

NFPA 55-2016 Edition

Compressed Gases and Cryogenic Fluids Code

TIA Log No.: 1195

Reference: 1.1.1* New

Comment Closing Date: October 16, 2015

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1. Add new Appendix material for 1.1.1 to read as follows:

1.1.1* Applicability. This code shall apply to the installation, storage, use, and handling of compressed gases and cryogenic fluids in portable and stationary cylinders, containers, equipment, and tanks in all occupancies.

A.1.1.1 The term “portable” points out the application of this code to systems other than those considered to be permanent; i.e., systems where the equipment is installed on foundations and meant to stay in place for a considerable period of time. This code applies to portable and temporary systems, including the two types listed below:

- (1) Equipment that is ordinarily used for the transportation and delivery of compressed gases or cryogenic fluids but that is located at a customer (end user) location and used for storage of compressed gases or cryogenic fluids. One example is a compressed gas tube trailer that is dropped at a customer location and left in place to supply the compressed gas to the customer use point. Another example is a cryogenic liquid trailer that is left at a customer location to supply cryogenic liquids to the customer use point (or vaporized into gas before going to the use point).
- (2) Equipment used for the temporary supply of compressed gases or cryogenic fluids at a customer location. An example is a portable cryogenic tank that is mounted on a trailer and dropped at the customer location and not always connected to foundations by anchor bolts. Such a supply system may be in place for a matter of weeks as opposed to a more permanent system that is left in place for years.

Some of the requirements of this code are not applicable to this type of equipment. For example, some sections of this code mandate that the equipment be anchored to permanent foundations. Equipment with wheels for transportation do not need to be anchored. However, auxiliary equipment, such as pressure reducing stations, would need to be anchored to a foundation. The user must determine which sections of the code apply to equipment and which sections do not apply.

It is not the intent of this code to regulate transportation and delivery equipment when that equipment is used only to deliver product to a storage system at a customer location. For example, a cryogenic liquid trailer that delivers product into a storage system (and does not stay on site after delivering product) does not have to meet the requirements of this code. The trailer is governed by DOT/TC requirements. Another example is a compressed gas tube trailer that delivers product to a permanent storage system and does not stay on site to supply product to the end user.

Portable equipment is sometimes transported with product loaded in the storage vessel or may be shipped with the vessel empty, to be filled at the customer location. Equipment that is designed to be transported with product in it is governed by DOT/TC regulations. Nothing in this code is intended to overrule the DOT/TC regulations governing the use of such equipment.

Substantiation: The purpose of this proposal is to clarify the applicability of NFPA 55 as it relates to transport trailers being used as storage/supply vessels in lieu of permanent structures.

Over the past several years the price and availability of natural gas has made it an attractive alternative to heating oil and propane as a heating fuel, especially in the northeastern part of the United States. Natural gas has been traditionally delivered via pipe line or as Liquefied Natural Gas by truck and rail. Natural gas suppliers have been actively developing and designing new and innovative methods for delivering natural gas to end users in areas that do not have access to pipe lines.

One of the new innovations in the delivery of natural gas is in a compressed form via transport trailer. In this application, compressed natural gas is loaded into a transport trailer at approximately 3500 PSI. The trailer is transported to the end user, connected to the heating plant via a series of stepdown regulators, and left on site to become the stationary storage/supply vessel in lieu of a permanent structure. When the trailer is empty it is replaced by another transport trailer using a just in time supply business management model.

The industries that developed this new delivery system have selected NFPA 52 as a guideline for installation. Consequently, they are avoiding set back clearances for storage and the requirements for a fire protection model as required by NFPA 55. The industry contends that the trailers fall under Department of Transportation requirements and therefore are not subject to the requirements of NFPA 55. The enforcing authorities in the New England States, where a majority of these installations are found, do not agree that NFPA 52 is the appropriate code. We maintain that the trailer, once disconnected from the tractor unit, and attached to the heating plant as the storage/supply vessel, falls within the scope of NFPA 55.

This Tentative Interim Agreement would clarify the role that NFPA 55 would play in those applications where transport trailers are being used as supply/storage vessels in lieu of a permanently constructed storage vessels.

Emergency Nature: The TIA reinforces that the requirements of NFPA 55 applies to transport trailers that are being used, in lieu of permanent structures, as on site storage for compressed natural gas (CNG).

This technology was developed approximately three years ago. A CNG trailer with product at approximately 3500 psi is connected to a series of step down regulators. The regulators are attached to the facility heating plant. This application has been used to take advantage of the lower price of natural gas, where there are no natural gas pipelines. The CNG industry has

attempted to apply NFPA 52 to these installations rather than the appropriate standard of NFPA 55.

Two years ago, in New England, there were two of these CNG installations. Today there are over thirty installations and they continue to grow. It is imperative that the CNG industry be provided with clear direction to recognize that the scope and application of NFPA 55, not NFPA 52, applies to this type of installation. This TIA would immediately clarify and reinforce NFPA 55 as the governing standard for these new CNG installations. Waiting for the next code cycle to include this language in the standard would allow for further confusion as to what code applies to these installations, and could result in unsafe non-compliant facilities being constructed.

Anyone may submit a comment by the closing date indicated above. To submit a comment, please identify the number of the TIA and forward to the [Secretary, Standards Council](#), 1 Batterymarch Park, Quincy, MA 02169-7471.