

# Bureau of Explosives

ASSOCIATION OF AMERICAN RAILROADS

2 PENNSYLVANIA PLAZA

NEW YORK, N. Y. 10001

March 30, 1969

## RULES AND RECOMMENDATIONS RELATING TO THE LOCATION OF LOADING RACKS, UNLOADING POINTS, AND STORAGE FACILITIES FOR ANY FLAMMABLE LIQUID WITH FLASH POINT BELOW 20° F (INCLUDING GASOLINE, ETC.)

For the purpose of these rules, the following classifications are provided:

**Class I**—Any flammable liquid with flash point below 20° F, having a vapor pressure as determined by the American Society for Testing Materials' Method of Test for Vapor Pressure of Petroleum Products (Reid Method) (D-323—current issue) which does not exceed 16 pounds per square inch absolute at 100° F.

**Class II**—Any flammable liquid with flash point below 20° F, having a vapor pressure exceeding that of a Class I liquid but not exceeding 40 pounds per square inch absolute at 100° F.

### LOADING

1. (a) Loading racks for Class I liquids shall be located at least 25 feet from a track over which a passenger train is moved.

(b) Loading racks for Class II liquids shall be located at least 50 feet from a track over which a passenger train is moved when physical conditions permit, and in no case less than 25 feet.

(c) When ground slopes toward such a track, a retaining wall, dike or earthen embankment must be placed between the installation and the track, so constructed as to effectively prevent liquids from flowing on to the track in case of accident.

(d) In loading Class II liquids, the tank car and the storage tank shall be so connected to prevent the escape of vapors to the air within 100 feet from the nearest track over which a passenger train is moved.

(e) Class I and II flammable liquids shall not be loaded into tank cars on carrier's property from tank trucks, drums, etc.

### UNLOADING

2. (a) When unloading points require railroad service for the unloading of tank cars of Class I liquids, the location must be subject to negotiation between the carrier and the interested company. Consolidated Freight Classification Rule 35 and the Department of Transportation Regulations forbid unloading of tank cars of certain liquids into tank trucks, drums, etc.

(Negotiations relating to new locations have generally been based on recommendations of the Bureau of Explosives that distance between passenger tracks and tracks on which tank cars are spotted for unloading should be at least 25 feet measured from near rail to near rail opposite center of spotted car. A location on a level with the railroad property or on ground sloping away from it is preferable. Also, a location where traffic is infrequent is preferable to one where traffic is congested.)

In congested areas or at locations where the slope of the terrain or a lack of diversion curbs, etc., would cause spillage to be a hazard, tank cars shall be unloaded through the dome instead of through the bottom outlet.)

Locations for the unloading of Class II liquids must be at least 50 feet from a track over which passenger trains are moved. Where physical conditions permit a greater distance, this distance should be at least 100 feet. Where the unloading location is on ground sloping toward a track over which passenger trains are moved, a retaining wall, dike or earthen embankment must be placed between the installation and track, so constructed as to effectively prevent liquids from flowing onto the track in case of accident.

### STORAGE OF CLASS I AND CLASS II LIQUIDS

3. (a) These rules apply only to above ground tanks for which railroad service is required. All storage tanks are considered above ground unless they are buried or so mounded over so that the top of the tank is covered with at least two feet of earth.

(b) All storage facilities shall be installed in accordance with the regulations of the authority having jurisdiction. Compliance with the applicable provisions in NFPA No. 30, Flammable Liquids Code,\* is recommended.

(c) Where practicable, tanks should be located on ground sloping away from railroad property. If this is impracticable, the tanks must be surrounded by dikes of earth, concrete, or other suitable material of sufficient capacity to hold all the contents of the largest tank within the diked area, or means provided to divert the flow of flammables away from railroad property.

\* Available from National Fire Protection Association, 60 Batterymarch Street, Boston, Massachusetts 02110.

