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Annex B Common Deficiencies and Impairments

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

<u>B.1</u>

Table B.1 does not take into account every variation of the conditions needing repair or correction. Refer to the manufacturer's design, installation, and maintenance manual. Table B.1 should be used with good judgement by qualified personnel. Table B.1 Common Deficiencies and Impairments

<u>Item(s)</u>	Item Finding	Impairment	Deficiency
General	System not installed or maintained per the manufacturer's design, installation, and maintenance manual	X	
Discharge nozzles	Clogged with debris or grease	X	
Discharge nozzles	Protective caps missing		X
Discharge nozzles	Wrong type for hazard or installed improperly	X	
Manual actuator	Inoperable	X	
Manual actuator	Inaccessible		X
Manual actuator	Needs adjustment		X
Manual actuator	Signage missing		X
Automatic actuation	Inoperable	X	
Automatic actuation	Improper detector	X	
Automatic actuation	Improper fixed temperature-sensing element temperature rating	X	
Shutoff devices (gas or electric)	Inoperable	X	
Manual reset relay	Inoperable	X	
<u>Exhaust fan</u>	Inoperable (unless not needed due to a listed component of the ventilation system or by design of the extinguishing system)		X
Pipe, fittings, tubing, and hose	Clogged with debris or grease	X	
Pipe, fittings, tubing, and hose	Minor surface corrosion, minor cracking of nonmetallic components		X
Compressed gas cartridge	Missing or incorrect size	X	
Compressed gas cartridge	Needs hydrostatic testing		X

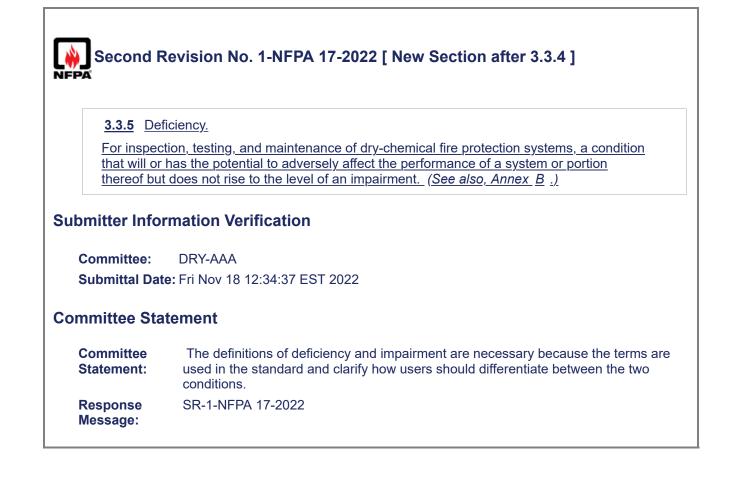
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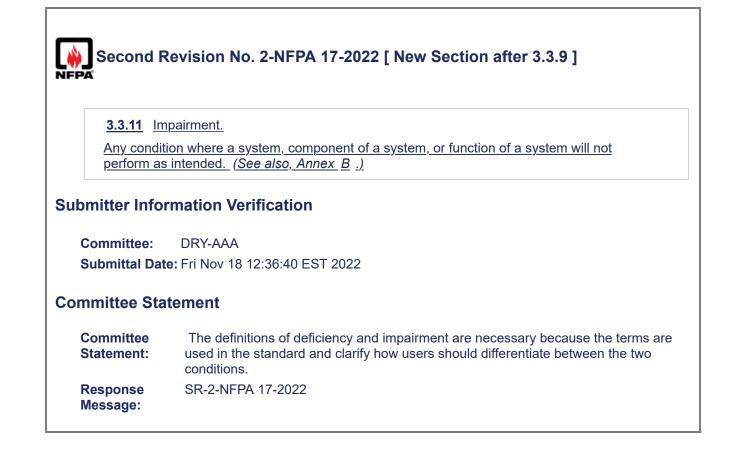
Item(s)	Item Finding	Impairment	Deficiency
<u>Compressed gas</u> <u>cartridge</u>	Insufficient cartridge charge as indicated by weight, pressure, or periodic replacement	X	
<u>Dry-chemical</u> container	Empty or insufficient quantity (for nonpressurized containers)	X	
<u>Dry-chemical</u> container	Pressure too low (for pressurized containers)	X	
<u>Dry-chemical</u> container	Needs hydrostatic testing		X
<u>Dry-chemical</u> <u>container</u>	Corrosion or pitting in excess of the manufacturer's limits, structural damage, fire damage, repairs by soldering, welding, or brazing	X	
<u>Dry-chemical</u> <u>container</u>	Needs 6-year internal examination		X
<u>Dry-chemical</u> <u>container</u>	Semi-annual internal examination falls outside manufacturer's limitations	X	
Pressure regulator	Inoperable or falls outside manufacturer's design limits	X	
Selector valve	Inoperable, needs adjustment or maintenance	X	
Hazard	Hazard has changed	X	
<u>Audible or visual</u> indicator	Inoperable or needs adjustment		X
<u>Connection to fire</u> <u>alarm system (if</u> <u>applicable)</u>	Inoperable		X
Labeling	Missing, damaged, or illegible		X

