

(Adopted July 19, 1991)

RULE 1142. MARINE TANK VESSEL OPERATIONS

(a) Applicability

This rule shall apply to all loading, lightering, ballasting, and housekeeping events where a marine tank vessel is filled with an organic liquid; or where a liquid is placed into a marine tank vessel's cargo tanks which had previously held organic liquid.

(b) Definitions

(1) **BACKGROUND** is the ambient concentration of volatile organic compounds in the air determined at least one (1) meter upwind of the component being inspected.

(2) **BALLASTING** is the loading of water or other liquid into a marine tank vessel's cargo tank to obtain proper propeller, rudder, and hull immersion.

(3) **SOUTH COAST WATERS** means the Pacific Ocean area beginning at the intersection of the Pacific Ocean and the Los Angeles-Ventura County boundary; and proceeding southwesterly to the intersection of the boundary of the California Coastal Waters at a point having the coordinates of 33° North Latitude and 119.5° West Longitude; then southeasterly along said boundary of the California Coastal Waters to a point having the coordinates of 32.5° North Latitude and 118.5° West Longitude; and then northeasterly to the intersection of the Pacific Ocean and the Orange-San Diego County boundary.

(4) **EMISSION CONTROL EQUIPMENT** means any equipment, machinery, apparatus, or device used to collect, store, or reduce the emissions of volatile organic compounds in the atmosphere.

(5) **EXEMPT COMPOUNDS** are any of the following compounds that have been determined to be non-precursors of ozone:

(A) Group I

chlorodifluoromethane (HCFC-22)

dichlorotrifluoroethane (HCFC-123)

tetrafluoroethane (HFC-134a)

dichlorofluoroethane (HCFC-141b)

chlorodifluoroethane (HCFC-142b)

(B) Group II

methylene chloride
1,1,1-trichloroethane (methyl chloroform)
trifluoromethane (FC-23)
trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)

In the future, the use of Group II compounds may be regulated by the District because they are toxic or potentially toxic, upper atmospheric ozone depleters, or cause other environmental impacts. The District Board has adopted a policy which states that chlorofluorocarbons (CFC) will be phased out at the earliest practicable date on or before 1997.

- (6) GASEOUS LEAK means a condition that exists when the reading on a portable hydrocarbon meter, measured 1 centimeter or less from any source, exceeds 1,000 parts per million, expressed as methane, above background.
- (7) HOUSEKEEPING consists of altering the composition of gases contained within marine vessel tanks by tank washing, gas freeing, or purging.
- (8) LIQUID LEAK means a leak of more than three drops per minute of organic liquid.
- (9) LIGHTERING is the transfer of organic liquid into a cargo tank from one marine tank vessel to another.
- (10) LOADING EVENT means an incident or occurrence beginning with the connecting of marine terminal storage tanks or a marine tank vessel to marine tank vessel cargo tank(s) with pipes or hoses followed by the transfer of liquid cargo and ending with the disconnecting of the pipes or hoses; or any other means of placing liquid into cargo tanks. In addition, emissions resulting from the venting of volatile organic compounds in South Coast Waters prior to, during, or after a loading event are included in that loading event.
- (11) MARINE TANK VESSEL means any tugboat, tanker, freighter, passenger ship, barge, boat, ship, or watercraft, which is specifically constructed or converted to carry liquid cargo in tanks.

- (12) MARINE TERMINAL means any facility, equipment, or structure constructed to handle the loading or unloading of organic liquid into or out of marine tank vessels.
 - (13) ORGANIC LIQUID means gasoline, gasoline blending stocks, aviation gas and aviation fuel (JP-4 type), crude oil and other liquids containing volatile organic compounds.
 - (14) VOLATILE ORGANIC COMPOUND means any chemical compound which contains the element carbon, except methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.
- (c) Requirements
- (1) Marine Tank Vessels
 - (A) Effective January 1, 1992, an owner or operator of a marine tank vessel equipped with emission control equipment shall operate such equipment while conducting a loading, lightering, ballasting, or housekeeping event in South Coast Waters.
 - (B) Effective January 1, 1994 a loading, lightering, ballasting, or housekeeping event shall not be conducted while in South Coast Waters, unless:
 - (i) The emissions of volatile organic compounds are limited to 5.7 grams per cubic meter (2 lbs per 1,000 barrels) of liquid loaded into a marine tank vessel; or
 - (ii) The emissions of volatile organic compounds are reduced by at least 95 percent by weight from uncontrolled conditions.
 - (2) Liquid and Gaseous Leaks

Effective January 1, 1994, all hatches, pressure relief valves, connections, gauging ports and vents, and other equipment associated with a loading, lightering, ballasting, or housekeeping event shall be maintained free of liquid or gaseous leaks. Any liquid or gaseous leak shall be tagged upon detection and repaired within 4 hours of detection by the owner or operator. Any liquid or gaseous leak detected by District staff shall constitute a violation of this rule.