### GENERAL

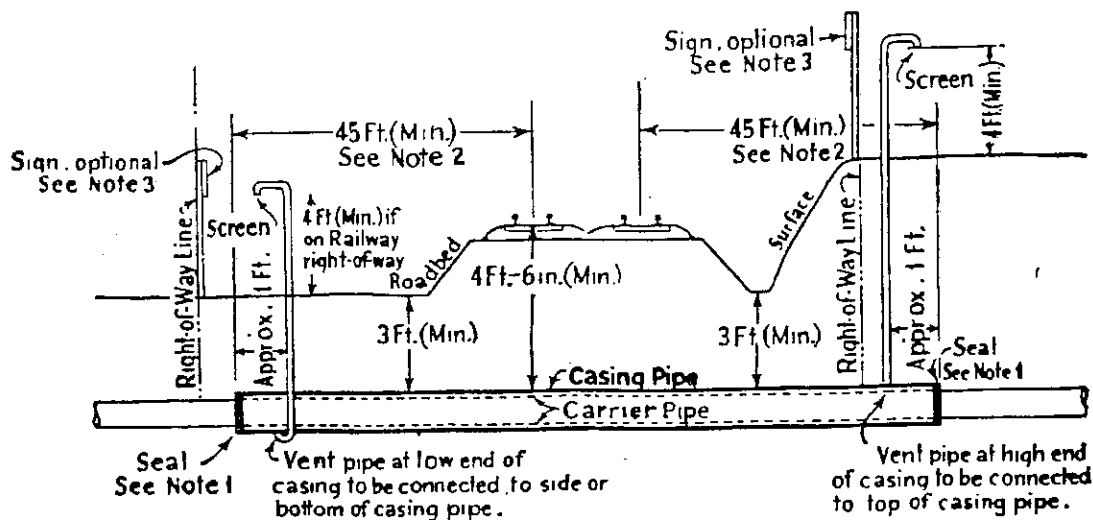
4. (a) In measuring distance from any railroad track to an installation for loading or unloading tank cars, the measurements must be taken from near rail to near rail opposite center of spotted car.

(b) During the time that the tank car is connected for loading or unloading, there must be signs placed on the track or car so as to give necessary warning. The party loading or unloading the tank car is responsible for furnishing, maintaining, and placing these signs, and the same party alone has authority to remove them. Tank cars thus protected must not be coupled to or moved. Other cars must not be placed on the same tracks so as to intercept the view of these signs without first notifying the party who placed the signs, unless there is a standard derail properly set and locked in derailing position between the nearest tank car and other cars to be set on the same track. Before these signs are removed, even temporarily, the party authorized to move them must securely close the outlet valve of the tank car. The outlet valve must not be opened until the tank car is properly protected by signs. Such signs must be at least 12 x 15 inches in size and bear the words "STOP—Tank Car Connected!" or "STOP—Men at Work!", the word "STOP" being in letters at least four inches high and the other words in letters at least two inches high. The letters must be white on a blue background.

These requirements are in conformity with Rule 26 of the A.A.R. Standard Code of Operating Rules, quoted below:

"A blue signal, displayed at one or both ends of an engine, car or train, indicates that workmen are under or about it; when thus protected it must not be coupled to or moved. Each class of workmen will display the blue signals and the same workmen are alone authorized to remove them. Other equipment must not be placed on the same track so as to intercept the view of the blue signals, without first notifying the workmen."

(c) Pipelines on railroad property for the loading or unloading of tank cars, must be laid at a depth of at least three feet, and at points where such pipelines pass under tracks, they must be laid at least four feet below the bottom of the ties and should be encased in a larger sized pipe. (See Figure 1.)



- NOTE:**
1. Seal and vent pipe not required if casing ends above ground where drainage is available.
  2. Casing to extend beyond limit of railway right-of-way if necessary to provide proper length outside of track.
  3. Sign to indicate location of pipe line at right-of-way line is "optional" with Railway.

Figure 1.

(d) All connections between tank cars and pipelines must be in good condition and must not permit any leakage. They must be frequently examined and replaced when they have become worn in order to insure absolutely tight connections. Tank cars must not be left connected to pipelines except when loading or unloading is going on and while a competent man is present and in charge.

(e) Except when properly gasketed enclosed electric lights are available, the loading or unloading of tank cars on railroad property must not be permitted except when artificial light is not required. The presence of flame lanterns, nearby flame switch lights or other exposed flame lights or fires during the process of loading or unloading is prohibited.