(a) An arrangement enabling the cargo to be heated before cargo transfer, using heat supplied by the ship or by another source; and

(b) Sides and bottom separate from the ship's side or bottom shell plating.

§ 153.490 Cargo Record Book and Approved Procedures and Arrangements Manual: Categories A, B, C, and D.

(a) Unless waived under §153.491, to have a Certificate of Inspection or Certificate of Compliance endorsed to carry NLS cargo, a ship must have—

(1) If U.S., a Cargo Record Book published by the Coast Guard (OMB App. No. 1625–0094), or, if foreign, a Cargo Record Book having the same entries and format as Appendix 4 of Annex II; and

(2) A Procedures and Arrangements Manual meeting paragraph (b) of this section and approved by—

(i) The Coast Guard, if the ship is a United States ship or one whose Administration is not signatory to MARPOL 73/78; or

(ii) The Administration, if the ship is one whose Administration is signatory to MARPOL 73/78.

(b) Each Procedures and Arrangements Manual under paragraph (a)(2) of this section must include the following:

(1) The standard format and content prescribed in Chapter 2 and Appendix D of the IMO *Standards for Procedures and Arrangements for the Discharge of Noxious Liquid Substances*, Resolution MEPC 18(22), 1985, or, for ships for which the only NLS carried is a Category D NLS and ships having a waiver under §153.483 or §153.491, the format and content prescribed by the Commandant (CG–522).

(2) If the ship has a tank that carries a cargo under a waiver issued under §153.483, procedures ensuring that—

(i) Category B and C NLSs are discharged from the tank only in the ports or terminals listed in accordance with §153.483(b); and

(ii) The tank is prewashed after discharging each Category B or C NLS unless §153.1114 allows the prewash to be omitted.

(3) If ventilation is used to clean a tank under §153.1102(b)(2), ventilation procedures that meet those in Appendix C of the IMO *Standards for Procedures and Arrangements for the Discharge of Noxious Liquid Substances*, Resolution MEPC 18(22), 1985.

(4) If tank cleaning agents are used, quantities to use and instructions for using the cleaning agents.

(5) If the tank has the discharge recording equipment required in §153.481(b), procedures to ensure that no NLS residue is discharged from the tank when the recording equipment is incapacitated unless the concentration and total quantity limits for the NLS in Annex II are not exceeded.

[CGD 81–101, 52 FR 7781, Mar. 12, 1987, as amended by CGD 81–101, 53 FR 28975, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989; USCG–2006–25697, 71 FR 55747, Sept. 25, 2006]

§ 153.491 Waiver of certain equipment for dedicated cargo tanks.

(a) The Coast Guard waives §§153.440(a)(3), 153.480, 153.481, 153.482, and 153.488 and endorses a ship's Certificate of Inspection or Certificate of Compliance allowing a cargo tank to carry a single, specific NLS cargo and no other cargo if the ship's owner—

(1) Requests a waiver following the procedures in §153.10; and

(2) Pledges in writing that while any waiver is in effect the cargo tank will—

(i) Carry only the NLS cargo listed on the Certificate of Inspection or Certificate of Compliance;

(ii) Carry no cargo other than the NLS; and

(iii) Not be washed or ballasted unless the wash water or ballast water is discharged to a reception facility.

(b) The Coast Guard waives §§153.470 and 153.490(a)(2) if—

(1) The ship's owner requests a waiver following the procedures in §153.10;

(2) The Coast Guard has issued a waiver to each of the ship's NLS cargo tanks under paragraph (a) of this section; and

(3) The ship's owner adds to the ship's operational manual any provisions for preventing NLS discharge specified by the Commandant (CG–522) as a condition for issuing the waiver.

[CGD 81–101, 52 FR 7781, Mar. 12, 1987, as amended by CGD 81–101, 53 FR 28975, Aug. 1, 1988 and 54 FR 12629, Mar. 28, 1989]

SPECIAL REQUIREMENTS

§ 153.500 Inert gas systems.

When Table 1 refers to this section, a cargo containment system must have a permanent inert gas system that:

(a) Maintains the vapor space of the containment system in an inert state by filling the vapor space with a gas that is neither reactive with the cargo nor flammable;

(b) Has a pressure control system that:

(1) Prevents the inert gas system from raising the cargo tank pressure to more than the relief valve setting; and

(2) Maintains at least a 3.5 kPa gauge (approx. 0.5 psig) pressure within the containment system at all times, including cargo discharge;

(c) Has storage for enough inerting gas to replace that normally lost while the tank's atmosphere is maintained in an inert condition (e.g. through tank breathing and relief valve leakage), but in no case an amount less than 5 percent of the tank's capacity when measured with the gas at −18 °C (approx. 0 °F) and a pressure equal to the cargo tank's relief valve setting; and

(d) Has connections for any supplemental gas supply necessary to maintain the inert gas pressure described in paragraph (b) of this section during cargo discharge.

§ 153.501 Requirement for dry inert gas.

When Table 1 refers to this section, an inert gas system for the containment system must supply inert gas containing no more than 100 ppm water.

§ 153.515 Special requirements for extremely flammable cargoes.

When Table 1 refers to this section:

(a) An enclosed space containing a cargo tank must have an inerting system that meets the requirements in § 153.500 applying to the inert gas system of a containment system;

(b) Cargo discharge pumps must be of a type that does not subject the shaft gland to the cargo under pressure or that is submerged; and

(c) The cargo tank's relief valve setting must be no less than 21 kPa gauge (approx. 3 psig).

§ 153.520 Special requirements for carbon disulfide.

A containment system carrying carbon disulfide must meet the following:

(a) Each cargo pump must be of the intank type and encased within a cylindrical well that extends from the top of the tank to a point no more than 10 cm (approx. 4 in.) above the bottom of the tank.

(b) [Reserved]

(c) The cargo piping and venting systems must be completely independent of those for other cargo.

(d) Pressure relief valves must be made of type 304 or 316 stainless steel.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21209, May 17, 1982]

§ 153.525 Special requirements for unusually toxic cargoes.

When Table 1 refers to this section a containment system must meet the following:

(a) Cargo piping and venting systems must be designed so that they can be separated from any containment system endorsed for a cargo not covered by this section.

(b) A cargo tank's relief valve setting must be not less than 21 kPa gauge (approx. 3 psig).

(c) All cargo pumps and valves located below the weatherdeck must be operable from the weatherdeck.

(d) A heat transfer system for the cargo must:

(1) Be independent of other ship service systems, except for other cargo heat transfer systems, and not enter the engine room;

(2) Be totally external to the cargo containment system; or

(3) Be approved by the Commandant (CG–522) for use with toxic cargoes.

(e) The cargo must be separated from any bunkers by at least two bulkheads.

(f) A cargo containment system must have a vapor return connection.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21209, May 17, 1982; CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

§ 153.526 Toxic vapor detectors.

(a) When Table 1 refers to this section, a tankship must have two toxic vapor detectors, at least one of which