

NFPA ISSUES 2017 REVISIONS TO INDUSTRY SPECIFIC COMBUSTIBLE DUST STANDARDS

By Jeff Davis, PE

The National Fire Protection Association (NFPA) is charged with creating standards for fire prevention in North America. While they have no enforcement power of their own, Authorities Having Jurisdiction (AHJs), including OSHA, will reference the NFPA standards in their own regulations. NFPA has had industry/commodity specific standards for combustible dusts for years, in some cases dating back to the early 1920's. These include:

- NFPA 61: Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities;
- NFPA 484: Standard for Combustible Metals;
- NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids; and,
- NFPA 664: Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities.

These industry standards have not been consistent with each other, providing differing definitions, procedures, and requirements. In the fall of 2015, NFPA released NFPA 652: Standard on the Fundamentals of Combustible Dust. This was an important first step for creating a single overarching standard for dealing with fire and explosion hazards associated with combustible dusts of all types and in all industries. Notable requirements from NFPA 652 include:

- Procedures for sampling and testing of dusts for combustibility and explosibility; and,
- Conducting a Dust Hazard Analysis (DHA) at facilities handling combustible dusts within 3 years of issuance of the standard.

As part of the development of NFPA 652, NFPA founded the Correlating Committee on Combustible Dusts to oversee the individual combustible dust Technical Committees. The primary function of this Committee is to work to align the industry/commodity specific standards to avoid the confusion that has plagued these standards.

The summer of 2016 has seen the release of the 2017 revisions for NFPA 61, 654, and 664. These are the first industry specific standards to be revised since founding the Correlating Committee on Combustible Dusts. As such, numerous changes have been made to these standards to begin the process of aligning the industry standards to NFPA 652. This included updating definitions across all three of the standards and referencing specific requirements of NFPA 652. This includes incorporation of the requirement for conducting the DHA; however, both NFPA 61 and NFPA 654 modified the timeline to 5 years for completion, instead of 3 years. The major updates to these standards are summarized in the paragraphs below.

NFPA 61: Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities, 2017 edition

The 2017 revision to NFPA 61 sees significant modifications from previous editions of the standard. This standard now incorporates all of NFPA 652 into NFPA 61. The Technical Committee made this update such that users of NFPA 61 would not need to use NFPA 652 as a starting point. Other notable updates include:

- The exemption from protection and monitoring devices on small, low speed bucket elevators has been removed from the standard.
- Flame-arresting and particulate retention vent systems are now explicitly allowed to be utilized for explosion venting on bucket elevators.
- Exceptions on explosion protection for smaller cyclones are now provided, with certain conditions.

NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2017 edition

The 2017 revision to NFPA 654 was not drastically altered like NFPA 61. Instead, NFPA 654 opted to align its definitions to match those of NFPA 652 and incorporates references, where applicable. This includes an Owner's Obligation statement that the facility owner/operator is responsible for ensuring the facility meets the requirements of NFPA 654 and 652. Other notable updates include:

- Like NFPA 61, the protection and monitoring exemptions for smaller bucket elevators have been eliminated;
- The allowable airflow handling capacity for enclosureless dust collectors has been increased from 3,000 CFM to 5,000 CFM;
- Clarification has been provided that flame-arresting and particulate retention vent systems cannot be used as an isolation device in a return air line; and,
- Procedures for vehicles in classified locations that are not addressed in NFPA 505: Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations have been added.

NFPA 664: Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities, 2017 edition

Like the 2017 revision to NFPA 654, the revision to NFPA 664 was not drastically altered and, instead, opted to align its definitions to match those of NFPA 652 and incorporates references, where applicable. This also included an Owner's Obligation statement that the facility owner/operator is responsible for ensuring the facility meets the requirements of NFPA 664 and 652. Other notable updates include:

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UPDATE ON GEORGIA'S DRAFT INDUSTRIAL STORMWATER GENERAL PERMIT

By Brian Edwards, PE

As we reported in an earlier blog post, the Georgia Environmental Protection Division (GAEPD) has posted a draft of the 2017 NPDES General Permit No. GAR050000 for Storm Water Discharges Associated with Industrial Activity. The current (2012) version of the permit is set to expire on May 31, 2017, and this revision will replace it. The GAEPD has held three stakeholder meetings that were open to the public, and representatives from CTI were in attendance. There are a few obvious trends that we can see from the direction the GAEPD is heading. Most notably, there is an increased focus on erosion and sedimentation control, and there is a push for higher accountability in completing corrective actions. We will discuss both of these below, but keep in mind that the permit is in an early draft phase. The GAEPD will be issuing a second draft based on input received during the stakeholder meetings and the preliminary comment period, and there will be a second opportunity for the public to comment before the final permit is issued.

