

VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT

RULE 71.3 - TRANSFER OF REACTIVE ORGANIC COMPOUND LIQUIDS

(Adopted 6/20/78, Revised 9/11/90, 6/16/92, 5/11/21, 00/00/00)

A. Applicability

The provisions of this rule shall apply to equipment used to transfer reactive organic compound (ROC) liquids with a Modified Reid Vapor Pressure (MRVP) greater than or equal to 0.5 psia. The provisions of this rule shall not apply to the transfer of gasoline or the transfer of ROC liquids via pipeline.

B. Requirements - Loading Facilities

1. No person shall transfer ROC liquids into any ROC liquid delivery vessel without either using a submerged fill pipe or bottom loading.

2. On or before December 31, 2021, no person shall transfer ROC liquids into any ROC liquid delivery vessel from a loading facility where the total ROC liquid throughput exceeds or has exceeded 20,000 gallons (476 barrels or bbl) per day of ROC liquid with a MRVP of 1.5 psia or higher or 150,000 gallons (3,571 bbl) per year of ROC liquid with a MRVP of 0.5 psia or higher without:

a. Using a bottom-loaded vapor recovery system that prevents the displaced vapors during loading from being released into the atmosphere. The vapor recovery system shall be capable of collecting all reactive organic compound vapors, and shall have one of the following:

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1) A vapor return or condensation system that connects to a gas pipeline recovery and distribution system, or

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2) A vapor disposal system capable of processing such vapors and gases with a vapor destruction or vapor removal efficiency of at least 90 percent by weight.

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b. Using one of the following devices to prevent overfill:

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1) A primary overfill protection system consisting of a preset fill meter with automatic flow shutoff and a secondary overfill protection system consisting of a liquid level sensor with the ability to signal high level to activate a control valve to shut off flow, or

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2) A combination of overfill devices and/or procedures, submitted in writing to the APCO, that is at least as effective in preventing overfill spillage as the system in Subsection B.2.b.1.

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- c. Using either a block and bleed valve system or other connectors with equivalent spill prevention characteristics.
3. On or after January 1, 2022, no person shall transfer ROC liquids into any ROC liquid delivery vessel from a loading facility where the total ROC liquid throughput exceeds or has exceeded 4,000 gallons (95 barrels of oil or bbl) but less than 20,000 gallons (476 bbl) per day of ROC liquid with a MRVP of 1.5 psia or higher or 150,000 gallons (3,571 bbl) per year of ROC liquid with a MRVP of 0.5 psia or higher without:
- a. Using a bottom-loaded vapor recovery system that prevents the displaced vapors during loading from being released into the atmosphere. The vapor recovery system shall be capable of collecting all reactive organic compound vapors, and shall have one of the following:
 - 1) A vapor return or condensation system that connects to a gas pipeline recovery and distribution system, or
 - 2) A vapor disposal system capable of processing such vapors and gases with a vapor destruction or vapor removal efficiency of at least 95 percent by weight.
 - b. Using one of the following devices to prevent overfill:
 - 1) A primary overfill protection system consisting of a preset fill meter with automatic flow shutoff and a secondary overfill protection system consisting of a liquid level sensor with the ability to signal high level to activate a control valve to shut off flow, or
 - 2) A combination of overfill devices and/or procedures, submitted in writing to the APCO, that is at least as effective in preventing overfill spillage as the system in Subsection B.23.b.1.
 - c. Using either a block and bleed valve system or other connectors with equivalent spill prevention characteristics.
4. On or after January 1, 2022, no person shall transfer ROC liquids into any ROC liquid delivery vessel from a loading facility where the total ROC liquid throughput exceeds or has exceeded 20,000 gallons (476 bbl) per day of ROC liquid with a MRVP of 1.5 psia or higher without:
- a. Using a bottom-loaded vapor recovery system that prevents the displaced vapors during loading from being released into the atmosphere. The vapor recovery system shall be capable of collecting all reactive organic compound vapors, and shall have one of the following:

