



# **CONTRACTOR INFORMATION**

## **This workplace has a Combustible Wood Dust Mitigation and Control Program**



The purpose:

- To control combustible wood dust accumulation and potential ignition sources
- To prevent a combustible wood dust fire, deflagration, or explosion.

**All employees and contractors are expected to work in accordance with that program.**

Any contractor activity that introduces a new combustible dust hazard is an at-risk activity and must be pre-planned to mitigate the risk. The new hazard would include one or more of the following:

1. **Added Fuel:** Activity produces wood dust, especially fine particle size dust.
2. **Dispersion of Fuel:** Activity disperses wood dust (pre-existing accumulation or newly created) into a thick cloud.
3. **Containment of Dispersed Fuel:** Activity disperses fuel, as a cloud, in an enclosed space or room.
4. **Introduction of Ignition Sources:** Activity introduces one or more ignition sources (e.g., heaters, hot work, hot equipment, spark generating tools) in areas where wood dust accumulation already exist or are being created by the activity, in the general work area, in designated hazardous locations, and around or within a passive containment system, or dust collection system components such as duct work and dust collector (baghouses, cyclones, etc.).
5. **Any activity** that might interfere with the proper functioning of the workplace’s existing dust accumulation and ignition source controls.
6. **Any activity** that might interfere with the proper functioning of the workplace’s existing equipment and systems for fire suppression and explosion prevention.



**Why?**

When finely divided (i.e., powdered) wood dust is allowed to accumulate in the workplace, it becomes a significant fire and explosion hazard. All that is required is for some activity or event to disperse the wood dust into an airborne cloud and contact an ignition source.



For small amounts of dust, the result will be a large fireball, which is capable of severely burning workers; if the activity or event occurs in an enclosure or room with larger amounts of wood dust, a powerful explosion will result, which is capable of severely injuring or killing workers and causing significant property damage.

Refer to the *Combustible Dust Awareness Quick Guide* for more information.

## Pre-Planning

Pre-planning to eliminate or minimize the risk and the proper execution of the plan are important.

For those hazard and risks that cannot be eliminated, the contractor will work with the workplace’s management to develop appropriate controls and safe work procedures for the planned activities. These safe work procedures include hot work permits and housekeeping (i.e., wood dust and tramp metal/foreign contamination) before, during and after activity.

The dust explosion incident summarized below is based on an actual incident, although not wood dust. The outcome would have been the same had the combustible dust been wood dust.

### Example: Working in the presence of existing combustible dust accumulation

As part of an ongoing furnace improvement project, a company engineer and an outside contractor were replacing igniters on a band furnace.

The pair experienced difficulty in reconnecting a particular natural gas line after replacing an igniter. The vibration, caused by using a hammer to force the gas port to reconnect, inadvertently lofted large amounts of combustible iron dust from flat surfaces on the side of the band furnace, spanning 20 feet above them.



Source: Chemical Safety Board  
<http://www.csb.gov/hoeqanaes-corporation-fatal-flash-fires/>

As soon as the dust dispersed, the engineer recalled being engulfed in flames. One worker died. The ignition source was the hot surface of the furnace.

The contractor activity disturbed an existing accumulation of combustible dust near an existing ignition source, i.e., the hot furnace surface.

Pre-job planning would have required the removal of the combustible dust accumulation. If possible, the furnace could have been shut down and allowed to cool before the work began thus removing a potential ignition source.