

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted June 1, 2012)

RULE 1177. LIQUEFIED PETROLEUM GAS TRANSFER AND DISPENSING

(a) Purpose

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) associated with the transfer and dispensing of liquefied petroleum gas (LPG).

(b) Applicability

This rule applies to the transfer of LPG from any cargo tank, stationary storage tank or cylinder into any other cargo tank, stationary storage tank, cylinder, or portable storage tank.

(c) Definitions

For the purpose of this rule the following definitions shall apply:

- (1) **BOBTAIL TRUCK** is a vehicle that is equipped with a cargo tank without a trailer and is used to deliver propane.
- (2) **BUBBLE TEST** is the application of a soap solution, detergent, aerosol spray or similar material that promotes the formation of bubbles at the site of any potential LPG vapor leak source and observing for bubbles.
- (3) **CARGO TANK** is a container that is used to transport LPG and is either mounted on a conventional truck chassis or is an integral part of a cargo transporting vehicle, such as a bobtail, mobile fueler or rail tank car.
- (4) **CONNECTOR** is any component, including an adapter, hose, fitting, valve or coupling that is used to facilitate the transfer of LPG from one container to another, and that is disconnected following completion of an LPG transfer or dispensing activity.
- (5) **CONTAINER** is any vessel, including cylinders, stationary tanks, portable storage tanks, and cargo tanks, used for the transporting or storage of LPG.
- (6) **CYLINDER** is a container designed, constructed, tested and marked in accordance with U.S. Department of Transportation (DOT) specifications, Title 49, Code of Federal Regulations or in accordance with a valid DOT special permit.

- (7) FILL BY WEIGHT is the filling of an LPG container without use of an FLLG and monitoring the fill level to prevent overfilling by weighing the container and the LPG in the container and limiting the filling to no more than the rated maximum capacity.
- (8) FIXED LIQUID LEVEL GAUGE (FLLG) is a liquid level indicator that uses a positive shutoff vent valve to indicate that the liquid level in a container being filled has reached the point at which the indicator communicates with the liquid level in the container.
- (9) INSPECTION is a physical survey of all LPG connectors for evidence of leakage through use of a bubble test. Use of a test method in accordance with subdivision (h) may be substituted for an inspection.
- (10) LIQUID TIGHT is a visible liquid leak rate not exceeding three drops per minute or exhibiting a visible liquid mist.
- (11) LOW EMISSION FLLG is fixed liquid level gauge with a number 72 orifice size (0.025 inch) or physical configuration that results in an equivalent or lower emission rate that is tested and demonstrated using a method for which written approval of the Executive Officer has been obtained.
- (12) LPG or LIQUEFIED PETROLEUM GAS is an organic compound having a vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves or as mixtures: propane, propylene, butane (normal butane or isobutane) and to a lesser extent butylenes, and that is stored and transported under pressure in a liquid state.
- (13) LPG BULK LOADING FACILITY is an LPG transfer and dispensing facility where the primary function is to store LPG for further distribution and has one or more stationary storage tanks with a water capacity of 10,000 gallons or more.
- (14) LPG LOW EMISSION CONNECTOR is any component, including an adapter, hose, fitting, valve or coupling that is used to facilitate transfer of LPG from one container to another and that is designed to result in a maximum emission release of four (4) cubic centimeters of LPG when disconnected.
- (15) LPG TRANSFER AND DISPENSING FACILITY is a mobile fueler or a stationary facility consisting of one or more stationary storage tanks and associated equipment which receives, stores and either transfers or

dispenses LPG to stationary storage tanks, cargo tanks, or portable storage tanks.

- (16) **LPG VAPOR RECOVERY OR EQUALIZATION SYSTEM** is a system installed on an LPG mobile fueler or a rail tank car that facilitates the transfer of liquid LPG and allows for the collection and recovery of LPG vapors displaced or emitted from the stationary storage tank, or cargo tank when LPG is transferred to or from the mobile fueler or rail tank car.
- (17) **LPG VAPORS** are the organic compounds in vapor form as well as entrained liquid LPG displaced during LPG transfer and dispensing operations.
- (18) **MOBILE FUELER** is any tanker truck or trailer, including a bobtail truck, which is used to transport LPG stored in an onboard cargo tank.
- (19) **OWNER/OPERATOR** is any person who owns, leases, or operates any facility subject to this rule.
- (20) **PORTABLE CYLINDER** is a container that is designed, constructed, tested and marked in accordance with U.S. Department of Transportation (DOT) specifications, Title 49, Code of Federal Regulations or in accordance with a valid DOT special permit. Examples of portable cylinders that contain LPG include those used with small hand torches, forklifts, barbecue grills and agricultural weed burners.
- (21) **PORTABLE STORAGE TANK** is a container or portable cylinder designed to be moved readily, as opposed to a container or stationary cylinder designed for stationary installations.
- (22) **RAILROAD TANK CAR** is a mounted cargo tank designated for transport over rail.
- (23) **STATIONARY CYLINDER** is the largest DOT approved cylinder and is typically used in residential, commercial and industrial applications.
- (24) **STATIONARY STORAGE TANK** is a container that is used for the storage of LPG, including, but not limited for residential, commercial or industrial usage, and includes containers constructed in accordance with the American Society of Mechanical Engineers Code .
- (25) **VALVE** is a device that regulates or isolates the fluid flow in a pipe, tube, tank, or conduit by means of an external actuator.
- (26) **VAPOR TIGHT** is the leak-free condition of LPG connectors established in accordance with the provisions of subdivision (h).

