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RULE 462
Organic Liquid Loading

(A) General Description

(1) Purpose: The purpose of this rule is to limit the emissions of volatile organic compounds (VOC) and toxic compounds (such as benzene) from Organic Liquid Loading (any organic liquid, including gasoline), and in conjunction with Rules 461 and 463, limit the emissions from the storage, transfer, and dispensing of organic liquids.

(2) Applicability: This rule applies to the transport of organic liquids, including fuels such as gasoline, between facilities and the transfer of such organic liquids into tanks, including motor vehicle fuel tanks, tank trucks, trailers or railroad tank cars. Facilities subject to this rule include, but are not limited to, bulk facilities, retail and non-retail service stations or any other facility where organic liquids are stored or transferred.

(B) Definitions

For the purposes of this rule only, the following terms are defined.

(1) "Class A Facility" - is any organic liquid loading facility having a valid permit to operate and loading 18,925,000 liters (5,000,000 gallons) or more per year and/or 73,700 liters (20,000 gallons) or more on any day of organic liquids with a true vapor pressure, determined at actual storage conditions, of 77.5 mm (1.5 psia) or greater into any tank truck, trailer, or railroad tank car.

(2) "Class B Facility" - is any organic liquid loading facility having a valid permit to operate and loading less than 18,925,000 liters (5,000,000 gallons) per year with a true vapor pressure, determined at actual storage conditions, of 77.5 mm (1.5 psia) or greater into any tank truck, trailer, or railroad tank car.

(3) "Fugitive Liquid Leak" - means the dripping of a liquid at a rate exceeding three (3) drops per minute.

(4) "Gasoline" - means any organic liquid, including petroleum distillate and methanol, having a Reid Vapor Pressure of 200 mm Hg (3.9 pounds per square inch), or greater, and used as a motor vehicle fuel, or any fuel which is commonly or commercially known or sold as gasoline.

(5) "Organic Liquid" - means any chemical compound of carbon, including organic materials, organic solvents and gasoline, which is in a liquid phase at ambient or storage conditions.

(6) "Organic Materials" - means chemical compounds of carbon excluding: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

(7) "Organic Solvents" - includes diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as dissolves, viscosity reducers or cleaning agents, except that such material exhibiting a boiling point higher than 104 ^{o}C (219^{o}F) at 0.5 mm Hg absolute pressure or having an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 104^{o}C (219^{o}F).

(8) "Switch Loading" - means a transfer of organic liquids with a vapor pressure of less than 77.5 mm Hg (1.5 psia) under actual loading conditions into any tank truck, trailer or railroad tank car that was previously loaded with an organic liquid with a vapor pressure of 77.5 mm Hg (1.5 psia) or greater.

(9) "Throughput" - means the mass or volume of material or substance that is handled, or processed by a system in a given time period, such as gallons per year, tons per hour, etc.

(10) "Vapor Reduction Device " - Methods of reduction include, but are not limited to, thermal destruction (incineration), and absorption, adsorption and condensation.

(11) "Vapor Recovery System" - means a system that is designed to collect or capture the vapors released and/or generated during the dispensing, transfer and/or storage of liquids, and is capable of returning the displaced vapors and air from the vessel being filled back to the stationary storage container (a balance system) and/or a vapor reduction device. The vapor recovery system shall have a vapor control efficiency of 95 percent, by weight, or better.

(12) "Vapor Recovery System Efficiency " - means the estimated efficiency of the air pollution control technology which is incorporated, by means of an enforceable permit condition(s), in the Authority To Construct (ATC) and/or the Permit To Operate (PTO) of an emissions unit or process. Emission reductions attributed to lowering throughput rates or curtailing operating hours shall not be considered in determining abatement efficiency.

(13) "Vapor Tight (Fugitive Vapor Leak)" - means the detection of less than 10,000 ppm, as methane, using an appropriate hydrocarbon analyzer when sampling is performed according to the procedures specified in EPA Method 21.

(C) Requirements

(1) Class A Facility

(a) A person shall not load organic liquids having a true vapor pressure of 77.5 millimeters of mercury (1.5 psia) or greater under actual loading conditions into any tank truck, trailer, or railroad tank car from any Class A facility unless the loading facility is equipped with a vapor recovery system . The vapor recovery system efficiency shall be verified pursuant to methods listed in Section (F) of this rule.

(b) Loading shall be accomplished in such a manner that the displaced vapor and air will be vented to a vapor recovery system. All connections and vapor lines are to be maintained in a Vapor Tight condition to prevent fugitive vapor leaks. Measures shall be taken to prevent fugitive liquid leaks from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected, to prevent excess organic liquid drainage.

(2) Class B Facility

A person shall not load organic liquids having a true vapor pressure of 77.5 millimeters of mercury (1.5 psia) or greater under actual loading conditions into any tank truck, trailer, or railroad car from a Class B loading facility, unless:

(a) The facility is equipped with a vapor recovery system to prevent the release of fugitive vapor emissions during the filling of organic liquid delivery vehicles.

