NFPA® 1

Fire Code

2015 Edition

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NFPA® 1

Fire Code

2015 Edition

This edition of NFPA 1, *Fire Code*, was prepared by the Technical Committee on Fire Code and acted on by NFPA at its June Association Technical Meeting held June 9–12, 2014, in Las Vegas, NV. It was issued by the Standards Council on August 14, 2014, with an effective date of September 3, 2014, and supersedes all previous editions.

An extensive Tentative Interim Amendment (TIA), indicated by boxed notices at the appropriate areas within the document, was issued on August 14, 2014. This TIA implements Standards Council Decision D#14-1 to temporarily withdraw NFPA 1124 and end all NFPA standards development activities relating to the storage and retail sales of consumer fireworks. For further information, see Decision D#14-1 at http://www.nfpa.org/sc2014.

For further information on Tentative Interim Amendments, see Section 5 of the *Regulations Governing the Development of NFPA Standards*, available at http://www.nfpa.org/regs.

This edition of NFPA 1 was approved as an American National Standard on September 3, 2014.

Origin and Development of NFPA 1

This *Code* was originally developed as a result of the requests of many members of the National Fire Protection Association for a document covering all aspects of fire protection and prevention that used the other developed NFPA codes and standards. NFPA staff initiated this work in 1971 upon a directive from the NFPA Board of Directors.

The original code was written around a format that served as a guide for the development of a local fire prevention code. Prerogatives of local officials were excluded from the main text of the document but included within appendices as guidance for exercising desired prerogatives.

In the late 1980s, the Fire Marshals Association of North America undertook the task of developing a code that was more self-contained, adding administrative sections and extracting heavily from other NFPA codes and standards. The draft was submitted to the Fire Prevention Code Committee. The Committee examined changes in the built environment as it is affected by fire and incorporated significant portions of the *Life Safety Code*®. A special task group on hazardous materials examined technological changes in the handling, storage, and use of flammable and combustible materials. Chapters extracting hazardous material requirements placed a greater emphasis on protection of life and property from chemical products made and used in the environment. A major rewrite resulted in the 1992 edition of the *Fire Prevention Code*.

The 1997 edition updated the text extracted from other NFPA codes and standards and added compliance with additional NFPA codes and standards as part of the requirements of NFPA 1.

The 2000 edition of NFPA 1 was a complete revision that updated the text extracted from other NFPA codes and standards. Additional direct references from NFPA codes and standards that are essential to a code official's use of the document were added. The Committee also added a new section on performance-based design as a valuable tool for code officials and design professionals. NFPA 1 was restructured to be more functional with respect to administration, code enforcement, and regulatory adoption processes.

The 2003 edition of NFPA 1, *Uniform Fire Code*™, was a complete revision. It incorporated provisions from the Western Fire Chiefs, *Uniform Fire Code*™, under a partnership between NFPA and Western Fire Chiefs, while it updated and expanded the provisions extracted from other key NFPA codes and standards. To emphasize the partnership, the document was renamed NFPA 1, *Uniform Fire Code*™. The *Uniform Fire Code* is a trademark of the Western Fire Chiefs Association.

NFPA 1, *Uniform Fire Code*™, was restructured into parts to be more compatible with the regulatory adoption procedures, including administration and code enforcement, occupancies, processes, equipment, and hazardous materials provisions. The Committee included a newly expanded chapter on performance-based design as an enhanced tool for code officials and design professionals. Additional extracts and references from NFPA codes and standards that are essential to a code official's use of the document were added, bringing the number of

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referenced NFPA codes and standards to over 125. Additional chapters on hazardous materials were included that incorporate the provisions covered in the *Uniform Fire Code*™.

The 2006 edition of NFPA 1, *Uniform Fire Code*™, was a complete revision of the *Code* that incorporated the provisions from NFPA 230, *Standard for the Fire Protection of Storage*. The Technical Committee on Uniform Fire Code had been given responsibility for NFPA 230 by the NFPA Standards Council, so they incorporated the requirements into NFPA 1 UFC rather than maintain a separate standard.

The 2006 edition of NFPA 1 included new chapters on classification of occupancy, motion picture studios, outdoor tire storage, and general storage, along with other extracted provisions updated and expanded the from other key NFPA codes and standards that were essential to a code official's use of the document. The number of NFPA codes and standards referenced in this edition was 117.

With the 2009 edition of NFPA 1, the title of the document was changed from *Uniform Fire Code* to *Fire Code*. The revision updated all the extracted provisions from the 117 codes and standards that were included as mandatory reference publications in the 2006 edition. The revisions also included an expansion of Section 12.5 on interior finish to contain extracted provisions from NFPA *101*; an expansion of Section 12.6 on furnishings, contents, decorations, and treated fabrics to contain extracted provisions from NFPA *101*; a new Section 18.4, which moved fire flow requirements for buildings from Annex H; a new Section 32.5 for regulating locations for motion picture and television production studios, soundstages, and approved production facilities with extracted provisions from NFPA 140; and new Sections 40.3 through 40.7 on combustible dust explosion protection and fire prevention with extracted provisions from NFPA 654. Additional information on hazardous materials classifications was added to Annex B. This revision also added three annexes to the 2009 edition, including Annex O, In-Building Public Safety Radio Enhancement Systems; Annex P, Fire Department Service Delivery Concurrency Evaluation; and Annex Q, Fire Fighter Safety Building Marking System. The number of NFPA codes and standards referenced in this edition was 119.

Six annexes published in the 2006 edition were deleted from the 2009 edition, including Annex E, Model Citation Program; Annex F, Model Fees and Charges Program; Annex H, Fire Flow Requirements for Buildings; Annex J, Protection of Outdoor Storage; Annex M, Recommendations for Fighting Rubber Tire Fires in Sprinklered Buildings; and Annex N, AHJ Minimum Qualifications and Job Descriptions for Code Enforcement Personnel.

The 2012 edition of NFPA 1 included revisions to requirements for the fire code board of appeals (Section 1.10); certificates of fitness (Section 1.13); application limits of referenced standards (Section 2.1); emergency plan provisions (Section 10.9); prohibited storage of grills on balconies (10.11.6.2); new requirements for standardized elevator keys (11.3.6); new requirements for determination of fire department communication capabilities in buildings and two-way radio communication enhancement systems and deleted former Annex O (Section 11.10); medical gas and vacuum systems (Section 11.11); photovoltaic systems (Section 11.12); quality assurance of fire barrier penetrations and joints (12.3.2); and automatic sprinkler system requirement for new buildings three or more stories in height above grade (13.3.2.4). The 2012 edition also relocated former Annex P to the new Chapter 15, Fire Department Service Delivery Concurrency Evaluation; expanded Chapter 17, Wildland Urban Interface; added a new Chapter 36, Telecommunication Facilities and Information Technology Equipment; added a new Chapter 37, Fixed Guideway Transit and Passenger Rail Systems; added requirements for carbon monoxide detection in residential occupancies; relocated former Annex G to the new Chapter 54, Ozone Gas-Generating Equipment; extensively revised Chapter 60, Hazardous Materials, to extract from NFPA 400, *Hazardous Materials Code*; updated Chapter 66, Flammable and Combustible Liquids, per the current edition of NFPA 30, *Flammable and Combustible Liquids Code*; revised Chapter 67, Flammable Solids, to reference NFPA 400; revised Chapter 68, Highly Toxic and Toxic Solids and Liquids, to reference NFPA 400; completely revised Chapter 70, Oxidizer Solids and Liquids; revised Chapter 71, Pyrophoric Solids and Liquids, to reference NFPA 400; revised Chapter 72, Unstable (Reactive) Solids and Liquids, to reference NFPA 400; added a new Chapter 74, Ammonium Nitrate; added a new Chapter 75, Organic Peroxide Solids and Liquids; deleted Annex K, Explanation of Rack Storage Test Data and Procedures; deleted Annex L, Protection of Baled Cotton: History of Guidelines; and updated all extracts through the Annual 2011 revision cycle.

Key revisions for the 2015 edition of NFPA 1 include the prohibition of the use of sky lanterns (10.10.9.3); expanded application of photovoltaic system requirements to existing installations (Section 11.12); AHJ authorization to permit the removal of nonrequired, existing occupant-use hose (13.2.2.6); mandatory automatic sprinkler requirement for all new hotels without exception (13.3.2.15); enhanced attic protection for residential board and care occupancies with residential sprinkler systems (13.3.2.21.2.7); expanded occupancy-based fire alarm system provisions to correlate with NFPA *101* (Section 13.7); new occupant load factor for concentrated business use (14.8.1.2); completely revised fire hydrant location and distribution requirements and deleted former Annex E (Section 18.5); revisions to NFPA 654 extracts for dust explosion prevention (Chapter 40); new hot work permit limits from NFPA 51B (41.3.4.4); expanded existing commercial cooking equipment extinguishing system requirements from NFPA 96 (50.4.4.3.2); expanded ammonia refrigeration system maintenance and testing requirements (Section 53.3); updated hazardous materials maximum allowable quantities from NFPA 400 (60.4.2); new provisions for alcohol-based hand rub dispensers from NFPA *101* (60.5.2); revisions to aerosol product classifications from NFPA 30B (61.1.3); new requirements for cleaning and purging gas piping systems from NFPA 55 (63.3.1.19); new provisions for cooking oil storage tank systems in commercial kitchens from NFPA 30 (66.19.7); and updates of all extracts through the Annual 2014 revision cycle.

NFPA 1 reflects the technical knowledge of the committees who are responsible for the codes and standards that are referenced in and from which text is extracted and incorporated into the technical provisions of NFPA 1. This *Code* is intended to provide state, county, and local jurisdictions with an effective fire code.

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NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on a Fire Prevention Code that includes appropriate administrative provisions, to be used with the National Fire Codes for the installation, operation, and maintenance of buildings, structures, and premises for the purpose of providing safety to life and property from fire and explosion. This includes development of requirements for, and maintenance of, systems and equipment for fire control and extinguishment. Safety to life of occupants of buildings and structures is under the primary jurisdiction of the Committee on Safety to Life.

Documents
Document Sharing Hub
Full document details: NFPA 1 2015

Contents

Chapter 1 Administration 1– 11
1.1 Scope 1– 11
1.2 Purpose 1– 11
1.3 Application 1– 11
1.4 Equivalencies, Alternatives, and Modifications 1– 12
1.5 Units 1– 12
1.6 Enforcement 1– 12
1.7 Authority 1– 12
1.8 Duties and Powers of the Incident Commander 1– 14
1.9 Liability 1– 14
1.10 Fire Code Board of Appeals 1– 14
1.11 Records and Reports 1– 16
1.12 Permits and Approvals 1– 16
1.13 Certificates of Fitness 1– 22
1.14 Plan Review 1– 23
1.15 Technical Assistance 1– 23
1.16 Notice of Violations and Penalties 1– 23

Chapter 2 Referenced Publications 1– 24
2.1 General 1– 24
2.2 NFPA Publications 1– 24
2.3 Other Publications 1– 26
2.4 References for Extracts in Mandatory Sections 1– 30

Chapter 3 Definitions 1– 30
3.1 General 1– 30
3.2 NFPA Official Definitions 1– 30
3.3 General Definitions 1– 31
3.4 Special Performance-Based Definitions 1– 48

Chapter 4 General Requirements 1– 49
4.1 Goals and Objectives 1– 49
4.2 Assumptions 1– 50
4.3 Compliance Options 1– 50
4.4 Fundamental Requirements 1– 50
4.5 General Requirements 1– 51

Chapter 5 Performance-Based Option 1– 52
5.1 General 1– 52
5.2 Performance Criteria 1– 54
5.3 Retained Prescriptive Requirements 1– 54
5.4 Design Scenarios 1– 54
5.5 Evaluation of Proposed Designs 1– 56
5.6 Safety Factors 1– 56
5.7 Documentation Requirements 1– 56

Chapter 6 Classification of Occupancy 1– 57
6.1 Classification of Occupancy 1– 57

Chapter 7 Reserved 1– 61

Chapter 8 Reserved 1– 61

Chapter 9 Reserved 1– 61

Chapter 10 General Safety Requirements 1– 61
10.1 Fundamental Requirements 1– 61
10.2 Owner/Occupant Responsibilities 1– 61
10.3 Occupancy 1– 61
10.4 Building Evacuation 1– 62
10.5 Fire Drills 1– 62
10.6 Reporting of Fires and Other Emergencies 1– 62
10.7 Tampering with Fire Safety Equipment 1– 62
10.8 Emergency Action Plans 1– 62
10.9 Smoking 1– 63
10.10 Open Flames, Candles, Open Fires, and Incinerators 1– 63
10.11 Fire Protection Markings 1– 63
10.12 Seasonal and Vacant Buildings and Premises 1– 64
10.13 Combustible Vegetation 1– 65
10.14 Special Outdoor Events, Carnivals, and Fairs 1– 65
10.15 Outside Storage 1– 69
10.16 Parade Floats 1– 69
10.17 Powered Industrial Trucks 1– 69
10.18 Storage of Combustible Materials 1– 69
10.19 Indoor Children's Playground Structures 1– 69

Chapter 11 Building Services 1– 70
11.1 Electrical Fire Safety 1– 70
11.2 Heating, Ventilation, and Air-Conditioning 1– 71
11.3 Elevators, Escalators, and Conveyors 1– 71
11.4 Utilities 1– 72
11.5 Heating Appliances 1– 72
11.6 Waste Chutes, Incinerators, and Laundry Chutes 1– 73
11.7 Stationary Generators and Standby Power Systems 1– 73
11.8 Smoke Control 1– 74
11.9 Emergency Command Center 1– 74
11.10 Two-Way Radio Communication Enhancement Systems 1– 74
11.11 Medical Gas and Vacuum Systems 1– 75
11.12 Photovoltaic Systems 1– 75

Chapter 12 Features of Fire Protection 1– 76
12.1 General 1– 76
12.2 Construction 1– 76

AVA Documents Document Sharing Hub
Full document details: NFPA 1 2015

12.3 Fire-Resistive Materials and Construction 1– 76
12.4 Fire Doors and Other Opening Protectives 1– 77
12.5 Interior Finish 1– 79
12.6 Contents and Furnishings 1– 82
12.7 Fire Barriers 1– 83
12.8 Smoke Partitions 1– 88
12.9 Smoke Barriers 1– 89

Chapter 13 Fire Protection Systems 1– 90
13.1 General 1– 90
13.2 Standpipe Systems 1– 91
13.3 Automatic Sprinklers 1– 91
13.4 Fire Pumps 1–105
13.5 Water Supply 1–110
13.6 Portable Fire Extinguishers 1–110
13.7 Detection, Alarm, and Communications Systems 1–123
13.8 Other Fire Protection Systems 1–176
13.9 Non-Listed Fire Protection or Suppression Devices and Equipment 1–176

Chapter 14 Means of Egress 1–177
14.1 Application 1–177
14.2 Exit Access Corridors 1–177
14.3 Exits 1–177
14.4 Means of Egress Reliability 1–178
14.5 Door Openings 1–178
14.6 Enclosure and Protection of Stairs 1–182
14.7 Exit Passageways 1–183
14.8 Capacity of Means of Egress 1–183
14.9 Number of Means of Egress 1–186
14.10 Arrangement of Means of Egress 1–186
14.11 Discharge from Exits 1–188
14.12 Illumination of Means of Egress 1–189
14.13 Emergency Lighting 1–190
14.14 Marking of Means of Egress 1–191
14.15 Secondary Means of Escape 1–192

Chapter 15 Fire Department Service Delivery Concurrency Evaluation 1–193
15.1 Application 1–193
15.2 Level of Service Objectives 1–193
15.3 Evaluator Qualifications 1–193
15.4 Fire Department Service Delivery Concurrency Evaluation Documentation 1–193
15.5 Independent Review 1–193
15.6 Approval 1–193

Chapter 16 Safeguarding Construction, Alteration, and Demolition Operations 1–193
16.1 General Requirements 1–193
16.2 Processes and Hazards 1–193
16.3 Fire Protection 1–194
16.4 Safeguarding Construction and Alteration Operations 1–196
16.5 Fire Safety During Demolition 1–197
16.6 Torch-Applied Roofing Systems 1–197
16.7 Tar Kettles 1–197
16.8 Asbestos Removal 1–198

Chapter 17 Wildland Urban Interface 1–198
17.1 General 1–198
17.2 Plans 1–200
17.3 Wildland Fire–Prone Areas 1–200

Chapter 18 Fire Department Access and Water Supply 1–202
18.1 General 1–202
18.2 Fire Department Access 1–202
18.3 Water Supplies 1–204
18.4 Fire Flow Requirements for Buildings 1–204
18.5 Fire Hydrants 1–205

Chapter 19 Combustible Waste and Refuse 1–207
19.1 General 1–207
19.2 Combustible Waste and Refuse 1–207

Chapter 20 Occupancy Fire Safety 1–208
20.1 Assembly Occupancies 1–208
20.2 Educational Occupancies 1–213
20.3 Day-Care Occupancies 1–214
20.4 Health Care Occupancies 1–216
20.5 Residential Board and Care Occupancies 1–219
20.6 Ambulatory Health Care Centers 1–221
20.7 Detention and Correctional Occupancies 1–222
20.8 Hotels and Dormitories 1–224
20.9 Apartment Buildings 1–225
20.10 Lodging or Rooming Houses 1–225
20.11 One- and Two-Family Dwellings and Manufactured Housing 1–225
20.12 Mercantile Occupancies 1–226
20.13 Business Occupancies 1–226
20.14 Industrial Occupancies 1–226
20.15 Storage Occupancies 1–226
20.16 Special Structures and High-Rise Buildings 1–227
20.17 Historic Buildings and Cultural Resources 1–227

Chapter 21 Airports and Heliports 1–228
21.1 Hangars 1–228
21.2 Terminals 1–228
21.3 Rooftop Heliport Construction and Protection 1–230

Documents
Document Sharing Hub
Full document details: NFPA 1 2015

Chapter 22 Automobile Wrecking Yards 1–232
22.1 General 1–232
22.2 Permits 1–232
22.3 Fire Department Access Roads 1–232
22.4 Welding and Cutting 1–232
22.5 Housekeeping 1–232
22.6 Fire Extinguishers 1–232
22.7 Tire Storage 1–232
22.8 Burning Operations 1–232
22.9 Motor Vehicle Fluids and Hazardous Materials 1–232

Chapter 23 Cleanrooms 1–232
23.1 General 1–232
23.2 Applicability 1–232
23.3 Permits 1–233

Chapter 24 Drycleaning 1–233
24.1 General 1–233
24.2 Permits 1–233

Chapter 25 Grandstands and Bleachers, Folding and Telescopic Seating, Tents, and Membrane Structures 1–233
25.1 General 1–233
25.2 Tents 1–234
25.3 Grandstands 1–235
25.4 Folding and Telescopic Seating 1–236
25.5 Permanent Membrane Structures 1–237
25.6 Temporary Membrane Structures 1–238

Chapter 26 Laboratories Using Chemicals 1–239
26.1 General 1–239
26.2 Permits 1–239

Chapter 27 Manufactured Home and Recreational Vehicle Sites 1–239
27.1 General 1–239
27.2 Manufactured Home Sites 1–240
27.3 Recreational Vehicle Parks and Campgrounds 1–240

Chapter 28 Marinas, Boatyards, Marine Terminals, Piers, and Wharves 1–240
28.1 Marinas, Boatyards, and Other Recreational Marine Facilities 1–240
28.2 Marine Terminals, Piers, and Wharves 1–243
28.3 Construction, Conversion, Repair, and Lay-Up of Vessels 1–243

Chapter 29 Parking Garages 1–243
29.1 General 1–243

Chapter 30 Motor Fuel Dispensing Facilities and Repair Garages 1–243
30.1 Motor Fuel Dispensing Facilities 1–243
30.2 Repair Garages 1–244
30.3 Operational Requirements 1–246

Chapter 31 Forest Products 1–246
31.1 General 1–246
31.2 Permits 1–246
31.3 Protection of Storage of Forest Products 1–246

Chapter 32 Motion Picture and Television Production Studio Soundstages and Approved Production Facilities 1–250
32.1 General 1–250
32.2 Permits 1–250
32.3 Housekeeping 1–250
32.4 Soundstages and Approved Production Facilities 1–250
32.5 Production Locations 1–252
32.6 Operating Features 1–253

Chapter 33 Outside Storage of Tires 1–253
33.1 General 1–253
33.2 Individual Piles 1–253
33.3 Emergency Response Plan 1–254
33.4 Fire Control Measures 1–254
33.5 Site Access 1–254
33.6 Signs and Security 1–254
33.7 Outdoor Storage of Altered Tire Material 1–254

Chapter 34 General Storage 1–254
34.1 General 1–254
34.2 Classification of Commodities 1–255
34.3 Building Construction 1–256
34.4 Storage Arrangement 1–256
34.5 General Fire Protection 1–257
34.6 Building Equipment, Maintenance, and Operations 1–258
34.7 Protection of Rack Storage 1–258
34.8 Protection of Rubber Tires 1–259
34.9 Protection of Roll Paper 1–259
34.10 Storage of Idle Pallets 1–259

Chapter 35 Reserved 1–260

Chapter 36 Telecommunication Facilities and Information Technology Equipment 1–260
36.1 General 1–260

Chapter 37 Fixed Guideway Transit and Passenger Rail Systems 1–260
37.1 General 1–260

AVA Documents Document Sharing Hub
2015 Edition
Full document details: NFPA 1 2015

Chapter 38 Reserved 1–260

Chapter 39 Reserved 1–260

Chapter 40 Dust Explosion and Fire Prevention 1–260
40.1 General 1–260
40.2 Permits 1–260
40.3 Fugitive Dust Control and Housekeeping 1–260
40.4 Ignition Sources 1–261
40.5 Fire Protection 1–263
40.6 Training and Procedures 1–265
40.7 Inspection and Maintenance 1–265

Chapter 41 Welding, Cutting, and Other Hot Work 1–266
41.1 General 1–266
41.2 Responsibility for Hot Work 1–266
41.3 Fire Prevention Precautions 1–267
41.4 Sole Proprietors and Individual Operators 1–269
41.5 Public Exhibitions and Demonstrations 1–269
41.6 Arc Welding Equipment 1–269

Chapter 42 Refueling 1–270
42.1 General 1–270
42.2 Automotive Fuel Servicing 1–270
42.3 Storage of Liquids 1–270
42.4 Piping for Liquids 1–274
42.5 Fuel Dispensing Systems 1–274
42.6 Building Construction Requirements 1–276
42.7 Operational Requirements 1–276
42.8 Additional Requirements for CNG, LNG, Hydrogen, and LPG 1–278
42.9 Marine Fueling 1–279
42.10 Aircraft Fuel Servicing 1–282
42.11 Alternate Fuels 1–289

Chapter 43 Spraying, Dipping, and Coating Using Flammable or Combustible Materials 1–290
43.1 Application 1–290
43.2 Automated Electrostatic Spray Equipment 1–303
43.3 Handheld Electrostatic Spray Equipment 1–303
43.4 Drying, Curing, or Fusion Processes 1–303
43.5 Miscellaneous Spray Operations 1–303
43.6 Powder Coating 1–304
43.7 Organic Peroxides and Plural Component Coatings 1–304
43.8 Styrene Cross-Linked Composites Manufacturing (Glass Fiber–Reinforced Plastics) 1–305
43.9 Dipping, Coating, and Printing Processes 1–305
43.10 Training 1–306

Chapter 44 Solvent Extraction 1–306
44.1 General 1–306
44.2 Application 1–306
44.3 Permits 1–306
44.4 Special Requirements 1–306

Chapter 45 Combustible Fibers 1–306
45.1 General 1–306
45.2 Electrical Wiring 1–306
45.3 No Smoking 1–306
45.4 Vehicles and Material Handling Equipment 1–306
45.5 Loose Storage of Combustible Fibers 1–306
45.6 Baled Storage 1–307
45.7 Storage of Hay, Straw, and Other Similar Agricultural Products 1–307
45.8 Hazardous Materials 1–307

Chapter 46 Reserved 1–307

Chapter 47 Reserved 1–307

Chapter 48 Reserved 1–307

Chapter 49 Reserved 1–307

Chapter 50 Commercial Cooking 1–307
50.1 Application 1–307
50.2 General Requirements 1–308
50.3 Protection of Coverings and Enclosure Materials 1–308
50.4 Fire-Extinguishing Equipment 1–309
50.5 Procedures for the Use, Inspection, Testing, and Maintenance of Equipment 1–311
50.6 Minimum Safety Requirements for Cooking Equipment 1–313

Chapter 51 Industrial Ovens and Furnaces 1–313
51.1 General 1–313
51.2 Location 1–313
51.3 Safety Controls 1–313

