

15A NCAC 02D .0927 BULK GASOLINE TERMINALS

(a) For the purpose of this Rule, the following definitions apply:

- (1) "Bulk gasoline terminal" means:
 - (A) a pipeline breakout station of an interstate oil pipeline facility; or
 - (B) a gasoline storage facility that typically receives gasoline from refineries primarily by pipeline, ship, or barge; delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by cargo tank; and has an average daily throughput of more than 20,000 gallons of gasoline.
- (2) "Cargo tank" means the storage vessels of freight trucks or trailers used to transport gasoline from sources of supply to stationary storage tanks of bulk gasoline terminals, bulk gasoline plants, gasoline dispensing facilities, and gasoline service stations.
- (3) "Contact deck" means a deck in an internal floating roof tank that rises and falls with the liquid level and floats in direct contact with the liquid surface.
- (4) "Degassing" means the process by which a tank's interior vapor space is decreased to below the lower explosive limit for the purpose of cleaning, inspection, or repair.
- (5) "Gasoline" means a petroleum distillate having a Reid Vapor Pressure (RVP) of 4.0 psi or greater.
- (6) "Leak" means a crack or hole letting petroleum product vapor or liquid escape that is identifiable through sight, sound, smell, an explosimeter, or the use of a meter that measures volatile organic compounds. When an explosimeter or meter is used to detect a leak, a leak is a measurement that is equal to or greater than 100 percent of the lower explosive limit, as detected by a combustible gas detector using the test procedure described in Appendix B of EPA-450/2-78-051. This test procedure is incorporated by reference, including any subsequent amendments and editions. A copy of this test procedure may be obtained free of charge at <https://nepis.epa.gov/Exe/ZyPDF.cgi/2000M9RD.PDF?Dockey=2000M9RD.PDF>.
- (7) "Liquid balancing" means a process used to degas floating roof gasoline storage tanks with a liquid whose vapor pressure is below 1.52 psi. This is done by removing as much gasoline as possible without landing the roof on its internal supports, pumping in the replacement fluid, allowing mixing, removing as much mixture as possible without landing the roof, and repeating these steps until the vapor pressure of the mixture is below 1.52 psi.
- (8) "Liquid displacement" means a process by which gasoline vapors remaining in an empty tank are displaced by a liquid with a vapor pressure below 1.52 psi.
- (9) "Pipeline breakout station" means a facility along a pipeline containing storage tanks used to:
 - (A) relieve surges in a hazardous liquid pipeline system; or
 - (B) receive and store hazardous liquids transported by pipeline for reinjection and continued transport by pipeline.

For the purposes of this definition, "hazardous liquid" means the materials listed in 49 CFR 195.2.

(b) This Rule applies to bulk gasoline terminals and the appurtenant equipment necessary to load the cargo tank compartments.

(c) Gasoline shall not be loaded into any cargo tank from any bulk gasoline terminal unless:

- (1) the bulk gasoline terminal is equipped with a vapor control system that prevents the emissions of volatile organic compounds from exceeding 35 milligrams per liter. The owner or operator shall obtain from the manufacturer and maintain in the cargo tank's records a pre-installation certification stating the vapor control efficiency of the system in use;
- (2) displaced vapors and gases are vented only to the vapor control system or to a flare;
- (3) a means is provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected; and
- (4) all loading and vapor lines are equipped with fittings that make vapor-tight connections and that are automatically and immediately closed upon disconnection.

(d) Sources regulated by this Rule shall not:

- (1) allow gasoline to be discarded in sewers or stored in open containers or handled in any manner that would result in evaporation; or
- (2) allow the pressure in the vapor collection system to exceed the cargo tank pressure relief settings.

(e) The owner or operator of a bulk gasoline terminal shall paint all tanks used for gasoline storage white or silver.

(f) The owner or operator of a bulk gasoline terminal shall install on each external floating roof tank with an inside diameter of 100 feet or less used to store gasoline a self-supporting roof, such as a geodesic dome.

