WRITTEN STATEMENT OF

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ON

CARBON MONOXIDE POISONING PREVENTION

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Subcommittee Hearing

Subcommittee on Consumer Protection,
Product Safety & Insurance
Senate Commerce, Science and Transportation Committee

Good afternoon, I am John Andres, Director of Engineering for Kidde's Residential and Commercial Division located in Mebane, North Carolina. Thank you, Chairman Pryor and members of the Committee, for the opportunity to contribute to the discussion on the prevention of carbon monoxide (CO) poisoning in the United States. Kidde Residential and Commercial Division is part of UTC Fire & Security, a subsidiary of United Technologies Corporation. We are a proud leader in manufacturing life-saving residential carbon monoxide alarms and other fire safety devices. We are committed to continuing to lead the industry in product safety and strict compliance to industry standards. We work closely with industry professionals, health, safety and fire experts, as well as nonprofit partners, to educate consumers on residential fire and carbon monoxide safety.

Kidde supports enactment of S.1216, "The Residential Carbon Monoxide Safety Act." The Centers for Disease Control and Prevention reports that each year, unintentional CO poisoning kills more than 400 Americans, requires 20,000 more to seek emergency medical attention, and causes more than 4,000 hospitalizations. S.1216 is a strong first step toward preventing these tragedies. I commend Senators Klobuchar and Nelson for their continued leadership in elevating this critical public health and safety issue and for their willingness to explore increased consumer protections in the form of mandatory federal product safety standards.

S.1216 would focus much-needed federal attention and resources toward ending accidental carbon monoxide poisoning. The bill's provisions to create a grant program supporting residential CO alarm laws are especially important. However, for the purposes of today's hearing, my comments will focus on describing the carbon monoxide hazard and how CO alarms operate to provide warning, and on explaining why it is necessary to establish mandatory federal product safety standards, as laid out in S.1216.

Known as the "silent killer," carbon monoxide is a by-product of combustion from common household sources, including appliances such as a furnace, water heater, gas stove, or grill, as well as other fuel-burning devices like a fireplace or engine. If such sources are improperly installed or malfunction, carbon monoxide can build up inside a home. Carbon monoxide follows the air current through a home and, based on the source and the residence's ventilation system, can build up either rapidly or slowly. Either can be deadly. Because one cannot see, taste or smell carbon monoxide, the only safe way to know that the gas has reached toxic levels is to install a sufficient number of working CO alarms. Kidde and fire safety experts such as the National Fire Protection Association recommend placing CO alarms outside each bedroom and on every level of an occupied dwelling.

A CO alarm functions by calculating CO concentration over time to determine when an alarm will sound. This time-weighted ratio ensures that the higher the level of CO and the steeper the rate of increase, the earlier the alarm will sound. This equation takes into account the effect of CO on the human body. When inhaled, carbon monoxide bonds with hemoglobin in a person's bloodstream, and displaces the oxygen that cells need to function. By operating off the principle of the calculated percentage of carboxyhemoglobin, or CoHb, in the blood, the alarm sounds earlier in the presence of higher CO levels.

CO alarms continuously monitor the home's environment. They are designed to sound before a healthy adult would feel the effects of CO poisoning. Consumers should have confidence that a properly installed and maintained CO alarm will warn them about the presence of dangerous CO levels, and avoid unwanted nuisance alarms that may cause them to doubt the alarm's accuracy. This need for accuracy and reliability is the cornerstone of Underwriters Laboratories (UL) 2034, the independent, third-party CO alarm standard to which U.S. carbon monoxide alarms are voluntarily tested and listed.

UL 2034 is an American National Standards Institute – or ANSI- recognized standard that combines input from medical experts, approval bodies like UL, government agencies such as the Consumer Product Safety Commission (CPSC), the National Fire Protection Association (NFPA), users and manufacturers in order to create a uniform requirement.

First published in 1992, UL 2034 has gone through several revisions, each of which is based on years of field test data and is intended to strengthen the standard. Kidde supports this standard because it specifically addresses electrical safety, mechanical robustness and the accuracy of detection across different humidity levels and temperatures over a long period of time. It also verifies performance. UL 2034 is continually reviewed by a standards technical panel in order to keep pace with technological advances and past lessons learned. In accordance with ANSI rules, any member can recommend a revision in order to improve product performance or reliability. This revision process has led to the creation of CO sensing technology that is more advanced, stable, and reliable than prior generations.

Currently, a manufacturer may voluntarily test and certify its CO alarms to the UL 2034 standard. While most states with laws requiring residential CO alarms mandate that they meet UL 2034, there is no uniform requirement. To date, 23 states have enacted laws requiring CO alarms in residential dwellings, and more states are likely to adopt similar legislation in the coming years. In order to avoid confusion among regulators, consumers, and the industry, state lawmakers need a consistent standard to define what constitutes an "approved" alarm. Without such a reference, conflicting regulations may arise, which would run directly counter to one of the CPSC's guiding objectives "to develop uniform safety standards for consumer products and to minimize conflicting state and local regulations." By setting a mandatory Consumer Product Safety Standard, the federal government would provide an umbrella of protection for all consumers in the US.

In closing, each week we hear of families whose lives have been saved through the use of CO alarms. Having a CO alarm does make the difference between life and death. Consumers must have confidence that their CO alarm will work reliably and accurately. A federal standard would give consumers that peace of mind

Again, I thank committee members for their thoughtful consideration of S.1216, and for raising awareness about CO dangers in the home. Senator Klobuchar and Senator Nelson, we look forward to working with you to pass this important legislation expeditiously. Thank you again for the opportunity to contribute to this discussion, and I will be glad to answer any questions.