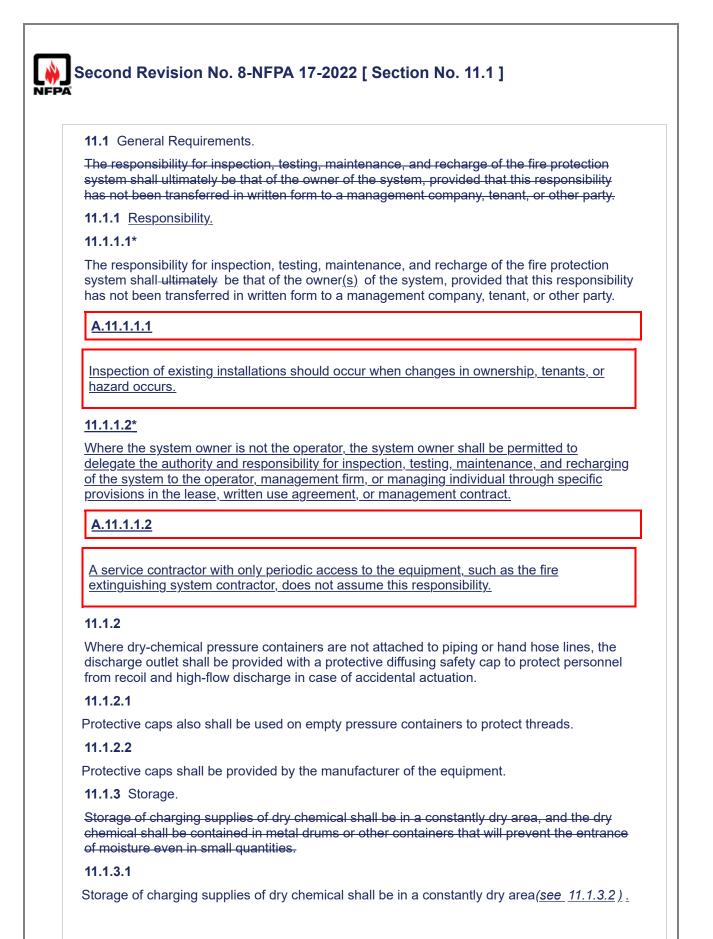
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Chapter 2 Reference	d Publications
2.1 General.	
	ions thereof listed in this chapter are referenced within this standard d part of the requirements of this document.
2.2 NFPA Publication	S.
National Fire Protection	n Association, 1 Batterymarch Park, Quincy, MA 02169-7471.
NFPA 30, <i>Flammable</i> a	and Combustible Liquids Code, 2024 edition.
NFPA 70 [®] , National E	<i>lectrical Code[®],</i> 2023 edition.
NFPA 72 [®] , National Fi	ire Alarm and Signaling Code [®] , 2022 edition.
NFPA 96, <i>Standard for</i> Operations, 2024 editio	Ventilation Control and Fire Protection of Commercial Cooking
2.3 Other Publications	5.
2.3.1 ASME Publication	ons.
American Society of M	echanical Engineers, Two Park Avenue, New York, NY 10016-5990.
ANSI/ASME B31.1, Po	wer Piping, 2020 <u>2022</u> .
Boiler and Pressure Ve	essel Code, 2021 <u>2023</u> .
2.3.2 ASTM Publication	ons.
ASTM International, 10 19428-2959.	0 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA
ASTM A53/A53M, Stai Welded and Seamless	ndard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coatec , 2020 <u>2022</u> .
2.3.3 IEEE Publication	ns.
IEEE, 3 Park Avenue,	17th Floor, New York, NY 10016–5997.
	ety Code (NESC), 2017 <u>2023</u> .
2.3.4 UL Publications	
	ries Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.
Cooking Equipment, 20	
Extinguishing System	
2.3.5 US Government	
US Government Publis 20401-0001.	hing Office, 732 North Capitol Street, NW, Washington, DC
	ral Regulations, Part 1910, Subpart S.
2.3.6 Other Publication	ns.

