Second Revision No. 10-NFPA 31-2019 [Global Comment]

Update the text throughout the document to incorporate the NFPA 211 (2019 edition) extracts. See attached Word file for reference.

Supplemental Information

File Name	Description Approved
Global_SR-10_FINAL.docx	for balloting

Submitter Information Verification

Committee:
Submittal Date: Fri May 17 12:15:59 EDT 2019

Committee Statement

Committee Statement: The Committee requested that all extracts from NFPA 211 be updated to reflect the 2019 edition.
Response Message: SR-10-NFPA 31-2019

[SR-10]

3.3.10.1 Factory-Built Chimney.

3.3.10.1.1 Building Heating Appliance–Type Factory-Built Chimney.
A heating appliance chimney suitable for continuous use at 1000°F (538°C), composed of listed, factory-built components, designed for open, ~~non-enclosed~~ nonenclosed use at specified minimum clearances to combustibles, and assembled in accordance with the terms of ~~its~~ the listing to form the completed chimney. [**211,** ~~2016~~2019]

3.3.10.1.3 Factory Built, Residential-Type and Building Heating Appliance–Type Chimney.
A chimney suitable for continuous use at 1000°F (538°C), which complies with the 10-~~-~~minute 1700°F (927°C) temperature test of ~~ANSI/~~ UL 103, *Standard for Factory-Built Chimneys for Residential Type and Building Heating Appliances*, and is composed of listed, factory-built components that might be fully enclosed in combustible, residential-type construction, and that is assembled in accordance with the terms of the listing to form the completed chimney. [**211,**~~2016~~ 2019]

3.3.10.1.4 Unlisted Metal (Smokestack) Chimney.
A manufactured or field-constructed chimney intended only for nonresidential applications~~,~~ having one or more metal walls, or made of metal with a refractory lining, and that is capable of withstanding the flue gas conditions of its use. [**211,** ~~2016~~2019]

3.3.10.2 Masonry Chimney.
A field-constructed chimney of solid masonry units, bricks, stones, listed masonry chimney units, or reinforced P~~p~~ortland cement concrete, lined with suitable chimney flue liners and built in accordance with the provisions of Chapter 7 of NFPA 211. [**211,**~~2016~~ 2019]

6.5.27
Gas utilization appliances and appliances burning liquid fuel shall be permitted to be connected to the same chimney flue through a single opening, provided the appliances are joined by a suitable fitting located as close as practicable to the chimney and provided the following conditions are met:

(1) Sufficient draft is available for the safe combustion of each appliance and for the removal of all products of combustion. [**211:**9.8.3(1)]

(2) The appliances so connected are equipped with primary safety controls and all appliances are located in the same room. [**211:**9.8.3(2)]

Second Revision No. 8-NFPA 31-2019 [Global Comment]

Throughout Chapter 8 and in 2.3.5, revise the title of UL 180 as follows:
UL 180, *Standard for Combustible Liquid Tank Accessories*

Submitter Information Verification

Committee:
Submittal Date: Tue May 14 10:23:33 EDT 2019

Committee Statement

Committee Statement: Revise the title of the UL 180 reference in two places in Chapter 8 to be consistent with the updated listing in Chapter 2 and elsewhere in Chapter 8.
Response Message: SR-8-NFPA 31-2019

Second Revision No. 11-NFPA 31-2019 [Section No. 3.3.50]

3.3.51 Qualified Person.

A person who, by possession of a recognized degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to deal with problems ~~relating to a particular~~ related to the subject matter, the work, or the project. [**1451,**~~2013~~ 2018]

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Fri May 17 12:21:33 EDT 2019

Committee Statement

Committee Statement: This revises the definition for Qualified Person to reflect the changes in the source document as this term has been extracted from NFPA 1451; this change also updates the edition date to that of the current edition.

Response Message: SR-11-NFPA 31-2019

Second Revision No. 12-NFPA 31-2019 [Section No. 3.3.52]

3.3.1 Accessible, Readily (Readily Accessible) .

Capable of being reached quickly for operation, renewal, or inspections, without requiring those to whom ready access is ~~required to climb over or remove obstacles~~ requisite to take actions such as to use tools (other than keys), to climb over or under, to remove obstacles, or to resort to portable ladders, and so forth. [**70**, : ~~2014~~ 100]

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Fri May 17 12:26:34 EDT 2019

Committee Statement

Committee Statement: The definition has been updated and revised to reflect the correct term as shown in the source document, NFPA 70, for this extracted term. Per the source, the extracted definition reverses the wording, so the definition will be relocated based on using Accessible as the first word rather than Readily to identify the term. The extract cite has also been revised to be consistent with the style for extracts from the NEC.

