100, 54 FR 40042, Sept. 29, 1989]

§ 153.1040 Carbon disulfide.

(a) No person may load, carry, or discharge carbon disulfide unless the cargo tank has a water pad over the cargo of at least one meter (approx. 40 in.).

(b) The person in charge of a carbon disulfide transfer operation shall ensure that carbon disulfide is discharged only by displacement or intank cargo pump.

(c) No person may remove a cargo pump for a containment system that carries carbon disulfide unless:

(1) The containment system has a gas free certificate issued under the standards in § 35.01–1 of this chapter; or

(2) The vapor space in the pump well is filled with water.

§ 153.1045 Inorganic acids.

When Table 1 refers to this section, the person in charge of cargo transfer shall ensure that the legends ''NO SMOKING'' and ''NO OPEN LIGHTS''

are displayed on the warning sign required in §153.955(a) when cargo is transferred.

§153.1046 Sulfuric acid.

No person may liquefy frozen or congealed sulfuric acid other than by external tank heating coils.

§153.1052 Carriage of other cargoes in acid tanks.

No person shall load or carry other cargoes in a cargo containment system of a U.S. flag ship endorsed to carry sulfuric acid, hydrochloric acid, or phosphoric acid with out specific authorization from the Commandant (G–MSO).

[CGD 94–900, 59 FR 45139, Aug. 31, 1994]

§153.1060 Benzene.

The person in charge of a Coast Guard inspected vessel must ensure that the provisions of part 197, subpart C, of this chapter are applied.

[CGD 88–040, 56 FR 65006, Dec. 13, 1991]

§153.1065 Sodium chlorate solutions.

(a) No person may load sodium chlorate solutions into a containment system that previously carried another cargo unless the containment system is thoroughly washed before loading.

(b) The person in charge of cargo transfer shall make sure that spills of sodium chlorate solutions are immediately washed away.

[CGD 81–078, 50 FR 21174, May 22, 1985]

APPROVAL OF SURVEYORS AND HANDLING OF CATEGORIES A, B, C, AND D CARGO AND NLS RESIDUE

SOURCE: CGD 81–101, 52 FR 7785, Mar. 12, 1987, unless otherwise noted.

§153.1100 Responsibility of the person in charge.

The person in charge of the ship shall ensure that—

(a) The requirements of §§153.1102 through 153.1132 are met; and

(b) The procedures in the approved Procedures and Arrangements Manual are followed.

§153.1101 Procedures for getting a Surveyor: Approval of Surveyors.

(a) At least 24 hours before a Surveyor is needed, the person wishing the services of a Surveyor must contact the Captain of the Port or the Marine Safety Office that has jurisdiction over the port at which the Surveyor will be needed to—

(1) Arrange for the Coast Guard to provide a Surveyor; or

(2) Inform the Coast Guard of the selection of a Surveyor from one of the organizations accepted by the Coast Guard to provide Surveyors.

(b) Organizations may be accepted by the Coast Guard to provide Surveyors if they—

(1) Are engaged, as a regular part of their business, in performing inspections or tests of bulk liquid cargo tanks or bulk liquid cargo handling equipment;

(2) Are familiar with the references in §153.0(b) and with the requirements of this part;

(3) Are not controlled by the owners or operators of ships needing the services of the Surveyors or the facilities at which those ships would unload cargo;

(4) Are not dependent on Coast Guard acceptance under this section to remain in business; and

(5) Sign a Memorandum of Understanding with the Coast Guard.

(c) Each application for acceptance as a Surveyor must be submitted to the Commandant (G–MSO) and must contain the following:

(1) The name and address of the organization, including subsidiaries and divisions, requesting acceptance by the Coast Guard to provide Surveyors.

(2) A statement that the organization is not controlled by the owners or operators of ships needing the services of Surveyors or the facilities at which these ships would unload, or a full disclosure of any ownership or controlling interest held by such parties.

(3) A description of the experience and qualifications of the personnel who would be performing the function of Surveyor.

(4) A statement that the persons who will be performing the function of Surveyor have been trained in and are familiar with the requirements of Annex II and the regulations in this part.

(5) A statement that the Coast Guard may verify the information submitted in the application and may examine the persons who will be performing the function of Surveyor to determine their qualifications.

(d) The acceptance of an organization may be terminated by the Commandant if the organization fails to properly perform or supervise the inspections required in this part.

§ 153.1102 Handling and disposal of NLS residue: Cateqories A, B, C, and D.