- 1) A vapor return or condensation system that connects to a gas pipeline recovery and distribution system, or
 - 2) A vapor disposal system capable of processing such vapors and gases which results in the emission of ROC vapors of 0.08 pounds per 1,000 gallons of organic liquid transferred or less.
- b. Using one of the following devices to prevent overflow:
- 1) A primary overflow protection system consisting of a preset fill meter with automatic flow shutoff and a secondary overflow protection system consisting of a liquid level sensor with the ability to signal high level to activate a control valve to shut off flow, or
 - 2) A combination of overflow devices and/or procedures, submitted in writing to the APCO, that is at least as effective in preventing overflow spillage as the system in Subsection B.[34](#).b.1.
- c. Using either a block and bleed valve system or other connectors with equivalent spill prevention characteristics.
5. Any loading operation equipment, vapor recovery system, or other equipment required by this rule shall not leak. The vapor recovery system shall be operated and maintained so that it does not cause the pressure in any delivery vessel to exceed 18 inches water gauge or the vacuum to exceed 6 inches water gauge.

C. Requirements - ROC Liquid Delivery Vessels

1. No person shall transfer ROC liquids into an ROC liquid delivery vessel using loading equipment having a vapor recovery system unless the delivery vessel is leak free and is permanently equipped with:
 - a. A properly installed vapor recovery system that is compatible with the loading facility.
 - b. A pressure-vacuum relief device for each compartment that is set at 90 percent of the maximum, safe pressure and vacuum ratings of the vessel.
 - c. A secondary overflow protection system compatible with the loading operation secondary overflow protection system or equivalent secondary overflow protection system, if required by Subsection B.[23](#).b or [B.4.b](#) of this rule.

- d. A loading connector/adaptor that is compatible with those required at the loading facility.
2. No person shall fill any ROC liquid delivery vessel required to have a vapor recovery system by Subsection C.1 of this rule unless the vapor recovery system is properly operating, properly maintained, does not leak, and all hatches are closed during transfer operations.

D. Operator Inspection and Repair Requirements

1. The operator of any equipment subject to Subsections B.2, B.3, and B.4 of this rule shall quarterly monitor one complete loading operation for leaks and for proper operation of the loading equipment and delivery vessel vapor recovery and overfill protection systems. Operators shall use EPA Method 21, [Determination of Volatile Organic Compounds Leaks](#), for monitoring of leaks during annual inspections.
2. The operator of any equipment subject to Subsection B.2, [B.3](#), or [B.4](#) of this rule shall notify the District no later than 72 hours after the inspection:
 - a. If any leaks were detected,
 - b. If the vapor recovery system, including any flare or incinerator, was not operating properly,
 - c. If any hatches were opened during the filling operation,
 - d. If the overfill prevention systems malfunctioned, or
 - e. If any spillage of ROC liquid occurred.
3. Any leak shall be repaired to a leak free state and any vapor recovery system or overfill prevention system found malfunctioning shall be restored to a properly operating condition. These repairs shall be done as soon as practicable but no later than 5 calendar days from the [leak](#) detection date.
4. An operator of any equipment subject to Subsection B.2, B.3, or B.4 of this rule may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually provided no leaks were found during the inspections required under the provision of D.1 for five consecutive quarterly inspections.

E. Exemptions

1. The provisions of this rule shall not apply to any equipment that transfers an ROC liquid with a modified Reid vapor pressure of less than 0.5 psia. Any person

claiming this exemption must maintain adequate records demonstrating that the modified Reid vapor pressure of all products transferred is less than 0.5 psia.

2. The requirements of Subsection B.2, [B.3](#), or [B.4](#) shall not apply to any loading equipment that transfers crude oil from storage tanks that are exempt from the vapor recovery requirements of Section B.1. of Rule 71.1, Crude Oil Production and Separation.
3. The requirements of Subsection B.2 shall not apply to a loading facility that transfers crude oil into any ROC delivery vessel from shipping tanks located more than 1200 feet from the loading facility. This exemption shall apply only to those loading facilities constructed prior to July 1, 1990.
4. The provisions of this rule shall not apply during the calibration of the marker inside a cargo tank when done by the Ventura County Department of Weights and Measures in accordance with their procedures.