Response Message: SR-12-NFPA 31-2019

Second Revision No. 7-NFPA 31-2019 [Section No. 5.4.3.2]

5.4.3.2

In addition to the openings specified in 5.4.3.1 , there shall be one opening communicating directly with the outdoors or to spaces, such as an attic or crawl space, that freely communicates with the outdoors and has a free area of not less than 1 $in.^2$ per 5000 Btu/hr (28 $in.^2$ per gal/hr) (4.4 cm^2/kW), based on the total input of all appliances in the space.

5.4.3.3

The additional opening specified in 5.4.3.2 shall not be required where an engineered system is used to provide outside combustion air and meets all of the following requirements:

(1) The system shall be listed and appropriately sized for the application.

(2) The system shall include safeguards that prevent burner operation in the event of blockage of the air passage to the oil burner(s).

(3) In addition, as long as the requirements of 5.2.1.1 are met, the volume of air required for ventilation of the confined space shall be permitted to be reduced to 25 ft^3 per 1000 Btu/hr (2.4 m^3 /kW), based on the total input of all appliances in the space.

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Wed Apr 17 13:07:00 EDT 2019

Committee Statement

Committee Statement: Per CI 25, a task group developed the changes to reinforce the proposed changes introduced by TIA 1400 that has been successfully balloted through the Technical Committee. These revisions address ventilation in confined spaces and provide specific safeguards for applications where oil burning appliances are located within confined spaces.

Response Message: SR-7-NFPA 31-2019

Second Revision No. 1-NFPA 31-2019 [Sections 8.2.1, 8.2.2]

8.2.1

Tank fill and vent piping shall be one of the types listed in 8.2.1.1 and 8.2.1.2, with male or female threaded ends that comply with a recognized thread specification, or press-connect ends listed to UL 180, *Standard for Combustible Liquid Tank Accessories* .

Global SR-8

8.2.1.1

For aboveground fill and vent piping, only the following types and materials shall be permitted:

(1) Minimum Schedule 40 steel pipe that complies with either ANSI/ASME B36.10M, *Standard on Welded and Seamless Wrought Steel Pipe*; ASTM A53/A53M, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless;* or ASTM A106/A106M, *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service*

(2) Minimum Schedule 40 brass pipe that complies with ASTM B43, *Standard Specification for Seamless Red Brass Pipe, Standard Sizes*

(3) Minimum Schedule 40 stainless steel pipe that complies with ASTM A312/A312M, *Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes*

(4) Other piping that is part of an engineered fuel storage system that is listed to UL 180, *Standard for ~~Liquid-Level Gauges for Oil Burner Fuels and Other~~ Combustible Liquids Tank Accessories*, installed in accordance with manufacturer's instructions, and approved by the authority having jurisdiction

8.2.1.2

For underground fill and vent piping, only the following types and materials shall be permitted:

(1) Listed nonmetallic piping that complies with UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids*

(2) Listed metallic piping that complies with UL 971A, *Outline of Investigation for Metallic Underground Piping for Flammable Liquids* or UL 180, *Standard for Combustible Liquid Tank Accessories*

(3) Steel pipe that meets 8.2.1.1(1)

(4) Brass pipe that meets 8.2.1.1(2)

(5) Stainless steel pipe that meets 8.2.1.1(3)

8.2.2

Fuel supply lines shall be one of the piping types listed in 8.2.2.1 or 8.2.2.2, with threaded ends that comply with a recognized thread specification, press-connect ends listed to UL 180, *Standard for Combustible Liquid Tank Accessories* , or, or tubing types intended for flared or engineered connections.

Global SR-8

8.2.2.1

For aboveground fuel supply lines, only the following types and materials shall be permitted:

(1) Minimum Schedule 40 steel pipe that complies with ANSI/ASME B36.10M, *Standard on Welded and Seamless Wrought Steel Pipe*; ASTM A53/A53M, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless;* or ASTM A106/A106M, *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service*

(2) Minimum Schedule 40 brass pipe that complies with ASTM B43, *Standard Specification for Seamless Red Brass Pipe, Standard Sizes*

(3) Flexible metal pipe listed to UL 2039, *Standard for Safety for Flexible Connector Piping for Fuels*, and rated for aboveground use, where rigid connections are impractical

(4) Minimum 0.032 in. (0.081 cm) thick copper tubing that complies with ASTM B75/B75M, *Standard Specification for Seamless Copper Tube*; ASTM B88, *Standard Specification for Seamless Copper Water Tube;* or ASTM B280, *Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service*

(5) Minimum 0.032 in. (0.081 cm) thick brass tubing that complies with ASTM B135/B135M, *Standard Specification for Seamless Brass Tube*