(a) Except those Category A NLS residues that must be discharged under paragraph (c) of this section, NLS residue from an NLS whose vapor pressure is 5 kPa (50 mbar) or less at 20 °C (68 °F) must be—

NOTE TO PARAGRAPH (a): The Marine Protection, Research, and Sanctuaries Act allows specific liquids to be discharged to the sea under permits issued by the EPA.

(1) Unloaded to any consignee;

(2) Returned to the shipper;

(3) Discharged to a reception facility;

(4) Retained on the ship; or

(5) Discharged to the sea under § 153.1126 or § 153.1128.

(b) Except those Category A NLS residues that must be discharged under paragraph (c) of this section, NLS residue from an NLS whose vapor pressure is greater than 5 kPa (50 mbar) at 20 °C must be—

(1) Handled in the same way as the NLS residue under paragraph (a) of this section; or

(2) Ventilated following a ventilation procedure in the approved Procedures and Arrangements Manual.

NOTE: The Clean Air Act (42 U.S.C. 7401 *et seq*) allows states to regulate emissions from tank ventilation. There may be other regulations, both local and Federal, that affect the use of tank ventilation for safety or environmental purposes.

(c) NLS residue containing Category A NLS in pumproom bilges and in spill trays at the manifold must be discharged to a reception facility.

[CGD 81–101, 52 FR 7785, Mar. 12, 1987, as amended by CGD 81–101, 53 FR 28975, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989]

§ 153.1104 Draining of cargo hose: Categories A, B, C, and D.

Before a cargo hose used in discharging an NLS from a ship's cargo tank is disconnected, the hose must be drained back to the transfer terminal unless the tank unloading the cargo has a waiver under § 153.483 or § 153.491.

[CGD 81–101, 53 FR 28975, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989]

§ 153.1106 Cleaning agents.

No tank cleaning agent other than water or steam may be used to clean an NLS residue from a cargo tank except as prescribed in the approved Procedures and Arrangements Manual.

§ 153.1108 Heated prewash for solidifying NLS, high viscosity NLS and required prewashes of NLS whose viscosity exceeds 25 mPa sec at 20 °C: Categories A, B, and C.

(a) When a high viscosity or solidifying cargo is unloaded from a cargo tank, the cargo tank must be prewashed unless § 153.1114 or paragraph (c) of this section allows the prewash to be omitted.

(b) When a prewash is required for a tank that has unloaded a solidifying cargo or a cargo having a viscosity exceeding 25 mPa sec at 20 °C, the wash water used in the prewash must leave the tank washing machine at a temperature of at least 60 °C (140 °F).

(c) The prewash required under paragraph (a) of this section may be omitted if the approved Procedures and Arrangements Manual contains a procedure for measuring the temperature of all interior cargo tank surfaces throughout unloading and under the measuring procedure the temperature of these surfaces remains above—

(1) The temperature of the cargo's melting point if the cargo is a Category B or C solidifying NLS; or

(2) The temperature at which the cargo's viscosity exceeds—

(i) 25 mPa.s, if the cargo is a high viscosity Category B NLS; or

(ii) 60 mPa.s, if the cargo is a high viscosity Category C NLS.

[81–101, 53 FR 28975, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989]

§153.1112 Prewash for tanks containing Category A NLS residue.

Unless §153.1114 allows the prewash to be omitted, a cargo tank that unloads a Category A NLS cargo must be prewashed following the procedures in §153.1120.

§153.1114 Conditions under which a prewash may be omitted: Categories A, B, and C.

A prewash required by this part may be omitted if one of the following requirements is met:

(a) A Surveyor has signed a statement in the Cargo Record Book that the next cargo has been determined to be one that may be loaded without washing the tank, and the tank is not washed or ballasted before it is loaded with the next cargo.

(b) A Surveyor has signed a statement in the Cargo Record Book that the approved Procedures and Arrangements Manual contains procedures for removing the NLS residue by ventilation, and the cargo tank is not washed or ballasted before being cleaned following the ventilation procedure.

NOTE: The Clean Air Act (42 U.S.C. 7401 *et seq.*) allows states to regulate emissions from tank ventilation. There may be other regulations, both local and Federal, that affect the use of tank ventilation for safety or environmental purposes.

(c) The tank requiring the prewash has a waiver issued under §153.483 or §153.491 and the waiver states when the tank is to be prewashed.

§153.1116 Prewash for tanks unloaded without following the approved Procedures and Arrangements Manual: Categories B and C.

