

Replacing the current Section 2209.3.1 with the proposed text clarifies that the separation required is from the dispensing equipment and not from the storage system. The storage system separation distances are addressed in Chapter 35. The weather protection for equipment found at Section 2209.3.2.2 has been added to the new 2209.3.1 language for the dispenser.

Deleting Table 2209.3.1 and replacing it with the text proposed for 2209.3.1 correlates the IFC with NFPA 52 Table 9.3.1.4 in the 2010 edition per approved ROP-81. The two separation distances listed in the proposed text for 2209.3.1 are the only ones that need to be added to the requirements of 2203.1 in order to achieve correlation with NFPA 52 Table 9.3.1.4 (2010 edition per ROP-81). See below for an image of the draft NFPA 52 Table 9.3.1.4 for convenience. The 1<sup>st</sup> row in table establishes a separation distance requirement between dispensing equipment and buildings. This NFPA 52 requirement corresponds to the existing text in IFC 2203.1. The next two items are not currently in IFC and are added to 2209.3.1 by this proposal.

The remaining deletions are of language that is no longer required due to the application of modifications to Chapter 35 of the IFC and the updated reference to NFPA 55.

The change at 2209.3.2.5 is a terminology correlation that has already been made to Chapter 32,

Approval of this proposal will simplify the application of the IFC to the outdoor storage of hydrogen and continue the efforts of ICC to provide for improved levels of safety in the application of new hydrogen technology and hydrogen as an alternative fuel.

**Cost Impact:** The code change proposal will not increase the cost of construction.

**Analysis:** The related code change proposal referred to in the first paragraph of the reason statement is F214-09/10. The action on this proposal should be consistent with the action on Code Change F176-09/10.

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

ICCFILENAME: DAVIDSON-SHUMAN-F18-2209.DOC

## F175-09/10

### 2209.2.2, Table 2209.2.2 (New), Chapter 47

**Proponent:** Julie Cairns, CSA America, Inc., representing CSA America Automotive Technical Committee

#### 1. Revise as follows:

**2209.2.2 Listed equipment.** Hoses, hose connections, compressors, hydrogen generators, dispensers, detection systems and electrical equipment used for hydrogen shall be *listed* for use with hydrogen in accordance with the applicable standard in Table 2209.2.2. Hydrogen motor fueling connections shall be *listed* and *labeled* for use with hydrogen.

**TABLE 2209.2.2**  
**HYDROGEN HANDLING COMPONENT STANDARDS**

<b><u>HYDROGEN HANDLING COMPONENT</u></b>	<b><u>STANDARD</u></b>
<u>Compressed Hydrogen Dispensers</u>	<u>CSA America HGV 4.1</u>
<u>Hoses and Hose Assemblies for Gaseous Hydrogen Vehicles and Dispensing Systems</u>	<u>CSA America HGV 4.2</u>
<u>Breakaway Devices for Hoses Used in Compressed Hydrogen Vehicle Fueling Stations</u>	<u>CSA America HGV 4.4</u>
<u>Priority and Sequencing Equipment for Gaseous Hydrogen Dispensing Systems</u>	<u>CSA America HGV 4.5</u>
<u>Manually Operated Valves Used in Gaseous Hydrogen Vehicle Fueling Stations</u>	<u>CSA America HGV 4.6</u>
<u>Standard for Automatic Pressure Operated Valves for Use in Gaseous Hydrogen Vehicle Fueling Stations</u>	<u>CSA America HGV 4.7</u>
<u>Hydrogen Gas Vehicle Fueling Station Compressor</u>	<u>CSA America HGV 4.8</u>
<u>Fittings for Compressed Hydrogen Gas and Hydrogen Rich Gas Mixtures</u>	<u>CSA America HGV 4.10</u>

2. Add new standards to Chapter 47 as follows:

**CSA America, Inc.**  
**8501 E. Pleasant Valley Rd.**  
**Cleveland, OH 44131**

- HGV 4.1 Compressed Hydrogen Dispensers
- HGV 4.2 Hoses and Hose Assemblies for Gaseous Hydrogen Vehicles and Dispensing Systems
- HGV 4.4 Breakaway Devices for Hoses Used in Compressed Hydrogen Vehicle Fueling Stations
- HGV 4.5 Priority and Sequencing Equipment for Gaseous Hydrogen Dispensing Systems
- HGV 4.6 Manually Operated Valves Used in Gaseous Hydrogen Vehicle Fueling Stations
- HGV 4.7 Standard for Automatic Pressure Operated Valves for Use in Gaseous Hydrogen Vehicle Fueling Stations
- HGV 4.8 Hydrogen Gas Vehicle Fueling Station Compressor
- HGV 4.10 Fittings for Compressed Hydrogen Gas and Hydrogen Rich Gas Mixtures

**Reason:** The proposal is to reference CSA America documents used by industry for certification of the dispenser and related equipment.

**Cost Impact:** The code change proposal will not increase the cost of construction.

**Analysis:** A review of the standard(s) proposed for inclusion in the code, CSA HGV 4.1, 4.2, 4.4, 4.5, 4.6, 4.7, 4.8 and 4.10, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before September 24, 2009.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

ICCFILENAME: CAIRNS-F1-2209.2.2

## **F176–09/10**

### **2209.3, 2209.3.1, Table 2209.3.1, 2209.3.1.1**

**Proponent:** Robert Boyd, LINDE North America, Inc., representing Hydrogen Industry Panel on Codes (HIPOC)

1. Revise as follows:

**2209.3 Location on property.** In addition to the requirements of Section 2203.1, ~~generation, compression, storage and dispensing equipment shall be located in accordance with Sections 2203 and Sections 2209.3.1 through Section 2209.3.3.~~

2. Delete and substitute as follows:

~~**2209.3.1 Separation from outdoor exposure hazards.** Generation, compression and dispensing equipment shall be separated from other fuels or equivalent risks to life, safety and buildings or public areas in accordance with Table 2209.3.1.~~

~~**Exception:** *Closed systems with a hydrogen capacity of 3,000 cubic feet (85 m<sup>3</sup>) or less at NTP.*~~

**2209.3.1 Location of dispensing operations and equipment.** Dispensing operations and equipment shall be located above ground. In addition to the requirements of Section 2203.1, the point of transfer dispensing shall be located in accordance with the following:

1. Ten feet (3048 mm) or more from the nearest public street or sidewalk.
2. Ten feet (3048 mm) from the nearest rail of any railroad track.
3. Dispensing equipment shall be allowed under weather protection in accordance with the requirements of Section 2704.13 and constructed in a manner that prevents the accumulation of hydrogen gas.

3. Delete section and table in their entirety without substitution:

~~**TABLE 2209.3.1**~~  
~~**MINIMUM SEPARATION FOR GASEOUS HYDDROGEN DISPENSERS,**~~  
~~**COMPRESSORS, GENERATORS AND STORAGE VESSELS**~~  
~~(Delete entire table and notes)~~