(6) Minimum 0.035 in. (0.089 cm) thick stainless steel tubing that complies with ASTM A254, *Standard Specification for Copper-Brazed Steel Tubing;* or ASTM A269/A269M, *Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service*

(7) Aboveground fuel supply piping systems listed to UL 180, *Standard for ~~Liquid-Level Gauges for Oil Burner Fuels and Other~~ Combustible Liquids Tank Accessories*

8.2.2.2

For underground fuel supply lines and for copper fuel supply lines that are in direct contact with concrete or soil, only the following types and materials shall be permitted:

(1) Listed nonmetallic piping that complies with UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids*

(2) Listed corrosion-resistant metallic piping that complies with UL 971A, *Outline of Investigation for Metallic Underground Fuel Pipe*

(3) Flexible metal piping listed to UL 2039, *Standard for Safety for Flexible Connector Piping for Fuels*, and rated for underground use, where rigid connections are impractical

(4) Corrosion-resistant copper tubing in accordance with 8.2.2.1(4), corrosion-resistant brass tubing in accordance with 8.2.2.1(5), stainless steel tubing in accordance with 8.2.2.1(6), or tubing in accordance with 8.2.2.1(7)

8.2.2.2.1

Except where within 12 in. (300 mm) of a tank or appliance, tubing of copper, brass, or stainless steel, as identified in 8.2.2.2, shall be either provided with a listed corrosion-resistant coating or shall be installed through a corrosion-resistant conduit.

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Wed Apr 17 11:13:55 EDT 2019

Committee Statement

Committee Statement: Based on the work of a Task Group addressing Committee Input #26, the Committee added the recently revised reference standard that now includes piping systems, so this revision adds the requirement that press-connect ends (one of the approved options for fill and vent piping and fuel supply lines) be listed to UL 180.

Response Message: SR-1-NFPA 31-2019

Second Revision No. 2-NFPA 31-2019 [Section No. 8.4.3]

8.4.3

Piping systems made of combustible materials shall not be used inside of buildings or aboveground outside of buildings unless listed with at least a 30-minute fire rating, in accordance with UL 180, *Standard for Combustible Liquid Tank Accessories* .

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Wed Apr 17 11:24:35 EDT 2019

Committee Statement

Committee Statement: Per Committee Input #26, a task group reviewed the requirements and based on that review, the Committee added the recently revised reference standard that piping systems made of combustible materials be listed to UL 180 in order to substantiate the 30-minute fire rating previously required in the standard.

Response Message: SR-2-NFPA 31-2019

Second Revision No. 4-NFPA 31-2019 [Section No. 8.7.2]

8.7.2*

The fuel supply piping from the supply tank shall be connected to the top of the tank, except ~~for~~ in the following cases:

(1) Tanks of 330 gal (1250 L) or less

(2) Tanks with cross-connections

A.8.7.2

Connecting fuel supply piping to the top of all supply tanks (top-draw connection) can increase the risk of water accumulation within the tank. If water is left in the tank, it could be at risk of premature failure due to internal corrosion. It is, therefore, recommended to properly maintain a top-draw tank by sloping the tank in accordance with 7.5.8(1) and 7.8.6 and adhering to the manufacturer's instructions for installation and maintenance. As a best practice for tank maintenance, the lowest point of the tank should be inspected for presence of water accumulation at least once per year and all water removed as soon as detected.

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Wed Apr 17 12:06:36 EDT 2019

Committee Statement

Committee Statement: Per Committee Input (CI) #24, a task group developed proposed explanatory information for the annex to highlight the risk from water accumulation in tanks with top draw connections. Existing requirements regarding sloping of the tank have been supplemented with best practice guidance for installation and maintenance of tanks with top draw connections in order to limit corrosion from water accumulation inside tanks.

Response Message: SR-4-NFPA 31-2019

Second Revision No. 3-NFPA 31-2019 [Section No. 8.7.6]

8.7.6

Unions or fittings that require gaskets or packings ~~shall not be~~ used in fuel lines shall be listed to UL 180, *Standard for Combustible Liquid Tank Accessories* .

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Wed Apr 17 11:31:12 EDT 2019

Committee Statement

Committee Statement: Per Committee Input #26, a task group recommended action by the Committee to include a reference to UL 180. The Committee added the recently revised reference standard that now includes piping systems and gaskets or packings, so this revision adds the requirement that these items be listed to UL 180.