Chapter 52 Stationary Storage Battery Systems 1–313
52.1 General 1–313
52.2 Permits 1–313
52.3 Safety Features 1–314

Chapter 53 Mechanical Refrigeration 1–315
53.1 General 1–315
53.2 Safety Features 1–315
53.3 Operations, Maintenance, and Testing 1–317

Documents
Document Sharing Hub
Full document details: NFPA 1 2015

Chapter 54 Ozone Gas–Generating Equipment 1–318
54.1 Scope 1–318
54.2 Location 1–318
54.3 Piping, Valves, and Fittings 1–319
54.4 Automatic Shutdown 1–319
54.5 Manual Shutdown 1–319

Chapter 55 Reserved 1–319

Chapter 56 Reserved 1–319

Chapter 57 Reserved 1–319

Chapter 58 Reserved 1–319

Chapter 59 Reserved 1–319

Chapter 60 Hazardous Materials 1–319
60.1 General Requirements 1–319
60.2 Special Definitions 1–320
60.3 Classification of Materials, Wastes, and Hazard of Contents 1–320
60.4 Permissible Storage and Use Locations 1–321
60.5 Fundamental Requirements 1–334
60.6 Emergency Action Planning, Fire Risk Control and Chemical Hazard Requirements for Industrial Processes 1–341
60.7 Performance Alternative 1–341

Chapter 61 Aerosol Products 1–341
61.1 General Provisions 1–341
61.2 Basic Requirements 1–342
61.3 Storage in Warehouses and Storage Areas 1–343
61.4 Mercantile Occupancies 1–346
61.5 Operations and Maintenance 1–347

Chapter 62 Reserved 1–348

Chapter 63 Compressed Gases and Cryogenic Fluids 1–348
63.1 General Provisions 1–348
63.2 Building-Related Controls 1–350
63.3 Compressed Gases 1–355
63.4 Cryogenic Fluids 1–369
63.5 Bulk Oxygen Systems 1–377
63.6 Bulk Gaseous Hydrogen Systems 1–377
63.7 Bulk Liquefied Hydrogen Systems 1–377
63.8 Gas Generation Systems 1–377
63.9 Insulated Liquid Carbon Dioxide Systems 1–377
63.10 Storage, Handling, and Use of Ethylene Oxide for Sterilization and Fumigation 1–377
63.11 Liquid Oxygen in Home Care 1–378

Chapter 64 Corrosive Solids and Liquids 1–378
64.1 General 1–378

Chapter 65 Explosives, Fireworks, and Model Rocketry 1–378
65.1 General 1–378
65.2 Display Fireworks 1–379
65.3 Pyrotechnics Before a Proximate Audience 1–379
65.4 Flame Effects Before an Audience 1–379
65.5 Fireworks Manufacturing 1–379
65.6 Model Rocketry 1–379
65.7 Rocketry Manufacturing 1–379
65.8 High Power Rocketry 1–379
65.9 Explosives 1–379

Chapter 66 Flammable and Combustible Liquids 1–379
66.1 General 1–379
66.2 Reserved 1–380
66.3 Definitions 1–380
66.4 Definition and Classification of Liquids 1–381
66.5 Reserved 1–381
66.6 Fire and Explosion Prevention and Risk Control 1–381
66.7 Electrical Systems 1–384
66.8 Application of Area Classification 1–387
66.9 Storage of Liquids in Containers — General Requirements 1–387
66.10 Reserved 1–393
66.11 Reserved 1–393
66.12 Reserved 1–393
66.13 Reserved 1–393
66.14 Hazardous Materials Storage Lockers 1–393
66.15 Outdoor Storage 1–394
66.16 Automatic Fire Protection for Inside Liquid Storage Areas 1–395
66.17 Processing Facilities 1–415
66.18 Dispensing, Handling, Transfer, and Use of Liquids 1–419
66.19 Specific Operations 1–421
66.20 Reserved 1–425
66.21 Storage of Liquids in Tanks — Requirements for All Storage Tanks 1–425
66.22 Storage of Liquids in Tanks — Aboveground Storage Tanks 1–431
66.23 Storage of Liquids in Tanks — Underground Tanks 1–440
66.24 Storage Tank Buildings 1–441
66.25 Storage Tank Vaults 1–445
66.26 Reserved 1–446
66.27 Piping Systems 1–446

Documents Document Sharing Hub
Full document details: NFPA 1 2015

66.28 Bulk Loading and Unloading Facilities for Tank Cars and Tank Vehicles 1–449
66.29 Wharves 1–451

Chapter 67 Flammable Solids 1–453
67.1 General 1–453

Chapter 68 Highly Toxic and Toxic Solids and Liquids 1–453
68.1 General 1–453

Chapter 69 Liquefied Petroleum Gases and Liquefied Natural Gases 1–453
69.1 General Provisions 1–453
69.2 LP-Gas Equipment and Appliances 1–454
69.3 Installation of LP-Gas Systems 1–456
69.4 LP-Gas Liquid Transfer 1–468
69.5 Storage of Cylinders Awaiting Use, Resale, or Exchange 1–470
69.6 Vehicular Transportation of LP-Gas 1–473
69.7 LP-Gases at Utility Plants 1–474
69.8 Liquefied Natural Gas (LNG) Facilities 1–474

Chapter 70 Oxidizer Solids and Liquids 1–475
70.1 General 1–475

Chapter 71 Pyrophoric Solids and Liquids 1–475
71.1 General 1–475

Chapter 72 Unstable (Reactive) Solids and Liquids 1–475
72.1 General 1–475

Chapter 73 Water-Reactive Solids and Liquids 1–475
73.1 General 1–475

Chapter 74 Ammonium Nitrate 1–475
74.1 General 1–475

Chapter 75 Organic Peroxide Solids and Liquids 1–475
75.1 General 1–475

Annex A Explanatory Material 1–475

Annex B Hazardous Materials Classifications 1–646

Annex C Sample Ordinance Adopting the NFPA 1, *Fire Code* 1–658

Annex D Hazardous Materials Management Plans and Hazardous Materials Inventory Statements 1–659

Annex E Fire Fighter Safety Building Marking System 1–668

Annex F Informational References 1–670

Index 1–676

Documents
Document Sharing Hub
Full document details: NFPA 1 2015

NFPA 1

Fire Code

2015 Edition

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NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex F. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex F.

Chapter 1 Administration

1.1 Scope.

1.1.1 The scope includes, but is not limited to, the following:

(1) Inspection of permanent and temporary buildings, processes, equipment, systems, and other fire and related life safety situations
(2) Investigation of fires, explosions, hazardous materials incidents, and other related emergency incidents
(3) Review of construction plans, drawings, and specifications for life safety systems, fire protection systems, access, water supplies, processes, hazardous materials, and other fire and life safety issues
(4) Fire and life safety education of fire brigades, employees, responsible parties, and the general public
(5) Existing occupancies and conditions, the design and construction of new buildings, remodeling of existing buildings, and additions to existing buildings
(6) Design, installation, alteration, modification, construction, maintenance, repairs, servicing, and testing of fire protection systems and equipment
(7) Installation, use, storage, and handling of medical gas systems
(8) Access requirements for fire department operations
(9) Hazards from outside fires in vegetation, trash, building debris, and other materials
(10) Regulation and control of special events including, but not limited to, assemblage of people, exhibits, trade shows, amusement parks, haunted houses, outdoor events, and other similar special temporary and permanent occupancies
(11) Interior finish, decorations, furnishings, and other combustibles that contribute to fire spread, fire load, and smoke production
(12) Storage, use, processing, handling, and on-site transportation of flammable and combustible gases, liquids, and solids
(13) Storage, use, processing, handling, and on-site transportation of hazardous materials
(14) Control of emergency operations and scenes
(15) Conditions affecting fire fighter safety
(16) Arrangement, design, construction, and alteration of new and existing means of egress

1.1.2 Title. The title of this *Code* shall be NFPA 1, *Fire Code*, of the National Fire Protection Association (NFPA).

1.2* Purpose. The purpose of this *Code* is to prescribe minimum requirements necessary to establish a reasonable level of fire and life safety and property protection from the hazards created by fire, explosion, and dangerous conditions.

1.3 Application.

1.3.1 This *Code* shall apply to both new and existing conditions.

1.3.2* Referenced Standards.

1.3.2.1 Details regarding processes, methods, specifications, equipment testing and maintenance, design standards, performance, installation, or other pertinent criteria contained in those codes and standards listed in Chapter 2 of this *Code* shall be considered a part of this *Code*.

1.3.2.2 Where no applicable codes, standards, or requirements are set forth in this *Code* or contained within other laws, codes, regulations, ordinances, or bylaws adopted by the authority having jurisdiction (AHJ), compliance with applicable codes and standards of NFPA or other nationally recognized standards as are approved shall be deemed as prima facie evidence of compliance with the intent of this *Code*.

1.3.2.3 Nothing herein shall diminish the authority of the AHJ to determine compliance with codes or standards for those activities or installations within the AHJ's responsibility.

1.3.2.4 Retroactivity of Referenced Standards to Existing Conditions. Unless otherwise specified by 1.3.2.4.1 through 1.3.2.4.3, the current provisions of the referenced standards shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of this *Code*.

1.3.2.4.1 Where specified by a reference standard for existing occupancies, conditions, or systems, the provisions of the referenced standards shall be retroactive.

1.3.2.4.2 Facilities, equipment, structures, and installations, installed in accordance with a reference standard, shall be maintained in accordance with the edition of the standard in effect at the time of installation.

1.3.2.4.3 In those cases where the AHJ determines that the existing situation constitutes an imminent danger, the AHJ shall be permitted to apply retroactively any portions of the current referenced standards deemed appropriate.

1.3.3 Conflicts.

1.3.3.1 When a requirement differs between this *Code* and a referenced document, the requirement of this *Code* shall apply.

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1.3.3.2 When a conflict between a general requirement and a specific requirement occurs, the specific requirement shall apply.

1.3.4 Multiple Occupancies. Where two or more classes of occupancy occur in the same building or structure and are so intermingled that separate safeguards are impractical, means of egress facilities, construction, protection, and other safeguards shall comply with the most restrictive fire safety requirements of the occupancies involved.

1.3.5 Vehicles and Vessels. Vehicles, vessels, or other similar conveyances, when in fixed locations and occupied as buildings, as described by Section 11.6 of NFPA *101*, *Life Safety Code*, shall be treated as buildings and comply with this *Code*.

1.3.6 Buildings.

1.3.6.1 Buildings permitted for construction after the adoption of this *Code* shall comply with the provisions stated herein for new buildings.

1.3.6.2* Buildings in existence or permitted for construction prior to the adoption of this *Code* shall comply with the provisions stated herein or referenced for existing buildings *(see 10.3.2)*.

1.3.6.3 Repairs, renovations, alterations, reconstruction, change of occupancy, and additions to buildings shall conform to this *Code*, NFPA *101*, and the building code.

1.3.6.4 Newly introduced equipment, materials, and operations regulated by this *Code* shall comply with the requirements for new construction or processes.

1.3.7 Severability. If any provision of this *Code* or the application thereof to any person or circumstance is held invalid, the remainder of the *Code* and the application of such provision to other persons or circumstances shall not be affected thereby.

1.4 Equivalencies, Alternatives, and Modifications.

1.4.1 Equivalencies. Nothing in this *Code* is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety to those prescribed by this *Code*, provided technical documentation is submitted to the AHJ to demonstrate equivalency and the system, method, or device is approved for the intended purpose.

1.4.2 Alternatives. The specific requirements of this *Code* shall be permitted to be altered by the AHJ to allow alternative methods that will secure equivalent fire safety, but in no case shall the alternative afford less fire safety than, in the judgment of the AHJ, that which would be provided by compliance with the provisions contained in this *Code*.

1.4.3 Modifications. The AHJ is authorized to modify any of the provisions of this *Code* upon application in writing by the owner, a lessee, or a duly authorized representative where there are practical difficulties in the way of carrying out the provisions of the *Code*, provided that the intent of the *Code* shall be complied with, public safety secured, and substantial justice done.

1.4.4 Buildings with equivalency, alternatives, or modifications approved by the AHJ shall be considered as conforming with this *Code*.

1.4.5 Each application for an alternative fire protection feature shall be filed with the AHJ and shall be accompanied by such evidence, letters, statements, results of tests, or other supporting information as required to justify the request. The AHJ shall keep a record of actions on such applications, and a signed copy of the AHJ's decision shall be provided for the applicant.

1.4.6 Approval. The AHJ shall approve such alternative construction systems, materials, or methods of design when it is substantiated that the standards of this *Code* are at least equaled. If, in the opinion of the AHJ, the standards of this *Code* shall not be equaled by the alternative requested, approval for permanent work shall be refused. Consideration shall be given to test or prototype installations.

1.4.7 Tests.

1.4.7.1 Whenever evidence of compliance with the requirements of this *Code* is insufficient or evidence that any material or method of construction does not conform to the requirements of this *Code*, or to substantiate claims for alternative construction systems, materials, or methods of construction, the AHJ shall be permitted to require tests for proof of compliance to be made by an approved agency at the expense of the owner or his/her agent.

1.4.7.2 Test methods shall be as specified by this *Code* for the material in question. If appropriate test methods are not specified in this *Code*, the AHJ is authorized to accept an applicable test procedure from another recognized source.

1.4.7.3 Copies of the results of all such tests shall be retained in accordance with Section 1.11.

1.5 Units.

1.5.1 International System of Units. Metric units of measurement in this *Code* are in accordance with the modernized metric system known as the International System of Units (SI).

1.5.2 Primary and Equivalent Values. If a value for a measurement as given in this *Code* is followed by an equivalent value in other units, the first stated value shall be regarded as the requirement. A given equivalent value could be approximate.

1.6 Enforcement. This *Code* shall be administered and enforced by the AHJ designated by the governing authority. *(See Annex C for sample wording for enabling legislation.)*

1.7 Authority.

1.7.1 Administration. The provisions of this *Code* shall apply without restriction, unless specifically exempted.

1.7.2* Minimum Qualifications to Enforce this *Code*. The AHJ shall establish minimum qualifications for all persons assigned the responsibility of enforcing this *Code*.

1.7.3 Interpretations.

1.7.3.1 The AHJ is authorized to render interpretations of this *Code* and to make and enforce rules and supplemental regulations in order to carry out the application and intent of its provisions.

1.7.3.2 Such interpretations, rules, and regulations shall be in conformance with the intent and purpose of this *Code* and shall be available to the public during normal business hours.

1.7.4 Enforcement Assistance. Police and other enforcement agencies shall have authority to render necessary assistance in the enforcement of this *Code* when requested to do so by the AHJ.

1.7.5 Delegation of Authority. The AHJ shall be permitted to delegate to other qualified individuals such powers as necessary for the administration and enforcement of this *Code*.

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1.7.6 Reliance on Other Enforcement Officials.

1.7.6.1* The AHJ shall be authorized to rely on plan reviews, inspections, opinions, and approvals rendered by other enforcement officials in determining compliance with this *Code*.

1.7.6.2 When the AHJ relies on inspections, plan reviews, opinions, and approvals rendered by other enforcement officials in determining compliance with this *Code*, the other enforcement officials shall be deemed to be acting as agents under their own authority and not as agents of the AHJ enforcing this *Code*.

1.7.7 Inspection.

1.7.7.1 The AHJ shall be authorized to inspect, at all reasonable times, any building or premises for dangerous or hazardous conditions or materials as set forth in this *Code*.

1.7.7.2 The AHJ shall have authority to order any person(s) to remove or remedy such dangerous or hazardous condition or material. Any person(s) failing to comply with such order shall be in violation of this *Code*.

1.7.7.3 To the full extent permitted by law, any AHJ engaged in fire prevention and inspection work shall be authorized at all reasonable times to enter and examine any building, structure, marine vessel, vehicle, or premises for the purpose of making fire safety inspections.

1.7.7.4 Before entering, the AHJ shall obtain the consent of the occupant thereof or obtain a court warrant authorizing entry for the purpose of inspection except in those instances where an emergency exists.

1.7.7.5 As used in 1.7.7.4, emergency shall mean circumstances that the AHJ knows, or has reason to believe, exist and that can constitute imminent danger.

1.7.7.6 Persons authorized to enter and inspect buildings, structures, marine vessels, vehicles, and premises as herein set forth shall be identified by credentials issued by the governing authority.

1.7.8 Where conditions exist and are deemed hazardous to life or property by the AHJ, the AHJ shall have the authority to summarily abate such hazardous conditions that are in violation of this *Code*.

1.7.9 Interference with Enforcement. Persons shall not interfere or cause conditions that would interfere with an AHJ carrying out any duties or functions prescribed by this *Code*.

1.7.10 Impersonation. Persons shall not use a badge, uniform, or other credentials to impersonate the AHJ.

1.7.11 Investigation.

1.7.11.1 Authority. The AHJ shall have the authority to investigate the cause, origin, and circumstances of any fire, explosion, release of hazardous materials, or other hazardous condition.

1.7.11.2 Evidence. The AHJ shall have the authority to take custody of all physical evidence relating to the cause of the fire, explosion, release of hazardous materials, or other hazardous condition.

1.7.11.3 Limiting Access. The AHJ shall have the authority to limit access to emergencies or other similar situations.

1.7.11.4 Trade Secret. Information that could be related to trade secrets or processes shall not be made part of the public record except as could be directed by a court of law.

1.7.12 Plans and Specifications.

1.7.12.1 The AHJ shall have the authority to require plans and specifications to ensure compliance with applicable codes and standards.

1.7.12.2 Plans shall be submitted to the AHJ prior to construction unless otherwise permitted by 1.7.12.4.

1.7.12.3 The construction documents for each phase shall be complete in themselves, so that review and inspection can properly be made. Preliminary plans of the total building shall be submitted with the construction documents, and with sufficient detail, so that proper evaluation can be made. Areas and items not included in the phase to be permitted shall be shown as not included. [**5000:**1.7.6.3.3.3]

1.7.12.4 The AHJ is authorized to exempt detached one- and two-family dwellings and accessory structures from the submittal of plans.

1.7.12.5 Plans shall be submitted to the AHJ prior to the change of occupancy of any existing building.

1.7.12.6 Plans shall be submitted to the AHJ prior to the alteration of the means of egress or fire protection systems of any existing building.

1.7.12.7 Plans shall be submitted to the AHJ for other conditions as deemed necessary by the AHJ to determine compliance with the applicable codes and standards.

1.7.12.8 The AHJ shall be authorized to require permits for conditions listed in 1.7.12.2, 1.7.12.5, and 1.7.12.6, unless otherwise permitted by 1.7.12.9.

1.7.12.9 The AHJ is authorized to exempt detached one- and two-family dwellings and accessory structures from the permit requirement of 1.7.12.8.

1.7.12.10 No construction work shall proceed until the AHJ has reviewed the plans for compliance with the applicable codes and standards and the applicable permits have been issued.

1.7.13 Inspection of Construction and Installation.

1.7.13.1 The AHJ shall be notified by the person performing the work when the installation is ready for a required inspection.

1.7.13.2 Whenever any installation subject to inspection prior to use is covered or concealed without having first been inspected, the AHJ shall have the authority to require that such work be exposed for inspection.

1.7.13.3 When any construction or installation work is being performed in violation of the plans and specifications as approved by the AHJ, a written notice shall be issued to the responsible party to stop work on that portion of the work that is in violation.

1.7.13.4 The notice shall state the nature of the violation, and no work shall be continued on that portion until the violation has been corrected.

1.7.14 Certificate of Occupancy. When the building code requires a certificate of occupancy, the certificate of occupancy shall not be issued until approved by the AHJ for fire code enforcement.

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1.7.15 Stop Work Order. The AHJ shall have the authority to order an operation, construction, or use stopped when any of the following conditions exists:

(1) Work is being done contrary to provision of this *Code*.
(2) Work is occurring without a permit required by Section 1.12.
(3) An imminent danger has been created.

1.7.16 Imminent Dangers and Evacuation.

1.7.16.1 When, in the opinion of the AHJ, an imminent danger exists, the AHJ shall be authorized to order the occupants to vacate, or temporarily close for use or occupancy, a building, the right-of-way, sidewalks, streets, or adjacent buildings or nearby areas.

1.7.16.2 The AHJ shall be authorized to employ the necessary resources to perform the required work in order to mitigate the imminent danger.

1.7.16.3 Costs incurred by the AHJ in the performance of emergency work shall be the responsibility of the property owner or other responsible party creating such imminent danger.

1.7.17 Standby and Fire Watch Personnel.

1.7.17.1 The AHJ shall have the authority to require standby fire personnel or an approved fire watch when potentially hazardous conditions or a reduction in a life safety feature exist due to the type of performance, display, exhibit, occupancy, contest, or activity; an impairment to a fire protection feature; or the number of persons present.

1.7.17.2 The owner, agent, or lessee shall employ one or more qualified persons, as required and approved, to be on duty.

1.7.17.2.1 The cost of standby fire personnel shall be at no cost to the AHJ.

1.7.17.3* Such standby fire personnel or fire watch personnel shall be subject to the AHJ's orders at all times and shall be identifiable and remain on duty during the times such places are open to the public, when such activity is being conducted, or as required by the AHJ.

1.7.18 Public Fire Education.

1.7.18.1 The AHJ shall have the authority to develop and implement a public fire safety education program as deemed necessary for the general welfare with respect to the potential fire hazards within the jurisdiction.

1.7.18.2 The AHJ shall have the authority to ensure duly authorized public fire safety education programs or public fire safety messages are disseminated to the general public.

1.8 Duties and Powers of the Incident Commander.

1.8.1 Authority. The incident commander conducting operations in connection with the extinguishment and control of any fire, explosion, hazardous materials incident, natural disaster, rescue, and/or other emergency shall have authority to direct all operations of fire extinguishment, mitigation of a hazardous materials incident, natural disaster, rescue, and/or control and to take necessary precautions to save life, protect property, and prevent further injury or damage.

1.8.2 Controlling Scene. During any emergency described in 1.8.1, including the investigation of the cause of such emergency, the incident commander or authorized representative shall be permitted to control or prohibit the approach to the scene of such emergency by any vehicle, vessel, or person.

1.8.3 Obstruction of Operations. Persons shall not obstruct the operations of the fire department or disobey any command of the incident commander or authorized representative or any part thereof, or any order of a police officer assisting the fire department.

1.8.4 Scene Barrier. The incident commander or authorized representative in charge of an emergency scene shall have the authority to establish barriers to control access in the vicinity of such emergency and to place, or cause to be placed, ropes, guards, barricades, or other obstructions across any street or alley to delineate such emergency scene barrier.

1.8.5 Persons, except as authorized by the incident commander in charge of the emergency, shall not be permitted to cross barriers established in accordance with 1.8.4.

1.9 Liability.

1.9.1 The AHJ, and other individuals charged by the AHJ, or the incident commander of emergency operations, charged with the enforcement of this *Code* or any other official duties, acting in good faith and without malice in the discharge of their duties, shall not thereby be rendered personally liable for any damage that could accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of their duties.

1.9.2 The fire department and AHJ, acting in good faith and without malice in the discharge of the organizations' public duty, shall not thereby be rendered liable for any damage that could accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of such duties.

1.9.3 Any suit brought against the AHJ, the incident commander, or such individuals because of such act or omission performed in the enforcement of any provision of such codes or other pertinent laws or ordinances implemented through the enforcement of this *Code* or enforced by the code enforcement agency shall be defended by this jurisdiction until final termination of such proceedings, and any judgment resulting therefrom shall be assumed by this jurisdiction.

1.9.4 This *Code* shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspections authorized by this *Code* or any permits or certificates issued under this *Code*.

1.10 Fire Code Board of Appeals.

1.10.1 Establishment of Fire Code Board of Appeals. A Board of Appeals shall be established to rule on matters relating to the fire code and its enforcement.

1.10.1.1 Membership.

1.10.1.1.1 The members of the Board of Appeals shall be appointed by the governing body of the jurisdiction.

1.10.1.1.2 The Board of Appeals shall consist of five or seven principal members and one ex officio member representative of the AHJ. Each principal member shall be permitted to have an alternate with similar experience to serve in his or her stead when necessary.

1.10.1.1.2.1 The jurisdiction governing body shall have the authority to appoint alternates who shall serve when a principal member is unable to fulfill their obligations. Alternates

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shall have the full authority and responsibility of principal members when serving in place of a principal member.

1.10.1.1.3 Members and alternate members shall be appointed based on their education, experience, and knowledge.

1.10.1.1.4 Members and alternates shall be appointed to a 3-year term.

1.10.1.1.5 Members and alternates shall be composed of individuals experienced in the following fields or professions:

(1) Engineering or architectural design
(2) General contracting
(3) Fire protection contracting
(4) Fire department operations or fire code enforcement
(5) Building code enforcement
(6) Legal
(7) General public

1.10.1.1.5.1 Members and alternates shall not be employees, agents, or officers of the jurisdiction.

1.10.1.1.5.2 Members and alternates shall be residents of the jurisdiction.

1.10.1.1.5.3 No more than one member shall represent the same field or provision listed in 1.10.1.1.5.

1.10.1.1.6 The representative of the AHJ shall be an ex officio member and shall be entitled to participate in all discussions. The ex officio member shall not be entitled to a vote.

