

**§ 157.150**

**33 CFR Ch. I (7-1-04 Edition)**

Guard, the owner or operator of a foreign tank vessel that is to be inspected must submit to the Coast Guard inspector evidence that the COW system has been installed in accordance with the plans accepted under § 157.106.

(b) Before the inspections under § 157.140 are conducted by the Coast Guard, the owner or operator of a tank vessel that is to be inspected must submit to the Coast Guard inspector evidence that the COW piping system has passed a test of 1½ times the design working pressure.

**§ 157.150 Crude Oil Washing Operations and Equipment Manual: Recording information after inspections.**

After passing the inspections under § 157.140, the owner, operator, and master shall ensure that the following are recorded in the *Crude Oil Washing Operations and Equipment Manual* approved under § 157.112:

- (a) The results of the inspections under § 157.140.
- (b) The following characteristics used to pass the inspections under § 157.140:
  - (1) Pressure and flow of the crude oil pumped to the COW machines.
  - (2) Revolutions, number of cycles, and length of cycles of each COW machine.
  - (3) Pressure and flow of the stripping suction device.
  - (4) Number and location of COW machines operating simultaneously in each cargo tank.
  - (5) Volume of water used for water rinsing.
  - (6) Trim conditions of the tank vessel.

PERSONNEL

**§ 157.152 Person in charge of COW operations.**

The owner, operator, and master of a tank vessel having a COW system under § 157.10(e), § 157.10(a)(2), or § 157.10c(b)(2) shall ensure that the person designated as the person in charge of COW operations—

- (a) Knows the contents in the *Crude Oil Washing Operations and Equipment Manual* approved by the Coast Guard under § 157.112 or by the government of the vessel's flag state;

(b) On at least two occasions, has participated in crude oil washing of cargo tanks, one of those occasions occurring on:

(1) The tank vessel on which the person assumes duties as the person in charge of COW operations; or

(2) A tank vessel that is similar in tank design and which has COW equipment similar to that used on the tank vessel on which the person assumes duties as the person in charge of COW operations; and

(c) Has one year or more of tank vessel duty that includes oil cargo discharge operations and:

(1) Crude oil washing of cargo tanks; or

(2) Has completed a training program in crude oil washing operations that is approved by the Coast Guard or the government of the vessel's flag state.

NOTE: Standards of a Coast Guard approved training program are to be developed.

[CGD 77-058b, 45 FR 43709, June 30, 1980, as amended by CGD 82-28, 50 FR 11628, Mar. 22, 1985]

**§ 157.154 Assistant personnel.**

The owner, operator, and master of a tank vessel having a COW system under § 157.10(e), § 157.10a(a)(2), or § 157.10c(b)(2) shall ensure that each member of the crew that has a designated responsibility during COW operations—

(a) Has six months or more of tank vessel duty that includes oil cargo discharge operations;

(b) Has been instructed in the COW operation of the tank vessel; and

(c) Is familiar with the contents of the *Crude Oil Washing Operations and Equipment Manual* approved by the Coast Guard under § 157.112 or by the government of the vessel's flag state.

[CGD 77-058b, 45 FR 43709, June 30, 1980, as amended by CGD 82-28, 50 FR 11628, Mar. 22, 1985]

COW OPERATIONS

**§ 157.155 COW operations: General.**

(a) The master of a tank vessel having a COW system under § 157.10(e), § 157.10a(a)(2), or § 157.10c(b)(2) shall ensure that—

- (1) Before crude oil washing a cargo tank, the level in each tank with crude

oil that is used as a source for crude oil washing is lowered at least one meter;

(2) A tank used as a slop tank is not used as a source for crude oil washing until:

(i) Its contents are discharged ashore or to another tank; and

(ii) The tank contains only crude oil;

(3) During COW operations:

(i) The valves under § 157.122(i)(1) are shut; or

(ii) The blanks under § 157.122(i)(2) are installed;

(4) The rotation of each COW machine mounted to or close to the bottom of each cargo tank is verified by:

(i) A visual inspection of a means located outside of the cargo tank that indicates movement of the machine during COW operations;

(ii) An audio inspection during COW operations; or

(iii) An inspection on a ballast voyage, with water as the fluid flowing through the machine;

(5) During the audio inspection under paragraph (a)(4)(ii) of this section, the COW machine being inspected is the only one operating in that tank;

(6) Before the inspection under paragraph (a)(4)(iii) of this section, the tank that has the COW machine being inspected in it, is gas freed;

(7) Each COW machine that is inspected under paragraph (a)(4)(iii) of this section is inspected at least once after every sixth COW operation of that machine, but no less than once every 12 months;

(8) After each stripping operation is completed, each tank:

(i) Is sounded by a means under § 157.128(b); and

(ii) Contains no oil except a minimal quantity near the stripping suction;

(9) Before the tank vessel begins each ballast voyage, each cargo tank and each cargo main, stripping, and COW piping is stripped of crude oil and the strippings are conveyed ashore through the piping under §§ 157.11(d)(3) or 157.11(e)(4);

(10) Before water washing the cargo tanks, the piping of the COW system is drained of crude oil;

(11) When the cargo tanks are not being water washed, the hydrant valves under § 157.122(g) are blanked off;

(12) If COW machines that are used as anchors for the piping of the COW system are removed, the means available under § 157.122(l) for anchoring the piping are installed;

(13) The fire main is not connected to the COW system; and

(14) On combination carriers, if flexible hoses under § 157.122(o) are used, those hoses are protectively stowed when not installed in the COW piping system.

(b) In addition to meeting paragraph (a) of this section, the master of a tank vessel having a COW system under § 157.10a(a)(2) or § 157.10c(b)(2) shall ensure that—

(1) Before ballasting cargo tanks upon leaving a port, each cargo pump, manifold, and piping that is used for ballasting the cargo tanks is drained of all crude oil; and

(2) Before ballasting or deballasting cargo tanks, except when ballasting cargo tanks to leave a port, the cargo piping that is used for ballasting or deballasting the cargo tanks is water washed.

[CGD 77-058b, 45 FR 43709, June 30, 1980, as amended by CGD 82-28, 50 FR 11628, Mar. 22, 1985]

**§ 157.156 COW operations: Meeting manual requirements.**

Except as allowed in § 157.158, the master of a foreign tank vessel having a COW system under §§ 157.10(e), 157.10a(a)(2), or 157.10c(b)(2) that has the *Crude Oil Washing Operations and Equipment Manual* approved under § 157.112 and is operating in the navigable waters of the United States or transferring cargo at a port or place subject to the jurisdiction of the United States and the 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 during each COW operation—

(a) The procedures listed in the *Crude Oil Washing Operations and Equipment Manual* are followed; and

(b) The characteristics recorded in the *Crude Oil Washing Operations and Equipment Manual* under § 157.150(b) are met.

[CGD 77-058b, 45 FR 43709, June 30, 1980, as amended by CGD 82-28, 50 FR 11628, Mar. 22, 1985]