Response Message: SR-3-NFPA 31-2019

Second Revision No. 5-NFPA 31-2019 [Section No. 8.10.6]

8.10.6 Fusible Link Safety Shutoff Valve.

8.10.6.1

A readily accessible fusible link safety shutoff valve that closes against the supply pressure shall be installed at each of the following points, except as provided in 8.10.6.2 :

(1) ~~Within 6 in. (150 mm) of~~ As close as practical to the filter on the tank side of the filter

(2) ~~Within 12 in. (300 mm) of~~ As close as practical to the inlet connection to the burner

8.10.6.2

Where the filter and inlet connection to a burner are within 18 in. (457 mm) of each other, only one fusible link safety shutoff valve shall be required to be installed on the tank side of the filter.

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Wed Apr 17 12:41:03 EDT 2019

Committee Statement

Committee Statement: Based on the work of a task group addressing CI #22, the Committee amended the requirement in 8.10.6 (1) and (2) to match a similar provision in 8.7.3 regarding placement of fusible link shutoff valves. The Committee added a new item (3) acknowledging that a single fusible link shutoff valve is sufficient when the filter and inlet connection to the burner are in close proximity. The text has been adjusted to conform to MOS guidelines.

Response Message: SR-5-NFPA 31-2019

Second Revision No. 9-NFPA 31-2019 [Section No. 10.6.3.1]

10.6.3.1

Such construction shall extend not less than 12 in. (0.3 m) beyond the appliance on all sides.

~~**Figure 10.6.3.1 Installation of Down-Flow Furnace on Combustible Floor.**~~

10.6.3.1.1*

Appliances shall be permitted to be placed on combustible floors although not listed for such installation, provided the floor under the appliance is protected in accordance with the requirements of accepted building code practice.

A.10.6.3.1.1

This allows a permissible variation for placing the hollow masonry to accommodate a downflow furnace, as shown in ~~Figure 10.6.3.1~~ Figure 10.6.1 .

10.6.3.1.2

An appliance listed for installation under Form I or II in Table 10.6.1 shall be permitted to be placed on a combustible floor that is protected with hollow masonry not less than 4 in. (100 mm) thick covered with sheet metal not less than 24 gauge, as shown in ~~Figure 10.6.3.1~~ Figure 10.6.1 . Such masonry shall be laid with ends unsealed and joints matched in such a way as to permit free circulation of air from side to side through the masonry. For such installations, the furnace shall be securely anchored to maintain the clearances required in Table 10.6.1.

Submitter Information Verification

Committee: LPI-AAA
Submittal Date: Tue May 14 16:10:35 EDT 2019

Committee Statement

Committee Statement: Figure 10.6.3.1 is deleted as it is a duplicate of Figure 10.6.1 and is not needed as shown in existing 10.6.3.1. With the deletion of Figure 10.6.3.1, the reference to that figure in 10.6.3.1.2 has also been revised to Figure 10.6.1.

Response Message:	SR-9-NFPA 31-2019

Second Revision No. 6-NFPA 31-2019 [Section No. A.4.5.1]

A.4.5.1

See Chapter 11 for additional requirements for oil-burning stoves, kerosene-burning room heaters, and kerosene-burning portable heaters. See Chapter 12 for additional requirements for used oil–burning appliances. See Chapter 13 for additional requirements for combination oil-and-gas–burning appliances.

Acceptable liquid fuels for use in oil-burning equipment are the liquid fuels for which the appliance is listed by an approved listing agency such as UL, based on testing to an accepted standard, or as approved and stipulated by the oil burner manufacturer. The fuels that are commonly used are No. 2 distillate fuel oil, ultra-low sulfur No. 2 distillate fuel oil, kerosene in residential oil burners, and other fuels listed in 4.5.1 for a range of burner applications. Not all fuels are approved for all applications. For example, 4.5.1 recently added ASTM D7666, *Standard Specification for Triglyceride Burner Fuel* , but this burner fuel might not be approved for, and cannot be burned in, residential oil-heating equipment. In addition, the biodiesel content for residential oil burners typically is limited by the burner manufacturer to 5 percent by volume in fuel oil, which is accepted by UL as equivalent to a heating oil without biodiesel content. Research is ongoing for use of B20 and higher biodiesel fuel blends in residential heating equipment, which require approval by the burner manufacturer. Equipment installers should refer to the installation instructions of the burner manufacturer regarding acceptable fuels to be used that are part of the burner's listing.

Submitter Information Verification

Committee: LPI-AAA

Submittal Date: Wed Apr 17 12:53:30 EDT 2019

Committee Statement

Committee Statement: Based on CI#27, a task group developed the proposed supplemental information for the Annex. The Committee approved the additional information to highlight the various fuels permitted by the standard, including those involving Biodiesel. The Committee also acknowledges that research is ongoing to address the emerging blends in Biodiesel being contemplated.

Response Message: SR-6-NFPA 31-2019