F. Recordkeeping [and Reporting](#) Requirements

1. The operator of any loading equipment subject to Subsection B.2, [B.3](#) or [B.4](#) of this rule shall maintain a record of inspections required by Section D of this rule and shall record, at a minimum, the following:
 - a. Date of inspection and operator's initials.
 - b. Name and location of loading equipment and amount of ROC liquid transferred.
 - c. Description of any leak or malfunction of the vapor recovery or overfill prevention systems.
 - d. Date component was repaired and type of repair, if applicable.
 - e. Whether or not delivery vessels hatches are closed during filling and if any spillage occurred.
 - f. Delivery vessel identification and name of delivery company.

Copies of the inspection report shall be retained by the operator for a minimum of 5 years after the date of an entry and shall be made available upon request to District personnel.

2. Any person claiming exemption from the vapor recovery requirements of Subsection B.2, [B.3](#), or [B.4](#) based on the throughput of ROC liquids through the loading equipment shall maintain adequate records to substantiate that exemption that include, at a minimum:

- a. Identification and location of all loading facilities where ROC liquids are loaded into an ROC delivery vessel. Indicate and identify if two or more of the loading equipment outlets are located within a circle having a diameter of 300 feet.
 - b. Record the gallons of ROC liquid loaded into an ROC delivery vessel on a daily basis and on an annual basis for each loading facility exempt from the vapor recovery requirements of Subsection B.2. Include operator's initials, date of loading operation, the MRVP of the liquid being transferred, and method of determining throughput for each loading operation.
3. Any person transferring ROC liquid into a vacuum truck and transporting such liquid that is manifested as required by any federal or state regulations shall record the following:
- a. Date of transfer and operator's initials.
 - b. Location of transfer operation and estimated amount of ROC liquid transferred.
 - c. Destination of ROC liquid being transferred.

Copies of these records shall be collected and retained by the loading facility operator for a minimum of 5 years after the date of an entry and shall be made available upon request to District personnel.

4. Any person subject to the provisions of Rule 71.3 shall submit to the District all records generated pursuant to the applicable provisions of Rule 71.3. Records for each calendar year must be submitted by December 31st of the following calendar year.

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G. Test Methods

1. The vapor pressure of petroleum products shall be measured using a modified Reid vapor pressure at product transfer temperature. The Reid method is defined by the ASTM Method No. D-323-82 Volume 5.01, Section 5. Organic liquids listed in Attachment 1 of Rule 71.2 shall be deemed exempt from the requirements of this rule if the transfer temperature does not exceed the maximum temperature listed corresponding to 0.5 psia.
2. The test method for determining the ~~compliance vapor removal efficiency in with~~ Subsection B.2.a.2, Subsection B.3.a.2 and Subsection B.4.a.2 shall be as follows:

- a. Measurement of vapor flow through pipes shall be determined by EPA Method 2A, [Direct Measurement of Gas Volume Through Pipes and Small Ducts](#), EPA Method 2B, [Determination of Exhaust Gas Volume Flow Rate from Gasoline Vapor Incinerators](#) or EPA Method 2D, [Measurement of Gas Volume Flow Rates in Small Pipes and Ducts](#).
 - b. Measurement of ROC vapor concentration shall be determined by EPA Method 25A, [Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer](#) or EPA Method 25B, [Determination of Total Gaseous Organic Concentration Using a Nondispersive Infrared Analyzer](#).
3. Monitoring for gaseous leaks shall be done using an appropriate analyzer calibrated with methane or the alternative screening procedure in EPA Reference Method 21, [Determination of Volatile Organic Compounds Leaks](#).

H. Violations

1. Failure to comply with any provision of this rule shall constitute a violation of this rule. Each leak discovered by District personnel from equipment required to be leak free shall constitute a violation of this rule.
2. Notifications provided to the District pursuant to Subsection D.2 shall not constitute a violation of this rule.