(d) Equipment and Operation Requirements

(1) LPG transfer at LPG Bulk Loading Facilities

Effective July 1, 2013, an owner/operator of an LPG bulk loading facility shall not transfer, allow the transfer or provide equipment for the transfer of LPG, from any cargo tank to a stationary storage tank located at the facility or from any stationary storage tank to a cargo tank unless all the following conditions are met:

- (A) Any railroad tank car or mobile fueler equipped with an LPG vapor recovery or equalization system is maintained and operated according to the specifications of the vapor recovery and equalization system manufacturer;
- (B) All vapor return lines and liquid lines are properly connected between the cargo tank and the stationary storage tank so that associated connectors are maintained in a vapor tight and liquid tight condition during LPG transfer; and
- (C) The transfer hose assembly, which includes the hose, fittings and gaskets, is properly maintained in order to maintain vapor tight conditions.

(2) LPG transfer at LPG Transfer and Dispensing Facilities

Effective July 1, 2013, an owner/operator of an LPG transfer and dispensing facility shall not transfer LPG from any stationary storage tank, cargo tank, or cylinder into any stationary storage tank, cargo tank, cylinder, portable storage tank, or vehicle fuel tank unless the specific containers meet the following applicable conditions:

- (A) The leased or owned stationary storage tank meets one or more of the following conditions:
 - (i) The stationary storage tank FLLG is closed during LPG transfer, using a filling technique or technology that monitors the maximum fill level to prevent overfilling without use of the FLLG; or
 - (ii) The stationary storage tank is equipped with a low emission FLLG according to the following schedule:
 - (I) If the stationary storage tank is either put into or returned to service, it shall be equipped with a low emission FLLG; and

- (II) If the stationary storage tank does not meet the provisions of subclause (d)(2)(A)(ii)(I), it shall be equipped with a low emission FLLG by July 1, 2015, or by July 1, 2017 if the owner/operator demonstrates through documentation prior to July 1, 2015 that the stationary storage tank being filled is equipped with an FLLG that cannot be retrofitted with a low emission FLLG in a safe manner without relocation of the stationary storage tank. Documentation shall be made available to the Executive Officer upon request; and
- (B) The cargo tank, if equipped with a FLLG, meets one or more of the following conditions:
 - (i) The cargo tank FLLG is closed while being filled using a filling technique or technology that monitors the maximum fill level to prevent overfilling without use of the FLLG; or
 - (ii) The cargo tank FLLG is equipped with a low emission FLLG according to the following schedule:
 - (I) If manufactured on or after July 1, 2013, the cargo tank shall be equipped exclusively with one or more low emission FLLGs; or
 - (II) The cargo tank shall be equipped exclusively with one or more low emission FLLGs by July 1, 2013, or as soon thereafter at the next service in which the cargo tank is evacuated, but no later than July 1, 2017; and
- (C) If the container is a cylinder or portable storage tank, the container shall meet one or more of the following conditions:
 - (i) The cylinder or portable storage tank FLLG is closed during LPG transfer, using a fill by weight technique or alternative technique or technology that monitors the maximum fill level to prevent overfilling without use of the FLLG; or
 - (ii) The cylinder or portable storage tank is equipped with a low emission FLLG no later than July 1, 2017; and

(D) Notwithstanding the above effective date of July 1, 2013, the stationary storage tank, cargo tank or cylinder used to transfer or dispense LPG is fitted exclusively with LPG low emission connectors that are maintained in a vapor tight and liquid tight condition, except when actively connecting or disconnecting, after December 31, 2013.

(e) **Owner/Operator Leak Detection and Repair Program Requirements**

Effective January 1, 2013, the owner/operator of any LPG bulk loading facility or any LPG transfer and dispensing facility that offers LPG for sale to an end user shall:

- (1) On a daily basis, physically check all connectors involved with the transfer of LPG for evidence of leakage, such as the presence of odorant, hissing, or staining.
- (2) Conduct an inspection as defined in paragraph (c)(9), for any owned or leased stationary storage tank or cargo tank used to supply LPG to any other stationary storage tank or cargo tank once every 90 days, or if the time between fillings is greater than 90 days, during or upon completion of a transfer of LPG.
- (3) Conduct a periodic training program for any employee that implements the provisions of paragraph (e)(1) or (e)(2). The training program shall incorporate:
 - (A) Written training procedures;
 - (B) The training frequency and the scheduled training dates; and
 - (C) A written record of the dates of training provided for each employee.
- (4) Remove from service any connector which is identified as leaking in accordance with paragraph (e)(1) or (e)(2). The connector shall not be put back into service until the leaky connector is repaired or replaced and inspected. An entry of such leak and repair/replacement activity shall be recorded in accordance with paragraph (f)(1) before the connector is returned to service. The identified leak repaired pursuant to this paragraph shall not constitute a violation of subparagraph (d)(1)(B) and (d)(2)(D).

