

Dust Hazard Analysis

NFPA CODE CHANGES THAT IMPACT THE FOOD & AGRICULTURAL INDUSTRY

On June 2, 2016, the National Fire Protection Association (NFPA) approved major changes to NFPA Code 61, 2017 edition, Standard for the Prevention of Fires & Dust Explosions in Agricultural & Food Processing Facilities, in response to dust explosions causing fatalities, injuries and severe property damage. Some of these events include Imperial Sugar (Georgia, 2008) and DeBruce Grain (Kansas, 1998). OSHA implemented their Dust Emphasis Program circa 2007 to improve workplace safety. They reference NFPA codes in many of their regulations as the industry standard best practices for compliance and mitigating employer liability.

What's changing

The most significant change of NFPA Code 61 is the new retroactive requirement of developing and implementing a written Dust Hazard Analysis (DHA) with details noted in Chapter 7 of the 2017 edition. The appendix section of NFPA Code 61 (Annex A) has a comprehensive list of facilities covered by the new standard which include, but are not limited to bakeries, grain elevators, feed mills, flour mills and others (Annex A. 1.3.1).

Combustible dust checklist

The initial steps of this process are to determine which areas of the facility have a potential dust explosion hazard. NFPA Code 61 (2017 edition) provides a comprehensive five-page Combustible Dust Checklist in the appendix section (Annex F) to assist owner/operators with the initial review process of their facilities. If there is a question of whether the dust is an explosion hazard, Chapter 5 of NFPA Code 61 (2017 edition) allows a "Go/No-Go" test of the dust. The "Go/No-Go" test can confirm whether a dust is an explosion hazard. Numerous vendors exist for "Go/No-Go" combustible dust testing services.

It should be noted that completing the five-page Combustible Dust Checklist is not considered a completed Dust Hazard Analysis — it is just the initial process. Chapter 7 of NFPA Code 61 (2017 edition) notes required methodology, and Chapter 8 covers dust hazard mitigation and prevention strategies.

Dust Hazard Analysis

The committee members of NFPA Code 61 recognized the challenges and resources necessary to genuinely satisfy the intent of a Dust Hazard Analysis. With this in mind, a required Dust Hazard Analysis should be completed within five years of the effective date or by June 2, 2021. (The 2020 edition of NFPA Code 61 has postponed the DHA completion date to January 1, 2022, and provided an updated Combustible Dust Checklist).

Some of our business partners (agencies and policyholders) are already experiencing the impact of these new NFPA 61 (2017 edition) code changes with mixed enforcement by authorities having jurisdiction — primarily state and local fire marshals. In one example, a fire marshal would not allow relocation of a vertical outdoor flour storage silo until a written Dust Hazard Analysis was completed in accordance with NFPA Code 61 (2017 edition).

WHAT'S NEXT

Nationwide® Insurance is currently not in a position to develop a Dust Hazard Analysis for a policyholder. However, the Property Engineering Group and other associates are available to assist with the review of completed DHAs and provide lists of vendors for DHA development services and "Go/No-Go" combustible dust testing services.

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