Increased Focus on Erosion and Sediment Control

For many years, dating back to the early 2000s, there has been a significant focus on stormwater runoff from construction sites; specifically on minimizing erosion and sedimentation associated with land disturbing activities. Erosion typically occurs when you have exposed soil and/or high volumes of water flow. Without vegetation to protect the soil from falling rain and to hold it in place, sediment can wash off a site and into nearby culverts, ditches, and streams. Increased flow of water will increase the amount of sediment carried away, and it can scour ditches and river banks. All the excess sediment picked up by the stormwater makes it into our streams and rivers, where it eventually settles out, changing the flow characteristics of the waterbodies. All of this causes increases in the likelihood and severity of floods, can threaten the stability of river banks and nearby structures, and can harm aquatic life and the surrounding fauna. To combat these negative effects, construction sites have been required to develop, implement, and maintain Best Management Practices (BMPs) to prevent erosion, capture sediment, and reduce the flow rate of stormwater leaving the property. These controls must be maintained through the entire construction process, until the site is stabilized. Once construction is done, sites can request termination of their coverage under the general construction stormwater permit. If a facility is an industrial site, it will then need coverage under the general industrial stormwater permit (if it didn't already have this).

There are requirements for erosion and sediment controls under the current industrial general permit, but they pale in

comparison to the requirements of the construction stormwater permit. That is looking to change in 2017, as GAEPD continues to show that the spotlight of stormwater pollution prevention is moving from construction to industry. Specifically, the draft permit is now proposing to require facilities, at minimum, to use controls measures in accordance with the Manual for Erosion and Sediment Control in Georgia – something previously reserved for construction sites. In addition, the draft permit is requiring a detailed evaluation of the erosion and sediment controls as part of the annual comprehensive inspection, including a determination of how effective the current controls are and a description of any new areas needing erosion and sediment controls. All of this means that state and local inspectors, as well as third party citizens (e.g. Chattahoochee Riverkeepers), will have stronger tools to use when enforcing pollution control requirements.

Higher Accountability for Corrective Actions

The previous versions of the industrial general permit have consistently required facilities to identify the need for and to complete corrective actions. With the 2012 version of the permit, the corrective action requirements became more specific; events that trigger corrective actions were defined, and corrective action deadlines were established. The new draft permit is even more strict than the 2012 version, as it requires immediate action to initiate corrective actions, and it has increased the deadline for completing corrective actions from 90 days to 14 days (or 45 days, depending on how feasible the corrective action is). In addition, the draft permit requires facilities to modify their Stormwater Pollution Prevention Plan (SWPPP) within 14 days of when a corrective action is completed, if the corrective action results in a change to any control device or procedure. These deadlines are going to be hard for many facilities to meet, and this was echoed in the stakeholder meetings, as representatives from both industry and government spoke out about the infeasibility of the proposed deadlines. Look for these deadlines to be loosened in the second draft of the permit.

Looking Ahead

Interested parties have the opportunity to submit written comments on the first draft by September 9, 2016. The GAEDP promised to consider the discussions from the stakeholder meetings and the written comments prior to issuing a proposed permit. Once the proposed permit is issued, a formal public meeting will be held after a 30-day notice period. This formal meeting is currently planned for November 8, 2016. Once the GAEPD issues a final draft permit, the permit will go to the USEPA for final approval. If all of this progresses on time, the new permit will be issued and become effective on June 1, 2017.



OSHA'S NEW RECORDKEEPING RULE

By Adam Haroz, EIT

Your injury and illness records are about to become public record!

The Occupational Safety and Health Administration (OSHA) has issued another final rule this year. This new rule on facility recordkeeping will require employers to electronically submit injury and illness data to OSHA each year. The data submitted will be made public as part of an OSHA public records database. This change, as expected, is causing much controversy with employers throughout general industry sectors.

The new rule will require facilities with 250 or more employees to electronically submit their injury and illness information, from OSHA forms 300, 300A, and 301, to OSHA each year. Facilities with 20 to 249 employees, in certain high-hazard industries, will need to submit the information from their OSHA 300A form. The information that facilities submit will be made available on OSHA's website. OSHA says that this database will "enable researchers to better study the causes of injuries, identify workplace hazards before they become widespread, and evaluate the effectiveness of injury and illness prevention programs and techniques."

These requirements took effect August 10, 2016, and will be phased in over the next two years. The facilities with 250 or more employees are to submit information from their 2016 Form 300A by July 1, 2017. These same facilities will be required to submit information from their 2017 Forms 300A, 300, and 301 by July 1, 2018. Starting in 2019, the information is to be submitted by March 2 of each year after that. Facilities with 20-249 employees, in certain high-risk industries, must submit information from their 2017 Form 300A also by July 1, 2018. Starting in 2019, the information is to be submitted by March 2 of each year after that.

Another controversial aspect to the new rule is that OSHA will be further scrutinizing the use of Safety Incentive Programs (e.g. if a company goes a full year without a reported injury or illness, there will be an extra bonus in everybody's paycheck). This is going to be done because, according to OSHA, it discourages employees from reporting properly. This has been under debate for some time now. OSHA says that this kind of incentive program is more likely to discourage employees from reporting out of fear of angering or disappointing fellow coworkers who will be denied the incentive.

Why a New Rule?

