

(1) A vessel may discharge clean ballast and segregated ballast below the waterline when in port or at an off-shore terminal.

(2) A vessel may discharge clean ballast and segregated ballast at sea by gravity below the waterline.

(3) An existing vessel that does not have above waterline discharge points for dedicated clean ballast tanks may discharge clean ballast from those tanks below the waterline at sea.

(4) An existing vessel that does not have above waterline discharge points for segregated ballast tanks may discharge segregated ballast below the waterline at sea.

(d) This section applies only to sea-going tank vessels of 150 gross tons or more.

[CGD 76-088b, 48 FR 45721, Oct. 6, 1983; 48 FR 46985, Oct. 17, 1983; USCG-2000-7641, 66 FR 55573, Nov. 2, 2001]

#### § 157.45 Valves in cargo or ballast piping system.

When a tank vessel is at sea and the tanks contain oil, valves and closing devices in the cargo or ballast piping system or in the transfer system must be kept closed except they may be opened for cargo or ballast transfer to trim the vessel.

#### § 157.47 Information for master.

A master or person in charge of a new vessel shall operate the vessel in accordance with the information required in 46 CFR 31.10-30(d) that includes the following:

(a) Stability information.

(b) Damage stability information determined in accordance with the criteria contained in Appendix B of this part.

(c) Loading and distribution of cargo information determined in compliance with the damage stability criteria required in Appendix B of this part.

[CGD 74-32, 40 FR 48283, Oct. 14, 1976, as amended by CGD 75-240, 41 FR 54180, Dec. 13, 1976]

#### § 157.49 Instruction manual.

The master of a tank vessel shall ensure that the instruction manual under § 157.23 is available and used when the cargo or ballast systems are operated.

### Subpart D—Crude Oil Washing (COW) System on Tank Vessels

SOURCE: CGD 77-058b, 45 FR 43709, June 30, 1980, unless otherwise noted.

#### GENERAL

#### § 157.100 Plans for U.S. tank vessels: Submission.

(a) Before each U.S. tank vessel having a COW system under § 157.10(e), § 157.10a(a)(2), or § 157.10c(b)(2) is inspected under § 157.140, the owner or operator of that vessel must submit to the Coast Guard plans that include—

(1) A drawing or diagram of the COW pumping and piping system that meets 46 CFR 56.01-10(d);

(2) The design of each COW machine;

(3) The arrangement, location, and installation of the COW machines; and

(4) Except as allowed in § 157.104, the projected direct impingement pattern of crude oil from the nozzles of the COW machines on the surfaces of each tank, showing the surface areas not reached by direct impingement.

(b) Plans under paragraph (a) of this section must be submitted to the Officer in Charge, Marine Inspection, of the zone in which the COW system is installed or to the Commanding Officer, U.S. Coast Guard Marine Safety Center, 2100 2nd Street, SW., Jemal Building, JR10-0525, Washington, DC 20593-0001.

(Reporting and Recordkeeping requirements approved by the Office of Management and Budget under control number 1625-0036)

[CGD 77-058b, 45 FR 43709, June 30, 1980, as amended by CGD 82-28, 50 FR 11626 and 11630, Mar. 22, 1985; CDG 85-048a, 51 FR 15481, Apr. 24, 1986; USCG-1998-3799, 63 FR 35531, June 30, 1998; USCG-2006-25150, 71 FR 39210, July 12, 2006; USCG-2008-0179, 73 FR 35015, June 19, 2008]

#### § 157.102 Plans for foreign tank vessels: Submission.

If the owner or operator of a foreign tank vessel having a COW system under § 157.10(e), § 157.10a(a)(2), or § 157.10c(b)(2), desires the letter from the Coast Guard under § 157.106 accepting the plans submitted under this paragraph, the owner or operator must submit to the Commandant (CG-543),

## § 157.104

U.S. Coast Guard, Washington, DC 20593-0001, plans that include—

(a) A drawing or diagram of the COW pumping and piping system that meets 46 CFR 56.01-10(d);

(b) The design of each COW machine;

(c) The arrangement, location, and installation of the COW machines; and

(d) Except as allowed in § 157.104, the projected direct impingement pattern of crude oil from the nozzles of the COW machines on the surfaces of each tank, showing the surface areas not reached by direct impingement.

