



**CGA P-41-2023**  
**STANDARD FOR LOCATING**  
**BULK LIQUID STORAGE**  
**SYSTEMS IN COURTS**  
**THIRD EDITION**

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Bulk Distribution Equipment and Standards Committee

NOTE—Technical changes from the previous edition are underlined.

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## 1 Scope

This publication provides guidelines for the safe siting, installing, and operating of bulk storage systems (argon, carbon dioxide, hydrogen, nitrogen, nitrous oxide, and oxygen) in courts or enclosed courts where reduced airflow can create an oxygen-deficient or oxygen-enriched atmosphere. This publication applies to bulk cryogenic storage systems, not to gaseous compressed gas storage systems.

NOTE—Carbon dioxide and nitrous oxide are technically not considered cryogenic liquids, but their liquid storage systems are covered by this publication.

For the purpose of this publication, a bulk liquid storage system is defined by NFPA 55, *Compressed Gases and Cryogenic Fluids Code* or NFPA 99, *Standard for Health Care Facilities* [1, 2].<sup>1</sup>

Indoor installations are not covered by this publication.

## 2 Definitions

For the purpose of this publication, the following definitions apply.

### 2.1 Publication terminology

#### 2.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for performance to specific recommendations allows no deviation.

#### 2.1.2 Should

Indicates that a procedure is recommended.

#### 2.1.3 May

Indicates that the procedure is optional.

#### 2.1.4 Will

Is used only to indicate the future, not a degree of requirement.

#### 2.1.5 Can

Indicates a possibility or ability.

### 2.2 Technical definitions

#### 2.2.1 Authorities having jurisdiction (AHJ)

Organization, office, or individual responsible for enforcing the requirements of a code or standard or responsible for approving equipment, materials, installations, or procedures [1].

#### 2.2.2 Court or courtyard

Open, uncovered, unoccupied space, unobstructed to the sky, bounded on three or more sides by exterior building walls, or freestanding walls [1].

#### 2.2.3 Enclosed court or courtyard

Uncovered, unoccupied space, unobstructed to the sky, bounded on all sides by exterior building walls, or freestanding walls [1].

#### 2.2.4 Indoor area

Area that is within a building or structure having overhead cover, other than a structure qualifying as “weather protection” [1].

NOTE—Weather protection is defined as a structure used for sheltering outdoor storage or use areas [1]. It is not permitted for use with flammable or explosive gases [1].

<sup>1</sup> References are shown by bracketed numbers and are listed in order of appearance in the reference section.