(3) Emission Control Equipment

The emission control equipment shall be designed and operated to collect, store, and process all emissions of volatile organic compounds resulting from a loading, lightering, ballasting, or housekeeping event.

(d) Compliance Schedule

Any owner or operator of a marine tank vessel or a terminal shall submit to the District Executive Officer an application for a Permit to Construct by April 1, 1992, for any equipment required to comply with the provisions of this rule.

(e) Test Methods

(1) Determination of Emissions

Emissions of volatile organic compounds specified in subparagraph (c)(1)(B) shall be measured according to the Environmental Protection Agency's (EPA) Reference Method 25, Air Resources Board's (ARB) Method 2-4, District's Source Test Manual Method 25.1 (March 1989), or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the United States Environmental Protection Agency, and approved in writing by the District Executive Officer. This test shall be conducted for at least 30 minutes during the transfer of the last 50 percent of total liquid cargo. For events of less than one hour duration, the test shall include the entire last 50 percent of total liquid cargo.

(2) Determination of Exempt Compounds

Emissions of exempt compounds shall be measured according to Air Resources Board Method 422 adopted January 22, 1987, or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the United States Federal Environmental Protection Agency and approved in writing by the District Executive Officer.

(3) Determination of Vapor Processing System Efficiency

Mass emission rates of vapor processing systems specified in subparagraph (c)(1)(B) shall be determined according to EPA's Reference Method 25, ARB's Method 2-4, District's Source Test Manual Method 25.1 (March 1989) or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the

United States Environmental Protection Agency, and approved in writing by the District Executive Officer.

(4) Determination of Gaseous Leaks

The screening of equipment for gaseous leaks shall be conducted according to EPA's Reference Method 21 or the procedures in the District's Source Test Manual, or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the United States Environmental Protection Agency, and approved in writing by the District Executive Officer.

(5) Determination of Compliance

Emissions determined to exceed any limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of this rule.

(f) Safety and Emergency

Nothing in this rule shall be construed as to:

- (1) Require any act or omission that would be in violation of any regulation or other requirement of the United States Coast Guard; or
- (2) Prevent any act that is necessary to secure the safety of a vessel or the safety of the passengers or crew.

(g) Notice

Effective January 1, 1992, any owner or operator of a marine tank vessel intending to engage in a loading, lightering, ballasting, or housekeeping event shall notify the District Executive Officer in writing, or by telephone, or in person at least 48 hours prior to the event. Such notice shall include name(s) of marine tank vessel(s), description of operation(s), cargo, location, and estimated start time and duration of the event.