(Reporting and Recordkeeping requirements approved by the Office of Management and Budget under control number 1625-0036)

[CGD 77-058b, 45 FR 43709, June 30, 1980, as amended by CGD 82-28, 50 FR 11627 and 11630, Mar. 22, 1985; CGD 88-052, 53 FR 25122, July 1, 1988; CGD 96-026, 61 FR 33668, June 28, 1996; USCG-2006-25150, 71 FR 39210, July 12, 2006]

## § 157.104 Scale models.

If the pattern under § 157.100(a)(4) or § 157.102(d) cannot be shown on a plan, a scale model of each tank must be built for Coast Guard inspection to simulate, by a pinpoint of light, the projected direct impingement pattern on the surfaces of the tank.

## § 157.106 Letter of acceptance.

The Coast Guard informs the submitter by letter that the plans submitted under § 157.100 or § 157.102 are accepted if:

(a) The plans submitted show that the COW system meets this subpart; or

(b) The plans submitted and the scale model under § 157.104 show that the COW system meets this subpart.

## § 157.108 Crude Oil Washing Operations and Equipment Manual for U.S. tank vessels: Submission.

Before each U.S. tank vessel having a COW system under § 157.10(e), § 157.10a(a)(2), or § 157.10c(b)(2) is inspected under § 157.140, the owner or operator of that vessel must submit two copies of a manual that meets § 157.138, to the Officer in Charge, Marine Inspection, of the zone in which the COW system is installed or to the appro-

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priate Coast Guard field technical office listed in § 157.100(b).

(Reporting and Recordkeeping requirements approved by the Office of Management and Budget under control number 1625-0036)

[CGD 82-28, 50 FR 11627, 11630, Mar. 22, 1985, as amended by USCG-2006-25150, 71 FR 39210, July 12, 2006]

## § 157.110 Crude Oil Washing Operations and Equipment Manual for foreign tank vessels: Submission.

If the owner or operator of a foreign tank vessel having a COW system under § 157.10(e), § 157.10a(a)(2), or § 157.10c(b)(2) desires a Coast Guard approved *Crude Oil Washing Operations and Equipment Manual* under § 157.112, the owner or operator must submit two copies of a manual that meets § 157.138 to the Commandant (CG-543), U.S. Coast Guard, Washington, DC 20593-1000.

(Reporting and Recordkeeping requirements approved by the Office of Management and Budget under control number 1625-0036)

[CGD 82-28, 50 FR 11627 and 11630, Mar. 22, 1985, as amended by CGD 88-052, 53 FR 25122, July 1, 1988; CGD 96-026, 61 FR 33668, June 28, 1996; USCG-2006-25150, 71 FR 39210, July 12, 2006]

## § 157.112 Approved Crude Oil Washing Operations and Equipment Manual.

If the manuals submitted under § 157.108 or § 157.110 meet § 157.138, the Coast Guard approves the manuals and forwards one of the approved manuals to the submitter.

## § 157.114 Crude Oil Washing Operations and Equipment Manual: Not approved.

If the manuals submitted under § 157.108 or § 157.110 are not approved, the Coast Guard forwards a letter to the submitter with the reasons why the manuals were not approved.

## § 157.116 Required documents: U.S. tank vessels.

The owner, operator, and master of a U.S. tank vessel having a COW system under § 157.10(e), § 157.10a(a)(2), or § 157.10c(b)(2) shall ensure that the vessel does not engage in a voyage unless the vessel has on board the following:

(a) The *Crude Oil Washing Operations and Equipment Manual* that—