1.10.1.1.7 No member of the Board of Appeals shall sit in judgment on any case in which the member holds a direct or indirect property or financial interest in the case.

1.10.1.1.8 The board shall select one of its members to serve as chair and one member to serve as vice chair.

1.10.2 Rules and Procedures of the Board of Appeals. The Board of Appeals shall have the authority to establish rules and regulations for conducting its business that are consistent with the provisions of this *Code*.

1.10.3 Authority of the Board of Appeals.

1.10.3.1 The Board of Appeals shall provide for the reasonable interpretation of the provisions of this *Code* and issue rulings on appeals of the decisions of the AHJ.

1.10.3.2 The ruling of the Board of Appeals shall be consistent with the letter of the *Code* or when involving issues of clarity, ensuring that the intent of the *Code* is met with due consideration for public safety and fire fighter safety.

1.10.3.3 The Board of Appeals shall have the authority to grant alternatives or modifications through procedures outlined in Section 1.4 of the *Code*.

1.10.3.4 The Board of Appeals shall not have the authority to waive the requirements of the *Code*.

1.10.3.5 The Board of Appeals decisions shall not be precedent setting.

1.10.4 Means of Appeals.

1.10.4.1 Any person with standing shall be permitted to appeal a decision of the AHJ to the Board of Appeals when it is claimed that any one or more of the following conditions exist:

(1) The true intent of the *Code* has been incorrectly interpreted.
(2) The provisions of the *Code* do not fully apply.
(3) A decision is unreasonable or arbitrary as it applies to alternatives or new materials.

1.10.4.2 An appeal shall be submitted to the AHJ in writing within 30 calendar days of notification of violation. The appeal shall outline all of the following:

(1) The *Code* provision(s) from which relief is sought
(2) A statement indicating which provisions of 1.10.4.1 apply
(3) Justification as to the applicability of the provision(s) cited in 1.10.4.1
(4) A requested remedy
(5) Justification for the requested remedy stating specifically how the *Code* is complied with, public safety is secured, and fire fighter safety is secured

1.10.4.3* Documentation supporting an appeal shall be submitted to the AHJ at least 7 calendar days prior to the Board of Appeals hearing.

1.10.5 Meetings and Records.

1.10.5.1 Meetings of the Board of Appeals shall be held at the call of the chair, at such other times as the board determines, and within 30 calendar days of the filing of a notice of appeal.

1.10.5.2 All hearings before the Board of Appeals shall be open to the public.

1.10.5.3 The Board of Appeals shall keep minutes of its proceedings showing the vote of each member on every question or, if the member is absent or fails to vote, these actions shall be recorded.

1.10.5.4 The Board of Appeals shall keep records of its examinations and other official actions.

1.10.5.5 Minutes and records of the Board of Appeals shall be public record.

1.10.5.6 A quorum shall consist of not less than 5 members or alternates.

1.10.5.7 In varying the application of any provision of this *Code*, or in modifying an order of the AHJ, a two-thirds vote of the quorum shall be required.

1.10.6 Decisions.

1.10.6.1 Every decision of the Board of Appeals shall be entered in the minutes of the board meeting.

1.10.6.2 A decision of the Board of Appeals to modify an order of the AHJ shall be in writing and shall specify the manner in which such modification is made, the conditions upon which it is made, the reasons therefore, and justification linked to specific code sections.

1.10.6.3 Every decision shall be promptly filed in the office of the AHJ and shall be open for public inspection.

1.10.6.4 A certified copy shall be sent by mail or delivered in person to the appellant, and a copy shall be publicly posted in the office of the AHJ for 2 weeks after filing.

1.10.6.5 The decision of the Board of Appeals shall be final, subject to such remedy as any aggrieved party might have through legal, equity, or other avenues of appeal or petition.

1.10.6.6 If a decision of the Board of Appeals reverses or modifies a refusal, order, or disallowance of the AHJ, or varies the application of any provision of this *Code*, the AHJ shall take action immediately in accordance with such decision.

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1.11 Records and Reports.

1.11.1 A record of examinations, approvals, equivalencies, and alternates shall be maintained by the AHJ and shall be available for public inspection during business hours in accordance with applicable laws.

1.11.2 The AHJ shall keep a record of all fire prevention inspections, including the date of such inspections and a summary of any violations found to exist, the date of the services of notices, and a record of the final disposition of all violations.

1.11.3 Emergency Response Records.

1.11.3.1 The fire department shall keep a record of fire and other emergency responses occurring within its jurisdiction and of facts concerning the same, including statistics as to the extent and damage caused by such fires or emergencies.

1.11.3.2 The fire department shall report its incident record data, collected in accordance with 1.11.3, to the recognized state agency responsible for collecting such data.

1.11.4 All records required to be kept shall be maintained until their usefulness has been served or as required by law.

1.12 Permits and Approvals.

1.12.1 The AHJ shall be authorized to establish and issue permits, certificates, and approvals pertaining to conditions, operations, or materials hazardous to life or property pursuant to Section 1.12.

1.12.2 Applications for permits shall be made to the AHJ on forms provided by the jurisdiction and shall include the applicant's answers in full to inquiries set forth on such forms.

1.12.2.1 Applications for permits shall be accompanied by such data as required by the AHJ and fees as required by the jurisdiction.

1.12.2.2 The AHJ shall review all applications submitted and issue permits as required.

1.12.2.3 If an application for a permit is rejected by the AHJ, the applicant shall be advised of the reasons for such rejection.

1.12.2.4 Permits for activities requiring evidence of financial responsibility by the jurisdiction shall not be issued unless proof of required financial responsibility is furnished.

1.12.3 Conditions of Approval.

1.12.3.1 Any conditions of the initial approval by the AHJ of a use, occupancy, permit, or construction shall remain with the use, occupancy, permit, or construction unless modified by the AHJ.

1.12.3.2 The AHJ shall be permitted to require conditions of approval be memorialized via recording in the public records, as part of the plat, permit, or other method as approved by the AHJ.

1.12.4 Approvals by Other AHJs.

1.12.4.1 The AHJ shall have the authority to require evidence to show that other regulatory agencies having jurisdiction over the design, construction, alteration, repair, equipment, maintenance, process, and relocation of structures have issued appropriate approvals.

1.12.4.2 The AHJ shall not be held responsible for enforcement of the regulations of such other regulatory agencies unless specifically mandated to enforce those agencies' regulations.

1.12.5 Misrepresentation.

1.12.5.1 Any attempt to misrepresent or otherwise deliberately or knowingly design; install; service; maintain; operate; sell; represent for sale; falsify records, reports, or applications; or other related activity in violation of the requirements prescribed by this *Code* shall be a violation of this *Code*.

1.12.5.2 Such violations shall be cause for immediate suspension or revocation of any related approvals, certificates, or permits issued by this jurisdiction.

1.12.5.3 Such violations shall be subject to any other criminal or civil penalties as available by the laws of this jurisdiction.

1.12.6 Permits.

1.12.6.1 A permit shall be predicated upon compliance with the requirements of this *Code* and shall constitute written authority issued by the AHJ to maintain, store, use, or handle materials; to conduct processes that could produce conditions hazardous to life or property; or to install equipment used in connection with such activities.

1.12.6.2 Any permit issued under this *Code* shall not take the place of any other approval, certificate, license, or permit required by other regulations or laws of this jurisdiction.

1.12.6.3 Where additional permits, approvals, certificates, or licenses are required by other agencies, approval shall be obtained from those other agencies.

1.12.6.4 The AHJ shall have the authority to require an inspection prior to the issuance of a permit.

1.12.6.5 A permit issued under this *Code* shall continue until revoked or for the period of time designated on the permit.

1.12.6.6 The permit shall be issued to one person or business only and for the location or purpose described in the permit.

1.12.6.7 Any change that affects any of the conditions of the permit shall require a new or amended permit.

1.12.6.8 The AHJ shall have the authority to grant an extension of the permit time period upon presentation by the permittee of a satisfactory reason for failure to start or complete the work or activity authorized by the permit.

1.12.6.9 A copy of the permit shall be posted or otherwise readily accessible at each place of operation and shall be subject to inspection as specified by the AHJ.

1.12.6.10 Any activity authorized by any permit issued under this *Code* shall be conducted by the permittee or the permittee's agents or employees in compliance with all requirements of this *Code* applicable thereto and in accordance with the approved plans and specifications.

1.12.6.11 No permit issued under this *Code* shall be interpreted to justify a violation of any provision of this *Code* or any other applicable law or regulation.

1.12.6.12 Any addition or alteration of approved plans or specifications shall be approved in advance by the AHJ, as evidenced by the issuance of a new or amended permit.

1.12.6.13* Permits shall be issued by the AHJ and shall indicate the following:

(1) Operation, activities, or construction for which the permit is issued
(2) Address or location where the operation, activity, or construction is to be conducted

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(3) Name, address, and phone number of the permittee
(4) Permit number
(5) Period of validity of the permit
(6) Inspection requirements
(7) Name of the agency authorizing the permit (AHJ)
(8) Date of issuance
(9) Permit conditions as determined by the AHJ

1.12.6.14 Any application for, or acceptance of, any permit requested or issued pursuant to this *Code* shall constitute agreement and consent by the person making the application or accepting the permit to allow the AHJ to enter the premises at any reasonable time to conduct such inspections as required by this *Code*.

1.12.7 Revocation or Suspension of Permits.

1.12.7.1 The AHJ shall be permitted to revoke or suspend a permit or approval issued if any violation of this *Code* is found upon inspection or in case any false statements or misrepresentations have been submitted in the application or plans on which the permit or approval was based.

1.12.7.2 Revocation or suspension shall be constituted when the permittee is duly notified by the AHJ.

1.12.7.3 Any person who engages in any business, operation, or occupation, or uses any premises, after the permit issued therefore has been suspended or revoked pursuant to the provisions of this *Code*, and before such suspended permit has been reinstated or a new permit issued, shall be in violation of this *Code*.

1.12.8 Permits shall be required in accordance with Table 1.12.8(a) through Table 1.12.8(d).

Tables 1.12.8(a) and 1.12.8(d) were revised by a tentative interim amendment. (TIA). See page 1.

Table 1.12.8(a) Permit Requirements

Operations and Materials	Permit Required	Cross Reference Section Number
Aerosol products	To store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 lb (226.8 kg)	61.1.2
Aircraft fuel servicing	To provide aircraft fuel servicing	42.10.1.2
Aircraft hangars	For servicing or repairing aircraft	21.1.1
Aircraft refueling vehicles	To operate aircraft refueling vehicles	42.10.1.2
Airport terminal buildings	For construction and alteration	21.2.2.1
Ammonium nitrate	For storage	Chapter 74
Amusement parks	For construction, alteration, or operation of amusement park fire protection safety features	10.15.1
Asbestos removal	For the removal of asbestos	16.8.2
Automatic fire suppression systems	For installation, modification, or removal from service of any automatic fire suppression system*	13.1.1.1; 50.4.2
Automobile wrecking yards	To operate automobile wrecking yards	22.2
Automotive fuel servicing	To provide automotive fuel servicing	42.2.2.1; 42.11.2.2.4; 42.11.3.1
Battery systems	To install or operate stationary lead-acid battery systems having an electrolyte capacity of more than 100 gal (378.5 L) in sprinklered buildings or 50 gal (189.3 L) in nonsprinklered buildings	52.2
Candles, open flames, and portable cooking	To use in connection with assembly areas, dining areas of restaurants, or drinking establishments	17.3.2; 20.1.1.1
Carnivals and fairs	To conduct a carnival or fair	10.15.1
Cellulose nitrate film	To store, handle, use, or display	20.15.7.2
Cellulose nitrate plastic	To store or handle more than 25 lb (11.3 kg)	43.1.1.4
Change of occupancy	For the change of occupancy classification of an existing building	1.7.11.5

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Table 1.12.8(a) *Continued*

Operations and Materials	Permit Required	Cross Reference Section Number
Cleanrooms	For construction, alteration, or operation	23.3
Combustible fibers	For storage or handling of combustible fibers greater than 100 ft^3 (2.8 m^3)	45.1.3
Combustible material storage	To store more than 2500 ft^3 (70.8 m^3) gross volume	10.19.2; 19.1.1; 31.2
Commercial rubbish-handling operation	To operate	19.1.1
Compressed gases	1. To store, use, or handle compressed gases in excess of the amounts listed in Table 1.12.8(b) 2. When the compressed gases in use or storage exceed the amounts listed in Table 1.12.8(b), a permit is required to install, repair damage to, abandon, remove, place temporarily out of service, close, or substantially modify a compressed gas system 3. For additional permit requirements for compressed gases facility closures, see 63.1.2	63.1.2
Construction	For the construction of a building or structure	1.7.11.8
Covered mall buildings	Annual requirement for facilities that utilize mall area for exhibits or displays with 4 conditions	20.1.5.5.1
Crop maze	To operate a crop maze	10.15.11.1
Cryogens	To produce, store, or handle cryogens in excess of amounts listed in Table 1.12.8(c) *Exception: Where federal or state regulations apply or for fuel systems of a vehicle.*	63.1.2
Cutting and welding operation	For operations within a jurisdiction	41.1.5; 41.3.2.2; 41.3.2.2.2
Display fireworks (1.3G)	For possession, transportation, storage, manufacture, sale, handling, and discharge of display fireworks within the jurisdiction	65.2.3; 65.5.2
Drycleaning plants	To engage in business of drycleaning or to change to a more hazardous cleaning solvent	24.2
Dust-producing operations	To operate a grain elevator, flour mill, starch mill, feed mill, or plant pulverizing aluminum, coal, cocoa, magnesium, spices, sugar, or other similar combustible material	40.2
Exhibit and trade shows	For operation of all exhibits and trade shows held within a jurisdiction	20.1.5.5.1
Explosives	1. Manufacture, sell, dispose, purchase, storage, use, possess, or transport of explosives within the jurisdiction 2. For additional permit requirements for blasting operations, see 65.9.2	65.9.2
Fire alarm and detection systems and related equipment	For installation, modification, or removal from service of any fire alarm and detection systems and related equipment*	13.1.1.1
Fire apparatus access roads	For the construction of a fire apparatus access road	18.1.2
Fire hydrants and water-control valves	To use a fire hydrant or operate a water-control valve intended for fire suppression purposes	13.1.1.1
Fire pumps and related equipment	For installation of, modification to, or removal from service of any fire pumps, jockey pumps, controllers, and generators*	13.1.1.1

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Table 1.12.8(a) ***Continued***

Operations and Materials	Permit Required	Cross Reference Section Number
Flame effects	Use of flame effects before an audience	65.4.2
Flammable and combustible liquids	1. To use or operate, repair, or modify a pipeline for the on-site transportation of flammable or combustible liquids 2. To store, handle, or use Class I liquids in excess of 5 gal (18.9 L) in a building or in excess of 10 gal (37.9 L) outside of a building *Exception to item (2): A permit is not required for the following:* *(a) The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant, or mobile heating plant unless such storage in the opinion of the chief would cause an unsafe condition* *(b) The storage or use of paints, oils, varnishes, or similar flammable mixtures when such liquids are stored for maintenance, painting, or similar purposes for a period of not more than 30 days* 3. To store, handle, or use Class II or Class III-A liquids in excess of 25 gal (94.6 L) in a building or in excess of 60 gal (227.1 L) outside a building *Exception to item (3): Fuel oil used in connection with oil-burning equipment* 4. To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes 5. To install, construct, alter, or operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries, and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed, or used 6. To install, alter, clean, repair, line with a protective coating, remove, abandon, place temporarily out of service, or otherwise dispose of a flammable or combustible liquid tank 7. To change the type of contents stored in a flammable or combustible liquid tank to a material other than those for which the tank was designed and constructed	66.1.5
Fruit ripening	To operate a fruit-ripening process	63.1.2
General storage	To store materials indoors or outdoors, representing a broad range of combustibles, including plastics, rubber tires, and roll paper	34.1.2
Grandstands, bleachers, and folding and telescopic seating	For construction, location, erection, or placement of grandstands, bleachers, and folding and telescopic seating	25.1.2
Hazardous materials	1. To store, transport on site, dispense, use, or handle hazardous materials in excess of the amounts listed in Table 1.12.8(d) 2. To install, repair, abandon, remove, place temporarily out of service, close, or substantially modify a storage facility or other area regulated by Chapter 60 when the hazardous materials in use or storage exceed the amounts listed in Table 1.12.8(d)	Chapter 60
High-piled combustible storage	To use any building or portion thereof as a high-piled storage area exceeding 500 ft^2 (46.45 m^2)	20.15.8.2
High-powered rocketry	For the manufacture, sale, and use of high-powered rocketry	65.8.2; 65.7.2
Hot work operations	To conduct hot work	17.3.2; 41.1.5; 41.3.4
Industrial ovens and furnaces	For operation of industrial ovens and furnaces covered by Chapter 51	51.1.2
Laboratories	For construction, alteration, or operation	26.3
Liquefied petroleum gases	1. To store, use, handle, or dispense LP-Gas of 125 gal (0.5 m^3) (water capacity) aggregate capacity or greater 2. To install or modify LP-Gas systems	42.11.2.2.4 69.1.2

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Table 1.12.8(a) *Continued*

Operations and Materials	Permit Required	Cross Reference Section Number
Liquid- or gas-fueled vehicles	To display, compete, or demonstrate liquid- or gas-fueled vehicles or equipment in assembly buildings	20.1.5.5.1
Lumberyards and woodworking plants	For storage of lumber exceeding 100,000 board ft	31.2
Marine craft fuel servicing	To provide marine craft fuel servicing	42.9.1.4
Means of egress	For the modification of a means of egress system in an existing building	1.7.11.6
Membrane structures, tents, and canopies — permanent	For construction, location, erection, or placement	25.1.2
Membrane structures, tents, and canopies — temporary	To erect or operate an air-supported temporary membrane structure or tent having an area in excess of 200 ft^2 (18.6 m^2) or a canopy in excess of 400 ft^2 (37.2 m^2) *Exception: Temporary membrane structures, tents, or canopy structures used exclusively for camping.*	25.1.2
Motion picture and television production studio soundstages and approved production facilities	To design, construct, operate, and maintain soundstages and approved production facilities used in motion picture and television industry productions	32.2
Oil- and gas-fueled heating appliances	To install oil- and gas-fired heating appliances	11.5.1.8
Open burning	1. To conduct open burning 2. For additional permit requirements for open burning, see 10.11.1	10.11.1
Open fires	1. For kindling or maintaining an open fire 2. For additional permit requirements for open fires, see 10.11.4†	10.11.1
Organic coatings	For operation and maintenance of a facility that manufactures organic coatings	43.1.1.4
Organic peroxide formulations	To store, transport on site, use, or handle materials in excess of amounts listed in Tables 1.12.8(c) and (d)	Chapter 75
Outside storage of tires	To store more than 500 tires outside	33.1.2
Oxidizers	To store, transport on site, use, or handle materials in excess of amounts listed in Tables 1.12.8(c) and (d)	Chapter 70
Parade floats	To use a parade float for public performance, presentation, spectacle, entertainment, or parade	10.17.1
Places of assembly	To operate a place of assembly	10.15.1; 20.1.1.1
Pyrotechnic articles	For the manufacture, storage, sale, or use of pyrotechnic articles within the jurisdiction	65.2.3; 65.3.3; 65.5.2
Pyrotechnics before a proximate audience	For the display and use of pyrotechnic materials before a proximate audience	65.3.3
Pyroxylin plastics	For storage, handling, assembly, or manufacture of pyroxylin plastics	43.1.1.4
Private fire hydrants	For installation, modification, or removal from service of any private fire hydrants	13.1.1.1

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Table 1.12.8(a) *Continued*

Operations and Materials	Permit Required	Cross Reference Section Number
Refrigeration equipment	To install or operate a mechanical refrigeration unit or system regulated by this *Code*	53.1.3
Repair garages and service stations	For operation of service stations and repair garages	30.1.1.3; 30.2.1.1
Rocketry manufacturing	For the manufacture of model rocket motors	65.7.2
Rooftop heliports	For construction, modification, or operation of a rooftop heliport	21.3.2.1
Solvent extraction	For storage, use, and handling	44.3
Spraying or dipping of flammable finish	For installation or modification of any spray room, spray booth, or preparation work station, or to conduct a spraying or dipping operation utilizing flammable or combustible liquids or powder coating	43.1.1.4
Standpipe systems	For installation, modification, or removal from service of any standpipe system*	13.1.1.1
Special outdoor events	For the location and operation of special outdoor events	10.15.1
Tar kettles	To place a tar kettle, a permit must be obtained prior to the placement of a tar kettle	16.7.1.2; 17.3.2
Tire storage	To use an open area or portion thereof to store tires in excess of 500 tires	33.1.2; 34.1.2
Torch-applied roofing operation	For the use of a torch for application of roofing materials	16.6.1
Water supply system for fire flow	For the construction of a water supply system for fire flow	18.1.2
Wildland fire–prone areas	For use of hazardous areas within fire-prone areas	17.3.2
Wood products	To store wood chips, hogged material, wood by-products, lumber, or plywood in excess of 200 ft^3 (5.7 m^3)	31.2

*Maintenance performed in accordance with this *Code* is not considered a modification and does not require a permit.
†Cooking and recreational fires are exempt an6d do not require a permit.

Table 1.12.8(b) Permit Amounts for Compressed Gases

Type of Gas	Amount*	
	ft^3	m^3
Corrosive	200	0.57
Flammable	200	0.57
Highly toxic	Any amount	
Inert and simple asphyxiant	6000	169.9
Oxidizing (including oxygen)	504	14.3
Pyrophoric	Any amount	
Toxic	Any amount	
Unstable (reactive)	Any amount	

Note: See Chapters 41, 42, 60, 63, and 69 for additional requirements and exceptions.
*Cubic feet measured at normal temperature and pressure.

Table 1.12.8(c) Permit Amounts for Cryogens

Type of Cryogen	Inside Building (gal)	Outside Building (gal)
Corrosive	Over 1	Over 1
Flammable	Over 1	60
Toxic/highly toxic	Over 1	Over 1
Nonflammable	60	500
Oxidizer (includes oxygen)	10	50

Note: See Chapter 63.

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Table 1.12.8(d) Permit Amounts for Hazardous Materials

Type of Material	Amount	
	U.S. Unit	Metric Unit
Cellulose nitrate	25 lb	11.3 kg
Combustible fiber	100 ft^3	2.8 m^3
Combustible liquids	*See Table 1.12.8(a)*	
Corrosive gases	*See Table 1.12.8(b)*	
Corrosive liquids	55 gal	208 L
Corrosive solids	500 lb	227 kg
Cryogens	*See Table 1.12.8(c)*	
Display fireworks (1.3G)	Any amount	
Explosives	Any amount	
Flammable gases	*See Table 1.12.8(b)*	
Flammable liquids	*See Table 1.12.8(a)*	
Flammable solids	100 lb	45.4 kg
Highly toxic gases	*See Table 1.12.8(b)*	
Highly toxic liquids	Any amount	
Highly toxic solids	Any amount	
LP-Gas	*See Table 1.12.8(b)*	
Nitrate film (cellulose)	Any amount	
Organic peroxides:	*See Table 1.12.8(a)*	
Class I	Any amount	
Class II	Any amount	
Class III	10 lb	4.5 kg
Class IV	20 lb	9 kg
Class V	Not required	
Unclassified detonatable	Any amount	
Oxidizing gases	*See Table 1.12.8(b)*	
Oxidizing liquids:	*See Table 1.12.8(a)*	
Class 4	Any amount	
Class 3	1 gal	3.8 L
Class 2	10 gal	38 L
Class 1	55 gal	208 L
Oxidizing solids:	*See Table 1.12.8(a)*	
Class 4	Any amount	
Class 3	10 lb	4.5 kg
Class 2	100 lb	45 kg
Class 1	500 lb	227 kg
Pyrophoric gases	*See Table 1.12.8(b)*	
Pyrophoric liquids	Any amount	
Pyrophoric solids	Any amount	
Toxic gases	*See Table 1.12.8(b)*	
Toxic liquids	10 gal	38 L
Toxic solids	100 lb	45 kg
Unstable (reactive) gases	*See Table 1.12.8(b)*	
Unstable (reactive) liquids:		
Class 4	Any amount	
Class 3	Any amount	
Class 2	5 gal	19 L
Class 1	10 gal	38 L
Unstable (reactive) solids:		
Class 4	Any amount	
Class 3	Any amount	
Class 2	50 lb	22.7 kg
Class 1	100 lb	45 kg
Water reactive liquids:		
Class 3	Any amount	
Class 2	5 gal	19 L
Class 1	10 gal	38 L

Table 1.12.8(d) ***Continued***

Type of Material	Amount	
	U.S. Unit	Metric Unit
Water reactive solids:		
Class 3	Any amount	
Class 2	50 lb	22.7 kg
Class 1	100 lb	45 kg

Note: See Chapter 60 for additional requirements and exceptions.

