

National Fire Protection Association Comments for the Chemical Safety Board, July 25, 2013 Public Meeting

Recommendations Concerning Gas Process Safety – ConAgra and Kleen Energy

NFPA responded to recommendations from the CSB for both of these referenced incidents using the broadest features of our consensus standards development system to satisfy the recommendations in a timely manner. In response to the ConAgra facility incident in June 2009, NFPA's National Fuel Gas Code technical committee developed and approved a Tentative Interim Amendment (TIA) to revise the provisions in NFPA 54, National Fuel Gas Code, applicable to the safe purging into service of fuel gas appliances. The TIA was issued by the NFPA Standards Council in August 2010 completing the revision of the code to add expanded requirements related to the safe purging of gas systems. These interim changes to NFPA 54 became permanent with the completion of the current 2012 edition of the code. CSB acknowledged this action by NFPA to amend the code as recommended and has "closed the recommendation, action acceptable."

Less than a week after the CSB issued its recommendations from ConAgra, an explosion at the Kleen Energy power plant in Connecticut focused increased attention on the practices to be followed any time flammable gas can be released from a process or piece of equipment without adequate controls to prevent the gas from coming into contact with ignition sources. After the Kleen Energy explosion, NFPA was once again able to support CSB by providing guidance on safe practices for such activities. During this time we discovered that no single code, standard, or regulation fully addressed the gas blow activity involved with the Kleen Energy incident or other related activities where flammable gases might be released. In the aftermath of the incident, NFPA contacted the leaders and members from several of the NFPA technical committees to discuss possible strategies that NFPA could implement in reaction to the recommendation that was anticipated from this incident. In June 2010, NFPA received a CSB recommendation to modify NFPA 54, National Fuel Gas Code.

Based on the input from the respective committee members and a review by NFPA staff, NFPA proposed an alternative strategy in response to the CSB recommendation. NFPA proposed to create a completely new standard to address all applications involving flammable gases where, during operation, startup, or maintenance, those gases could be released to the environment without adequate ignition controls. With the approval from the NFPA Standards Council to begin this process in October 2010, NFPA solicited interested parties to join this new committee and work on developing this new standard.

While in the preliminary stages of this new standard development, NFPA took the opportunity to share the strategy for the new standard with both CSB and OSHA. Our intent for meeting with CSB was to outline for the Board why NFPA was pursuing an alternative path in response to the Board urgent recommendation from the Kleen incident. Essentially, NFPA adopted this strategy for two reasons – if successful, it would yield a more comprehensive standard of practice that was much broader than that called for by the CSB recommendation, and NFPA believed it could be achieved much more quickly than the action specifically recommended. We asked to meet with OSHA staff to review our plan and to determine their interest in participating. OSHA staff serves on over 40 of the NFPA technical committees, and with the CSB recommendation directly to OSHA, NFPA wanted the agency's involvement so they could be familiar with the new standard and its background, and the agency could

consider using the new standard as part of any regulatory or compliance action it might take. As a result of our meeting with OSHA, a member of the OSHA staff was appointed to the Gas Process Safety Technical Committee and participated in all the meetings during the development of NFPA 56 (PS) and continued to fully participate during the recent meetings to develop the 2014 edition.

In an unprecedented action for standards development, NFPA completed and issued NFPA 56 (PS), Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems, using an accelerated schedule and process, in barely eighteen months after the Kleen Energy incident occurred. Because the standard was developed using an expedited process in response to the urgency of the Board's recommendation, NFPA has just issued the 2014 edition of NFPA 56 following the full procedures of the NFPA standards development process. Upon completion and issuance of NFPA 56 (PS) in August 2011, the CSB acknowledged this accomplishment by NFPA and designated the recommendation as "open acceptable response" pending the adoption of the 2014 edition. These incidents related to purging and other gas process safety activities highlighted gaps in the consensus codes and standards as well as federal regulations. As a hallmark of the NFPA process, we worked with the CSB staff and Board on each of these recommendations to use the NFPA standards making system and our network of technical committee volunteers to address each of the issues raised in a timely manner. Consistent with the safety goals of both the CSB and NFPA, we also ensure that information regarding these outcomes is widely disseminated.

