

CONDUCTING A FIRE ASSESSMENT FOR CONSTRUCTION SITES IN AN OCCUPIED BUILDING

Risk assessments are used to establish priorities and in so doing allow more dangerous situations to be addressed first and those less likely to cause major problems to be scheduled for future response.

PURPOSE

To assist building project managers to conduct fire safety risk assessments in occupied buildings undergoing construction and renovation activities. This activity takes on increased significance when a project involves the use or storage of flammable materials, work in close proximity to hazardous materials, welding or tasks that result in interruption of building fire suppression or alarm system.

SCOPE

All buildings/facilities owned or maintained by the University, which are occupied during a significant renovation, repair or maintenance activity.

REFERENCES

- U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
- Public Health Service
- Centers of Disease Control and Prevention (CDC)
- National Institute for Occupational Safety and Health (NIOSH)

GUIDELINES

Step 1: Determine who will conduct the analysis.

Those involved in the analysis should be knowledgeable about the scope and schedule of the work and the area that is being assessed. The findings from various sources including, but not limited to: area occupants, contractors, EH&S staff, and maintenance personnel should be combined for a comprehensive site analysis.

Step 2: Define the area to be included.

The area to be included involves potential impact as well as work areas. If a large area is selected, it is best to subdivide and, then, combine the results. Conduct an analysis of each problem area identified and combine these results to assess the hazards in the total area.

Step 3: Identify all the possible fire hazards that exist in the area selected for evaluation.

Start by determining all likely sources of ignition in the area and organize them with the help of the attached form: POTENTIAL FIRES (Attachment #1). Under each general label, i.e., electrical, frictional, etc., list all the specific sources of ignition of this type that can be found in the area being analyzed. For example, under the label “electrical” - list power centers, fan motors, etc., and under the label “frictional” - belt rollers or the belt of a motor may be identified. Be as specific and as realistic as possible when listing fire hazards.

Step 4: Evaluate the Risks

Use the following two concepts: Probability of occurrence, and Severity of effects. For each fire hazard identified, a judgment is required about the probability of a fire being caused by that ignition source and the severity of the consequences.

In summary, to assess risk:

- (a) identify a source of ignition; (i.e., hazard)
- (b) determine the likelihood that this source will actually cause a fire; (probability)
- (c) estimate how serious the damage to life, property, and the environment could be.

Step 5: Use Hazard Ratings

Those hazards deemed to have the greatest probability of occurring should be flagged. They should be made the top priority for mitigation, and/or response efforts.

Organize these findings in terms of their severity potential and allocate resources accordingly.

For more information regarding this guide, contact the Department of Environmental Health and Safety at 2621.