1.13 Certificates of Fitness.

1.13.1 Authorization. The AHJ shall have the authority to require certificates of fitness and collect fees for individuals or companies performing any of the following activities:

(1) Inspection, servicing, or recharging of portable fire extinguishers
(2) Installation, servicing, modification, or recharging of fixed fire extinguishing systems
(3) Installation, servicing, or modification of fire alarm or fire communication systems
(4) Installation, modification, or servicing of gas- or oil-burning heating systems
(5) Chimney sweep operations
(6) Installation, inspection, servicing, or modification of range-hood systems
(7) Installation or servicing of private fire service mains and their appurtenances
(8) Crowd management services required by the *Code*
(9) Utilization of pyrotechnics before a proximate audience
(10) Installation, modification, or maintenance of liquefied petroleum gas or liquefied natural gas tanks or systems
(11) Installation or modification of medical gas systems where a permit is required by Table 1.12.8(a)
(12) Installation, modification, or maintenance of standpipe systems
(13) Installation, modification, or maintenance of automatic sprinkler systems
(14) Installation, modification, or maintenance of fire pumps
(15) Installation, modification, or maintenance of tanks, wells, or drafting points used for fire protection water supplies

1.13.2 Mandatory. The AHJ shall require certificates of fitness and collect fees for individuals or companies performing any of the following activities:

(1) Use of explosive materials
(2) Fireworks displays involving display fireworks, 1.3G

1.13.3 The AHJ shall be responsible for the issuance of certificates of fitness required by the AHJ.

1.13.4 All applications for a certificate of fitness shall be filed with the AHJ on forms provided by the AHJ.

1.13.5 Certification of Applicant.

1.13.5.1 Every individual or company applying for a certificate of fitness shall furnish to the AHJ evidence of a familiarity with applicable codes, regulations, standards, listings, guidelines, and construction and safety practices for the activity for which the certificate of fitness is issued.

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1.13.5.2* The AHJ shall also utilize certification programs provided by national organizations acceptable to the AHJ, where available, to determine evidence of compliance with 1.13.5.1.

1.13.5.3 The AHJ shall investigate every application for a certificate of fitness.

1.13.5.4* The investigation shall include an examination of the applicant's experience and training in the field of the certificate of fitness for which application has been made.

1.13.5.5 When the AHJ determines that an applicant is not fit to receive the certificate of fitness because of the applicant's inability to comply with the provisions of this *Code*, the AHJ shall refuse to issue the certificate of fitness.

1.13.5.6 If the refusal is based on the applicant's inability to pass an examination given to determine competency, the applicant shall not be permitted to apply again for the certificate of fitness within a 10-day period following the examination.

1.13.6 Certificates of fitness shall not be transferable.

1.13.7 Certificates of fitness shall be issued for the period of time as indicated on the certificate of fitness as determined by the AHJ, but such period of time shall not exceed 3 years.

1.13.8 Applications for renewal of a certificate of fitness shall be filed in the same manner as an application for an original certificate.

1.13.9 Each individual or company holding a certificate of fitness shall notify the AHJ in writing of any address change within 10 days after such change.

1.13.10 A certificate of fitness shall be in the form of an identification card. The card shall contain the following information:

(1) Purpose for which the certificate of fitness is issued
(2) Date of expiration
(3) Information necessary to easily identify the individual to whom the certificate of fitness is issued
(4) Signature of the individual to whom the certificate of fitness is issued
(5) Name and signature of the AHJ or a designated representative
(6) Statement printed thereon in bold type the following: THIS CERTIFICATE IS NOT AN ENDORSEMENT OF THIS INDIVIDUAL OR COMPANY BY THE AUTHORITY HAVING JURISDICTION.

1.13.11 Any individual or company to whom a certificate of fitness has been granted shall, upon request, produce and show proper identification and the certificate of fitness to anyone for whom that individual seeks to render services or to the AHJ.

1.13.12 Revocation or Suspension of Certificates of Fitness.

1.13.12.1 The AHJ shall be permitted to revoke or suspend a certificate of fitness issued if any violation of this *Code* is found upon inspection or where any false statements or misrepresentations are submitted in the application on which the approval was based.

1.13.12.2 Revocation or suspension shall be constituted when notification is served, posted, or mailed to the address of record for the certificate holder.

1.13.12.3 Failure on the part of an individual to give such notification of a change of address required by 1.13.9 shall constitute grounds for revocation of the certificate of fitness.

1.13.12.4 Revocations or suspensions of a certificate of fitness by the AHJ are appealable to the Board of Appeals as established in Section 1.10.

1.14 Plan Review.

1.14.1 Where required by the AHJ for new construction, modification, or rehabilitation, construction documents and shop drawings shall be submitted, reviewed, and approved prior to the start of such work as provided in Section 1.14.

1.14.2 The applicant shall be responsible to ensure that the following conditions are met:

(1) The construction documents include all of the fire protection requirements.
(2) The shop drawings are correct and in compliance with the applicable codes and standards.
(3) The contractor maintains an approved set of construction documents on site.

1.14.3 It shall be the responsibility of the AHJ to promulgate rules that cover the following:

(1) Criteria to meet the requirements of Section 1.14
(2) Review of documents and construction documents within established time frames for the purpose of acceptance or providing reasons for nonacceptance

1.14.4 Review and approval by the AHJ shall not relieve the applicant of the responsibility of compliance with this *Code*.

1.14.5 When required by the AHJ, revised construction documents or shop drawings shall be prepared and submitted for review and approval to illustrate corrections or modifications necessitated by field conditions or other revisions to approved plans.

1.15 Technical Assistance.

1.15.1 The AHJ shall be permitted to require a review by an approved independent third party with expertise in the matter to be reviewed at the submitter's expense.

1.15.2 The independent reviewer shall provide an evaluation and recommend necessary changes of the proposed design, operation, process, or new technology to the AHJ.

1.15.3 The AHJ shall be authorized to require design submittals to bear the stamp of a registered design professional.

1.15.4 The AHJ shall make the final determination as to whether the provisions of this *Code* have been met.

1.16 Notice of Violations and Penalties.

1.16.1 Where Required. Whenever the AHJ determines violations of this *Code*, a written notice shall be issued to confirm such findings.

1.16.2 Serving Notice of Violation.

1.16.2.1 Any order or notice of violation issued pursuant to this *Code* shall be served upon the owner, operator, occupant, registered agent, or other person responsible for the condition or violation by one of the following means:

(1) Personal service
(2) Mail to last known address of the owner, operator, or registered agent

1.16.2.2 For unattended or abandoned locations, a copy of such order or notice of violation shall be posted on the premises in a conspicuous place at or near the entrance to such

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premises, and the order or notice shall be disseminated in accordance with one of the following:

(1) Mailed to the last known address of the owner, occupant, or registered agent
(2) Published in a newspaper of general circulation wherein the property in violation is located

1.16.2.3 Refusal of an owner, occupant, operator, or other person responsible for the violation to accept the violation notice shall not be cause to invalidate the violation or the notice of violation. When acceptance of a notice of violation is refused, valid notice shall have deemed to have been served under this section provided the methods of service in 1.16.2.1 or 1.16.2.2 have been followed.

1.16.3 Destruction or Removal of Notice. The mutilation, destruction, or removal of a posted order or violation notice without authorization by the AHJ shall be a separate violation of this *Code* and punishable by the penalties established by the AHJ.

1.16.4 Penalties.

1.16.4.1 Any person who fails to comply with the provisions of this *Code*, fails to carry out an order made pursuant to this *Code*, or violates any condition attached to a permit, approval, or certificate shall be subject to the penalties established by the AHJ.

1.16.4.2 Where the AHJ establishes a separate penalty schedule, violations of this *Code* shall be subject to a $250.00 penalty.

1.16.4.3 Failure to comply with the time limits of an order or notice of violation issued by the AHJ shall result in each day that the violation continues being regarded as a separate offense and shall be subject to a separate penalty.

1.16.4.4 A separate notice of violation shall not be required to be served each day for a violation to be deemed a separate offense.

1.16.5 Abatement. Where a violation creates an imminent danger, the AHJ is authorized to abate such hazard in accordance with 1.7.16.

Chapter 2 Referenced Publications

2.1 General. The documents referenced in this chapter or portions of such documents are referenced within this Code and shall be considered part of the requirements of this document.

(1)*Documents referenced in this chapter or portion of such documents shall only be applicable to the extent called for within other chapters of this *Code*.
(2) Where the requirements of a referenced code or standard differ from the requirements of this Code, the requirements of this Code shall govern.

Sections 2.2 and 2.4 were revised by a tentative interim amendment. (TIA). See page 1.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 2, *Hydrogen Technologies Code,* 2011 edition.

NFPA 10, *Standard for Portable Fire Extinguishers,* 2013 edition.

NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam,* 2010 edition.

NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems,* 2011 edition.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems,* 2009 edition.

NFPA 13, *Standard for the Installation of Sprinkler Systems,* 2013 edition.

NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes,* 2013 edition.

NFPA 13R, *Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies,* 2013 edition.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems,* 2013 edition.

NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection,* 2012 edition.

NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems,* 2011 edition.

NFPA 17, *Standard for Dry Chemical Extinguishing Systems,* 2013 edition.

NFPA 17A, *Standard for Wet Chemical Extinguishing Systems,* 2013 edition.

NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection,* 2013 edition.

NFPA 22, *Standard for Water Tanks for Private Fire Protection,* 2013 edition.

NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances,* 2013 edition.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems,* 2014 edition.

NFPA 30, *Flammable and Combustible Liquids Code,* 2015 edition.

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages,* 2015 edition.

NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products,* 2015 edition.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment,* 2011 edition.

NFPA 32, *Standard for Drycleaning Plants,* 2011 edition.

NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials,* 2011 edition.

NFPA 34, *Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids,* 2011 edition.

NFPA 35, *Standard for the Manufacture of Organic Coatings,* 2011 edition.

NFPA 36, *Standard for Solvent Extraction Plants,* 2013 edition.

NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines,* 2014 edition.

NFPA 40, *Standard for the Storage and Handling of Cellulose Nitrate Film,* 2011 edition.

NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals,* 2011 edition.

NFPA 51, *Standard for the Design and Installation of Oxygen–Fuel Gas Systems for Welding, Cutting, and Allied Processes,* 2013 edition.

NFPA 51A, *Standard for Acetylene Cylinder Charging Plants,* 2012 edition.

NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work,* 2014 edition.

NFPA 52, *Vehicular Gaseous Fuel Systems Code,* 2013 edition.

NFPA 54, *National Fuel Gas Code,* 2015 edition.

NFPA 55, *Compressed Gases and Cryogenic Fluids Code,* 2013 edition.

NFPA 58, *Liquefied Petroleum Gas Code,* 2014 edition.

NFPA 59, *Utility LP-Gas Plant Code,* 2015 edition.

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Full document details: NFPA 1 2015

NFPA 59A, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG),* 2013 edition.

NFPA 61, *Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities,* 2013 edition.

NFPA 68, *Standard on Explosion Protection by Deflagration Venting,* 2013 edition.

NFPA 69, *Standard on Explosion Prevention Systems,* 2014 edition.

NFPA 70®, National Electrical Code®, 2014 edition.

NFPA 72®, National Fire Alarm and Signaling Code, 2013 edition.

NFPA 75, *Standard for the Protection of Information Technology Equipment,* 2013 edition.

NFPA 76, *Standard for the Fire Protection of Telecommunications Facilities,* 2012 edition.

NFPA 80, *Standard for Fire Doors and Other Opening Protectives,* 2013 edition.

NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment,* 2014 edition.

NFPA 85, *Boiler and Combustion Systems Hazards Code,* 2011 edition.

NFPA 86, *Standard for Ovens and Furnaces,* 2015 edition.

NFPA 88A, *Standard for Parking Structures,* 2015 edition.

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems,* 2015 edition.

NFPA 90B, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems,* 2015 edition.

NFPA 91, *Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids,* 2010 edition.

NFPA 92, *Standard for Smoke Control Systems,* 2012 edition.

NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations,* 2014 edition.

NFPA 99, *Health Care Facilities Code,* 2015 edition.

NFPA *101®, Life Safety Code®,* 2015 edition.

NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures,* 2011 edition.

NFPA 105, *Standard for Smoke Door Assemblies and Other Opening Protectives,* 2013 edition.

NFPA 110, *Standard for Emergency and Standby Power Systems,* 2013 edition.

NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems,* 2013 edition.

NFPA 120, *Standard for Fire Prevention and Control in Coal Mines,* 2010 edition.

NFPA 122, *Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities,* 2010 edition.

NFPA 130, *Standard for Fixed Guideway Transit and Passenger Rail Systems,* 2014 edition.

NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations,* 2013 edition.

NFPA 150, *Standard on Fire and Life Safety in Animal Housing Facilities,* 2013 edition.

NFPA 160, *Standard for the Use of Flame Effects Before an Audience,* 2011 edition.

NFPA 170, *Standard for Fire Safety and Emergency Symbols,* 2012 edition.

NFPA 204, *Standard for Smoke and Heat Venting,* 2012 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel–Burning Appliances,* 2013 edition.

NFPA 220, *Standard on Types of Building Construction,* 2015 edition.

NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls,* 2015 edition.

NFPA 232, *Standard for the Protection of Records,* 2012 edition.

NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations,* 2013 edition.

NFPA 252, *Standard Methods of Fire Tests of Door Assemblies,* 2012 edition.

NFPA 253, *Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source,* 2011 edition.

NFPA 257, *Standard on Fire Test for Window and Glass Block Assemblies,* 2012 edition.

NFPA 259, *Standard Test Method for Potential Heat of Building Materials,* 2013 edition.

NFPA 260, *Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture,* 2013 edition.

NFPA 261, *Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes,* 2013 edition.

NFPA 265, *Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile or Expanded Vinyl Wall Coverings on Full Height Panels and Walls,* 2011 edition.

NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth,* 2011 edition.

NFPA 288, *Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal Fire Resistance–Rated Assemblies,* 2012 edition.

NFPA 289, *Standard Method of Fire Test for Individual Fuel Packages,* 2013 edition.

NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft,* 2015 edition.

NFPA 303, *Fire Protection Standard for Marinas and Boatyards,* 2011 edition.

NFPA 307, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves,* 2011 edition.

NFPA 312, *Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up,* 2011 edition.

NFPA 318, *Standard for the Protection of Semiconductor Fabrication Facilities,* 2015 edition.

NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair,* 2010 edition.

NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids,* 2012 edition.

NFPA 400, *Hazardous Materials Code,* 2013 edition.

NFPA 407, *Standard for Aircraft Fuel Servicing,* 2012 edition.

NFPA 408, *Standard for Aircraft Hand Portable Fire Extinguishers,* 2010 edition.

NFPA 409, *Standard on Aircraft Hangars,* 2011 edition.

NFPA 410, *Standard on Aircraft Maintenance,* 2010 edition.

NFPA 415, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways,* 2013 edition.

NFPA 418, *Standard for Heliports,* 2011 edition.

NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents,* 2013 edition.

NFPA 484, *Standard for Combustible Metals,* 2015 edition.

NFPA 495, *Explosive Materials Code,* 2013 edition.

NFPA 498, *Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives,* 2013 edition.

NFPA 501, *Standard on Manufactured Housing,* 2013 edition.

NFPA 501A, *Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities,* 2013 edition.

NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations,* 2013 edition.

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Full document details: NFPA 1 2015

NFPA 601, *Standard for Security Services in Fire Loss Prevention,* 2010 edition.

NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids,* 2013 edition.

NFPA 655, *Standard for Prevention of Sulfur Fires and Explosions,* 2012 edition.

NFPA 664, *Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities,* 2012 edition.

NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films,* 2010 edition.

NFPA 703, *Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials,* 2015 edition.

NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response,* 2012 edition.

NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment,* 2015 edition.

NFPA 750, *Standard on Water Mist Fire Protection Systems,* 2014 edition.

NFPA 801, *Standard for Fire Protection for Facilities Handling Radioactive Materials,* 2013 edition.

NFPA 909, *Code for the Protection of Cultural Resource Properties — Museums, Libraries, and Places of Worship,* 2013 edition.

NFPA 914, *Code for Fire Protection of Historic Structures,* 2010 edition.

NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner,* 2014 edition.

NFPA 1122, *Code for Model Rocketry,* 2013 edition.

NFPA 1125, *Code for the Manufacture of Model Rocket and High Power Rocket Motors,* 2012 edition.

NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience,* 2011 edition.

NFPA 1127, *Code for High Power Rocketry,* 2013 edition.

NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting,* 2012 edition.

NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire,* 2013 edition.

NFPA 1192, *Standard on Recreational Vehicles,* 2015 edition.

NFPA 1194, *Standard for Recreational Vehicle Parks and Campgrounds,* 2014 edition.

NFPA 1963, *Standard for Fire Hose Connections,* 2014 edition.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems,* 2012 edition.

NFPA 2010, *Standard for Fixed Aerosol Fire Extinguishing Systems,* 2010 edition.

NFPA 2113, *Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire,* 2012 edition.

NFPA 5000®, Building Construction and Safety Code®, 2015 edition.

2.3 Other Publications.

2.3.1 ANSI Publications. American National Standards Institute, Inc., 25 West 43rd Street, 4th floor, New York, NY 10036.

ICC/ANSI A117.1 *American National Standard for Accessible and Usable Buildings and Facilities,* 2009.

ANSI/AIHA Z9.7 *Recirculation of Air from Industrial Process Exhaust Systems,* 2007.

ANSI B15.1 *Mechanical Power Transmission Apparatus,* 2000.

2.3.2 APA Publication. American Pyrotechnics Association, P.O. Box 30438, Bethesda, MD 20824.

APA 87-1, *Standard for the Construction and Approval for Transportation of Fireworks, Novelties, and Theatrical Pyrotechnics,* 2004 edition.

2.3.3 API Publications. American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005-4070.

API-ASME Code for Unfired Pressure Vessels for Petroleum Liquids and Gases, Pre-July 1, 1961.

API Specification 12B, *Bolted Tanks for Storage of Production Liquids,* 15th edition, 2008.

API Specification 12D, *Field Welded Tanks for Storage of Production Liquids,* 11th edition, 2008.

API Specification 12F, *Shop Welded Tanks for Storage of Production Liquids* 12th edition, 2008.

API 620, *Recommended Rules for the Design and Construction of Large, Welded, Low-Pressure Storage Tanks,* 11th edition, Addendum 2, 2010.

API Standard 650, *Welded Steel Tanks for Oil Storage,* 11th edition, Addendum 2, 2009.

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction,* 4th edition, 2012.

API Standard 2000, *Venting Atmospheric and Low-Pressure Storage Tanks* 5th edition, 1998.

API 2350, *Overfill Protection for Storage Tanks in Petroleum Facilities,*4th edition, 2012.

API BULL 1529, *Aviation Fueling Hose,* 1998.

API 607, *Fire Test for Soft-Seated Quarter-Turn Valves,* 1993.

2.3.4 ASHRAE Publications. American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1791 Tullie Circle, NE, Atlanta, GA 30329-2305.

ANSI/ASHRAE 15, *Safety Standard for Refrigeration Systems,* 2010.

2.3.5 ASME Publications. American Society of Mechanical Engineers, Two Park Avenue, New York, NY 10016-5990.

ASME A13.1, *Scheme for the Identification of Piping Systems,* 2007.

ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators,* 2007.

ASME A17.3, *Safety Code for Existing Elevators and Escalators,* 2008.

ASME B31, *Code for Pressure Piping,* 2012.

ANSI/ASME B31.3, *Process Piping,* 2008.

ASME B56.1, *Safety Standard for Low-Lift and High-Lift Trucks,* 2008.

ASME *Boiler and Pressure Vessel Code,* Section VIII, "Rules for the Construction of Unfired Pressure Vessels," 2010.

ASME *Code for Unfired Pressure Vessels,* 2010.

2.3.6 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM A 395, *Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures,* 1999 (reaffirmed 2009).

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ASTM D5/D5M, *Standard Test Method for Penetration of Bituminous Materials*, 2013.

ASTM D 56, *Standard Test Method for Flash Point by Tag Closed Cup Tester*, 2005 (reaffirmed 2010).

ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester*, 2012b.

ASTM D 93, *Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester*, 2012.

ASTM D 323, *Standard Method of Test for Vapor Pressure of Petroleum Products (Reid Method)*, 2008.

ASTM D 396, *Standard Specification for Fuel Oils*, 2010.

ASTM D 635, *Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position*, 2010.

ASTM D 1929, *Standard Test Method for Determining Ignition Temperature of Plastics*, 2012.

ASTM D 2843, *Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics*, 2010.

ASTM D 2859, *Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials*, 2006 (2011).

ASTM D 2898, *Standard Test Methods for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing*, 2010.

ASTM D 3278, *Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus*, 1996 (reaffirmed 2011).

ASTM D 3699, *Standard Specification for Kerosene*, 2008.

ASTM D 3828, *Standard Test Methods for Flash Point by Small Scale Closed Cup Tester*, 2012a.

ASTM D 4359, *Standard Test for Determining Whether a Material is a Liquid or a Solid*, 1990 (reaffirmed 2012).

ASTM D 5391, *Standard Test for Electrical Conductivity and Resistivity of a Flowing High Purity Water Sample*, 1999 (2009).

ASTM D 6448, *Industrial Burner Fuels from Used Lube Oils*, 2009.

ASTM D 6751, *Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuel*, 2010.

ASTM D 6823, *Commercial Burner Fuels from Used Lube Oils*, 2008.

ASTM E 84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, 2013.

ASTM E 108, *Standard Test Methods for Fire Tests of Roof Coverings*, 2011.

ASTM E 119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, 2012a.

ASTM E 136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C*, 2012.

ASTM E 648, *Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source*, 2010 e1.

ASTM E 681, *Standard Test Method for Concentration Limits of Flammability of Chemicals (Vapors and Gases)*, 2009.

ASTM E 814, *Standard Test Method for Fire Tests of Through-Penetration Fire Stops*, 2011a.

ASTM E 1354, *Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*, 2013.

ASTM E 1537, *Standard Test Method for Fire Testing of Upholstered Furniture*, 2012.

ASTM E 1590, *Standard Test Method for Fire Testing of Mattresses*, 2012.

ASTM E 1591, *Standard Guide for Obtaining Data for Deterministic Fire Models*, 2007.

ASTM E 1966, *Standard Test Method for Fire-Resistive Joint Systems*, 2007 (2011).

ASTM E 2074, *Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies*, 2000e1 (withdrawn 2007).

ASTM E 2174, *Standard Practice for On-Site Inspection of Installed Fire Stops*, 2010a e1.

ASTM E 2307,*Standard Test Method for Determining Fire Resistance of Perimeter Fire Barrier Systems Using Intermediate-Scale, Multi-story Test Apparatus*, 2010.

ASTM E 2393, *Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers*, 2010a.

ASTM E 2404, *Standard Practice for Specimen Preparation and Mounting of Textile, Paper or Polymeric (Including Vinyl) Wall or Ceiling Coverings, and of Facings and Wood Veneers Intended to be Applied on Site Over a Wood Substrate, to Assess Surface Burning Characteristics*, 2012.

ASTM E 2573, *Standard Practice for Specimen Preparation and Mounting of Site-Fabricated Stretch Systems to Assess Surface Burning Characteristics*, 2012.

ASTM E 2599, *Standard Practice for Specimen Preparation and Mounting of Reflective Insulation, Radiant Barrier, and Vinyl Stretch Ceiling Materials for Building Applications to Assess Surface Burning Characteristics*, 2011.

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2015 Edition NFPA
Full document details: NFPA 1 2015

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CGA S-1.2, *Pressure Relief Device Standards — Part 2 — Cargo and Portable Tanks for Compressed Gases,* 2009.

CGA S-1.3, *Pressure Relief Device Standards — Part 3 — Stationary Storage Containers for Compressed Gases,* 2008.

CGA-V6, *Standard Cryogenic Liquid Transfer Connections*, 2008.

2.3.8 CTA Publications. Canadian Transportation Agency, Queen's Printer, Ottawa, Ontario, Canada. (Available from the Canadian Communications Group Publication Centre, Ordering Department, Ottawa, Canada K1A 0S9.)