Combustible Dust Incidents

The earliest fire and explosion safety standards for combustible dust from NFPA date back to 1922 where standards for pulverized fuel, flour, and other agricultural products were addressed. Today, NFPA publishes 5 specific standards addressing fire and explosion hazard identification and control for facilities where combustible solids, powders, or particulates are stored, handled, and used so as to generate and release combustible dusts. Beginning with the CSB investigation of the West Pharmaceutical explosion in North Carolina in February 2003, the agency noted in its reports on that and subsequent incidents involving combustible dusts, that the incident might have been prevented or at least mitigated had the relevant NFPA standard been adopted and enforced. In two of the 2003 incidents investigated by the CSB, recommendations were issued to NFPA to "communicate the findings and recommendations" of the respective reports to the NFPA membership. In addition to sharing the lessons learned from these incidents with the NFPA membership, the information was also made available to the respective technical committees for their consideration during future revisions to the standards.

In April 2009, US Department of Labor Secretary Solis announced that OSHA would initiate rulemaking to develop a comprehensive standard on combustible dusts for general industry, and that process was marked in October with the publication of the Advanced Notice of Proposed Rulemaking (ANPRM). NFPA participated in the rulemaking process by submitting written comments during the public comment period and by attending and serving on a panel during the stakeholder meetings conducted in late 2009 and early 2010. NFPA staff was also invited to participate on an expert panel held in May 2011 to respond to questions pertaining to the development of OSHA's combustible dust standard.

In the discussion items contained within the ANPRM, comments were included regarding the current NFPA combustible dust standards. Though, five standards exist and four of them address specific industries where solids can create dusts of a specific type or composition (agricultural and food processing, wood working and wood process, metals, and sulfur), the comments in the OSHA narrative

to the ANPRM questions, suggested that it is difficult to figure out which NFPA standard applies and that in some cases the requirements are inconsistent. In response to these comments and input from CSB regarding the NFPA standards, a task group, chaired by a member of the NFPA Standards Council and consisting of the current committee leaders and members, developed an alternative strategy for the structure of the combustible dust project (committees and documents). To address the issue of possible overlap and inconsistent requirements between documents, the plan introduced a Correlating Committee – a committee not intended to focus on the specific technical requirements but instead to address correlation and consistency between industries, dust types, and ultimately the individual standards. The second critical outcome from this process was the formation of a new technical committee established to work solely on fundamental requirements to be applicable to all industries and dust types. By establishing a new committee and proposed new standard, NFPA 652, Fundamentals of Combustible Dust, the existing industry or dust-type specific standard can then focus attention on those requirements unique to either the industry or specific type of dust. The Correlating Committee manages the relationship between the five committees – fundamentals, agriculture, metals, wood, and general dusts – and ensures that there is correlation between the committees on key technical points and ensures that requirements between documents are consistent. The Correlating Committee also guides each committee any time there is possible action on requirements where potential for overlap occurs.

In the time since the first incidents occurred in 2003, each of the NFPA combustible dust standards have been revised at least two times. Each of those revisions has considered the lessons learned from the incidents and been factored into specific changes, where applicable. The development of NFPA 652 has reached its first major stage – completion of the First Draft. The committee developed a preliminary draft, published it for review and input, considered and addressed the input, and approved the First Draft through a letter ballot. That First Draft will be posted to the Fundamentals Technical Committee web page on or before September 6, 2013 and Public Comments may be submitted on-line through that web page link until November 15, 2013. The Committee meets again to act on the Public Comments in January 2014 and the NFPA Standards Council considers issuing this new NFPA standard in November 2014, if no other open items remain. With the pending further progress by OSHA to develop a federal standard on combustible dusts, NFPA believes the work on NFPA 652 should be strongly considered at such time as the agency moves forward toward publication of the Notice of Proposed Rulemaking. OSHA staff currently serves on each of the technical committees for the NFPA combustible dust standards, including the new committee on fundamentals. In addition to working with OSHA, NFPA has also assisted several of the states in their response to recommendations from the CSB through the training seminars we have provided to state and local officials.

In conclusion, thank you for the opportunity to comment on these matters that relate to areas in which NFPA has been quite active. If the Board requires additional information, we would be happy to provide that as follow-up to our remarks at this meeting.