(b) The facility is equipped with a vapor recovery system to prevent the release of fugitive vapor emissions displaced during the filling of the facility's stationary storage containers with all connections and vapor lines to be maintained vapor tight; and

(c) The facility is equipped with a pressure-vacuum valve on the above ground stationary storage containers with a minimum pressure valve setting of 8 ounces per square inch, provided that such setting will not exceed the container's maximum pressure rating.

(D) Additional Requirements

(1) Other agencies requirements - The vapor recovery systems used to comply with the provision of this Rule shall comply with all safety, fire, weights and measures, and other applicable codes and/or regulations, including those listed in the California Health and Safety Code Sections 41950 - 41974.

(2) Fugitive Vapor and Liquid Leaks - All of the components of the facility including but not limited to tanks, flanges, seals, pipes, pumps, valves, meters, connectors, shall be maintained and operated so as to prevent fugitive vapor leaks, fugitive liquid leaks and excess organic liquid drainage during transfer, storage and handling operations.

(3) Organic Liquid Transport (Tank Truck, Trailer, etc.)

(a) A person shall not allow loading or unloading of organic liquid, or other use or operation of any designated transporting vessel unless the vessel has a valid certification of vapor integrity as defined by the applicable Air Resources Board Certification and Test Procedures, pursuant to Health and Safety Code Section 41962(9) and the California Administrative Code Title 17, Section 94004.

(b) Vapor leaks from dome covers, pressure vacuum vents or other sources shall be determined in accordance with EPA Method 21.

(c) The transport equipment shall be operated such that there are no fugitive liquid leaks.

(4) Switch Loading

Uncontrolled switch loading is prohibited unless:

(a) any vapors vented to the atmosphere do not at any point during the transfer exceed 10,000 ppmv, measured as equivalent methane, with a portable hydrocarbon analyzer in accordance with EPA Method 21, or

(b) emissions are controlled by a vapor recovery system.

(5) Distribution of Responsibilities

(a) The owner or operator of an organic liquid loading facility is responsible for complying with the provisions of this rule, and for maintaining the equipment at the facility in such condition that it can comply with the

requirements of this rule if properly operated. If employees of the owner or operator of the facility supervise or effect the transfer operation, the owner or operator of the facility shall be responsible for ensuring that the transfer operation complies with all requirements of this rule and that the transfer equipment is properly operated.

(b) The owner, operator, or driver of a tank truck, trailer, or railroad tank car is responsible for complying with Subsections (D)(2) and (D)(3) of this rule.

(c) Where appropriate, the owner or operator of an organic liquid loading facility and the owner operator, or driver of a tank truck, trailer, or railroad tank car may be separately or jointly found in violation of this rule.

(E) Record Keeping and Reporting

(1) Any facility subject to this rule shall, as a minimum, maintain the following records:

(a) The owner or operator shall maintain a log of all inspections, repairs, and maintenance on equipment subject to this rule. Such logs or records shall be maintained at the facility for at least 2 years and shall be made available to the APCO upon request.

(b) The owner or operator of a Class A or Class B Facility shall prepare a log showing the daily:

(i) input

(ii) output

(iii) average stored volume over the 24 hour period (midnight to midnight)

(iv) storage and transfer temperatures of the organic liquid

(v) stored product's name and Chemical Abstracts Service (CAS) number

(vi) a monthly summary of the throughput for the calendar year to date.

(2) Any facility classified as exempt or claiming to be exempt shall meet the same record keeping requirements of this rule so as to be able to prove the exemption status.

(F) Test Methods For Compliance Verification

(1) A violation determined by any one of these test methods shall constitute a violation of the rule.

(a) Vapor Tightness (Fugitive Vapor Leaks) for all equipment described in this rule, unless otherwise specified, shall be determined by EPA Method 21 - *Determination of Volatile Organic Compounds Leaks.*

(b) Vapor Recovery System Efficiency for Delivery Vessels shall be determined by the EPA Method entitled *Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems* (method specified in the CTG EPA-450/2-78-051), the CARB Method entitled, "Certification and Test Procedures for Vapor Recovery Systems of Gasoline Delivery Tanks".

(c) Reid Vapor Pressure shall be determined in accordance with ASTM Method D 323-82, and the true vapor pressure in psi absolute of stored liquid shall be determined by using the nomograph contained in American Petroleum Institute Bulletin 2517 for conversion of Reid vapor pressure to true vapor pressure.

(d) Vapor Recovery System Efficiency for Bulk Plants shall be determined by CARB Method 202, "Certification of Vapor Recovery Systems - Bulk Plants".

(e) Vapor Recovery System Efficiency for Terminals shall be determined by CARB Method 203, "Certification of Vapor Recovery Systems - Gasoline Terminals".

(f) Vapor Recovery System Efficiency for Service Stations shall be determined by the CARB Methods in "Test Procedures for Determining the Efficiency of Gasoline Vapor Recovery Systems at Service Stations".

[SIP: Approved 5/3/95, 60 FR 21702, 40 CFR 52.220(c)(198)(i)(E)(1); Approved 6/9/82, 47 FR 25013, 40 CFR 52.220(c)(85)(v)(A); Approved 12/21/78, 43 FR 59489, 40 CFR 52.220(c)(42)(xiii)(A); Approved 7/26/77, 42 FR 37976, 40 CFR 52.220(c)(31)(vi)(A)]