If for any reason more Category B or C NLS residue remains in a cargo tank and transfer piping of a ship after unloading than would remain after a normal discharge of the cargo when the unloading procedures in the approved Procedures and Arrangements Manual are followed, the tank must be prewashed following the procedures in §153.1120 unless—

(a) Section 153.1114 allows the prewash to be omitted; or

(b) The residue is reduced using another procedure, and a Surveyor estimates and states in the Cargo Record Book that the cargo tank and transfer piping contain no more NLS residue than they would if discharged following the procedures in the approved Procedures and Arrangements Manual, and no other prewash is required by this part.

§153.1118 Prewash of Categories B and C cargo tanks not meeting stripping standards: Categories B and C.

(a) Unless §153.1114 allows the prewash to be omitted, a cargo tank from which a Category B NLS is unloaded must be prewashed using the procedures in §153.1120(b) if the tank—

(1) Operates under the interim standard in §153.481(b); or

(2) Has a waiver issued under §153.483.

(b) Unless §153.1114 allows the prewash to be omitted, a cargo tank from which a Category C NLS is unloaded must be prewashed using the procedures in §153.1120(b) if the tank has a waiver issued under §153.483.

§153.1119 When to prewash and discharge NLS residues from a prewash; unloading an NLS cargo in a country whose Administration is not signatory to MARPOL 73/78: Categories A, B, and C.

(a) Except as allowed in paragraphs (b), (c), and (e) of this section, each prewash required by this subpart must be completed and all tank washings must be discharged to a reception facility before the ship leaves the unloading port.

(b) NLS residue from the prewash following the unloading of a Category B NLS may be transferred to a slop tank for discharge under §153.1126 instead of being discharged under paragraph (a) of this section if the prewash is required solely under §153.1118(a)(1).

(c) A tank that is required by this part to be prewashed may be prewashed in a port other than the unloading port if the following conditions are met:

(1) The person in charge requests permission from the Commandant (G–

MSO) (tel num; 202–267–1217) if the prewash port is a foreign port, or the Captain of the Port having jurisdiction over the unloading port if the prewash port is a U.S. port.

(2) The person in charge supplies with the request required under paragraph (c)(1) of this section—

(i) The name of the ship;

(ii) The name of the owner;

(iii) The name of the NLS;

(iv) The approximate date the tank will be prewashed if the relocation of the prewash port is for one time only;

(v) A written agreement to receive the tank washings by a reception facility in the prewash port;

(vi) When the prewash port or terminal is in a country whose Administration is signatory to MARPOL 73/78, a written attestation from the person in charge of each prewash port or terminal that the Administration has determined the port or terminal to have adequate reception facilities for the NLS residue;

(vii) Written pledges from the person in charge that—

(A) The tank to be prewashed will not be washed or ballasted before being prewashed; and

(B) The ship will be taken to the reception facility and the tank prewashed in accordance with the requirements in §153.1120; and

(viii) Any additional information the Captain of the Port or Commandant (G–MSO) requests to evaluate granting the permission.

(3) The Coast Guard or Commandant (G–MSO) has granted the permission in writing, the permission is carried aboard the ship, and the person in charge of the ship has made an entry in the Cargo Record Book stating that the permission has been granted.

(d) Unless the permission granted under paragraph (c)(4) of this section includes alternate conditions of termination or revocation in writing, the permission is—

(1) Terminated after the tank is prewashed as pledged in paragraph (c)(3)(vii) of this section or loaded with another cargo;

(2) Revoked if either of the pledges in paragraph (c)(3)(vii) of this section is invalidated or the agreement in paragraph (c)(3)(v) of this section is repudiated; and

(3) Revoked at any time the ship is not operated in accordance with the pledges in paragraph (c)(3)(vii) of this section and the conditions listed with the granted permission.

(e) A U.S. ship that would otherwise be required by this part to prewash in a port without reception facilities must obtain permission from Commandant (G–MSO) to prewash in an alternate port.

§153.1120 Procedures for tank prewash: Categories A, B, and C.

Except where the approved Procedures and Arrangements Manual prescribes a different procedure, each of the following steps must be done in the order listed for the Coast Guard to consider the tanks prewashed under this part:

(a) When this part requires a prewash of a tank containing Category A NLS residue and the alternative prewash procedure in paragraph (b) of this section is not used, the prewash must meet the following:

(1) The prewash may not begin until—

(i) A Surveyor is present; and

(ii) Instrumentation or equipment is available that is capable of measuring the concentration of the Category A NLS in the NLS residue and determining whether it is below 0.1 per cent by weight.