Transportation of Dangerous Goods Regulations.

2.3.9 FM Publications. FM Global, 1301 Atwood Avenue, P.O. Box 7500, Johnston, RI 02919.

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Approval Standard for Plastic Plugs for Steel Drums, Class Number 6083, October 2006.

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2.3.10 IEC Publication. International Electrotechnical Commission, 3, rue de Varembé, P.O. Box 131, CH-1211 Geneva 20, Switzerland.

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2.3.13 NBBPVI Publications. National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, OH 43229.

ANSI/NB23, *National Board Inspection Code*, 2007.

2.3.14 NRFC Publications. National Railroad Freight Committee, 222 South Riverside Plaza, Chicago, IL 60606-5945.

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2.3.16 STI Publications. Steel Tank Institute, 570 Oakwood Road, Lake Zurich, IL 60047.

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ANSI/UL 263, *Standard for Fire Tests of Building Construction and Materials*, 2011.

ANSI/UL 294, *Standard for Access Control System Units*, 1999, Revised 2010.

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ANSI/UL 626, *Standard for Water Fire Extinguishers*, 2005, Revised 2012.

ANSI/UL 710B, *Standard for Recirculating Exhaust Systems*, 2004, Revised 2009.

ANSI/UL 711, *Standard for Rating and Fire Testing of Fire Extinguishers*, 2004, Revised 2009.

ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials*, 2008, Revised 2010.

ANSI/UL 790, *Standard for Safety for Tests for Fire Resistance of Roof Covering Materials*, 2004, Revised 2008.

ANSI/UL 842, *Standard for Valves for Flammable Fluids*, 2007, Revised 2011.

ANSI/UL 900, *Standard for Air Filter Units*, 2004, Revised 2009.

ANSI/UL 913, *Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III Division 1, Hazardous (Classified) Locations,* 2006, Revised 2010.

ANSI/UL 924, *Standard for Emergency Lighting and Power Equipment,* 2006, Revised 2011.

UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids*, 1995, Revised 2006.

ANSI/UL 1037, *Standard for Antitheft Alarms and Devices*, 1999, Revised 2009.

ANSI/UL 1040, *Standard for Fire Test of Insulated Wall Construction*, 1996, Revised 2007.

ANSI/UL 1313, *Standard for Nonmetallic Safety Cans for Petroleum Products,* 1993, Revised 2007.

UL 1316, *Standard for Glass-Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures*, 2006.

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UL 1573, *Standard for Stage and Studio Luminaires and Connector Strips*, 2003.

UL 1640, *Standard for Portable Power-Distribution Equipment*, 2007.

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UL 1803, *Standard for Factory Follow-up on Third Party Certified Portable Fire Extinguishers,* 2012.

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ANSI/UL 2085, *Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids*, 1997, Revised 2010.

ANSI/UL 2129, *Standard for Halocarbon Clean Agent Fire Extinguishers*, 2005, Revised 2012.

ANSI/UL 2208, *Standard for Solvent Distillation Units*, 2005, Revised 2011.

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UL 2368, *Standard for Fire Exposure Testing of Intermediate Bulk Containers for Flammable and Combustible Liquids*, 2012.

ANSI/UL 2586, *Standard for Hose Nozzle Valves,* 2011, Revised 2012.

2.3.18 ULC Publications. Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, Ontario M1R 3B4, Canada.

CAN/ULC-S503, *Standard for Carbon-Dioxide Fire Extinguishers*, 2005, Revised 2010.

CAN/ULC-S504, *Standard for Dry Chemical Fire Extinguishers*, 2002, Revised 2009.

CAN/ULC-S507, *Standard for Water Fire Extinguishers*, 2005, Revised 2010.

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CAN/ULC-S554, *Standard for Water Based Agent Fire Extinguishers*, 2005, Reaffirmed 2010.

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Title 18, United States Code, "Importation, Manufacture, Distribution and Storage of Explosive Materials," 1970.

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Title 27, Code of Federal Regulations, Part 555, Bureau of Alcohol, Tobacco, Firearms, and Explosives, U.S. Department of Justice.

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Full document details: NFPA 1 2015

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NFPA 13, *Standard for the Installation of Sprinkler Systems,* 2013 edition.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems,* 2013 edition.

NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection,* 2013 edition.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems,* 2014 edition.

NFPA 30, *Flammable and Combustible Liquids Code,* 2015 edition.

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages,* 2015 edition.

NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products,* 2015 edition.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment,* 2011 edition.

NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials,* 2011 edition.

NFPA 34, *Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids,* 2011 edition.

NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals,* 2011 edition.

NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work,* 2014 edition.

NFPA 52, *Vehicular Gaseous Fuel Systems Code,* 2013 edition.

NFPA 55, *Compressed Gases and Cryogenic Fluids Code,* 2013 edition.

NFPA 58, *Liquefied Petroleum Gas Code,* 2014 edition.

NFPA 59A, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG),* 2013 edition.

NFPA 61, *Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities,* 2013 edition.

NFPA 68, *Standard on Explosion Protection by Deflagration Venting,* 2013 edition.

NFPA 69, *Standard on Explosion Prevention Systems,* 2014 edition.

NFPA 70®, National Electrical Code®, 2014 edition.

NFPA 72®, National Fire Alarm and Signaling Code, 2013 edition.

NFPA 80, *Standard for Fire Doors and Other Opening Protectives,* 2013 edition.

NFPA 88A, *Standard for Parking Structures,* 2015 edition.

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems,* 2015 edition.

NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations,* 2014 edition.

NFPA *101®, Life Safety Code®,* 2015 edition.

NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures,* 2011 edition.

NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations,* 2013 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel–Burning Appliances,* 2013 edition.

NFPA 220, *Standard on Types of Building Construction,* 2015 edition.

NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations,* 2013 edition.

NFPA 303, *Fire Protection Standard for Marinas and Boatyards,* 2011 edition.

NFPA 307, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves,* 2011 edition.

NFPA 312, *Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up,* 2011 edition.

NFPA 318, *Standard for the Protection of Semiconductor Fabrication Facilities,* 2015 edition.

NFPA 400, *Hazardous Materials Code,* 2013 edition.

NFPA 402, *Guide for Aircraft Rescue and Fire-Fighting Operations,* 2013 edition.

NFPA 407, *Standard for Aircraft Fuel Servicing,* 2012 edition.

NFPA 415, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways,* 2013 edition.

NFPA 418, *Standard for Heliports,* 2011 edition.

NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents,* 2013 edition.

NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids,* 2013 edition.

NFPA 805, *Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants,* 2010 edition.

NFPA 914, *Code for Fire Protection of Historic Structures,* 2010 edition.

NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner,* 2014 edition.

NFPA 1141, *Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas,* 2012 edition.

NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire,* 2013 edition.

NFPA 5000®, Building Construction and Safety Code®, 2015 edition.

Multiple definitions in Chapter 3 were deleted by a tentative interim amendment (TIA). See page 1.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this *Code.* Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary,* 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the AHJ.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3* Code. A standard that is an extensive compilation of provisions covering broad subject matter or that is suitable for adoption into law independently of other codes and standards.

3.2.4 Guide. A document that is advisory or informative in nature and that contains only nonmandatory provisions. A

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guide may contain mandatory statements such as when a guide can be used, but the document as a whole is not suitable for adoption into law.

3.2.5 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the AHJ and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.6* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the AHJ and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.7 Recommended Practice. A document that is similar in content and structure to a code or standard but that contains only nonmandatory provisions using the word "should" to indicate recommendations in the body of the text.

3.2.8 Shall. Indicates a mandatory requirement.

3.2.9 Should. Indicates a recommendation or that which is advised but not required.

3.2.10 Standard. A document, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

3.3 General Definitions.

3.3.1* Absolute Pressure. Pressure based on a zero reference point, the perfect vacuum. [**55,** 2013]

3.3.2 Access Box. An approved secure box, accessible by the AHJ's master key or control, containing entrance keys or other devices to gain access to a structure or area.

3.3.3 Addition. An increase in building area, aggregate floor area, building height or number of stories of a structure. [**5000,** 2015]

3.3.4* Aerosol Product. A combination of a container, a propellant, and a material that is dispensed. [**30B,** 2015]

3.3.5 Airport (Aerodrome). An area on land or water that is used or intended to be used for the landing and takeoff of aircraft and includes buildings and facilities. [**402,** 2013]

3.3.6 Airport Ramp. Any outdoor area, including aprons and hardstands, where aircraft can be positioned, stored, serviced, or maintained, irrespective of the nature of the surface of the area. [**415,** 2013]

3.3.7* Aisle Width. The horizontal dimension between the face of the loads in racks under consideration. [**13,** 2013]

3.3.8 Alarm. A warning of danger. [**72,** 2013]

3.3.9 Alarm Signal. See 3.3.228.1.

3.3.10 Alcohol-Based Hand Rub. An alcohol-containing preparation designed for application to the hands for reducing the number of visible microorganisms on the hands and containing ethanol or isopropanol in an amount not exceeding 95 percent by volume.

3.3.11 Alleyway. An accessible clear space between storage piles or groups of piles suitable for housekeeping operations, visual inspection of piling areas, and initial firefighting operations.

3.3.12 Alternative. A system, condition, arrangement, material, or equipment submitted to the AHJ as a substitute for a requirement in a standard. [**1144,** 2013]

3.3.13 ANSI/ASME. The designation for American National Standards Institute publication sponsored and published by the American Society of Mechanical Engineers.

3.3.14 Area.

3.3.14.1 ***Back Stock Area.*** The area of a mercantile occupancy that is physically separated from the sales area and not intended to be accessible to the public. [**30B,** 2015]

3.3.14.2 ***Control Area.*** A building or portion of a building or outdoor area within which hazardous materials are allowed to be stored, dispensed, used, or handled in quantities not exceeding the maximum allowable quantities (MAQ). [**400,** 2013]

3.3.14.3 ***Fire Area.*** An area of a building separated from the remainder of the building by construction having a fire resistance of at least 1 hour and having all communicating openings properly protected by an assembly having a fire resistance rating of at least 1 hour. [**30,** 2015]

3.3.14.4 ***Fire Flow Area.*** The floor area, in square feet, used to determine the required fire flow.

3.3.14.5 ***Indoor Area.*** An area that is within a building or structure having overhead cover, other than a structure qualifying as "weather protection" in accordance with Section 6.6 of NFPA 55, *Compressed Gases and Cryogenic Fluids Code.* [**55,** 2013]

3.3.14.6 ***Inside Liquid Storage Area.*** A room or building used for the storage of liquids in containers or portable tanks, separated from other types of occupancies. [**30,** 2015]

3.3.14.7 ***Organic Peroxide Storage Area.*** An area used for the storage of organic peroxide formulations. [**400,** 2013]

3.3.14.8 ***Outdoor Area.*** An area that is not an indoor area. [**55,** 2013]

3.3.14.9 ***Permissible Areas.***

3.3.14.9.1 ***Designated Area.*** A specific location designed and approved for hot work operations that is maintained fire safe such as a maintenance shop or a detached outside location that is of noncombustible or fire-resistive construction, essentially free of combustible and flammable contents, and suitably segregated from adjacent areas. [**51B,** 2014]

3.3.14.9.2 ***Permit-Required Area.*** Any location other than a designated area that is approved for hot work. A permit-required area is an area that is made fire safe by removing or protecting combustibles from ignition sources. [**51B,** 2014]

3.3.14.10 ***Sales Display Area.*** The area of a mercantile occupancy that is open to the public for the purpose of viewing and purchasing goods, wares, and merchandise.

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Individuals are free to circulate among the items, which are typically displayed on shelves, on racks, or on the floor. [**30B,** 2015]

3.3.14.11 ***Smoking Area.*** A designated area where smoking is permitted within a premises in which smoking is otherwise generally prohibited.

3.3.14.12* ***Spray Area.*** Any fully enclosed, partly enclosed, or unenclosed area in which dangerous quantities of flammable or combustible vapors, mists, residues, dusts, or deposits are present due to the operation of spray processes, including (1) any area in the direct path of a spray application process; (2) the interior of a spray booth or spray room or limited finishing workstation, as herein defined; (3) the interior of any exhaust plenum, eliminator section, or scrubber section; (4) the interior of any exhaust duct or exhaust stack leading from a spray application process; (5) the interior of any air recirculation filter house or enclosure, including secondary recirculation particulate filters; (6) any solvent concentrator (pollution abatement) unit or solvent recovery (distillation) unit. The following shall not be considered part of the spray area: (1) Fresh air make-up units; (2) Air supply ducts and air supply plenums; (3) Recirculation air supply ducts downstream of secondary filters; (4) Exhaust ducts from solvent concentrator (pollution abatement) units. [**33,** 2011]

3.3.15 ASME. American Society of Mechanical Engineers. [**58,** 2014]

3.3.16 ASME Container (or Tank). See 3.3.69.1.

3.3.17 ASTM. American Society for Testing and Materials, now known as "ASTM International." [**55,** 2013]

3.3.18 Automatic Emergency Shutoff Valve. A designated fail-safe automatic closing valve designed to shut off the flow of gases or liquids that is initiated by a control system where the control system is activated by either manual or automatic means. [**55,** 2013]

3.3.19* Available Height for Storage. The maximum height at which commodities can be stored above the floor and still maintain necessary clearance from structural members and the required clearance below sprinklers. [**13,** 2013]

3.3.20* Baled Cotton. A natural seed fiber wrapped and secured in industry-accepted materials, usually consisting of burlap, woven polypropylene, or sheet polyethylene, and secured with steel, synthetic, or wire bands, or wire; also includes linters (lint removed from the cottonseed) and motes (residual materials from the ginning process).

3.3.20.1 ***Block.*** A basic yard storage unit for baled cotton comprising multiple-row storage with clear spaces on all sides.

3.3.20.2* ***Densely Packed Baled Cotton.*** Cotton, made into banded bales, with a packing density of at least 22 lb/ft^3 (360 kg/m^3), and dimensions complying with the following: a length of 55 in. (ca. 1400 mm ± 20 mm), a width of 21 in. (ca. 530 mm ± 20 mm), and a height of 27.6 in. to 35.4 in. (700 mm to 900 mm).

3.3.20.3 ***Fire-Packed Baled Cotton.*** A cotton bale within which a fire has been packed as a result of a process in which ginning is the most frequent cause.

3.3.20.4 ***Naked Cotton Bale.*** An unwrapped cotton bale secured with wire or steel straps.

3.3.21 Barrel. A unit of volume used in the petroleum industry that is equal to 42 gal (159 L). [**30,** 2015]

3.3.22 Basement. Any story of a building wholly or partly below grade plane that is not considered the first story above grade plane. [**5000,** 2015]

3.3.23 Battery System. A system that consists of these interconnected subsystems: (1) stationary storage batteries, (2) battery chargers, and (3) a collection of rectifiers, inverters, converters, and associated electrical equipment as required for a particular application.

3.3.24 Battery Types, Stationary.

3.3.24.1 ***Lithium-Ion Battery.*** A storage battery that consists of lithium ions imbedded in a carbon graphite or nickel metal-oxide substrate. The electrolyte is a carbonate mixture or a gelled polymer. The lithium ions are the charge carriers of the battery.

3.3.24.2 ***Lithium Metal Polymer Battery.*** A storage battery that is comprised of nonaqueous liquid or polymerized electrolytes, which provide ionic conductivity between lithiated positive active material electrically separated from metallic lithium or lithiated negative active material.

3.3.24.3 ***Nickel Cadmium (NiCad) Battery.*** An alkaline storage battery in which the positive active material is nickel oxide, the negative contains the cadmium, and the electrolyte is potassium hydroxide.

3.3.24.4* ***Valve-Regulated (VRLA).*** A lead-acid battery consisting of sealed cells furnished with a valve that opens to vent the battery whenever the internal pressure of the battery exceeds the ambient pressure by a set amount.

3.3.24.5* ***Vented (Flooded).*** A lead-acid battery consisting of cells that have electrodes immersed in liquid electrolyte.

3.3.25 Block. See 3.3.20.1.

3.3.26 Board of Appeals. A group of persons appointed by the governing body of the jurisdiction adopting this *Code* for the purpose of hearing and adjudicating differences of opinion between the AHJ and the citizenry in the interpretation, application, and enforcement of this *Code*.

3.3.27* Boiling Point. The temperature at which the vapor pressure of a liquid equals the surrounding atmospheric pressure. [**30,** 2015]

3.3.28* Boil-Over. An event in the burning of certain oils in an open-top tank when, after a long period of quiescent burning, there is a sudden increase in fire intensity associated with expulsion of burning oil from the tank. [**30,** 2015]

3.3.29* Building. Any structure used or intended for supporting or sheltering any use or occupancy. [***101,*** 2015]

3.3.29.1* ***Airport Terminal Building.*** A structure used primarily for air passenger enplaning or deplaning, including ticket sales, flight information, baggage handling, and other necessary functions in connection with air transport operations. This term includes any extensions and satellite buildings used for passenger handling or aircraft flight service functions. Aircraft loading walkways and "mobile lounges" are excluded. [**415,** 2013]

3.3.29.2 ***Apartment Building.*** See 3.3.183.2.

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3.3.29.3 ***Attached Building.*** A building having only one common wall with another building having other types of occupancies.

3.3.29.4 ***Bulk Merchandising Retail Building.*** See 3.3.183.4.

3.3.29.5* ***Existing Building.*** A building erected or officially authorized prior to the effective date of the adoption of this edition of the *Code* by the agency or jurisdiction. [***101,*** 2015]

3.3.29.6* ***High-Rise Building.*** A building where the floor of an occupiable story is greater than 75 ft (23 m) above the lowest level of fire department vehicle access. [**5000,** 2015]

3.3.29.7* ***Important Building.*** A building that is considered not expendable in an exposure fire. [**30,** 2015]

3.3.29.8 ***Mini-Storage Building.*** See 3.3.183.28.1.

3.3.29.9 ***Satellite.*** A structure that can be adjacent to but separated from the airport terminal building, accessible above ground or through subway passages, and used to provide flight service operations, such as passenger check-in, waiting rooms, food service, enplaning or deplaning, etc. [**415,** 2013]

3.3.29.10* ***Special Amusement Building.*** A building that is temporary, permanent, or mobile and contains a device or system that conveys passengers or provides a walkway along, around, or over a course in any direction as a form of amusement arranged so that the egress path is not readily apparent due to visual or audio distractions or an intentionally confounded egress path, or is not readily available due to the mode of conveyance through the building or structure. [***101,*** 2015]

3.3.29.11 ***Storage Tank Building.*** A three-dimensional space that is enclosed by a roof and walls that cover more than one-half of the possible area of the sides of the space, is of sufficient size to allow entry by personnel, will likely limit the dissipation of heat or dispersion of vapors, and restricts access for fire fighting. [**30,** 2015]

3.3.30 Bulk Hydrogen Compressed Gas System. See 3.3.254.1.

3.3.31 Bulk Inert Gas System. See 3.3.254.2.

3.3.32 Bulk Liquefied Hydrogen Gas System. See 3.3.254.3.

3.3.33 Bulk Oxygen System. See 3.3.254.4.

3.3.34 Bulk Plant or Terminal. That portion of a property where liquids are received by tank vessel, pipelines, tank car, or tank vehicle and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline, tank car, tank vehicle, portable tank, or container.

3.3.35 Burn-It. A fire-fighting strategy that allows for the free-burn of a tire fire.

3.3.36 Bury-It. A fire-fighting strategy in which a tire pile is buried with soil, sand, gravel, cement dust, or other cover material.

3.3.37* Cathodic Protection. A technique to resist the corrosion of a metal surface by making the surface the cathode of an electrochemical cell. [**55,** 2013]

3.3.38 Cathodic Protection Tester. A person who demonstrates an understanding of the principles and measurements of all common types of cathodic protection systems applicable to metal piping and container systems and who has education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of metal piping and container systems. [**55,** 2013]

3.3.39 Certificate of Fitness. A written document issued by the AHJ to any person for the purpose of granting permission to such person to conduct or engage in any operation or act for which certification is required.

3.3.40 CFR. The Code of Federal Regulations of the United States Government.

3.3.41 CGA. Compressed Gas Association.

3.3.42 Chemical Heat of Combustion (H_c). The amount of heat released, in Btu/lb (kJ/g), when a substance is oxidized to yield stable end products, including water as a vapor, as measured under actual fire conditions in a normal ambient (air) atmosphere. [**30B,** 2015]

3.3.43 Chemical Name. The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry or the Chemical Abstracts Service rules of nomenclature, or a name that clearly identifies a chemical for the purpose of conducting an evaluation.

3.3.44 Chemical Plant. A large integrated plant or that portion of such a plant, other than a refinery or distillery, where liquids are produced by chemical reactions or used in chemical reactions. [**30,** 2015]

3.3.45* Chip. A wood chip of various species used in the manufacture of pulp.

3.3.46* Cleaning Media. Materials used to clean piping systems. [**55,** 2013]

3.3.47 Clean Zone. A defined space in which the concentration of airborne particles is controlled to specified limits. [**318,** 2015]

3.3.48 Cleanroom. A room in which the concentration of airborne particles is controlled to specified limits, including areas below the raised floor and above the ceiling grid if these areas are part of the air path and within the rated construction. [**5000,** 2015]

3.3.49 Clear Space. An area free of combustible materials but that can contain noncombustible materials that cannot transmit an exposure fire.

3.3.50 Closed System Use. See 3.3.267.1.

3.3.51 Closed-Top Diking. A dike with a cover intended to minimize the entrance of precipitation into the diked area. [**30,** 2015]

3.3.52 Clothes Dryer. A device used to dry wet laundry by means of heat derived from the combustion of fuel or from electric heating elements. [**211,** 2013]

3.3.53 Code.

3.3.53.1 ***Building Code.*** The building or construction code adopted by the jurisdiction. [**55,** 2013]

3.3.53.2 ***Electrical Code.*** The electrical code referenced in Section 2.2

3.3.53.3 ***Mechanical Code.*** The mechanical or mechanical construction code adopted by the jurisdiction. [**55,** 2013]

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3.3.53.4 ***Plumbing Code.*** The plumbing code referenced in Section 2.2.

3.3.54 Cold Deck. A single ranked pile of logs with individual logs of regular or irregular length usually 20 ft to 50 ft (6.1 m to 15.2 m) long, but greater than 8 ft (2.4 m) long.

3.3.55 Column (Paper). A single vertical stack of rolls of paper.

3.3.56 Combustible (Material). A material that, in the form in which it is used and under the conditions anticipated, will ignite and burn; a material that does not meet the definition of noncombustible or limited-combustible. [***101,*** 2015]

3.3.57* Combustible Dust. A finely divided combustible particulate solid that presents a flash fire hazard or explosion hazard when suspended in air or the process-specific oxidizing medium over a range of concentrations. [**654,** 2013]

3.3.58* Combustible Fiber. Any material in a fibrous or shredded form that readily ignites when heat sources are present.

3.3.59 Combustible Liquid. See 3.3.164.1.

3.3.60 Combustible Particulate Solid. See 3.3.236.1.

3.3.61 Combustible Refuse. All combustible or loose rubbish, litter, or waste materials generated by an occupancy that are refused, rejected, or considered worthless and are disposed of by incineration on the premises where generated or periodically transported from the premises.

3.3.62* Combustible Waste. Combustible or loose waste material that is generated by an establishment or process and, if salvageable, is retained for scrap or reprocessing on the premises where generated or transported to a plant for processing.

3.3.63 Combustion. A chemical process of oxidation that occurs at a rate fast enough to produce heat and usually light in the form of either a glow or flame.

3.3.64 Commodity. The combination of products, packing material, and container that determines commodity classification. [**13,**2013]

3.3.65* Common Path of Travel. The portion of exit access that must be traversed before two separate and distinct paths of travel to two exits are available. [***101,*** 2015]

3.3.66 Compartment.

3.3.66.1* ***Fire Compartment.*** A space within a building that is enclosed by fire barriers on all sides, including the top and bottom. [***101,*** 2015]

3.3.66.2* ***Smoke Compartment.*** A space within a building enclosed by smoke barriers on all sides, including the top and bottom. [***101,*** 2015]

3.3.67 Condition, Existing. See 3.3.101.

3.3.68 Construction Documents. Documents that consist of scaled design drawings and specifications for the purpose of construction of new facilities or modification to existing facilities. *(See also 3.3.227, Shop Drawings.)*

3.3.69 Container. A vessel, including cylinders, tanks, portable tanks, and cargo tanks, used for transporting or storing materials.

