

[Products Liability Law Daily Wrap Up, TOP STORY—HOUSEHOLD PRODUCTS—CPSC considers regulation of residential gas furnaces and boilers, \(Aug. 19, 2019\)](#)

Products Liability Law Daily Wrap Up

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ANPR discusses hazards, current voluntary standards, and possible alternatives.

The Consumer Product Safety Commission (CPSC) issued an advance notice of proposed rulemaking (ANPR) addressing the risk of injury and death associated with carbon monoxide (CO) production and leakage from residential gas furnaces and boilers. The agency invited comments concerning the alternatives discussed in the ANPR. Additionally, CPSC requested that interested parties submit existing voluntary standards or a statement of intent to modify or develop a voluntary standard that addresses the risk of injury described in the document. Comments are due by October 18, 2019 (*CPSC Advance Notice of Proposed Rulemaking*, [84 FR 42847](#), August 19, 2019).

Background. The Consumer Product Safety Act (CPSA) provides that CPSC may issue a consumer product safety standard if the requirements of the standard are "reasonably necessary to prevent or reduce an unreasonable risk of injury associated with [a] product." First, the agency must issue an ANPR that identifies the product and the nature of the risk of injury associated with it; summarizes the regulatory alternatives CPSC is considering; and includes information on any relevant existing standards and why the agency preliminarily believes that those standards would not adequately reduce the risk of injury associated with the product. The ANPR also must invite comments concerning the risk of injury and regulatory alternatives and invite the public to submit existing standards or a statement of intent to modify or develop a voluntary standard to address the risk of injury. After publishing an ANPR, CPSC may proceed with rulemaking by reviewing the comments received in response to the ANPR and publishing a notice of proposed rulemaking (NPR).

Product. This ANPR covers residential, gas-fired central furnaces, boilers, wall furnaces, and floor furnaces (gas furnaces and boilers). These appliances are fueled by natural gas or propane (gas). Residential gas furnaces and boilers are vented gas heating appliances that are used to heat all categories of consumer dwellings, including single family homes, town homes, condominiums, and multifamily dwellings, as well as small-to-medium-sized commercial dwellings. These products provide heat to a dwelling by burning a mixture of fuel (either natural gas or propane) and air within the combustion chamber of a heat exchanger. Gas wall furnaces are installed in wall spaces, typically between the wall stud framing members; and floor furnaces are installed in the floor, typically between the floor joist framing members. Wall furnaces and floor furnaces both provide localized heating directly to the room in which they are located, and indirectly to adjoining rooms within the dwelling. Of the gas appliances covered by this ANPR, central gas-fired furnaces are the type most commonly used in U.S. households.

Risk of injury. According to CPSC, in 2015, the most recent time period for which data are available, there were an estimated 175 unintentional, non-fire CO poisoning deaths associated with consumer products under the CPSC's jurisdiction. Of that number, heating systems were associated with an estimated 37 (21 percent) of the deaths. Gas furnaces and boilers (liquefied petroleum, natural gas, and unspecified gas) were associated with the largest share of CO deaths (19 deaths or 51 percent) among heating systems and the second largest share (11 percent) among all consumer products. For the 11-year period 2005 through 2015, gas furnaces accounted for 248 CO deaths (44 percent) among heating appliances, and 14 percent among all consumer products. CPSC staff estimated that annually there were about 1,850 gas furnace or boiler non-fire, CO-related injuries treated between 2013 and 2015 at U.S. hospital emergency departments. Combined with estimates of

medically attended injuries that were treated outside of hospital emergency departments, and using estimates from CPSC's Injury Cost Model (ICM), staff estimated an average of 7,590 non-fire, CO-related injuries annually between 2013 and 2015, which were associated with gas furnaces and boilers.

Existing voluntary standards. CPSC stated that the four gas appliance types within the scope of the ANPR are covered by the following domestic voluntary standards: ANSI Z21.13, *Standard for Gas-Fired Low Pressure Steam and Hot Water Boilers*; ANSI Z21.47, *Standard for Gas-Fired Central Furnaces*; and ANSI Z21.86, *Standard for Vented Gas-Fired Space Heating Appliances*. These voluntary standards all require the subject appliances to not produce CO in excess of 400 ppm; shut off when the vent or flue is fully blocked; shut off when the blower door is not sealed properly (gas-fired central furnaces only); and shut off if flames issue outside of the burner inlet openings. However, CPSC noted that these standards do not include requirements to protect against many of the failure modes or conditions that have been associated with production and leakage of CO into living spaces of U.S. households. Furthermore, the voluntary standards requirements do not address the long-term use of the products once installed in a dwelling or the various conditions that can cause or contribute to CO production and leakage.

In 2015, CPSC staff proposed requirements for CO shutoff/response to the respective voluntary standards development organizations for gas-fired central furnaces, boilers, wall furnaces, and floor furnaces. The proposal would have required the appliances to limit the production of CO below a threshold level, or for the appliances to shut off when CO emissions in the combustion chamber, flue passageways, or vent pipe exceed a hazardous level. However, to date, no revisions to the ANSI Z21 voluntary standards have been made that incorporate those proposed performance requirements. Therefore, the agency believes that the existing ANSI Z21 voluntary standards do not adequately address the risk of injury and death associated with CO production and leakage from residential gas furnaces and boilers.

Regulatory alternatives. CPSC is considering several alternatives to address these risks. First, the agency could develop a mandatory standard under the CPSA establishing performance requirements and/or warnings and instructions for residential gas furnaces and boilers to prevent or reduce an unreasonable risk of death or injury associated with the production and leakage of CO from these products. CPSC also could continue to address the hazard through voluntary standards and work to develop more effective voluntary standard requirements to address the identified hazards. Alternatively, CPSC could continue to rely on product recalls or information and education campaigns instead of promulgating a mandatory rule.

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