(2) The equipment specified in §153.484 must be used as prescribed in the approved Procedures and Arrangements Manual for the prewash.

(3) The wash water must be heated if required by §153.1108, and water or tank washings must pass through the cargo pump and piping, including any stripping equipment, during washing or during discharge of tank washings.

(4) The tank washing machine must be placed in all positions specified for the tank's Category A NLS prewash procedure in the approved Procedures and Arrangements Manual.

(5) The tank must be pumped out each time there are enough tank washings collected in the bottom of the tank for the pump to gain suction, and if the NLS is immiscible with water or

is a solidifying cargo, all floating and suspended NLS must be discharged.

(6) The washing machine must be operated until samples of the discharged tank washings taken by the Surveyor are tested using the equipment required by paragraph (a)(1)(ii) of this section and the concentration of NLS is below 0.1 per cent by weight.

(7) After the washing is stopped, the remaining tank washings must be pumped out.

(8) The Cargo Record Book must have items 12 through 14 completed and must show the Surveyor's written certification of their accuracy.

(9) The Cargo Record Book must have the Surveyor's written concurrence that the prewash procedures specified in the approved Procedures and Arrangements Manual were followed.

(b) When this part requires a prewash of a tank containing Category B or C NLS residue or when the procedure in this paragraph is used as an alternative to the prewash procedure under paragraph (a) of this section, the prewash must meet the following:

(1) If the prewash is for a Category A NLS, the prewash may not begin until a Surveyor is present.

(2) The equipment specified in §153.484 must be used as prescribed in the approved Procedures and Arrangements Manual for the prewash.

(3) The wash water must be heated if required by §153.1108, and water or tank washings must pass through the cargo pump and piping, including any stripping equipment, during washing or during discharge of tank washings.

(4) Except as required in paragraph (b)(5) of this section, the number of washing machine cycles specified in Table 153.1120 must be completed. If a prewash is required by a section listed under Column 1 of Table 153.1120 and another section listed under Column 2, the number of cycles in Column 1 must be completed but no additional cycles are necessary.

(5) If the approved Procedures and Arrangements Manual specifies that a tank washing machine must be moved for the prewash of a tank from which a Category A NLS or a solidifying NLS has been unloaded, the number of washing machine cycles specified in Table 153.1120 must be completed at each position to which the washing machine is moved.

(6) When the NLS is immiscible with water or is a solidifying cargo, the tank must be pumped out each time enough tank washings collect in the bottom of the tank for the pump to gain suction, or the procedures in paragraphs (b)(3), (b)(4), and (b)(5) of this section must be repeated two additional times with the tank pumped out each time, for a total of three washings.

(7) Items 12 through 14 in the Cargo Record Book must be completed and, if the prewash is for a Category A NLS, verification that the procedures specified in the approved Procedures and Arrangements Manual were followed shown by the Surveyor's endorsement in the Cargo Record Book.

TABLE 153.1120—NUMBER OF WASHING MACHINE CYCLES IN THE PREWASH PROCEDURE

	Number of washing machine cycles	
	Column 1: Prewash under §153.1116 or for a solidifying NLS under §153.1108	Column 2: Prewashes except those listed under column 1
Category A NLS	2	1
Category B or C NLS	1	1/2

[CGD 81–101, 52 FR 7785, Mar. 12, 1987, as amended by CGD 81–101, 53 FR 28975, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989]

§153.1122 Discharges of NLS residue from tank washing other than a prewash: Categories A, B, and C.

Tank washings that do not result from a prewash and that contain Category A, B, or C NLS residues must be discharged to a reception facility or

discharged to the sea under § 153.1126 or § 153.1128 except those tank washings resulting from washing a tank that has been cleaned following a ventilation procedure in the approved Procedures and Arrangements Manual.

§ 153.1124 Discharges of Category D NLS residue.

NLS residue from Category D NLSs must be discharged to a reception facility or discharged to the sea using the following procedure:

(a) Before discharge begins, drain or flush the NLS residue in the tank's piping systems into the tank.

(b) After draining or flushing, discharge the NLS residue to the sea in accordance with § 153.1128 or transfer it to a slop tank and discharge in accordance with § 153.1126.

§ 153.1126 Discharge of NLS residue from a slop tank to the sea: Categories A, B, C, and D.