2.4 Refer	ences for Extracts in Mandatory Sections.
NFPA 17A	, Standard for Wet Chemical Extinguishing Systems, 2024 edition.
	Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Systems, 2023 edition.
NFPA 72 [®]	, <i>National Fire Alarm and Signaling Code[®],</i> 2022 edition.
	Standard for Ventilation Control and Fire Protection of Commercial Cooking s, 2024 edition.
	, Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal ocessing Facilities, 2023 edition.
NFPA 820 2024 editio	, Standard for Fire Protection in Wastewater Treatment and Collection Facilities, on.
NFPA 200	1, Standard on Clean Agent Fire Extinguishing Systems, 2022 edition.
<u>Fil</u>	Information <u>e Name Description Approved</u>
<mark>Fil</mark> 17_A2023_SI	
<u>Fil</u> 17_A2023_SI omitter Info Committee:	e Name Description Approved DM_Chapter2.docx For Staff Use Only For Staff Use Only rmation Verification DRY-AAA
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<u>Fil</u> 17_A2023_SI bmitter Info Committee:	e Name Description Approved DM_Chapter2.docx For Staff Use Only For Staff Use Only rmation Verification DRY-AAA Est 2022
Fil 17_A2023_SI bmitter Info Committee: Submittal Dat	e Name Description Approved DM_Chapter2.docx For Staff Use Only For Staff Use Only rmation Verification DRY-AAA Est 2022







11.1.3.2

<u>Dry</u> chemical shall be contained in metal drums or other containers that will prevent the entrance of moisture even in small quantities.

11.1.3.3

Prior to the dry-chemical chamber being charged, the dry chemical shall be checked carefully to determine that it is in a flowing condition.

11.1.4*

A service technician who performs maintenance on an extinguishing system shall be trained and shall have passed a written or online test that is acceptable to the authority having jurisdiction. <u>comply with both of the following:</u>

(1) <u>Be</u> trained

(2) <u>Have</u> passed a written or online test that is acceptable to the authority having jurisdiction

11.1.4.1

The service technician shall possess a certification document confirming the requirements in 11.1.4 issued by the manufacturer or testing organization that is acceptable to the authority having jurisdiction.

11.1.5*

A service technician that has the applicable manufacturer's design, installation, and maintenance manual and service bulletins shall service the dry-chemical fire-extinguishing system at intervals no more than 6 months apart as outlined in Section 11.3.

11.1.6*

All dry-chemical extinguishing systems shall be <u>both</u> inspected in accordance with the owner's manual and maintained and recharged in accordance with the manufacturer's design, installation, and maintenance manual and service bulletins.

11.1.7 Recharge Agents.

11.1.7.1*

Dry chemical provided for the system shall be listed for the system.

11.1.7.1.1

Expellant gas for stored pressure cylinders shall be standard industrial-grade nitrogen with a dew point of $-60^{\circ}F(-51^{\circ}C)$ or lower (CGA nitrogen specification G10.1).

11.1.7.1.2

The dry chemical provided by the equipment manufacturer and the type of expellant gas specified by the equipment manufacturer shall be required to be used.

11.1.7.1.3

Where carbon dioxide or nitrogen is used as the expellant gas, it shall be <u>both</u> of good commercial grade and free of water and other contaminants that might cause container corrosion.

11.1.8

System access for inspection or maintenance that requires opening panels in fire chases, ducts, or both shall not be permitted while any appliance(s) or equipment protected by that system is in operation.

Supplemental Information

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Description For staff use only **Approved**

Submitter Information Verification			
	DRY-AAA Tue Dec 06 12:50:58 EST 2022		
Committee Statement			
Committee Statement:	The revision clarifies that the owner is responsible for the inspection, testing, maintenance, and recharging		
	of the fire extinguishing system, except when that responsibility has been transferred by written agreement		
	to another party with control over the equipment. For clarity the original text was separated into two sections		
	based on similar language in NFPA 72®, National Fire Alarm and Signaling Code, that has been in that		
	document since 2013. The Annex note also clarifies that a service contractor with only periodic access to the		
	equipment, such as the fire extinguishing system contractor, does not assume responsibility for the ITM&R		
	of the equipment. The proposed changes are consistent with similar language recently accepted by the		
	Technical Committee on Commercial Cooking Operations, NFPA 96.		
Response Message:	SR-8-NFPA 17-2022		



	C.2.1 US Government Publications.		
	US Government Publishing Office, 732 North Capitol Street, NW, Washington, DC 20401-0001.		
	Title 49, Code of Federal Regulations, Parts 170–190.		
	C.3 References for Extracts in Informational Sections.		
	NFPA 10, Standard for Portable Fire Extinguishers, 2022 edition.		
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C	ommittee Statement: Revised to refer to latest editions of all referenced publications.		
R	esponse Message: SR-4-NFPA 17-2022		