3.3.69.1 ***ASME Container.*** A container constructed in accordance with the ASME Code. [**58,** 2014]

3.3.69.2 ***Closed Container.*** A container as herein defined, so sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures. [**30,** 2015]

3.3.69.3 ***Compressed Gas Container.*** A pressure vessel designed to hold compressed gas at an absolute pressure greater than 1 atmosphere at 68°F (20°C) that includes cylinders, containers, and tanks. [**55,** 2013]

3.3.69.4* ***Container (Flammable or Combustible Liquid).*** Any vessel of 119 gal (450 L) or less capacity used for transporting or storing liquids. [**30,** 2015]

3.3.69.5 ***Cryogenic Fluids Container.*** A cryogenic vessel used for transportation, handling, or storage.

3.3.69.6 ***Intermediate Bulk Container.*** Any closed vessel having a liquid capacity not exceeding 3000 L (793 gal) and intended for storing and transporting liquids, as defined in Title 49, Code of Federal Regulations, Parts 100 through 199 or in Part 6 of the United Nations *Recommendations on the Transport of Dangerous Goods.* [**30,** 2015]

3.3.69.7 ***[LP-Gas] Container.*** Any vessel, including cylinders, tanks, portable tanks, and cargo tanks, used for the transporting or storing of LP-Gases. [**58,** 2014]

3.3.70 Control Area. See 3.3.14.2.

3.3.71* Conventional Pallets. A material-handling aid designed to support a unit load with openings to provide access for material-handling devices. *(See Figure A.3.3.71.)* [**13,** 2013]

3.3.72 Cooking Fire. The noncommercial, residential burning of materials not exceeding 3 ft (0.9 m) in diameter and 2 ft (0.6 m) in height, other than rubbish in which the fuel burned is contained in an outdoor fireplace, a barbecue grill, or a barbecue pit for the purpose of preparing food.

3.3.73 Cordwood. Logs 8 ft (2.4 m) or less in length customarily intended for pulpwood or fuel uses.

3.3.74 Core. The central tube around which paper is wound to form a roll. [**13,** 2013]

3.3.75* Corrosive Material. See 3.3.173.3.

3.3.76 Crude Petroleum. Hydrocarbon mixtures that have a flash point below 150°F (65.6°C) and that have not been processed in a refinery. [**30,** 2015]

3.3.77 Cryogenic Fluid. A fluid with a boiling point lower than –130°F (–90°C) at an absolute pressure of 14.7 psi (101.3 kPa). [**55,** 2013]

3.3.77.1 ***Flammable Cryogenic Fluid.*** A cryogenic fluid that forms flammable mixtures in air when in its vapor state. [**55,** 2013]

3.3.77.2 ***Inert Cryogenic Fluid.*** A cryogenic fluid that vaporizes to produce an intert gas when in its vapor state. [**55,** 2013]

3.3.77.3 ***Oxidizing Cryogenic Fluid.*** An oxidizing gas in the cryogenic state. [**55,** 2013]

3.3.78* Cultural Resource Properties. Buildings, structures, or sites, or portions thereof, that are culturally significant, or that house culturally significant collections. [**914,** 2010]

3.3.79 Cylinder. A pressure vessel designed for absolute pressures higher than 40 psi (276 kPa) and having a circular cross-section. It does not include a portable tank, multiunit tank car tank, cargo tank, or tank car. [**55,** 2013]

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3.3.80 Cylinder Containment Vessel. A gastight recovery vessel designed so that a leaking compressed gas container can be placed within its confines, thereby encapsulating the leaking container. [**55,** 2013]

3.3.81* Cylinder Pack. An arrangement of cylinders into a cluster where the cylinders are confined into a grouping or arrangement with a strapping or frame system and connections are made to a common manifold. The frame system is allowed to be on skids or wheels to permit movement. [**55,** 2013]

3.3.82 Damage-Limiting Construction. For the purposes of this code, any set of construction elements, used individually or in combination, which will act to limit damage from an explosion, including open structures, pressure relieving construction, or pressure resistant construction. [**30,** 2015]

3.3.83 Deflagration. Propagation of a combustion zone at a velocity that is less than the speed of sound in the unreacted medium. [**68,** 2013]

3.3.84 Detector. A device suitable for connection to a circuit that has a sensor that responds to a physical stimulus such as gas, heat or smoke. [**72,** 2013]

3.3.84.1 ***Air Sampling–Type Detector.*** A detector that consists of a piping or tubing distribution network that runs from the detector to the area(s) to be protected. An aspiration fan in the detector housing draws air from the protected area back to the detector through air sampling ports, piping, or tubing. At the detector, the air is analyzed for fire products. [**72,** 2013]

3.3.84.2 ***Automatic Fire Detector.*** A device designed to detect the presence of a fire signature and to initiate action. For the purpose of this *Code*, automatic fire detectors are classified as follows: Automatic Fire Extinguishing or Suppression System Operation Detector, Fire–Gas Detector, Heat Detector, Other Fire Detectors, Radiant Energy–Sensing Fire Detector, and Smoke Detector. [**72,** 2013]

3.3.84.3 ***Automatic Fire Extinguishing or Suppression System Operation Detector.*** A device that automatically detects the operation of a fire extinguishing or suppression system by means appropriate to the system employed. [**72,** 2013]

3.3.84.4* ***Combination Detector.*** A device that either responds to more than one of the fire phenomena or employs more than one operating principle to sense one of these phenomena. Typical examples are a combination of a heat detector with a smoke detector or a combination rate-of-rise and fixed-temperature heat detector. This device has listings for each sensing method employed. [**72,** 2013]

3.3.84.5 ***Electrical Conductivity Heat Detector.*** A line-type or spot-type sensing element in which resistance varies as a function of temperature. [**72,** 2013]

3.3.84.6 ***Fire–Gas Detector.*** A device that detects gases produced by a fire. [**72,** 2013]

3.3.84.7* ***Fixed-Temperature Detector.*** A device that responds when its operating element becomes heated to a predetermined level. [**72,** 2013]

3.3.84.8* ***Flame Detector.*** A radiant energy–sensing fire detector that detects the radiant energy emitted by a flame. (*Refer to A.17.8.2 of NFPA 72.*) [**72,** 2013]

3.3.84.9 ***Gas Detector.*** A device that detects the presence of a specified gas concentration. Gas detectors can be either spot-type or line-type detectors. [**72,** 2013]

3.3.84.10 ***Heat Detector.*** A fire detector that detects either abnormally high temperature or rate of temperature rise, or both. [**72,** 2013]

3.3.84.11 ***Line-Type Detector.*** A device in which detection is continuous along a path. Typical examples are rate-of-rise pneumatic tubing detectors, projected beam smoke detectors, and heat-sensitive cable. [**72,** 2013]

3.3.84.12* ***Multi-Criteria Detector.*** A device that contains multiple sensors that separately respond to physical stimulus such as heat, smoke, or fire gases, or employs more than one sensor to sense the same stimulus. This sensor is capable of generating only one alarm signal from the sensors employed in the design either independently or in combination. The sensor output signal is mathematically evaluated to determine when an alarm signal is warranted. The evaluation can be performed either at the detector or at the control unit. This detector has a single listing that establishes the primary function of the detector. [**72,** 2013]

3.3.84.13* ***Multi-Sensor Detector.*** A device that contains multiple sensors that separately respond to physical stimulus such as heat, smoke, or fire gases, or employs more than one sensor to sense the same stimulus. A device capable of generating multiple alarm signals from any one of the sensors employed in the design, independently or in combination. The sensor output signals are mathematically evaluated to determine when an alarm signal is warranted. The evaluation can be performed either at the detector or at the control unit. This device has listings for each sensing method employed. [**72,** 2013]

3.3.84.14 ***Other Fire Detectors.*** Devices that detect a phenomenon other than heat, smoke, flame, or gases produced by a fire. [**72,** 2013]

3.3.84.15 ***Pneumatic Rate-of-Rise Tubing Heat Detector.*** A line-type detector comprising small-diameter tubing, usually copper, that is installed on the ceiling or high on the walls throughout the protected area. The tubing is terminated in a detector unit containing diaphragms and associated contacts set to actuate at a predetermined pressure. The system is sealed except for calibrated vents that compensate for normal changes in temperature. [**72,** 2013]

3.3.84.16 ***Projected Beam–Type Detector.*** A type of photoelectric light obscuration smoke detector wherein the beam spans the protected area. [**72,** 2013]

3.3.84.17 ***Radiant Energy–Sensing Fire Detector.*** A device that detects radiant energy, such as ultraviolet, visible, or infrared, that is emitted as a product of combustion reaction and obeys the laws of optics. [**72,** 2013]

3.3.84.18* ***Rate Compensation Detector.*** A device that responds when the temperature of the air surrounding the device reaches a predetermined level, regardless of the rate of temperature rise. [**72,** 2013]

3.3.84.19* ***Rate-of-Rise Detector.*** A device that responds when the temperature rises at a rate exceeding a predetermined value. [**72,** 2013]

3.3.84.20 ***Smoke Detector.*** A device that detects visible or invisible particles of combustion. [**72,** 2013]

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3.3.84.21 ***Spark/Ember Detector.*** A radiant energy–sensing fire detector that is designed to detect sparks or embers, or both. These devices are normally intended to operate in dark environments and in the infrared part of the spectrum. [**72,** 2013]

3.3.84.22 ***Spot-Type Detector.*** A device in which the detecting element is concentrated at a particular location. Typical examples are bimetallic detectors, fusible alloy detectors, certain pneumatic rate-of-rise detectors, certain smoke detectors, and thermoelectric detectors. [**72,** 2013]

3.3.85 Detonation. Propagation of a combustion zone at a velocity that is greater than the speed of sound in the unreacted medium. [**68,** 2013]

3.3.86 Dispensing. The pouring or transferring of a material from a container tank, or similar vessel whereby vapors, dusts, fumes, mists, or gases could be liberated to the atmosphere. [**5000,** 2015]

3.3.87 Distillery. A plant or that portion of a plant where liquids produced by fermentation are concentrated and where the concentrated products are also mixed, stored, or packaged. [**30,** 2015]

3.3.88 Distributor. A business engaged in the sale or resale, or both, of compressed gases or cryogenic fluids, or both. [**55,** 2013]

3.3.89 Dormitory. See 3.3.183.9

3.3.90 DOT. U.S. Department of Transportation.

3.3.91 Driveway. A clear space suitable for fire-fighting operations by motorized fire apparatus.

3.3.92 Dwelling Unit. One or more rooms arranged for complete, independent housekeeping purposes, with space for eating, living, and sleeping; facilities for cooking; and provisions for sanitation. [**5000,** 2015]

3.3.92.1 ***One- and Two-Family Dwelling Unit.*** See 3.3.183.22.1.

3.3.93 Emergency. A fire, explosion, or hazardous condition that poses an immediate threat to the safety of life or damage to property.

3.3.94 Emergency Relief Vent. An opening, construction method, or device that will automatically relieve excessive internal pressure due to an exposure fire. [**30,** 2015]

3.3.95 Emergency Shutoff Valve. A designated valve designed to shut off the flow of gases or liquids. [**55,** 2013]

3.3.96 Ethylene Oxide Drum. For the purposes of this code, containers built to UN specification 1A1. [**55,** 2013]

3.3.97 Excess Flow Control. A fail-safe system or approved means designed to shut off flow due to a rupture in pressurized piping systems. [**55,** 2013]

3.3.98 Excess Flow Valve. A valve inserted into a compressed gas cylinder, portable tank, or stationary tank that is designed to positively shut off the flow of gas in the event that its predetermined flow is exceeded.

3.3.99* Exhausted Enclosure. An appliance or piece of equipment that consists of a top, a back, and two sides that provides a means of local exhaust for capturing gases, fumes, vapors, and mists. [**55,** 2013]

3.3.100* Existing. That which is already in existence on the date this edition of the *Code* goes into effect. [***101,*** 2015]

3.3.101 Existing Condition. Any situation, circumstance, or physical makeup of any structure, premise, or process that was ongoing or in effect prior to the adoption of this *Code*.

3.3.102* Exit. That portion of a means of egress that is separated from all other spaces of a building or structure by construction, location, or equipment as required to provide a protected way of travel to the exit discharge. [***101,*** 2015]

3.3.102.1* ***Horizontal Exit.*** A way of passage from one building to an area of refuge in another building on approximately the same level, or a way of passage through or around a fire barrier to an area of refuge on approximately the same level in the same building that affords safety from fire and smoke originating from the area of incidence and areas communicating therewith. [***101,*** 2015]

3.3.103 Exit Access. That portion of a means of egress that leads to an exit. [***101,*** 2015]

3.3.104 Exit Discharge. That portion of a means of egress between the termination of an exit and a public way. [***101,*** 2015]

3.3.105 Explosion. The bursting or rupture of an enclosure or a container due to the development of internal pressure from a deflagration. [**69,** 2014]

3.3.106* Explosion Control. A means of either preventing an explosion through the use of explosion suppression, fuel reduction, or oxidant reduction systems or a means to prevent the structural collapse of a building in the event of an explosion through the use of deflagration venting, barricades, or related construction methods. [**55,** 2013]

3.3.107* Explosive Material. A chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion. [**5000,** 2015]

3.3.108 Facility. As applied to access and water supply, a structure or use in a fixed location including exterior storage, use, and handling areas that relates to the occupancies and operations covered by this *Code*.

3.3.108.1 ***Hazardous Material Storage Facility.*** See 3.3.145.

3.3.108.2 ***Limited Care Facility.*** See 3.3.183.15.

3.3.108.3 ***Motor Fuel Dispensing Facility.*** See 3.3.183.19.

3.3.108.3.1 ***Fleet Vehicle Motor Fuel Dispensing Facility.*** See 3.3.183.19.1.

3.3.108.3.2 ***Marine Motor Fuel Dispensing Facility.*** See 3.3.183.19.2.

3.3.108.3.3 ***Motor Fuel Dispensing Facility Located Inside a Building.*** See 3.3.183.19.3.

3.3.109 Fail-Safe. A design arrangement incorporating one or more features that automatically counteracts the effect of an anticipated source of failure or which includes a design arrangement that eliminates or mitigates a hazardous condition by compensating automatically for a failure or malfunction.

3.3.110 Festival Seating. A form of audience/spectator accommodation in which no seating, other than a floor or finished ground level, is provided for the audience/spectators gathered to observe a performance. [***101,*** 2015]

3.3.111 Fines (Wood). Small pieces or splinters of wood byproducts that can pass through a 0.25 in. (6.4 mm) screen.

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3.3.112 Finish.

3.3.112.1 ***Interior Ceiling Finish.*** The interior finish of ceilings. [***101,*** 2015]

3.3.112.2* ***Interior Finish.*** The exposed surfaces of walls, ceilings, and floors within buildings. [***101,*** 2015]

3.3.112.3* ***Interior Floor Finish.*** The interior finish of floors, ramps, stair treads and risers, and other walking surfaces. [***101,*** 2015]

3.3.112.4 ***Interior Wall Finish.*** The interior finish of columns, fixed or movable walls, and fixed or movable partitions. [***101,*** 2015]

3.3.113 Fires, Classification of.

3.3.113.1 ***Class A Fires.*** Class A fires are fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics. [**10,** 2013]

3.3.113.2 ***Class B Fires.*** Class B fires are fires in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases. [**10,** 2013]

3.3.113.3 ***Class C Fires.*** Class C fires are fires that involve energized electrical equipment. [**10,** 2013]

3.3.113.4 ***Class D Fires.*** Class D fires are fires in combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium. [**10,** 2013]

3.3.113.5 ***Class K Fires.*** Class K fires are fires in cooking appliances that involve combustible cooking media (vegetable or animal oils and fats). [**10,** 2013]

3.3.114 Fire, Recreational. See 3.3.217.

3.3.115 Fire Alarm System. See 3.3.254.10.

3.3.116 Fire Compartment. See 3.3.66.1.

3.3.117 Fire Department Access Road. The road or other means developed to allow access and operational setup for fire-fighting and rescue apparatus.

3.3.118 Fire Door Assembly. Any combination of a fire door, a frame, hardware, and other accessories that together provide a specific degree of fire protection to the opening. [**80,** 2013]

3.3.119 Fire Flow. The flow rate of a water supply, measured at 20 psi (137.9 kPa) residual pressure, that is available for fire fighting.

3.3.120 Fire Hazard. Any situation, process, material, or condition that, on the basis of applicable data, can cause a fire or explosion or that can provide a ready fuel supply to augment the spread or intensity of a fire or explosion, all of which pose a threat to life or property. [**914,** 2010]

3.3.121* Fire Hydrant. A valved connection on a water supply system having one or more outlets and that is used to supply hose and fire department pumpers with water. [**1141,** 2012]

3.3.122* Fire Lane. A fire department access road, which is marked with approved signs or other approved notices.

3.3.123 Fire Point. The lowest temperature at which a liquid will ignite and achieve sustained burning when exposed to a test flame in accordance with ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester.* [**30,** 2015]

3.3.124 Fire Retardant. A liquid, solid, or gas that tends to inhibit combustion when applied on, mixed in, or combined with combustible materials.

3.3.125 Fire Watch. The assignment of a person or persons to an area for the express purpose of notifying the fire department, the building occupants, or both of an emergency; preventing a fire from occurring; extinguishing small fires; or protecting the public from fire or life safety dangers.

3.3.126* Flame Spread. The propagation of flame over a surface. [***101,*** 2015]

3.3.127 Flame Spread Index. A comparative measure, expressed as a dimensionless number, derived from visual measurements of the spread of flame versus time for a material tested in accordance with ASTM E 84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials.* [***101,*** 2015]

3.3.128 Flammable Vapors. Flammable vapors are the concentration of flammable constituents in air that exceed 25 percent of their lower flammability limit (LFL).

3.3.129* Flash Point. The minimum temperature of a liquid at which sufficient vapor is given off to form an ignitible mixture with the air, near the surface of the liquid or within the vessel used, as determined by the appropriate test procedure and apparatus specified in Section 4.4 of NFPA 30, *Flammable and Combustible Liquids Code.* [**30,** 2015]

3.3.130 Floor Area.

3.3.130.1* ***Gross Floor Area.*** The floor area within the inside perimeter of the outside walls of the building under consideration with no deduction for hallways, stairs, closets, thickness of interior walls, columns, elevator and building services shafts, or other features, but excluding floor openings associated with atriums and communicating spaces. [**5000,** 2015]

3.3.130.2 ***Net Floor Area.*** The floor area within the inside perimeter of the outside walls, or the outside walls and fire walls of the building, or outside and/or inside walls that bound an occupancy or incidental use area requiring the occupant load to be calculated using net floor area under consideration with deductions for hallways, stairs, closets, thickness of interior walls, columns, or other features. [**5000,** 2015]

3.3.131 Forecasting. The ability to predict fire progression in a scrap tire storage location prior to the completion of the inventory fire break using heavy equipment.

3.3.132* Fugitive Emissions. Releases of flammable vapor that continuously or intermittently occur from process equipment during normal operations. [**30,** 2015]

3.3.133 Gallon, U.S. Standard. 1 U.S. gal = 0.833 Imperial gal = 231 in.^{3} = 3.785 L. [**58,** 2014]

3.3.134 Garage. A building or portion of a building in which one or more self-propelled vehicles carrying volatile flammable liquid for fuel or power are kept for use, sale, storage, rental, repair, exhibition, or demonstrating purposes, and all that portion of a building that is on or below the floor or floors in which such vehicles are kept and that is not separated therefrom by suitable cutoffs. [**5000,** 2015]

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3.3.135 Gas.

3.3.135.1* ***Compressed Gas.*** A material, or mixture of materials, that (1) is a gas at 68°F (20°C) or less at 14.7 psi (101.3 kPa) and (2) has a boiling point of 68°F (20°C) or less at 14.7 psi (101.3 kPa) that is liquefied, nonliquefied, or in solution, except those gases that have no other health or physical hazard properties are not considered to be compressed until the pressure in the packaging exceeds an absolute pressure of 40.6 psi (280 kPa) at 68°F (20°C). [**55,** 2013]

3.3.135.1.1 ***Compressed Gas Mixtures.*** A mixture of two or more compressed gases contained in a packaging, the hazard properties of which are represented by the properties of the mixture as a whole.

3.3.135.1.2 ***Compressed Gases in Solution.*** Nonliquefied gases that are dissolved in a solvent.

3.3.135.1.3 ***Liquefied Compressed Gases.*** Gases that are contained in a packaging under the charged pressure and are partially liquid at a temperature of 68°F (20°C).

3.3.135.1.4 ***Nonliquefied Compressed Gases.*** Gases, other than those in solution, that are contained in a packaging under the charged pressure and are entirely gaseous at a temperature of 68°F (20°C).

3.3.135.2 ***Corrosive Gas.*** A gas that causes visible destruction of or irreversible alterations in living tissue by chemical action at the site of contact. [**55,** 2013]

3.3.135.3 ***Flammable Gas.*** A material that is a gas at 68°F (20°C) or less at an absolute pressure of 14.7 psi (101.3 kPa), that is ignitable at an absolute pressure of 14.7 psi (101.3 kPa) when in a mixture of 13 percent or less by volume with air, or that has a flammable range at an absolute pressure of 14.7 psi (101.3 kPa) with air of at least 12 percent, regardless of the lower limit. [**55,** 2013]

3.3.135.4 ***Flammable Liquefied Gas.*** A liquefied compressed gas that, when under a charged pressure, is partially liquid at a temperature of 68°F (20°C) and is flammable. [**55,** 2013]

3.3.135.5 ***Highly Toxic Gas.*** A chemical that has a median lethal concentration (LC_{50}) in air of 200 ppm by volume or less of gas or vapor, or 2 mg/L or less of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 0.44 lb and 0.66 lb (200 g and 300 g) each. [**55,** 2013]

3.3.135.6* ***Inert Gas.*** A nonreactive, nonflammable, noncorrosive gas such as argon, helium, krypton, neon, nitrogen, and xenon. [**55,** 2013]

3.3.135.7 ***Irritant Gas.*** A chemical that is not corrosive, but that causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41, for an exposure of 4 or more hours or by other appropriate techniques, it results in an empirical score of 5 or more. A chemical is classified as an eye irritant if so determined under the procedure listed in 16 CFR 1500.42, or other appropriate techniques. [**55,** 2013]

3.3.135.8 ***Liquefied Gas.*** A gas, other than in solution, that in a packaging under the charged pressure exists both as a liquid and a gas at a temperature of 68°F (20°C). [**30,** 2012]

3.3.135.9 ***Liquefied Natural Gas (LNG).*** A fluid in the cryogenic liquid state that is composed predominantly of methane and that can contain minor quantities of ethane, propane, nitrogen, and other components normally found in natural gas. [**59A,** 2013]

3.3.135.10* ***Liquefied Petroleum Gas (LP-Gas).*** Any material having a vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves (except propylene) or as mixtures: propane, propylene, butane (normal butane or isobutane), and butylenes. [**58,** 2014]

3.3.135.11 ***Nonflammable Gas.*** A gas that does not meet the definition of a flammable gas. [**55,** 2013]

3.3.135.12* ***Other Gas.*** A gas that is not a corrosive gas, flammable gas, highly toxic gas, oxidizing gas, pyrophoric gas, toxic gas, or unstable reactive gas with a hazard rating of Class 2, Class 3, or Class 4 gas. [**55,** 2013]

3.3.135.13 ***Oxidizing Gas.*** A gas that can support and accelerate combustion of other materials more than air does. [**55,** 2013]

3.3.135.14 ***Pyrophoric Gas.*** A gas with an autoignition temperature in air at or below 130°F (54.4°C). [**55,** 2013]

3.3.135.15 ***Scavenged Gas.*** A residual process gas that is collected for treatment or release at a location remote from the site of use.

3.3.135.16 ***Simple Asphyxiant Gas.*** A gas that does not provide sufficient oxygen to support life and that has none of the other physical or health hazards.

3.3.135.17 ***Toxic Gas.*** A gas with a median lethal concentration (LC_{50}) in air of more than 200 ppm but not more than 2000 ppm by volume of gas or vapor, or more than 2 mg/L but not more than 20 mg/L of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 0.44 lb and 0.66 lb (200 g and 300 g) each. [**55,** 2013]

3.3.135.18* ***Unstable Reactive Gas.*** A gas that, in the pure state or as commercially produced, will vigorously polymerize, decompose, or condense; become self-reactive; or otherwise undergo a violent chemical change under conditions of shock, pressure, or temperature. [**55,** 2013]

3.3.136* Gas Cabinet. A fully enclosed, noncombustible enclosure used to provide an isolated environment for compressed gas cylinders in storage or use. [**55,** 2013]

3.3.137 Gas Manufacturer/Producer. A business that produces compressed gases or cryogenic fluids, or both, or fills portable or stationary gas containers, cylinders, or tanks. [**55,** 2013]

3.3.138 Gas Room. A separately ventilated, fully enclosed room in which only compressed gases, cryogenic fluids, associated equipment, and supplies are stored or used. [**55,** 2013]

3.3.139* Gaseous Hydrogen System. A system in which hydrogen is delivered, stored, and discharged in the gaseous form to a piping system. The gaseous hydrogen system terminates at the point where hydrogen at service pressure first enters the distribution piping. [**55,** 2013]

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3.3.140 Ground Kettle. A container that could be mounted on wheels and is used for heating tar, asphalt, or similar substances.