NLS residue in a slop tank may not be discharged into the sea unless—

(a) The ship meets the conditions for discharging the NLS residue from a cargo tank in § 153.1128; and

(b) For Category B NLS residue transferred to the slop tank under § 153.1119(b), the NLS is discharged—

(1) Through an NLS residue discharge system with the flow recording equipment required in § 153.481(b)(2) operating; and

(2) At a rate maintained at or below Q in the following:

For tank contents that are miscible

$$Q = \frac{VKU^{1.4}L^{1.6}}{N} \times 10^{-5}\ m^3/hr$$

For tank contents that are immiscible

$$Q = KU^{1.4}\ L^{1.6} \times 10^{-5}\ m^3/hr$$

where:

Q=maximum permissible slops discharge rate in cubic meters per hour.

V=volume of slops in the tank in cubic meters.

K=4.3, except K=6.45 if Q is distributed between two NLS residue discharge outlets on opposite sides of the ship (see §§ 153.470(c) and 153.481(b)).

U=ship's speed in knots.

L=ship's length in meters.

N=number of tanks containing Category B NLS residue pumped into the slop tank.

§ 153.1128 Discharge of NLS residue from a cargo tank to the sea: Categories A. B, C, and D.

The discharge of NLS residue to the sea must be made with the ship at least 22.24 km (12 nautical miles) from the nearest land, and must meet the following additional conditions:

(a) To discharge the following the ship must be in water at least 25 m (76.2 ft) deep:

(1) Category B or C NLS residue diluted to less than 1 ppm of the NLS.

(2) Category B or C NLS residue resulting from washing a tank after the following washing procedure has been completed:

(i) If the tank is not required to be prewashed under this part, the tank must be washed following the procedures that apply to a prewash of a Category B NLS in § 153.1120 using one washing machine cycle, and the tank washings discharged to a reception facility or to the sea under § 153.1126 or paragraph (a)(1), (c) or (d) of this section.

(ii) After the tank has been prewashed or has been washed under paragraph (a)(2)(i) of this section, the tank must then be washed with one cycle of the tank washing machine, and the tank washings discharged to a reception facility or to the sea in accordance with § 153.1126 or paragraph (a)(1), (c), or (d) of this section.

(b) To discharge a Category D NLS residue to which 10 times its volume in water is added and mixed, the ship must be—

(1) If self-propelled, maintained at a speed of at least 12.97 km/hr (7 knots); and

(2) If not self-propelled, maintained at a speed of at least 7.41 km/hr (4 knots).

(c) Each ship built before July 1, 1986 that discharges Category A, B or C NLS residues before January 1, 1988 must be—

(1) In water at least 25 m (76.2 ft) deep;

(2) If discharging the residue of a Category A NLS cargo, discharging only residue created by washing the Category A NLS's cargo tank after a prewash;

(3) If discharging the residue of a Category B NLS cargo, discharging no

more than the larger of 1 m^3 or 1/3000th the volume of the Category B cargo loaded;

(4) If discharging the residue of a Category C NLS cargo, discharging no more than the larger of 3 m^3 of or

1/1000th the volume of the Category C cargo loaded;

(5) If self-propelled, maintained at a speed of at least 12.97 km/hr (7 knots); and

(6) If not self-propelled, maintained at a speed of at least 7.41 km/hr (4 knots).

(d) To discharge Category A, B, C, or D NLS residue other than as allowed under paragraphs (a) through (c) of this section, the ship must be—

(1) In water at least 25 m (76.2 ft) deep;

(2) Discharging at a rate not exceeding that used for Q_d in §153.470;

(3) If self-propelled, maintained at speed no less than the minimum specified in the approved Procedures and Arrangements Manual but at least 12.97 km/hr (7 knots);

(4) If not self-propelled, maintained at a speed no less than the minimum specified in the approved Procedures and Arrangements Manual but at least 7.41 km/hr (4 knots);

(5) If discharging the residue of a Category A NLS cargo, discharging only residue created by washing the Category A NLS's cargo tank after a prewash;

(6) If discharging the residue of a Category B NLS cargo, discharging no more than the larger of 1 m^3 or 1/3000th the volume of the Category B cargo loaded;

(7) If discharging the residue of a Category C NLS cargo, discharging no more than the larger of 3 m^3 of or

1/1000th the volume of the Category C cargo loaded;

(8) Discharging through an NLS residue discharge system meeting §153.470.

[CGD 81–101, 52 FR 7785, Mar. 12, 1987, as amended by CGD 81–101, 53 FR 28976, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989]

§153.1130 Failure of slops discharge recording equipment; operating with, reporting failures, and replacing pollution equipment: Category A, B, C, D.

