



**U.S. Chemical Safety and
Hazard Investigation Board**

Statement by CSB Chairman Rafael Moure-Eraso on Adoption of Updated Purging
Requirements by the Plumbing Industry

STATEMENT:

On behalf of the U.S. Chemical Safety Board (CSB), I would like to take this opportunity to commend the International Association of Plumbing and Mechanical Officers (IAPMO) for issuing Tentative Interim Amendments to the Uniform Plumbing and Mechanical Codes (UPC and UMC) to prohibit purging fuel gas piping into industrial, large commercial, and large multifamily buildings. IAPMO is the third trade organization to revise its codes to incorporate new purging safety requirements as a result of recommendations issued by the CSB.

The CSB conducted an investigation of a catastrophic natural gas explosion that occurred at the ConAgra Slim Jim manufacturing facility in Garner, North Carolina, on June 9, 2009. That tragic and preventable accident took four lives, injured 67 others, and led to a decision to close the plant with the loss of hundreds of jobs in the region. The accident occurred during an operation to purge, or clear, air from a new steel gas-supply pipe that was connected to a newly installed industrial water heater. Due to difficulties in lighting the water heater, the purging operation was continued for an unusually long time, eventually causing gas inside the building to accumulate to a concentration above its lower explosive limit. The gas exploded after contacting an ignition source, causing extensive sections of the large facility to collapse. The explosion also damaged piping from the plant's ammonia-based refrigeration system, causing approximately 18,000 pounds of anhydrous ammonia to be released to the environment.

At its October 2, 2009 meeting, the CSB issued a safety bulletin: *Dangers of Purging Gas Piping into Buildings* outlining five key lessons to prevent fires and explosions during fuel gas purging operations. Shortly thereafter, on February 4, 2010, the CSB issued formal safety recommendations to the National Fire Protection Association and the International Code Council to prohibit indoor purging and require companies and installers to purge flammable fuel gases to safe locations outdoors, away from workers and ignition sources.

In August 2010, the NFPA approved a Tentative Interim Amendment that will prohibit indoor purging of industrial gas lines operating at greater than two pounds per square inch gauge (psig) or meeting certain pipe size criteria. Under these new code requirements, fuel gas piping systems in industrial, large commercial and large multifamily buildings may not be purged indoors. In October 2010, the International Code Council incorporated these new requirements via an Emergency Amendment to the International Fuel Gas and Residential Codes (IFGC and IRC).

The CSB believes that permanent adoption of these code revisions will help to prevent future purging accidents at work sites across the country. I thank the IAPMO code development

committees for incorporating these requirements, and encourage them to make these revisions permanent during the codes' next revision cycles.

END STATEMENT