3.3.141 Handling. The deliberate movement of material by any means to a point of storage or use.

3.3.142* Hazard of Contents.

3.3.142.1 ***High Hazard.*** High hazard contents shall include materials defined as hazardous materials in 3.3.173.4, whether stored, used, or handled. [**5000:**6.3.2.4.1.1]

3.3.142.1.1 ***High Hazard Level 1 Contents.*** High hazard Level 1 contents shall include materials that present a detonation hazard including, but not limited to, the following: (1) Explosives; (2) Unclassified detonable organic peroxides; (3) Class 4 oxidizers; (4) Detonable pyrophoric materials; (5) Class 3 detonable and Class 4 unstable (reactive) materials. [**5000:**6.3.2.4.2]

3.3.142.1.2 ***High Hazard Level 2 Contents.*** High hazard Level 2 contents shall include materials that present a deflagration hazard or a hazard from accelerated burning including, but not limited to, the following: (1) Class I, Class II, or Class III-A flammable or combustible liquids that are used or stored in normally open containers or systems, or in closed containers or systems at gauge pressures of more than 15 psi (103 kPa); (2) Combustible dusts stored, used, or generated in a manner creating a severe fire or explosion hazard; (3) Flammable gases and flammable cryogenic liquids; (4) Class I organic peroxides; (5) Class 3 solid or liquid oxidizers that are used or stored in normally open containers or systems, or in closed containers or systems at gauge pressures of more than 15 psi (103 kPa); (6) Nondetonable pyrophoric materials; (7) Class 3 nondetonable unstable (reactive) materials; (8) Class 3 water-reactive materials [**5000:**6.3.2.4.3]

3.3.142.1.3 ***High Hazard Level 3 Contents.*** High hazard Level 3 contents shall include materials that readily support combustion or present a physical hazard including, but not limited to, the following: (1) Level 2 and Level 3 aerosols; (2) Class I, Class II, or Class III-A flammable or combustible liquids that are used or stored in normally closed containers or systems at gauge pressures of less than 15 psi (103 kPa); (3) Flammable solids, other than dusts classified as high hazard Level 2, stored, used, or generated in a manner creating a high fire hazard; (4) Class II and Class III organic peroxides; (5) Class 2 solid or liquid oxidizers; (6) Class 3 solid or liquid oxidizers that are used or stored in normally closed containers or systems at gauge pressures of less than 15 psi (103 kPa); (7) Oxidizing gases and oxidizing cryogenic liquids; (8) Class 2 unstable (reactive) materials; (9) Class 2 water-reactive materials [**5000:**6.3.2.4.4]

3.3.142.1.4 ***High Hazard Level 4 Contents.*** High hazard Level 4 contents shall include materials that are acute health hazards including, but not limited to, the following: (1) Corrosives; (2) Highly toxic materials; (3) Toxic materials [**5000:**6.3.2.4.5]

3.3.142.1.5 ***High Hazard Level 5 Contents.*** High hazard Level 5 contents include hazardous production materials (HPM) used in the fabrication of semiconductors or semiconductor research and development. [**5000:**6.3.2.4.6]

3.3.142.2* ***Low Hazard Contents.*** Low hazard contents shall be classified as those of such low combustibility that no self-propagating fire therein can occur. [**5000:**6.3.2.2]

3.3.142.3* ***Ordinary Hazard Contents.*** Ordinary hazard contents shall be classified as those that are likely to burn with moderate rapidity or to give off a considerable volume of smoke. [**5000:**6.3.2.3]

3.3.143* Hazard Rating. The numerical rating of the health, flammability, self-reactivity, and other hazards of the material, including its reaction with water. [**55,** 2013]

3.3.144 Hazardous Material. See 3.3.173.4.

3.3.145 Hazardous Material Storage Facility. A building, a portion of a building, or exterior area used for the storage of hazardous materials in excess of exempt amounts.

3.3.146 Hazardous Materials Storage Locker. A movable prefabricated structure, manufactured primarily at a site other than the final location of the structure and transported completely assembled or in a ready-to-assemble package to the final location, and intended to meet local, state, and federal requirements for outside storage of hazardous materials. [**30,** 2015]

3.3.147* Hazardous Reaction or Hazardous Chemical Reaction. Reactions that result in dangers beyond the fire problems relating to flash point and boiling point of either the reactants or of the products. [**30,** 2015]

3.3.148 Heat Transfer Fluid (HTF). A liquid that is used as a medium to transfer heat energy from a heater or vaporizer to a remote heat consumer (e.g., injection molding machine, oven, or dryer, or jacketed chemical reactor). [**30,** 2015]

3.3.149* Heliport. An identifiable area located on land, on water, or on a structure, that also includes any existing buildings or facilities thereon, used or intended to be used for landing and takeoff of helicopters. [**418,** 2011]

3.3.150 Hogged Material. Mill waste consisting mainly of hogged bark but possibly including a mixture of bark, chips, dust, or other by-products from trees; also includes material designated as hogged fuel.

3.3.151 Home.

3.3.151.1 ***Day-Care Home.*** See 3.3.183.6.

3.3.151.2 ***Nursing Home.*** See 3.3.183.21.

3.3.152 Horizontal Exit. See 3.3.102.1.

3.3.153* Immediately Dangerous to Life and Health (IDLH). A concentration of airborne contaminants, normally expressed in parts per million (ppm) or milligrams per cubic meter, that represents the maximum level from which one could escape within 30 minutes without any escape-impairing symptoms or irreversible health effects. [**55,** 2013]

3.3.154 Imminent Danger. A condition or practice in an occupancy or structure that poses a danger that could reasonably be expected to cause death, serious physical harm, or serious property loss.

3.3.155* Incident Commander (IC). The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. [**472,** 2013]

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3.3.156 Incidental Liquid Use or Storage. Use or storage as a subordinate activity to that which establishes the occupancy or area classification. [**30,** 2015]

3.3.157 Indicating Valve. See 3.3.268.1.

3.3.158 Initiating Device Circuit. A circuit to which automatic or manual initiating devices are connected where the signal received does not identify the individual device operated. [**72,** 2013]

3.3.159 Inside Liquid Storage Area. See 3.3.14.6.

3.3.160* ISO Module. An assembly of tanks or tubular cylinders permanently mounted in a frame conforming to International Organization for Standardization (ISO) requirements. [**55,** 2013]

3.3.161 Jurisdiction. A governmental unit or political division or a subdivision.

3.3.162 Limit.

3.3.162.1* ***Ceiling Limit.*** The maximum concentration of an airborne contaminant to which one can be exposed. [**5000,** 2015]

3.3.162.2* ***Permissible Exposure Limit (PEL).*** The maximum permitted 8-hour, time-weighted average concentration of an airborne contaminant. [**55,** 2013]

3.3.162.3* ***Short-Term Exposure Limit (STEL).*** The concentration to which it is believed that workers can be exposed continuously for a short period of time without suffering from irritation, chronic or irreversible tissue damage, or narcosis of a degree sufficient to increase the likelihood of accidental injury, impairment of self-rescue, or the material reduction of work efficiency, without exceeding the daily permissible exposure limit (PEL). [**55,** 2013]

3.3.163 Limited-Combustible (Material). *See 4.5.10.* [**5000,** 2015]

3.3.164 Liquid. A material that has a melting point that is equal to or less than 68°F (20°C) and a boiling point that is greater than 68°F (20°C) and 14.7 psia (101.3 kPa). When not otherwise identified, the term liquid shall mean both flammable and combustible liquids. [**5000,** 2015]

3.3.164.1 ***Combustible Liquid.*** Any liquid that has a closed-cup flash point at or above 100°F (37.8°C), as determined by the test procedures and apparatus set forth in Section 4.4 of NFPA 30, *Flammable and Combustible Liquids Code.* Combustible liquids are classified according to Section 4.3 of NFPA 30. [**30,** 2015]

3.3.164.2* ***Flammable Liquid.*** Any liquid that has a closed-cup flash point below 100°F (37.8°C), as determined by the test procedures and apparatus set forth in Section 4.4 of NFPA 30, *Flammable and Combustible Liquids Code,* and a Reid vapor pressure that does not exceed an absolute pressure of 40 psi (276 kPa) at 100°F (37.8°C), as determined by ASTM D 323, *Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method).* Flammable liquids are classified according to Section 4.3 of NFPA 30. [**30,** 2015]

3.3.164.3 ***Highly Volatile Liquid.*** A liquid with a boiling point of less than 68°F (20°C).

3.3.164.4 ***Stable Liquid.*** Any liquid not defined as unstable. [**30,** 2015]

3.3.165 Log. Felled tree from which all the branches have been removed.

3.3.166 Loose House. A separate detached building in which unbaled combustible fibers are stored.

3.3.167 Lumber. Wood from felled trees having a section produced by lengthwise sawing or chipping of logs or other solid wood of large dimensions and possible crosscutting and/or further machining to obtain a certain size and includes boards, dimension lumber, timber, and similar wood products.

3.3.168 Manual Emergency Shutoff Valve. A designated valve designed to shut off the flow of gases or liquids that is manually operated. [**55,** 2013]

3.3.169 Manual Fire Alarm Box. A manually operated device used to initiate a fire alarm signal. [**72,** 2013]

3.3.170 Manual Pull Station. See 3.3.169, Manual Fire Alarm Box.

3.3.171 Marine Terminal. A facility comprised of one or more berths, piers, wharves, loading and unloading areas, warehouses, and storage yards and used for transfer of people and/or cargo between waterborne and land transportation modes. [**307,** 2011]

3.3.172 Marine Vessel. A water craft or other artificial contrivance used as a means of transportation in or on the water.

3.3.173 Material.

3.3.173.1 ***Combustible (Material).*** See 3.3.56.

3.3.173.2 ***Compatible Material.*** A material that, when in contact with an oxidizer, will not react with the oxidizer or promote or initiate its decomposition.

3.3.173.3 ***Corrosive Material.*** A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. [**400,** 2013]

3.3.173.4 ***Hazardous Material.*** A chemical or substance that is classified as a physical hazard material or a health hazard material, whether the chemical or substance is in usable or waste condition. *(See also 3.3.173.6, Health Hazard Material, and 3.3.173.12, Physical Hazard Material.)* [**400,** 2013]

3.3.173.5 ***Hazardous Production Material (HPM).*** A solid, liquid, or gas associated with semiconductor manufacturing that has a degree-of-hazard rating of 3 or 4 in health, flammability, instability, or water reactivity in accordance with NFPA 704 and that is used directly in research, laboratory, or production processes that have as their end product materials that are not hazardous. [**5000,** 2015]

3.3.173.6 ***Health Hazard Material.*** A chemical or substance classified as a toxic, highly toxic, or corrosive material in accordance with definitions set forth in this *Code.* [**400,** 2013]

3.3.173.7* ***Highly Toxic Material.*** A material that produces a lethal dose or lethal concentration that falls within any of following categories: (1) a chemical that has a median lethal dose (LD_{50}) of 50 mg/kg or less of body weight when administered orally to albino rats weighing between 200 g and 300 g each; (2) a chemical that has a median lethal dose (LD_{50}) of 200 mg/kg or less of body weight when administered by continuous contact for 24 hours, or less if

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death occurs within 24 hours, with the bare skin of albino rabbits weighing between 2 kg and 3 kg each or albino rats weighing 200 g to 300 g each; (3) a chemical that has a median lethal concentration (LC_{50}) in air of 200 parts per million by volume or less of gas or vapor, or 2 mg/L or less of mist, fume, or dust, when administered by continuous inhalation for 1 hour, or less if death occurs within 1 hour, to albino rats weighing between 200 g and 300 g each. [**400,** 2013]

3.3.173.8 ***Hogged Material.*** See 3.3.150.

3.3.173.9* ***Incompatible Material.*** Materials that, when in contact with each other, have the potential to react in a manner that generates heat, fumes, gases or by-products that are hazardous to life or property. [**400,** 2013]

3.3.173.10 ***Limited-Combustible Material.*** See 4.5.10. [**5000,** 2015]

3.3.173.11 ***Noncombustible Material.*** See 4.5.9. [**5000,** 2015]

3.3.173.12 ***Physical Hazard Material.*** A chemical or substance classified as a combustible liquid, explosive, flammable cryogen, flammable gas, flammable liquid, flammable solid, organic peroxide, oxidizer, oxidizing cryogen, pyrophoric, unstable (reactive), or water-reactive material. [**400,** 2013]

3.3.173.13 ***Pyrophoric Material.*** A chemical with an autoignition temperature in air at or below 130°F (54.4°C). [**400,** 2013]

3.3.173.14* ***Toxic Material.*** A material that produces a lethal dose or a lethal concentration within any of the following categories: (1) a chemical or substance that has a median lethal dose (LD_{50}) of more than 50 mg/kg but not more than 500 mg/kg of body weight when administered orally to albino rats weighing between 200 g and 300 g each; (2) a chemical or substance that has a median lethal dose (LD_{50}) of more than 200 mg/kg but not more than 1000 mg/kg of body weight when administered by continuous contact for 24 hours, or less if death occurs within 24 hours, with the bare skin of albino rabbits weighing between 2 kg and 3 kg each; (3) a chemical or substance that has a median lethal concentration (LC_{50}) in air of more than 200 parts per million but not more than 2000 parts per million by volume of gas or vapor, or more than 2 mg/L but not more than 20 mg/L, of mist, fume, or dust when administered by continuous inhalation for 1 hour, or less if death occurs within 1 hour, to albino rats weighing between 200 g and 300 g each. [**400,** 2013]

3.3.173.15* ***Unstable (Reactive) Material.*** A material that, in the pure state or as commercially produced, will vigorously polymerize, decompose or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure, or temperature. [**400,** 2013]

3.3.173.16* ***Water-Reactive Material.*** A material that explodes, violently reacts, produces flammable, toxic, or other hazardous gases; or evolves enough heat to cause self-ignition or ignition of nearby combustibles upon exposure to water or moisture. [**400,** 2013]

3.3.174 Material Safety Data Sheet (MSDS). Written or printed material concerning a hazardous material that is prepared in accordance with the provisions of OSHA 29 CFR 1910.1200.

3.3.175* Maximum Allowable Quantity (MAQ). The quantity of hazardous material permitted in a control area.

3.3.176* Means of Egress. A continuous and unobstructed way of travel from any point in a building or structure to a public way consisting of three separate and distinct parts: (1) the exit access, (2) the exit, and (3) the exit discharge. [***101,*** 2015]

3.3.177 Means of Escape. A way out of a building or structure that does not conform to the strict definition of means of egress but does provide an alternate way out. [***101,*** 2015]

3.3.178 Mezzanine. An intermediate level between the floor and the ceiling of any room or space. [***101,*** 2015]

3.3.179* Mobile Supply Unit. Any supply source that is equipped with wheels so it is able to be moved around. [**55,** 2013]

3.3.180 Motor Vehicle Fluid. A fluid that is a flammable, combustible, or hazardous material, such as crankcase fluids, fuel, brake fluids, transmission fluids, radiator fluids, and gear oil.

3.3.181 Nesting. A method of securing cylinders upright in a tight mass using a contiguous three-point contact system whereby all cylinders in a group have a minimum of three contact points with other cylinders or a solid support structure (e.g., a wall or railing). [**55,** 2013]

3.3.182* Normal Temperature and Pressure (NTP). A temperature of 70°F (21°C) at an absolute pressure of 14.7 psi (101.3 kPa). [**55,** 2013]

3.3.183 Occupancy. The purpose for which a building or other structure, or part thereof, is used or intended to be used. [**ASCE/SEI 7:**1.2]

3.3.183.1* ***Ambulatory Health Care Occupancy.*** An occupancy used to provide services or treatment simultaneously to four or more patients that provides, on an outpatient basis, one or more of the following: (1) treatment for patients that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (2) anesthesia that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (3) emergency or urgent care for patients who, due to the nature of their injury or illness, are incapable of taking action for self-preservation under emergency conditions without the assistance of others [***101,*** 2015]

3.3.183.2* ***Apartment Building.*** A building or portion thereof containing three or more dwelling units with independent cooking and bathroom facilities. [***101,*** 2015]

3.3.183.3* ***Assembly Occupancy.*** An occupancy (1) used for a gathering of 50 or more persons for deliberation, worship, entertainment, eating, drinking, amusement, awaiting transportation, or similar uses; or (2) used as a special amusement building, regardless of occupant load. [***101,*** 2015]

3.3.183.4 ***Bulk Merchandising Retail Building.*** A building in which the sales area includes the storage of combustible materials on pallets, in solid piles, or in racks in excess of 12 ft (3660 mm) in storage height. [***101,*** 2015]

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3.3.183.5* ***Business Occupancy.*** An occupancy used for the transaction of business other than mercantile. [***101,*** 2015]

3.3.183.6* ***Day-Care Home.*** A building or portion of a building in which more than 3 but not more than 12 clients receive care, maintenance, and supervision, by other than their relative(s) or legal guardian(s), for less than 24 hours per day. [***101,*** 2015]

3.3.183.7* ***Day-Care Occupancy.*** An occupancy in which four or more clients receive care, maintenance, and supervision, by other than their relatives or legal guardians, for less than 24 hours per day. [***101,*** 2015]

3.3.183.8* ***Detention and Correctional Occupancy.*** An occupancy used to house one or more persons under varied degrees of restraint or security where such occupants are mostly incapable of self-preservation because of security measures not under the occupants' control. [***101,*** 2015]

3.3.183.8.1 ***Detention and Correctional Use Condition.*** For application of the life safety requirements in Section 20.7, the resident user category is divided into the five use conditions.

3.3.183.8.1.1 ***Use Condition I — Free Egress.*** A condition under which free movement is allowed from sleeping areas and other spaces where access or occupancy is permitted to the exterior via means of egress that meet the requirements of NFPA *101, Life Safety Code.* [***101:*** 22.1.2.1.1]

3.3.183.8.1.2 ***Use Condition II — Zoned Egress.*** A condition under which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. [***101:*** 22.1.2.1.2]

3.3.183.8.1.3 ***Use Condition III — Zoned Impeded Egress.*** A condition under which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual sleeping rooms and a group activity space, with egress impeded by remote-controlled release of means of egress from such a smoke compartment to another smoke compartment. [***101:*** 22.1.2.1.3]

3.3.183.8.1.4 ***Use Condition IV — Impeded Egress.*** A condition under which free movement is restricted from an occupied space, and remote-controlled release is provided to allow movement from all sleeping rooms, activity spaces, and other occupied areas within the smoke compartment to another smoke compartment. [***101:*** 22.1.2.1.4]

3.3.183.8.1.5 ***Use Condition V — Contained.*** A condition under which free movement is restricted from an occupied space, and staff-controlled manual release at each door is provided to allow movement from all sleeping rooms, activity spaces, and other occupied areas within the smoke compartment to another smoke compartment. [***101:*** 22.1.2.1.5]

3.3.183.9* ***Dormitory.*** A building or a space in a building in which group sleeping accommodations are provided for more than 16 persons who are not members of the same family in one room, or a series of closely associated rooms under joint occupancy and single management, with or without meals, but without individual cooking facilities. [***101,*** 2015]

3.3.183.10* ***Educational Occupancy.*** An occupancy used for educational purposes through the twelfth grade by six or more persons for 4 or more hours per day or more than 12 hours per week. [***101,*** 2015]

3.3.183.11* ***Health Care Occupancy.*** An occupancy used to provide medical or other treatment or care simultaneously to four or more patients on an inpatient basis, where such patients are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupants' control. [***101,*** 2015]

3.3.183.12 ***Hospital.*** A building or portion thereof used on a 24-hour basis for the medical, psychiatric, obstetrical, or surgical care of four or more inpatients. [***101,*** 2015]

3.3.183.13* ***Hotel.*** A building or groups of buildings under the same management in which there are sleeping accommodations for more than 16 persons and primarily used by transients for lodging with or without meals. [***101,*** 2015]

3.3.183.14* ***Industrial Occupancy.*** An occupancy in which products are manufactured or in which processing, assembling, mixing, packaging, finishing, decorating, or repair operations are conducted. [***101,*** 2015]

3.3.183.15* ***Limited Care Facility.*** A building or portion of a building used on a 24-hour basis for the housing of four or more persons who are incapable of self-preservation because of age; physical limitations due to accident or illness; or limitations such as mental retardation/developmental disability, mental illness, or chemical dependency. [***101,*** 2015]

3.3.183.16 ***Lodging or Rooming House.*** A building or portion thereof that does not qualify as a one- or two-family dwelling, that provides sleeping accommodations for a total of 16 or fewer people on a transient or permanent basis, without personal care services, with or without meals, but without separate cooking facilities for individual occupants. [***101,*** 2015]

3.3.183.17* ***Mercantile Occupancy.*** An occupancy used for the display and sale of merchandise. [***101,*** 2015]

3.3.183.17.1 ***Class A Mercantile Occupancy.*** All mercantile occupancies having an aggregate gross area of more than 30,000 ft^2 (2800 m^2) or occupying more than three stories for sales purposes. [***101,*** 2015]

3.3.183.17.2 ***Class B Mercantile Occupancy.*** All mercantile occupancies of more than 3000 ft^2 (280 m^2), but not more than 30,000 ft^2 (2800 m^2), aggregate gross area and occupying not more than three stories for sales purposes. Class B also includes all mercantile occupancies of not more than 3000 ft^2 (280 m^2) gross area and occupying two or three stories for sales purposes. [***101,*** 2015]

3.3.183.17.3 ***Class C Mercantile Occupancy.*** All mercantile occupancies of not more than 3000 ft^2 (280 m^2) gross area and used for sales purposes occupying one story only. [***101,*** 2015]

3.3.183.18 ***Mixed Occupancy.*** A multiple occupancy where the occupancies are intermingled. [***101,*** 2015]

3.3.183.19 ***Motor Fuel Dispensing Facility.*** That portion of a property where motor fuels are stored and dispensed from fixed equipment into the fuel tanks of motor vehicles or marine craft or into approved containers, including all equipment used in connection therewith. [**30A,** 2015]

3.3.183.19.1 ***Fleet Vehicle Motor Fuel Dispensing Facility.*** A motor fuel dispensing facility at a commercial, industrial, governmental, or manufacturing property where motor fuels are dispensed into the fuel tanks of motor vehicles that

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are used in connection with the business or operation of that property by persons within the employ of such business or operation. [**30A,** 2015]

3.3.183.19.2 ***Marine Motor Fuel Dispensing Facility.*** A motor fuel dispensing facility at or adjacent to shore, a pier, a wharf, or a floating dock where motor fuels are dispensed into the fuel tanks of marine craft. [**30A,** 2015]

3.3.183.19.3* ***Motor Fuel Dispensing Facility Located Inside a Building.*** That portion of a motor fuel dispensing facility located within the perimeter of a building or building structure that also contains other occupancies. [**30A,** 2015]

3.3.183.20 ***Multiple Occupancy.*** A building or structure in which two or more classes of occupancy exist. [***101,*** 2015]

3.3.183.21 ***Nursing Home.*** A building or portion of a building used on a 24-hour basis for the housing and nursing care of four or more persons who, because of mental or physical incapacity, might be unable to provide for their own needs and safety without the assistance of another person. [***101,*** 2015]

3.3.183.22 ***One- and Two-Family Dwelling.*** One- and two-family dwellings include buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms.

3.3.183.22.1 ***One- and Two-Family Dwelling Unit.*** A building that contains not more than two dwelling units with independent cooking and bathroom facilities. [***101,*** 2015]

3.3.183.23* ***Parking Structure.*** A building, structure, or portion thereof used for the parking, storage, or both, of motor vehicles. [**88A,** 2015]

3.3.183.23.1 ***Basement and Underground Parking Structures.*** Parking structures that are located below grade. A basement parking structure has other occupancies above it and an underground parking structure has no occupancy other than parking above it. Basement and underground parking structures are considered as specific cases of enclosed parking structures.

3.3.183.23.2 ***Enclosed Parking Structure.*** Any parking structure that is not an open parking structure. [**88A,** 2015]

3.3.183.23.3 ***Open Parking Structure.*** A parking structure that meets the requirements of Section 5.5 of NFPA 88A. [**88A,** 2015]

3.3.183.24 ***Repair Garages.***

3.3.183.24.1 ***Major Repair Garage.*** A building or portions of a building where major repairs, such as engine overhauls, painting, body and fender work, and repairs that require draining of the motor vehicle fuel tank are performed on motor vehicles, including associated floor space used for offices, parking, or showrooms.