(f) Recordkeeping Requirements

(1) Effective January 1, 2013, the following records shall be maintained for a period of at least two years and shall be made available to the Executive Officer upon request:

(A) A person who performs the installation of FLLGs or connectors, inspections, as defined by paragraph (c)(9), or repairs connectors at any LPG transfer and dispensing facility or any LPG bulk loading facility, shall provide the owner/operator with all applicable records listed below immediately after service is completed, and the owner/operator shall maintain all provided records:

(i) Records of all FLLGs and connectors installed.

(ii) Service or sales receipts or repair logs confirming follow-up repairs for any leaks identified and repaired in accordance with paragraph (e)(1) and (e)(2), which shall include:

(I) Date and time of each repair;

(II) The name of any person who performed the repair and, if applicable, the name, address and phone number of their employer;

(III) A description of the service performed; and,

(IV) Identification of the FLLG or connector that was installed, repaired, serviced or removed, such as FLLG or connector identification information and FLLG or connector manufacturer name.

(B) The owner/operator of any railroad tank car or mobile fueler equipped with an LPG vapor recovery or equalization system shall maintain records to demonstrate that the system is maintained and operated according to the specifications of the vapor recovery and equalization system manufacturer.

(2) The owner/operator of any LPG transfer and dispensing facility shall maintain and provide to the Executive Officer upon request, documentation that demonstrates that any connector or FLLG used to comply with subdivision (d) meets the definition of LPG low emission connector or low emission FLLG, respectively.

(g) Reporting Requirements

- (1) By July 1 of each year from 2014 through 2016, the owner/operator of an LPG bulk loading facility or an LPG transfer and dispensing facility that offers LPG for sale to an end user shall submit an annual report containing the monthly LPG purchase volume and dispensing volume to the Executive Officer for the prior calendar year, in a format approved by the Executive Officer. The reporting facility shall maintain copies of all purchase and sales records used to support the submitted report for a period of at least two years, and make such records available to the Executive Officer upon request.
- (2) In lieu of submitting the above annual report, the owner/operator of an LPG transfer and dispensing facility that offers LPG for sale to an end user shall meet all of the following conditions:
 - (A) Provide that all the facility's LPG suppliers for that prior calendar year include the name of the facility with the supplier's annual report and have the supplier notify the District and the facility by March 1 of the reporting year that the supplier will include the facility in its annual report.
 - (B) The facility shall maintain copies of all purchase records and notifications from all LPG suppliers for a period of at least two years, and make such records available to the Executive Officer upon request.
- (3) By July 1, 2014, the owner/operator of an LPG bulk loading facility shall submit to the Executive Officer an end of year inventory of all facility located LPG low emission connectors, including all LPG low emission connectors installed on facility-owned or leased mobile fuelers associated with the transfer or storage of LPG for calendar year 2013. This inventory shall include the specific storage or transfer equipment or operation involved and the manufacturer and identification or part number of all low emission connectors.
- (4) By July 1 of each year from 2014 through 2018, the owner/operator of an LPG bulk loading facility shall submit to the Executive Officer an end of year inventory of all facility located containers, including all facility-owned or leased mobile fuelers associated with the transfer or storage of LPG that are equipped with one or more FLLGs for the prior calendar year. This inventory shall include a summary, by size and classification,

and the associated number of installed low emission FLLGs, submitted in a form approved by the Executive Officer.

(h) Test Method

Measurements of leak concentrations shall be conducted according to the United State Environmental Protection Agency (U.S. EPA) Reference Method 21 using an appropriate analyzer calibrated with methane. The analyzer shall be calibrated before inspection on the day of inspection. For the purposes of this rule, a measurement at or below 10,000 ppm shall be considered to be vapor tight.

(i) Confidentiality of Information

Subject to the provisions of the California Public Records Act (Govt. Code § 6250-6276.48) information submitted to the Executive Officer may be designated as exempt from disclosure. The designation must be clearly indicated on the reporting form, identifying exactly which information is deemed exempt from disclosure. District guidelines require a detailed and complete basis for such claim in the event of a public records request.

(j) Exemptions

- (1) The provisions of this rule shall not apply to the transfer of LPG into any container with a water capacity less than four (4) gallons.
- (2) The provisions of this rule shall not apply to facilities that are subject to the requirements of Rule 1173 – Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants.
- (3) The provisions of subparagraph (d)(2)(C) shall not apply to LPG cylinders that are specifically dedicated for and installed for use with recreational vehicles.