According to OSHA, one of the reasons for this new rule is to "encourage employers to increase their efforts to prevent worker injuries and illnesses, and, compelled by their own incentives spirit, to race to the top in terms of worker

safety." While some people feel that the new OSHA injury reporting rules will bring workplace injury and illness reporting into the 21st century, some others, including the U.S Chamber of Commerce, believe that "the rule will only create a new filing requirements that will lead to sensitive employer data being made public without context or explanation." Without proper context behind injury and illness data, employers could be seen as unsafe, and it may not reflect a company's commitment to establishing and maintaining a safe work environment.

Will this new rule and requirements change the safety culture within the workplace for the good? That has yet to be determined. The new rule is set to be in full effect, with the requirements being phased in over the next two years. For more information regarding the "High-Risk" industries, you can read our newsletter article from Winter 2015.

If you have any questions regarding your company's reporting requirements, please contact Conversion Technology Inc. or visit our website at conversionstechnology.com.

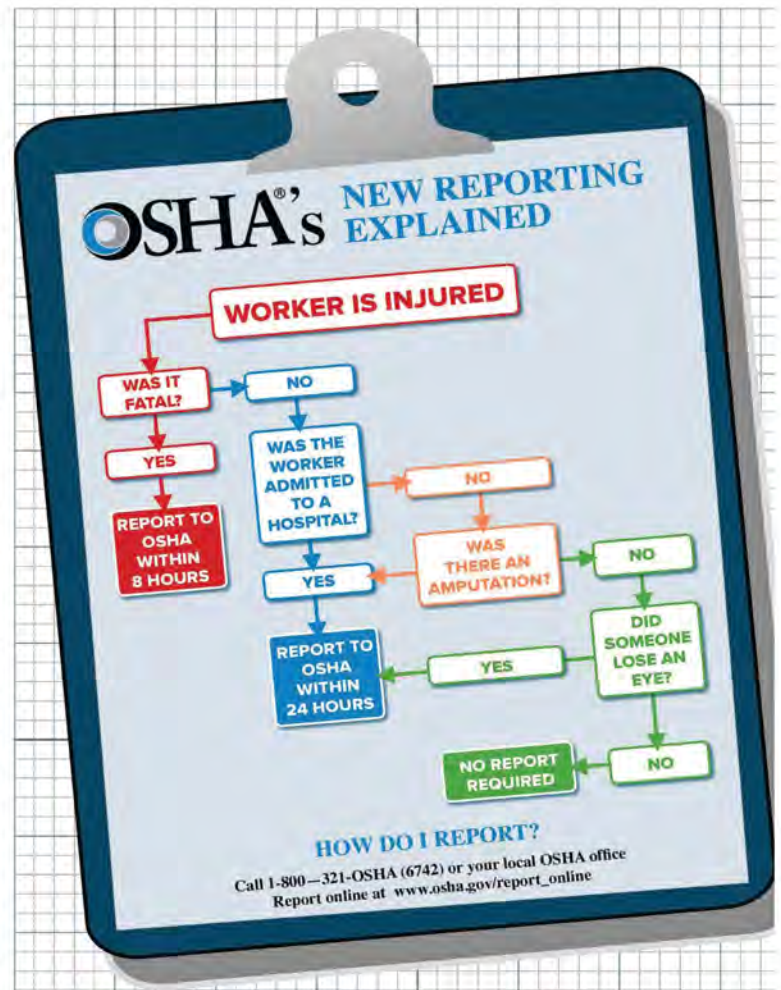


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- Increased clarification on the application of NFPA 664 to woodworking operations/carpenter shops that exceed certain sizes has been added;
- The identification of a deflagration hazard applying to locations with 1/8 inch of dust accumulation over 5% of an area now specifically only apply to "small areas". No area limit is specified for larger spaces, though now an option is present to define deflagration hazards using the DHA per NFPA 652;
- The separation/segregation of hazardous locations from NFPA 652 has been incorporated.
- Increased clarification has been added on the use of enclosureless dust collectors.
- The chapters addressing human element and housekeeping are now specifically identified as being applied retroactively.
- The PPE and Workplace Hazard Assessment requirements from NFPA 652 have been incorporated, which includes requirements for flame-resistant clothing.

While not specifically related to the standards previously discussed, the 2017 edition of NFPA 499: Recommended Practices for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas was also recently issued. This is a useful standard when conducting a DHA. More information on this update can be found on our blog:

<http://www.conversiontechnology.com/blog/>

For more information on NFPA 652 and on conducting a DHA, see the Compliance Matters Newsletter – Summer Q3 2015, available at <http://www.conversiontechnology.com/resources/>

If you need assistance conducting a Dust Hazard Analysis or have questions about how these NFPA updates affect your facility, please do not hesitate to contact CTI.

News You Can Use

- OSHA penalty adjustment to take affect Sept. 1, 2016
- GA Stormwater Smoke and Dye Testing Compliance Deadline, May 31, 2017
- Boiler MACT Notification of Compliance Status is due 60 days after completion of test. Deadline for testing was July 29, 2016
- Look on our website to find out more about CTI's Process Safety services

Look for more info for these stories on our news blog.