



REMARKS OF THE INTERNATIONAL CODE COUNCIL
JUNE 22, 2005

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IN THE MATTER OF COMBUSTIBLE DUST HAZARDS
(70 FED REG 23980 ET. SEC., MAY 6, 2005)

Good afternoon, I am David Conover of the International Code Council® (ICC®). My remarks will focus on an overview of the development, adoption, implementation and enforcement of building construction and fire prevention regulations within the U.S. Through my remarks I hope to help frame the remarks of other panel members on the status and effectiveness of building and fire codes in addressing dust fire and explosion hazards. For the record, I have graduate and undergraduate degrees in mechanical engineering, have been involved with codes and standards development, deployment and conformity assessment issues at the international, national, state and local level since 1976.

The United States system of building regulations is founded on cooperation between public and private sectors at all levels. The system can be summarized as:

- Development and maintenance of criteria (model codes, standards, test methods, guidelines, etc.) within the voluntary sector
- Research, including incident reporting and investigations, conducted by public and private sector interest that forms the basis for new criteria and enhancements to existing criteria
- Adoption of the criteria, via model codes and standards or directly through adaptation, by federal, state and local legislative or regulatory action with possible amendment to address specific needs of the adopting entity
- Adoption of the criteria by lenders, insurance interests, building owners and others as minimum requirements with occasional “carrots” for going beyond the minimum
- Implementation of what is adopted by designers, building owners, underwriters, and others responsible for enduring building safety
- Enforcement by the adopting agency or those under their authority through plan review, field inspection, reliance on third party certification, etc.
- Compliance by those regulated with assessment of appropriate penalties

A simplistic way to picture the U.S. system is by thinking of a pyramid with national activities at the top and moving down through regional and state activities to local activities at the bottom of the pyramid. Most development is done at the top, adoption throughout the vertical structure of the pyramid and implementation and enforcement typically toward the bottom – the building site. In some instances, such as with OSHA, there is a “vertical stack” within the pyramid within which federal initiatives at the top of the pyramid preempt or affect similar actions by state and local government.

The ICC International Codes[®] or I-Codes[®], which in turn reference many standards from numerous standards developers, are developed at the national level and provide federal, state and local government and private sector interests a basis for their building regulations. The ICC International Fire Code[®] contains a chapter on dust-producing operations. A summary of the provisions and questions I might pose given the focus of this meeting today are as follows:

- Permits are required from the fire official – are the permits being secured? If not why?
- Combustible dust is defined, which determines applicability of the codes and standards – is the definition correct and if not how should it be enhanced?
- Smoking, open flames and sparking equipment are prohibited – is this sufficient and how is compliance ensured on a continuing basis?
- Keep dust accumulation to a minimum in the building interior – is minimum sufficient, is building interior clear enough and how is this being enforced?
- Collect accumulated dust by vacuum cleaning or other means, but do not use forced air – how is this implemented and enforced and what provisions exist for maintenance of collection systems?
- The fire official is to enforce the provisions of numerous NFPA standards – does the fire official do this?

As suggested via the pyramid, building sites are where the explosions occur yet many activities occur “upstream” that affect what happens in buildings. Some relevant questions that this meeting and subsequent activities by the CSB should address come to mind:

- What is the status of development and revision of model codes and standards? If not being actively pursued, what needs to occur to increase development or revision?
- Are the provisions in the model codes and standards sufficient? Are they clear and understandable and if not how might they be improved? Are there research projects or enhancements to fire incident reporting systems that are needed to drive development of enhancements to these documents?
- What is the status of adoption of model codes and standards? If not adopted, what needs to occur to secure adoptions?

- Who is responsible for implementation and enforcement of model codes and standards? What awareness activities, procedures and programs, such as education and training, are in place to facilitate implementation and enforcement? Are they sufficient and if not, what needs to be done to enhance them?
- Who provides the resources to do all of this?
- Can new technology be applied to enhance administrative and technical activities associated with these activities?

If one considers the gap between a goal of zero dust fires and explosions and the current situation, the two end points of the gap can be pulled together by a chain that has multiple links. Those links are associated with research, development, adoption, implementation, enforcement and compliance on an ongoing and evolving basis. Knowing what influences each of these links and where the most room for improvement lies can help strengthen the chain and in so doing get us closer to the goal.

I certainly do not have all the answers, but do want to thank the CSB for the opportunity to participate in this panel and commend them for their leadership in raising the issues and focusing us on this opportunity. The ICC supports and tries to bolster a number of links in the chain, as I know Guy, Al, Chris, and Pete do. I'll let them each provide their perspectives on the U.S. system, how it addresses dust fires and explosion and where they feel additional support may be needed.