(g) The following equipment shall be required on all tanks storing gasoline at a bulk gasoline terminal:

- (1) rim-mounted secondary seals on all external and internal floating roof tanks;
 - (2) gaskets on deck fittings; and
 - (3) floats in the slotted guide poles with a gasket around the cover of the poles.
- (h) Decks shall be required on all above ground tanks with a capacity greater than 19,800 gallons storing gasoline at a bulk gasoline terminal. All decks installed after June 30, 1998 shall comply with the following requirements:
- (1) deck seams shall be welded, bolted, or riveted; and
 - (2) seams on bolted contact decks and on riveted contact decks shall be gasketed.
- (i) If, upon facility or operational modification of a bulk gasoline terminal that existed before December 1, 1992, an increase in benzene emissions results such that:
- (1) emissions of volatile organic compounds increase by more than 25 tons cumulative at any time during the five years following modifications; and
 - (2) annual emissions of benzene from the cluster, which includes the bulk gasoline terminal, the pipeline, and marketing terminals served by the pipeline, exceed benzene emissions from that cluster based upon calendar year 1991 gasoline throughput and application of the requirements of this Subchapter,

then, the annual increase in benzene emissions due to the modification shall be offset within the cluster by reduction in benzene emissions beyond that otherwise achieved from compliance with this Rule, in the ratio of at least 1.3 to 1.

(j) To qualify for exemption from the requirements under Paragraphs (e) through (i) of this Rule, the owner or operators of a bulk gasoline terminal that received an air quality permit before December 1, 1992 to emit toxic air pollutants under 15A NCAC 02Q .0700 to comply with 15A NCAC 02D .1100 shall continue to follow all terms and conditions of the permit issued under 15A NCAC 02Q .0700 and to bring the terminal into compliance with 15A NCAC 02D .1100 according to the terms and conditions of the permit, and shall maintain this permit to emit toxic air pollutants.

(k) The owner or operator of a bulk gasoline terminal shall not load, or allow to be loaded, gasoline into any cargo tank unless the cargo tank has been certified leak tight according to 15A NCAC 02D .0932.

(l) The owner or operator of a bulk gasoline terminal shall have on file at the terminal a copy of the certification test conducted according to 15A NCAC 02D .0932 for each gasoline cargo tank loaded at the terminal.

(m) Emissions of gasoline from degassing of external or internal floating roof tanks at a bulk gasoline terminal shall be collected and controlled by at least 90 percent by weight. Liquid balancing shall not be used to degas gasoline storage tanks at bulk gasoline terminals. Bulk gasoline storage tanks containing not more than 138 gallons of liquid gasoline or the equivalent of gasoline vapor and gasoline liquid are exempted from the degassing requirements if gasoline vapors are vented for at least 24 hours. Documentation of degassing external or internal floating roof tanks shall be made according to 15A NCAC 02D .0903.

(n) The owner or operator of a bulk gasoline terminal shall visually inspect the following for leaks each day that the terminal is both manned and open for business:

- (1) the vapor collection system;
- (2) the vapor control system; and
- (3) each lane of the loading rack while a gasoline cargo tank is being loaded.

In accordance with 15A NCAC 02D .1903, the owner or operator shall maintain records of the visual inspections. If no leaks are found, the owner or operator shall record that no leaks were found. If a leak is found, the owner or operator shall record the information specified in Paragraph (p) of this Rule. The owner or operator shall repair all leaks found according to Paragraph (q) of this Rule.

(o) The owner or operator of a bulk gasoline terminal shall inspect weekly for leaks:

- (1) the vapor collection system;
- (2) the vapor control system; and
- (3) each lane of the loading rack while a gasoline cargo tank is being loaded.

The weekly inspection shall be done using sight, sound, or smell; a meter used to measure volatile organic compounds; or an explosimeter. An inspection using either a meter used to measure volatile organic compounds or an explosimeter shall be conducted every month. If no leaks are found, the owner or operator shall record the date that the inspection was done and that no leaks were found. If a leak is found, the owner or operator shall record the information specified in Paragraph (p) of this Rule. The owner or operator shall repair all leaks found according to Paragraph (q) of this Rule.

(p) For each leak found under Paragraph (n) or (o) of this Rule, the owner or operator of a bulk gasoline terminal shall record:

- (1) the date of the inspection;
- (2) the findings detailing the location, nature, and severity of each leak;

- (3) the corrective action taken;
 - (4) the date when corrective action was completed; and
 - (5) any other information that the terminal deems necessary to demonstrate compliance with this Rule.
- (q) The owner or operator of a bulk gasoline terminal shall repair all leaks as follows:
- (1) The vapor collection hose that connects to the cargo tank shall be repaired or replaced before another cargo tank is loaded at that rack after a leak has been detected originating with the terminal's equipment rather than from the gasoline cargo tank.
 - (2) All other leaks shall be repaired as expeditiously as possible but no later than 15 days from their detection. If more than 15 days are required to make the repair, the reasons that the repair cannot be made shall be documented, and the leaking equipment shall not be used after the fifteenth day from when the leak detection was found until the repair is made.

History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1979;
Amended Eff. January 1, 2007; April 1, 2003; August 1, 2002; July 1, 1998; July 1, 1996; July 1, 1994; December 1, 1992; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.