(a) If equipment required in §§153.470 through 153.488 fails, the Coast Guard Marine Inspection Office, Marine Safety Office, or Captain of the Port must be notified within 24 hours after the failure.

(b) No person shall replace a piece of equipment required by §§153.470 through 153.488 unless the replacement is—

(1) Identical to the original equipment; or

(2) Allowed as an alternative under §153.10.

(c) The following conditions apply when discharge recording equipment required under §153.481(b)(2) fails:

(1) No NLS residue may be discharged unless the approved Procedures and Arrangements Manual contains procedures for discharging with incapacitated discharge recording equipment while meeting the discharge restrictions of §153.1126(b) and these procedures are followed.

(2) The failure of the discharge recording equipment must be recorded in the Cargo Record Book within 24 hours after the failure.

(3) If the ship operates under a Certificate of Inspection, the failed discharge recording equipment must be repaired or replaced within 60 days after it fails, and the repair or replacement recorded in the Cargo Record Book and reported to the Coast Guard within 24 hours after it is completed.

§153.1132 Reporting spills and noncomplying discharges: Category A, B, C, and D.

The following shall be reported following the procedures applying to oil in 33 CFR 151.15 (c), (d), (g), (h):

(a) All discharges of the NLS that do not meet the requirements of this part.

(b) All spills into the water.

MAINTENANCE

§ 153.1500 Venting system rupture disks.

The master shall ensure that a relief valve exposed to a cargo after the failure of a rupture disk or breaking pin is cleaned and operates properly before the next cargo is loaded into the tank.

§ 153.1502 Fixed ballast relocation.

No person may remove or relocate fixed ballast unless:

(a) The change is approved by the Commandant (G–MSO); or

(b) The ballast is temporarily moved under the supervision of a Coast Guard Marine Inspector for examination or repair of the tankship.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

§ 153.1504 Inspection of personnel emergency and safety equipment.

The master shall ensure that the personnel emergency and safety equipment required by § 153.214 is inspected each 30 days and found to be in good condition and operating properly.

Subpart D—Test and Calculation Procedures for Determining Stripping Quantity, Clingage NLS Residue, and Total NLS Residue

SOURCE: CGD 81–101, 52 FR 7788, Mar. 12, 1987, unless otherwise noted.

§ 153.1600 Equipment required for conducting the stripping quantity test.

The operator shall ensure the stripping quantity test is conducted with—

(a) Equipment that maintains a backpressure of at least 100 kPa (1 atm) (gauge) at the connection of the discharge line of the tank to be tested to the cargo transfer hose, including, but not limited to, piping whose discharge is 10 m above the manifold or a constant pressure valve in the discharge line and set at 100 kPa;

(b) A container for measuring the volume of water remaining in the tank to an accuracy of ± 5%;

(c) A squeegee or broom to collect standing water on the tank floor;

(d) One or more containers for collecting and transferring water; and

(e) One of the following for transferring the water remaining in the tank to the measuring container:

(1) A wet vacuum.

(2) A positive displacement pump.

(3) An eductor with an air/water separator in line.

§ 153.1602 Test procedure for determining the strippinq quantity.

(a) The stripping quantity of a tank must be determined by testing the tank under the procedures in paragraph (b) of this section unless the Coast Guard agrees under the provisions of § 153.10 to accept the stripping quantity, previously determined under paragraph (b) of this section, of a tank having similar geometry, internal structure, and piping system.

(b) When testing a tank for stripping quantity, the owner or operator of the ship shall proceed as follows:

(1) Make arrangements with the Officer in Charge, Marine Inspection, for a Coast Guard Marine Inspector to witness the stripping test.

(2) Clean and gas free the tanks to be tested.

(3) Determine the least favorable values of list and trim for drainage within the range allowed by the approved Procedures and Arrangements Manual.

(4) Maintain the ship's list and trim during the test to that determined under paragraph (b)(3) of this section.

(5) Load the tank with enough water so that unloading the water simulates the final stages of unloading a full tank of cargo.

(6) Pump out the water and strip the tank using the procedures specified in the approved Procedures and Arrangements Manual.

(7) After shutting the manifold valve, open any cargo pump foot valve to allow water trapped in the cargo pump to drain into the tank.

(8) Open all valves in the piping system except the manifold valve and allow the water to drain into the tank.

(9) Squeegee or sweep the water drained under paragraphs (b)(7) and (b)(8) of this section and any water that stands in puddles on the tank floor to the tank's low point or sump and collect in the container required