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CSB Board Members Vote to Approve Urgent Gas Code Recommendations Following Deadly ConAgra Explosion at Public Meeting in Raleigh

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Investigation Details:[ConAgra Natural Gas Explosion and Ammonia Release](#)

UPDATED 9 p.m. February 4 - On a 2-1 vote, the U.S. Chemical Safety Board tonight approved urgent safety recommendations on gas purging safety at a public meeting in Raleigh following extensive testimony and public comment. The draft recommendations, which were approved as presented by the staff without amendment, urged the National Fire Protection Association (NFPA), American Gas Association (AGA), and the International Code Council (ICC) to strengthen the national fuel gas code provisions on purging. Board Chairman John Bresland and Member William Wark voted to approve; Board Member William Wright voted to disapprove.

Raleigh, NC, February 4, 2010 — The U.S. Chemical Safety Board (CSB) is set to consider [two urgent recommendations](#) that national fuel gas codes be changed to improve safety when gas pipes are being purged (cleared of air) during maintenance or installation of new piping.

The recommendations – to be voted on by board members at a CSB public meeting in Raleigh tonight – grow out of the CSB's ongoing federal investigation into the June 9, 2009, natural gas explosion at the ConAgra Slim Jim production facility in Garner, North Carolina, which caused four deaths, three critical life-threatening burn injuries, and other injuries that sent a total of 67 people to the hospital.

In preliminary findings to be presented at a news conference this morning and at the public meeting tonight, CSB investigators determined that the catastrophic explosion resulted from the accumulation of significant amounts of natural gas that had been purged indoors from a new 120-foot length of pipe during the startup of a new water heater in the plant that made Slim Jims, a popular beef-jerky product. During pipe purging, workers feed pressurized gas into a pipe in order to displace air or other gases so that only pure fuel gas remains in the piping when it is connected to an appliance such as a water heater or boiler.

CSB Chairman John Bresland said, "The board is very concerned that companies across the country continue to purge pipes indoors, and this evening we will consider recommendations to the National Fire Protection Association (NFPA), the American Gas Association (AGA) and the International Code Council (ICC). Currently, the codes of the NFPA and ICC do not require gases to be vented outdoors or define adequate ventilation or hazardous conditions, nor do they require the use of combustible-gas detectors during these operations. The CSB recommendations, if adopted, would urge that these things be done."

The NFPA and the ICC are prominent organizations whose codes are used and followed by government bodies, private organizations and individuals nationwide.

CSB investigations supervisor Donald Holmstrom said his team made the recommendations to the board during the course of the ConAgra investigation after discovering gaps in the fuel gas codes. "Purging flammable gases into building interiors is a recipe for disaster. At ConAgra, we determined the accident would not have happened had the gas been vented safely outdoors through a hose or pipe." Mr. Holmstrom noted that since the June 2009 accident, ConAgra has instituted strict policies on purging, requiring it be done to safe outdoor locations.

As proposed, the CSB recommendations would urge the NFPA and the American Gas Association (AGA), enact tentative interim and then permanent changes to the National Fuel Gas Code. These would require that purged gases shall be vented "to a safe location outdoors, away from personnel and ignition sources." In cases where outdoor venting is not possible, companies would be required to seek a variance from local officials before purging gas indoors, including approval of a risk evaluation and hazard control plan. The recommendation would also require the use of combustible gas detectors to continuously monitor gas concentrations; the training of personnel about the problems of odor fade and odor fatigue; and warnings against the use of odor alone for detecting releases of fuel gases.

The CSB issued a safety bulletin in October 2009 entitled "Dangers of Purging Gas Piping into Buildings." The bulletin's key lesson is: "Purging new or existing gas piping into a building can be highly hazardous due to the possible accumulation of gas ... and the associated danger of fire and explosion." It notes that large numbers of workers are at risk, including plumbers, gas installers, maintenance workers, contract supervisors, and industrial facility managers.

Mr. Holmstrom said, "The CSB has examined several other similar accidents in which gas was purged indoors and not detected. We have determined that workers cannot rely on their sense of smell to warn them of danger, in part because people become desensitized to the odorant added to natural gas and propane. Gas detectors must be used."

Other incidents examined by the CSB include: a 1999 explosion at a Ford power plant in Dearborn, Michigan, killing six, injuring 38, and causing a \$1 billion property loss; a 2008 explosion at a Hilton Hotel under construction in San Diego, California that injured fourteen people; a 2005 school explosion in Porterville, California, burning two plumbers; and an explosion at a hotel in Cheyenne, Wyoming, in 2007 severely burning two plumbers.

In addition to Chairman Bresland, the board consists of William E. Wright and William B. Wark. There are currently two board vacancies. Approval of recommendations requires a majority vote. The CSB meeting will be held at the Sheraton Raleigh Hotel, 421 South Salisbury Street.

Following a presentation of preliminary findings by the investigation team, the board will receive the views from a panel of experts: Chris Noles of the North Carolina State Fire Marshal's Office (the state has passed strict regulations to require outdoor gas purging since the accident), Ted Lemoff of the National Fire Protection Association, and Belinda Thielen of the United Food and Commercial Workers International Union, which represents employees at the ConAgra Slim Jim plant.

Finally, the board will hear from members of the public who wish to speak. "This was a devastating accident," Chairman Bresland said, "and it is my hope that workers and residents in the area will let us know their views on the need for the stricter codes that we will be considering on Thursday evening."

The CSB is an independent federal agency charged with investigating industrial chemical accidents. The agency's board members are appointed by the president and confirmed by the Senate. CSB investigations look into all aspects of chemical accidents, including physical causes such as equipment failure as well as inadequacies in regulations, industry standards, and safety management systems.

The Board does not issue citations or fines but does make safety recommendations to plants, industry organizations, labor groups, and regulatory agencies such as OSHA and EPA. Visit our website, www.csb.gov.

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