3.3.183.24.2 ***Minor Repair Garage.*** A building or portions of a building used for lubrication, inspection, and minor automotive maintenance work, such as engine tune-ups, replacement of parts, fluid changes (e.g., oil, antifreeze, transmission fluid, brake fluid, air conditioning refrigerants, etc.), brake system repairs, tire rotation, and similar routine maintenance work, including associated floor space used for offices, parking, or showrooms.

3.3.183.25* ***Residential Board and Care Occupancy.*** An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services. [***101,*** 2015]

3.3.183.26* ***Residential Occupancy.*** An occupancy that provides sleeping accommodations for purposes other than health care or detention and correctional. [***101,*** 2015]

3.3.183.27 ***Separated Occupancy.*** A multiple occupancy where the occupancies are separated by fire resistance–rated assemblies. [***101,*** 2015]

3.3.183.28* ***Storage Occupancy.*** An occupancy used primarily for the storage or sheltering of goods, merchandise, products, or vehicles. [***101,*** 2015]

3.3.183.28.1* ***Mini-Storage Building.*** A storage occupancy partitioned into individual storage units, with a majority of the individual units not greater than 750 ft^2 in area, that are rented or leased for the purposes of storing personal or business items where all of the following apply: (1) the storage units are separated from each other by less than a 1-hour fire resistance rated barrier, (2) the owner of the facility does not have unrestricted access to the storage units, and (3) the items being stored are concealed from view from outside the storage unit.

3.3.184 Occupant Load. The total number of persons that might occupy a building or portion thereof at any one time. [***101,*** 2015]

3.3.185 Open System Use. See 3.3.267.2.

3.3.186 Operating Pressure. The pressure at which a system operates.

3.3.187* Operating Unit (Vessel) or Process Unit (Vessel). The equipment in which a unit operation or unit process is conducted. *(See also 3.3.263, Unit Operation or Unit Process.)* [**30,** 2015]

3.3.188 Operations. A general term that includes, but is not limited to, the use, transfer, storage, and processing of liquids. [**30,** 2015]

3.3.189 Organic Peroxide. Any organic compound having a double oxygen or peroxy (-O-O-) group in its chemical structure. [**400,** 2013]

3.3.189.1* ***Organic Peroxide Formulation.*** A pure or technically pure organic peroxide or a mixture of organic peroxides alone or in combination with one or more materials in various combinations and concentrations. [**400,** 2013]

3.3.189.1.1 ***Class I.*** Class I shall describe those formulations that are more severe than a Class II but do not detonate. [**400,** 2013]

3.3.189.1.2 ***Class II.*** Class II shall describe those formulations that burn very rapidly and that present a severe reactivity hazard. [**400,** 2013]

3.3.189.1.3 ***Class III.*** Class III shall describe those formulations that burn rapidly and that present a moderate reactivity hazard. [**400,** 2013]

3.3.189.1.4 ***Class IV.*** Class IV shall describe those formulations that burn in the same manner as ordinary combustibles and that present a minimal reactivity hazard. [**400,** 2013]

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3.3.189.1.5 ***Class V.*** Class V shall describe those formulations that burn with less intensity than ordinary combustibles or do not sustain combustion and that present no reactivity hazard. [**400,** 2013]

3.3.189.2 ***Organic Peroxide Storage Area.*** See 3.3.14.7.

3.3.190 OSHA. The Occupational Safety and Health Administration of the U.S. Department of Labor. [**55,** 2013]

3.3.191 Overcrowded. A situation where the occupant load exceeds the exit capacity or the posted occupant load.

3.3.192* Oxidizer. Any solid or liquid material that readily yields oxygen or other oxidizing gas or that readily reacts to promote or initiate combustion of combustible materials and that can, under some circumstances undergo a vigorous self-sustained decomposition due to contamination or heat exposure. [**400,** 2013]

3.3.192.1 ***Class 1.*** An oxidizer that does not moderately increase the burning rate of combustible materials with which it comes into contact or a solid oxidizer classified as Class 1 when tested in accordance with the test protocol set forth in G.1 of NFPA 400. [**400,** 2013]

3.3.192.2 ***Class 2.*** An oxidizer that causes a moderate increase in the burning rate of combustible materials with which it comes into contact or a solid oxidizer classified as Class 2 when tested in accordance with the test protocol set forth in G.1 of NFPA 400. [**400,** 2013]

3.3.192.3 ***Class 3.*** An oxidizer that causes a severe increase in the burning rate of combustible materials with which it comes into contact or a solid oxidizer classified as Class 3 when tested in accordance with the test protocol set forth in G.1 of NFPA 400. [**400,** 2013]

3.3.192.4 ***Class 4.*** An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock and that causes a severe increase in the burning rate of combustible materials with which it comes into contact. [**400,** 2013]

3.3.193 Ozone Generator. Equipment that causes the production of ozone.

3.3.194 Packaging. A commodity wrapping, cushioning, or container. [**13,** 2013]

3.3.195 Paper. Felted sheets made from natural fibrous materials, usually vegetable but sometimes mineral or animal, and formed on a fine wire screen by means of water suspension.

3.3.196 Patch Kettle. Any pot or container with a capacity of less than 6 gal (22.7 L) used for preheating tar, asphalt, pitch, or similar substances for the repair of roofs, streets, floors, pipes, or similar objects.

3.3.197 Permissible Exposure Limit (PEL). See 3.3.162.2.

3.3.198 Permit. A document issued by the AHJ for the purpose of authorizing performance of a specified activity.

3.3.199 Peroxide-Forming Chemical. A chemical that, when exposed to air, forms explosive peroxides that are shock sensitive, pressure sensitive, or heat sensitive.

3.3.200* Personal Care. The care of residents who do not require chronic or convalescent medical or nursing care. [***101,*** 2015]

3.3.201 Pesticide. Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest or for use as a plant regulator, defoliant, or desiccant.

3.3.202 Physical Hazard. A chemical for which there is scientifically valid evidence that the chemical is an organic peroxide or oxidizer.

3.3.203* Pier. A structure, usually of greater length than width and projecting from the shore into a body of water with direct access from land, that can be either open deck or provided with a superstructure. [**307,** 2011]

3.3.204* Pressure Vessel. A container, process vessel, or other component designed in accordance with the ASME Boiler and Pressure Vessel Code, DOT, or other approved standards. [**400,** 2013]

3.3.205 Primary Containment. The first level of containment, consisting of the inside portion of that container that comes into immediate contact on its inner surface with the material being contained.

3.3.206* Process or Processing. An integrated sequence of operations. [**30,** 2015]

3.3.207 Process Unit (Vessel). See 3.3.187, Operating Unit (Vessel) or Process Unit (Vessel).

3.3.208 Proprietary Information. Information regarding compounds or ingredients used in a process or production that do not qualify as trade secrets but that provide an industry or business with a competitive advantage.

3.3.209 Protection for Exposures. Fire protection for structures on property adjacent to liquid storage that is provided by (1) a public fire department or (2) a private fire brigade maintained on the property adjacent to the liquid storage, either of which is capable of providing cooling water streams to protect the property adjacent to the liquid storage. [**30,** 2015]

3.3.210 Public Way. A street, alley, or other similar parcel of land essentially open to the outside air deeded, dedicated, or otherwise permanently appropriated to the public for public use and having a clear width and height of not less than 10 ft (3050 mm). [***101,*** 2015]

3.3.211 Purging. A method used to free the internal volume of a piping system of unwanted contents that results in the existing contents being removed or replaced. [**55,** 2013]

3.3.212 Pyrophoric. A chemical that spontaneously ignites in air at or below a temperature of 130°F (54.5°C).

3.3.213 Quality Assurance. The procedures conducted by the registered design professionals (RDPs) responsible for design and the registered design professionals responsible for inspection that provide evidence and documentation to the RDPs, the owner, and the AHJ that the work is being constructed in accordance with the approved construction documents. [**5000,** 2015]

3.3.214 Quality Assurance Program. A predefined set of observations, special inspections, tests, and other procedures that provide an independent record to the owner, AHJ, and RDP responsible for design that the construction is in general conformance with the approved construction documents. [**5000,** 2015]

3.3.215* Rack. Any combination of vertical, horizontal, and diagonal members that supports stored materials.

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3.3.215.1 ***Double-Row Racks.*** Racks less than or equal to 12 ft (3.7 m) in depth or single-row racks placed back to back having an aggregate depth up to 12 ft (3.7 m), with aisles having an aisle width of at least 3.5 ft (1.1 m) between loads on racks. [**13,** 2013]

3.3.215.2* ***Movable Racks.*** Racks on fixed rails or guides.

3.3.215.3 ***Multiple-Row Racks.*** Racks greater than 12 ft (3.7 m) in depth or single- or double-row racks separated by aisles less than 3.5 ft (1.1 m) wide having an overall width greater than 12 ft (3.7 m). [**13,** 2013]

3.3.215.4* ***Portable Racks.*** Racks that are not fixed in place and can be arranged in any number of configurations. [**13,** 2013]

3.3.215.5 ***Single-Row Racks.*** Racks that have no longitudinal flue space and that have a depth up to 6 ft (1.8 m) with aisles having a width of at least 3.5 ft (1.1 m) between loads on racks. [**13,** 2013]

3.3.216* Ramp. A walking surface that has a slope steeper than 1 in 20. [***101,*** 2015]

3.3.217 Recreational Fire. The noncommercial burning of materials other than rubbish for pleasure, religious, ceremonial, cooking, or similar purposes in which the fuel burned is not contained in an incinerator, a barbecue grill, or a barbecue pit, and the total fuel area is not exceeding 3 ft (0.9 m) in diameter and 2 ft (0.6 m) in height.

3.3.218 Refinery. A plant in which flammable or combustible liquids are produced on a commercial scale from crude petroleum, natural gasoline, or other hydrocarbon sources. [**30,** 2015]

3.3.219 Registered Design Professional (RDP). An individual who is registered or licensed to practice his/her respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed. [**5000,** 2015]

3.3.220 Relocatable Power Tap. A device for indoor use consisting of an attachment plug on one end of a flexible cord and two or more receptacles on the opposite end, and has overcurrent protection.

3.3.221 Row. A minimum yard storage unit comprised of adjoining cotton bales.

3.3.222* Safety Can. A listed container of not more than 5.3 gal (20 L) capacity having a screen or strainer in each fill and pour opening, and having a spring-closing lid and spout cover, designed to safely relieve internal pressure when exposed to fire. [**30,** 2015]

3.3.223 Sales Display Area. See 3.3.14.10.

3.3.224 Salvage Vehicle. A vehicle that is dismantled for parts or awaiting destruction.

3.3.225 Self-Closing. Equipped with an approved device that ensures closing after opening. [***101,*** 2015]

3.3.226 Separation of Hazards. Physically separated by a specified distance, construction, or appliance. [**55,** 2013]

3.3.227 Shop Drawings. Scaled working drawings, equipment cutsheets, and design calculations. *(See 3.3.12, Plan, of NFPA 1031.)* [**1031,** 2014]

3.3.228* Signal.

3.3.228.1* ***Alarm Signal.*** A signal that results from the manual or automatic detection of an alarm condition. [**72,** 2013]

3.3.228.2* ***Fire Alarm Signal.*** A signal that results from the manual or automatic detection of a fire alarm condition. [**72,** 2013]

3.3.228.3* ***Supervisory Signal.*** A signal that results from the detection of a supervisory condition. [**72,** 2013]

3.3.228.4* ***Trouble Signal.*** A signal that results from the detection of a trouble condition. [**72,** 2013]

3.3.229 Simple Asphyxiant Gas. See 3.3.135.16.

3.3.230 Smoke Alarm. A single or multiple-station alarm responsive to smoke. [**72,** 2013]

3.3.231* Smoke Barrier. A continuous membrane, or a membrane with discontinuities created by protected openings, where such membrane is designed and constructed to restrict the movement of smoke. [**5000,** 2015]

3.3.232 Smoke Compartment. See 3.3.66.2

3.3.233* Smoke Partition. A continuous membrane that is designed to form a barrier to limit the transfer of smoke. [***101,*** 2015]

3.3.234 Smoking. The use or carrying of a lighted pipe, cigar, cigarette, tobacco, or any other type of smoking substance.

3.3.235 Smoking Area. See 3.3.14.11.

3.3.236 Solid.

3.3.236.1* ***Combustible Particulate Solid.*** An oxidizable, solid-phase material comprising distinct particles or pieces. [**69,** 2014]

3.3.236.2* ***Flammable Solid.*** A solid substance, other than a substance defined as a blasting agent or explosive, that is liable to cause fire resulting from friction or retained heat from manufacture, that has an ignition temperature below 212°F (100°C), or that burns so vigorously or persistently when ignited that it creates a serious hazard. [**400,** 2013]

3.3.237 Solid Material. A material that has a melting point, decomposes, or sublimes at a temperature greater than 68°F (20°C). [**5000,** 2015]

3.3.238 Solid Shelving. Solid shelving is fixed in place, slatted, wire mesh, or other type of shelves located within racks. The area of a solid shelf is defined by perimeter aisle or flue space on all four sides. Solid shelves having an area equal to or less than 20 ft^2 (1.9 m^2) shall be defined as open racks. Shelves of wire mesh, slats, or other materials more than 50 percent open and where the flue spaces are maintained shall be defined as open racks. [**13,** 2013]

3.3.239 Special Use. See 3.3.267.3.

3.3.240 Spray Area. See 3.3.14.12.

3.3.241* Spray Booth. A power-ventilated enclosure for a spray application operation or process that confines and limits the escape of the material being sprayed, including vapors, mists, dusts, and residues that are produced by the spraying operation and conducts or directs these materials to an exhaust system. [**33,** 2011]

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3.3.242* Spray Room. A power-ventilated fully enclosed room used exclusively for open spraying of flammable or combustible materials. [**33,** 2011]

3.3.243 Standard Cubic Foot (scf) of Gas. An amount of gas that occupies one cubic foot at an absolute pressure of 14.7 psi (101 kPa) and a temperature of 70°F (21°C). [**55,** 2013]

3.3.244 Standard Temperature and Pressure (STP). A temperature of 70°F (21°C) and a pressure of 1 atmosphere (14.7 psi or 760 mm Hg).

3.3.245 Standpipe System. See 3.3.254.13.

3.3.246 Storage.

3.3.246.1 ***Banded Tire Storage.*** Storage in which a number of tires are strapped together.

3.3.246.2 ***Cartoned Storage.*** Storage consisting of corrugated cardboard or paperboard containers that fully enclose the commodity.

3.3.246.3 ***Detached Storage.*** Storage in a separate building or in an outside area located away from all structures.

3.3.246.4 ***High-Piled Storage.*** Solid-piled, palletized, rack storage, bin box, and shelf storage in excess of 12 ft (3.7 m) in height. [**13,** 2013]

3.3.246.5 ***Isolated Storage.*** Storage in a different storage room or in a separate and detached building located at a safe distance.

3.3.246.6 ***Laced Tire Storage.*** Tires stored where the sides of the tires overlap, creating a woven or laced appearance. *[See Figure A.34.8.1(g).]* [**13,** 2013]

3.3.246.7* ***Miscellaneous Tire Storage.*** The storage of rubber tires that is incidental to the main use of the building. Storage areas shall not exceed 2000 ft^2 (186 m^2). On-tread storage piles, regardless of storage method, shall not exceed 25 ft (7.6 m) in the direction of the wheel holes. Acceptable storage arrangements include (a) on-floor, on-side storage up to 12 ft (3.7 m) high; (b) on-floor, on-tread storage up to 5 ft (1.5 m) high; (c) double-row or multirow fixed or portable rack storage on-side or on-tread up to 5 ft (1.5 m) high; (d) single row fixed or portable rack storage on-side or on-tread up to 12 ft (3.7 m) high; and (e) laced tires in racks up to 5 ft (1.5 m) in height. [**13,** 2013]

3.3.246.8 ***On-Side Tire Storage.*** Tires stored horizontally or flat. [**13,** 2013]

3.3.246.9 ***On-Tread Tire Storage.*** Tires stored vertically or on their treads. [**13,** 2013]

3.3.246.10 ***Palletized Tire Storage.*** Storage on portable racks of various types utilizing a conventional pallet as a base. [**13,** 2013]

3.3.246.11 ***Segregated Storage.*** Storage located in the same room or inside area that is physically separated by distance from incompatible materials.

3.3.246.12 ***Yard Storage.*** Storage of commodities in outdoor areas.

3.3.247 Storage Aids. Commodity storage devices, such as pallets, dunnage, separators, and skids. [**13,** 2013]

3.3.248 Story. The portion of a building located between the upper surface of a floor and the upper surface of the floor or roof next above. [**5000,** 2015]

3.3.248.1* ***Occupiable Story.*** A story occupied by people on a regular basis. [***101,*** 2015]

3.3.249 Street. A public thoroughfare that has been dedicated for vehicular use by the public and can be used for access by fire department vehicles. [***101,*** 2015]

3.3.250* Street Floor. A story or floor level accessible from the street or from outside the building at the finished ground level, with the floor level at the main entrance located not more than three risers above or below the finished ground level, and arranged and utilized to qualify as the main floor. [***101,*** 2015]

3.3.251 Structural Element. The columns and girders, beams, trusses, joists, braced frames, moment-resistant frames, and vertical and lateral resisting elements, and other framing members that are designed to carry any portion of the dead or live load and lateral forces, that are essential to the stability of the building or structure. [**5000,** 2015]

3.3.252* Structure. That which is built or constructed. [***101,*** 2015]

3.3.253 Summarily Abate. To immediately judge a condition to be a fire hazard to life or property and to order immediate correction of such condition.

3.3.254 System. Several items of equipment assembled, grouped, or otherwise interconnected for the accomplishment of a purpose or function.

3.3.254.1 ***Bulk Hydrogen Compressed Gas System.*** An assembly of equipment that consists of, but is not limited to, storage containers, pressure regulators, pressure relief devices, compressors, manifolds, and piping, with a storage capacity of more than (5000 scf) (141.6 Nm^3) of compressed hydrogen gas and that terminates at the source valve. [**55,** 2013]

3.3.254.2 ***Bulk Inert Gas System.*** An assembly of equipment that consists of, but is not limited to, storage containers, pressure regulators, pressure relief devices, vaporizers, manifolds, and piping, with a storage capacity of more than 20,000 scf (566 Nm^3) of inert gas, including unconnected reserves on hand at the site, and that terminates at the source valve. [**55,** 2013]

3.3.254.3 ***Bulk Liquefied Hydrogen System.*** An assembly of equipment that consists of, but is not limited to, storage containers, pressure regulators, pressure relief devices, vaporizers, liquid pumps, compressors, manifolds, and piping, with a storage capacity of more than 39.7 gal (150 L) of liquefied hydrogen that terminates at the source valve. [**55,** 2013]

3.3.254.4* ***Bulk Oxygen System.*** An assembly of equipment, such as oxygen storage containers, pressure regulators, pressure relief devices, vaporizers, manifolds, and interconnecting piping, that has a storage capacity of more than 20,000 scf (566 Nm^3) of oxygen and that terminates at the source valve. [**55,** 2013]

3.3.254.5 ***Central Station Service Alarm System.*** A system or group of systems in which the operations of circuits and devices are transmitted automatically to, recorded in, maintained by, and supervised from a listed central station that has competent and experienced servers and operators who, upon receipt of a signal, take such action as required by *NFPA 72*. Such service is to be controlled and operated by a person, firm, or corporation whose

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business is the furnishing, maintaining, or monitoring of supervised alarm systems. [**72,** 2013]

3.3.254.6 ***Compressed Gas System.*** An assembly of equipment designed to contain, distribute, or transport compressed gases. [**318,** 2015]

3.3.254.7 ***Continuous Gas Detection System.*** A gas detection system in which the instrument is maintained in continuous operation and the interval between sampling of any point does not exceed 30 minutes. [**55,** 2013]

3.3.254.8 ***Cylinder Containment System.*** A gastight recovery system comprising equipment or devices that can be placed over a leak in a compressed gas container, thereby stopping or controlling the escape of gas from the leaking container. [**55,** 2013]

3.3.254.9 ***Dedicated Smoke-Control System.*** A system that is intended for the purpose of smoke control only, which are separate systems of air moving and distribution equipment that do not function under normal building operating conditions.

3.3.254.10 ***Fire Alarm System.*** A system or portion of a combination system that consists of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal-initiating devices and to initiate the appropriate response to those signals. [**72,** 2013]

3.3.254.11 ***Fire Protection System.*** Any fire alarm device or system or fire-extinguishing device or system, or combination thereof, that is designed and installed for detecting, controlling, or extinguishing a fire or otherwise alerting occupants, or the fire department, or both, that a fire has occurred. [**1141,** 2012]

3.3.254.12 ***Nondedicated Smoke-Control System.*** A smoke-control system that shares components with some other system(s), such as the building HVAC system, which changes its mode of operation to achieve the smoke-control objective.

3.3.254.13* ***Standpipe System.*** An arrangement of piping, valves, hose connections, and allied equipment installed in a building or structure, with the hose connections located in such a manner that water can be discharged in streams or spray patterns through attached hose and nozzles, for the purpose of extinguishing a fire, thereby protecting a building or structure and its contents in addition to protecting the occupants. [**14,** 2013]

3.3.254.14 ***Treatment System.*** An assembly of equipment capable of processing a hazardous gas and reducing the gas concentration to a predetermined level at the point of discharge from the system to the atmosphere. [**55,** 2013]

3.3.254.15* ***Vapor Processing System.*** A system designed to capture and process vapors displaced during transfer or filling operations by use of mechanical or chemical means. [**30,** 2015]

3.3.254.16* ***Vapor Recovery System.*** A system designed to capture and retain, without processing, vapors displaced during transfer or filling operations. [**30,** 2015]

3.3.255 Tank.

3.3.255.1 ***Aboveground Storage Tank.*** A horizontal or vertical tank that is listed and intended for fixed installation, without backfill, above or below grade and is used within the scope of its approval or listing. [**30A,** 2015]

3.3.255.2 ***Aboveground Tank.*** A tank that is installed above grade, at grade, or below grade without backfill. [**30,** 2012]

3.3.255.2.1 ***Protected Aboveground Tank.*** An atmospheric aboveground storage tank with integral secondary containment and thermal insulation that has been evaluated for resistance to physical damage and for limiting the heat transferred to the primary tank when exposed to a hydrocarbon pool fire and is listed in accordance with ANSI/UL 2085, *Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids,* or an equivalent test procedure. [**30:**22.2.3]

3.3.255.3 ***ASME Tank.*** See 3.3.69.1, ASME Container.

3.3.255.4* ***Portable Tank. (Compressed Gases and Cryogenic Fluids)*** Any vessel having a liquid capacity over 60 gal (230 L) intended for storing liquids and not intended for fixed installation. [**30,** 2015]

3.3.255.5 ***Secondary Containment Tank.*** A tank that has an inner and outer wall with an interstitial space (annulus) between the walls and that has a means for monitoring the interstitial space for a leak. [**30,** 2015]

3.3.255.6* ***Stationary Tank.*** A packaging designed primarily for stationary installations not intended for loading, unloading, or attachment to a transport vehicle as part of its normal operation in the process of use. [**55,** 2010]

3.3.255.7 ***Storage Tank.*** Any vessel having a liquid capacity that exceeds 60 gal (230 L), is intended for fixed installation, and is not used for processing. [**30,** 2015]

3.3.256 Temporary Wiring. Approved wiring for power and lighting during a period of construction, remodeling, maintenance, repair, or demolition, and decorative lighting, carnival power and lighting, and similar purposes.

3.3.257 Tire.

3.3.257.1 ***Rubber Tires.*** Pneumatic tires for passenger automobiles, aircraft, light and heavy trucks, trailers, farm equipment, construction equipment (off-the-road), and buses. [**13,** 2013]

3.3.257.2 ***Scrap Tire.*** A tire that can no longer be used for its original purpose due to wear or damage.

3.3.258 TC. Transport Canada. [**55,** 2013]

3.3.259 Toxic Material. See 3.3.173.14.

3.3.260* Traffic Calming Device. A roadway design element utilized to reduce vehicle speeds, decrease motor vehicle volumes, and increase safety for pedestrians and nonmotorized vehicles.

3.3.261* Tube Trailer. A truck or semitrailer on which a number of very long compressed gas tubular cylinders have been mounted and manifolded into a common piping system. [**55,** 2013]

3.3.262 Unauthorized Discharge. A release or emission of materials in a manner that does not conform to the provisions of this *Code* or applicable public health and safety regulations.

3.3.263 Unit Operation or Unit Process. A segment of a physical or chemical process that might or might not be integrated with other segments to constitute the manufacturing sequence. [**30,** 2015]

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