

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]

§157.158 COW operations: Changed characteristics.

The COW system may be operated with characteristics that do not meet those recorded under §157.150(b) only if:

(a) The tank vessel passes the inspections under §157.140 using the changed characteristics;

(b) The changed characteristics used to pass the inspections under §157.140 are recorded in the *Crude Oil Washing Operations and Equipment Manual* approved under §157.112; and

(c) The Coast Guard issues to the tank vessel an amending letter stating that the tank vessel complies with this subpart with these characteristics.

§157.160 Tanks: Ballasting and crude oil washing.

(a) The owner, operator, and master of a tank vessel under §157.10(e) shall ensure that:

(1) Ballast water is carried in a cargo tank only as allowed under §157.35;

(2) For oil cargo residue control, at least 25 percent of the cargo tanks are crude oil washed before each ballast voyage and that each cargo tank is crude oil washed at least once every fourth time crude oil is discharged from the tank, but no tank need be crude oil washed more than once during each 120 day period;

(3) Ballast water in a cargo tank that is crude oil washed but not water rinsed during or after the most recent discharge of crude oil from that tank is discharged in accordance with §157.37(a); and

(4) Cargo tanks are not crude oil washed during a ballast voyage.

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

(1) Ballast water is carried only in a cargo tank that is crude oil washed during or after the most recent discharge of crude oil from that tank;

(2) Before each ballast voyage a sufficient number of cargo tanks have been crude oil washed during or after the most recent discharge of crude oil from those tanks to allow ballast water to be carried in cargo tanks:

(i) With a total capacity to meet the draft and trim requirements in §157.10a(d); and

(ii) For the vessel's trading pattern and expected weather conditions;

(3) For oil cargo residue control, at least 25 percent of the cargo tanks not used for carrying ballast water under paragraph (b)(2)(i) of this section are crude oil washed before each ballast voyage, and that each cargo tank is crude oil washed at least once every fourth time crude oil is discharged from the tank, but no tank need be crude oil washed more than once during each 120 day period;

(4) Cargo tanks are not crude oil washed during a ballast voyage; and

(5) Ballast water in a cargo tank that is crude oil washed but not water rinsed during or after the most recent discharge of crude oil from that tank is discharged in accordance with §157.37(a).

[CGD 77-058b, 45 FR 43709, June 30, 1980, as amended by CGD 82-28, 50 FR 11628, Mar. 22, 1985; USCG-2000-7641, 66 FR 55573, Nov. 2, 2001]

§157.162 Crude oil washing during a voyage.

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 each cargo tank that is crude oil washed during a voyage other than a ballast voyage—

(a) Remains empty so that the tank may be inspected upon arrival at the next discharge port; and

(b) If it is to be used as a ballast tank when leaving the discharge port, is ballasted before the vessel departs from that discharge port so that the

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tank may be inspected under § 157.140(a)(2).

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

§ 157.164 Use of inert gas system.

(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 the following:

(1) Before each cargo tank is crude oil washed, the oxygen content in the tank is measured at each of the following locations in the tank:

- (i) One meter from the deck.
- (ii) In the center of the ullage space.

(2) Before each cargo tank with partial bulkheads is crude oil washed, each area of that tank formed by each partial bulkhead is measured in accordance with paragraph (a)(1) of this section.

(3) Before each cargo tank is crude oil washed, the oxygen content in that tank is 8 percent or less by volume at the locations under paragraph (a)(1) of this section.

(4) During COW operations, the following are maintained in each cargo tank being crude oil washed:

- (i) A gas or a mixture of gases with an oxygen content of 8 percent or less by volume.
- (ii) A positive atmospheric pressure.

(5) During COW operations, a crew member monitors the instrumentation under 46 CFR 32.53-60(a)(1), except if that instrumentation has an alarm that sounds in the cargo control room when the oxygen content exceeds 8 percent by volume.

(b) Crude oil washing of the cargo tanks must be terminated when paragraph (a)(4) of this section is not met and crude oil washing of that tank may not be resumed until the requirements of paragraph (a)(4) of this section are met.

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

§ 157.166 Hydrocarbon emissions.

If the tank vessel having a COW system under § 157.10a(a)(2) or § 157.10c(b)(2) transfers cargo at a port in the United States that is in an area designated in 40 CFR Part 81 as an area that does not

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meet the national primary ambient air quality ozone standard under 40 CFR Part 50, issued under the Clean Air Act, as amended (42 U.S.C. 1857), the master of the vessel shall ensure that when cargo tanks are ballasted in that port the hydrocarbon vapors in each tank are contained by a means under § 157.132.

NOTE: Questions relating to whether or not a particular port is located in an area designated in 40 CFR Part 81 as an area that does not meet the national primary ambient air quality standard under 40 CFR Part 50 should be directed to the Plans Analysis Section of the Environmental Protection Agency at (919) 541-5665.

[CGD 82-28, 50 FR 11628, Mar. 22, 1985]

§ 157.168 Crew member: Main deck watch.

During COW operations, the master shall ensure that at least one member of the crew with a designated responsibility for monitoring COW operations is on the main deck at all times.

§ 157.170 COW equipment: Removal.

(a) Whenever a deck mounted COW machine is removed from the tank, the master shall ensure that:

(1) The supply piping to that machine is blanked off; and

(2) The tank opening is sealed by a secured plate made of steel or an equivalent material accepted by the Commandant.

(b) If the equipment for the COW system is removed from a cargo tank for the carriage of cargoes other than crude oil and then reinstalled, the master shall ensure that, before COW operations are conducted, the system has no crude oil leakage.

§ 157.172 Limitations on grades of crude oil carried.

If a tank vessel having a COW system meeting § 157.10a(a)(2) or § 157.10c(b)(2) does not have segregated ballast tanks or dedicated clean ballast tanks that meet § 157.10c(c)(2), the owner, operator, and master shall ensure that the vessel carries only the grades of crude oil that can be used for crude oil washing.

[CGD 82-28, 50 FR 11628, Mar. 22, 1985]