

Railcar Unloading Regulations

Description:

U.S. DOT regulations set out specific requirements that affect the unloading of railcars containing LP-gas.

Regulatory Reference

49 CFR § 174.9	Inspection and acceptance
49 CFR § 174.24	Shipping papers
49 CFR § 174.59	Marking and placarding of rail cars
49 CFR § 174.67	Tank car unloading

Applies to:

The regulations apply to persons who conduct railcar unloading operations, and car return functions.

General Requirements:

(1) 49 CFR § 174.67 gives the following requirements:

§ 174.67 Tank car unloading.

- (a) In unloading tank cars, the following rules must be observed (see subpart F of this part for gases):
 - (1) Unloading operations must be performed only by reliable persons properly instructed in unloading hazardous materials and made responsible for careful compliance with this part.
 - (2) Brakes must be set and wheels blocked on all cars being unloaded.
 - (3) Caution signs must be so placed on the track or cars to give necessary warning to persons approaching the cars from the open end of a siding and must be left up until after the cars are unloaded and disconnected from the discharge connection. The signs must be of metal or other comparable material, at least 30 cm (12 inches) high by 38 cm (15 inches) wide in size, and bear the words, "STOP-Tank Car Connected", or "STOP-Men at Work", the word "STOP" being in letters at least 10 cm (3.9 inches) high and the other words in letters at least 5 cm (2 inches) high. The letters must be white on a blue background.
- (b) After the pressure is released, the seal must be broken and the manhole cover removed as follows:
 - (1) Screw type. The cover must be loosened by placing a bar between the manhole cover lug and knob. After two complete turns, so that vent openings are exposed, the operation must be stopped, and if there is any sound of escaping vapor, the cover must be screwed down tightly and the interior pressure relieved, before again attempting to remove the cover.

- (2) Hinged and bolted type. All nuts must be unscrewed one complete turn, after which the same precautions as prescribed for screw type cover must be observed.
 - (3) Interior type. All dirt and cinders must be carefully removed from around the cover before the yoke is unscrewed.
 - (c) Unloading connections must be securely attached to unloading pipes on the dome or to the bottom discharge outlets before any discharge valves are opened.
 - (d) Tank cars may not be allowed to stand with unloading connections attached after unloading is completed. Throughout the entire period of unloading, and while car is connected to unloading device, the car must be attended by the unloader.
 - (e) If it is necessary to discontinue unloading a tank car for any reason, all unloading connections must be disconnected. All valves must first be tightly closed, and the closures of all other openings securely applied.
 - (f) As soon as a tank car is completely unloaded, all valves must be made tight by the use of a bar, wrench or other suitable tool, the unloading connections must be removed and all other closures made tight.
 - (g) Railroad defect cards may not be removed.
 - (h) All tools and implements used in connection with unloading must be kept free of oil, dirt, and grit.
- (2) 49 CFR § 174.59 requires, "No person may transport a rail car carrying hazardous materials unless it is marked and placarded as required by this subchapter..." That requirement means that before releasing a return car to the railroad company after unloading, the unloading personnel should be certain that the required placards appear on both sides and each end of the railcar.
 - (3) 49 CFR § 174.24 states, "A person may not accept or transport a hazardous material by rail unless that person receives a shipping paper that properly conveys the information required by part 172 of this subchapter. Only an initial carrier within the United States must receive and retain a copy of the shipper's certification as required by §172.204 of this subchapter..."
 - (4) 49 CFR § 174.9 requires, "At each location where a hazardous material is accepted for transportation or placed in a train, the carrier shall inspect each rail car containing the hazardous material, at ground level, for required markings, labels, placards, securement of closures and leakage..." This requirement means that unloading personnel are responsible for inspecting the condition of the railcar before accepting and unloading it, and for the condition of the railcar as it is returned to the railroad company after unloading.

Training Requirements:

Unloading railcars is a required function-specific element of hazmat employee training for operating company employees who unload railcars.

Maintenance and Review

Many operating companies who handle LP-gas by railcar have written standard operating procedures (SOPs) for unloading railcars. Requirements for written plant operating and maintenance procedures that become effective with the adoption of NFPA 58, 2001 edition, should

be coordinated with any existing or revised SOPs. Railcar unloading procedures and regulations should be considered as topics for safety meetings and refresher training for affected employees.

Additional Information and Resources

Propane Delivery, Certification Area 2.0, Certified Employee Training Program, National Propane Gas Association, Lisle, IL

Initial OSHA and DOT Training: For the Handling and Transport of Hazardous Materials, Propane Education and Research Council, Washington, DC