(h) Recordkeeping

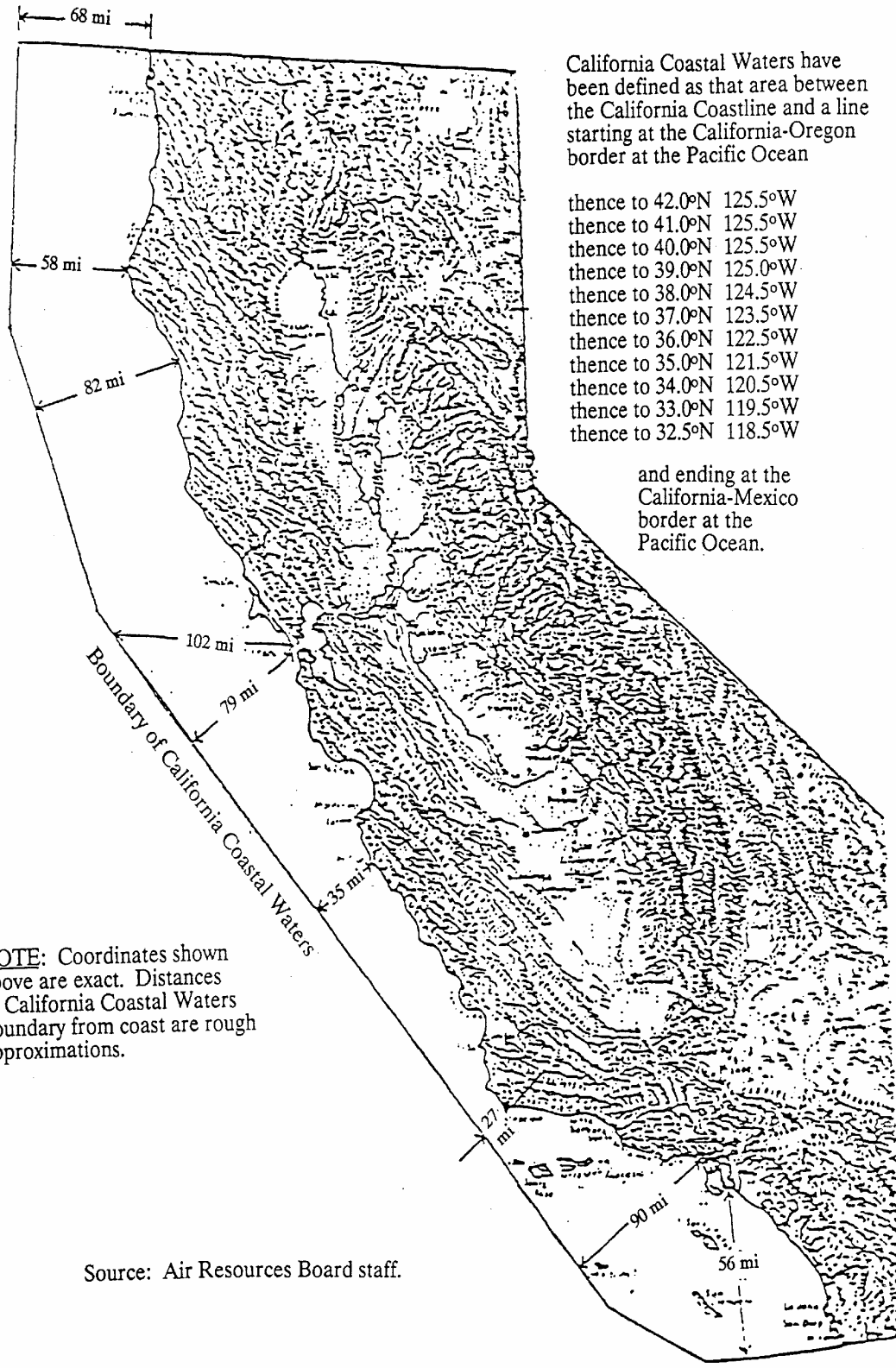
Effective January 1, 1994, any owner or operator of a marine tank vessel shall maintain two sets of records regarding each loading, lightering, ballasting, or housekeeping event. One set of records will be kept on board the marine tank vessel and the other set shall be kept at the marine terminal. Records shall be maintained for at least two years and shall be made available to District staff upon request. Such records shall be submitted annually on standard forms specified by

the District, and shall contain all information required on the form. The records shall include, but are not limited to, all of the following information:

- (1) The location of each marine loading, lightering, ballasting, or housekeeping event.
 - (2) The owner or operator responsible for handling the marine loading, lightering, ballasting, or housekeeping event.
 - (3) The date(s) and times at which the marine tank vessel(s) arrived and departed from the location of the loading, lightering, ballasting, or housekeeping event.
 - (4) The name and registry of the vessel and legal owner of the marine tank vessel participating in the loading, lightering, ballasting, or housekeeping event.
 - (5) The prior cargo carried by the receiving marine tank vessel.
 - (6) The type and amount of liquid cargo loaded into the receiving marine tank vessel.
 - (7) The condition of the receiving marine tanks prior to being loaded (i.e., cleaned, crude oil washed, gas freed, etc.).
 - (8) The amount of ballast water or other liquid added to the unsegregated ballast tanks.
 - (9) The description of operating procedures to prevent venting while ballasting into unsegregated ballast tanks.
 - (10) The complete description of any gaseous or liquid leak detected, leak repair action taken, date and time of leak detection, time required to repair leak, and screening level after a repair has been made.
- (i) Ozone Episode Days
- (1) Effective January 1, 1992, a loading, lightering, ballasting or housekeeping event shall not be conducted on any day that the District predicts a Stage 1 or greater ozone episode for any area of the South Coast Air Basin, unless the emissions of volatile organic compounds are reduced by at least 95 percent by weight from uncontrolled conditions, or are limited to 5.7 grams per cubic meter (2 pounds for every 1,000 barrels) of liquid loaded.
 - (2) Any marine vessel or terminal operator, who has been subject to the prohibition of paragraph (i)(1) for two consecutive days, may conduct a

marine loading, lightering, ballasting, or housekeeping event in South Coast Waters for up to three days following the two consecutive days of prohibition.

CALIFORNIA COASTAL WATERS



NOTE: Coordinates shown above are exact. Distances of California Coastal Waters boundary from coast are rough approximations.

Source: Air Resources Board staff.