

Case 384. 38-year-old supervisor died when a floor collapsed on top of him during demolition activities.

A 38-year-old male supervisor died when a floor collapsed during demolition activities. The brick building involved in the incident had previously been damaged by weather and fire. The demolition activities were divided into activity areas (bays). The work crew had dismantled a nearby bay (Bay A), but, due to space limitations, stacked all the wood from Bay A onto the floor in the bay where the incident occurred (Bay B). The rough sawn wood floor joists of Bay B were damaged and “sitting” unsecured by bolts or hangers in a “groove” in the brick along the wall. The floor boards were saturated with water and damaged. Two individuals were dismantling the floor, working 7-feet above the basement floor using a saw, pry bar and other equipment. They handed/dropped the demolished flooring into the basement. The work crew did not move the stacked lumber prior to beginning the demolition of the floor. The decedent who had been up on the floor jumped down and with a coworker, began work in the basement level stacking the discarded wood. The decedent used a sledge hammer (maul) to strike Bay B’s flooring 6x6 vertical supports while the work continued on the floor above him. He struck and knocked down one vertical support, and when he struck the 2nd vertical support located near the stacked wood, the floor collapsed on top of him. His coworker was able to run to safety. Emergency response was summoned and the decedent declared dead.

MIOSHA Construction Safety and Health Division issued the following Serious citations to the employer at the conclusion of its investigation:

SERIOUS: DEMOLITION, CS PART 20

- **RULE 408.42031(1):**

Before the start of a demolition operation, an employer shall ensure that all of the following are done:

(a) An engineering survey of the structure and equipment is conducted by a competent person knowledgeable in demolition to determine all of the following:

- (i) The condition of the foundation, roof, walls and floors.
- (ii) Whether any adjacent structure will be affected by the demolition.
- (iii) The utility service entering the building.
- (iv) Any other conditions and equipment affecting the safety of an employee.

(b) An employer shall ensure that there is a written report of the survey at the field office until the completion of the job. The report shall include information such as the name of the person conducting the survey, date of the survey, and hazardous substances and dangerous conditions found and their location. In an emergency situation, a survey is not required. If a field office does not exist at the demolition site, then an employer shall file the written report of the survey at the employer’s main office.

(c) An employer shall inform utility companies of the planned demolition. An employer shall ensure that utility services are shut off, capped, or otherwise protected from damage, except as specified in sub-rule (2) of this rule.

(d) An employer shall ensure that glazed sash and doors and other glass that might cause an injury shall be protected or removed before demolition starts.

Before the start of a demolition operation, no demolition engineering survey was performed on the structure or equipment. Employees are performing demolition work.

- Rule 408.42031(2):

If an employee is required to work in a structure that has been damaged by fire, flood, or explosion, then an employer shall ensure that the affected walls and floors are shored or braced before manual demolition starts.

- RULE 408.42031(4):

An employer shall ensure that manual demolition of structural components starts at the top of the structure and proceeds downward so that each level is completely dropped before the next lower wall and floor is dropped, except that if a connection portion is a different level, then that portion may be removed first. This requirement does not prohibit the cutting of a floor for the removal of materials if the requirements of R 408.42044 are complied with.

It was not ensured that demolition was started at the top and proceeded downward at the work site. Employees are performing demolition work.

- RULE 408.42031(8):

During demolition, an employer or his or her designated representative shall make daily inspections to detect hazards and unsafe conditions. An employer shall ensure that an employee is not permitted to work where hazards exist until the hazards are corrected by shoring, bracing, or other effective means.

No inspection was performed to detect and remove hazards at the work site. Employees are performing demolition work.

- RULE 408.42044(4):

Before a floor is demolished, debris and other material shall be removed from the area and adjacent areas for a distance of not less than 20 feet.

Employees are stacking previously demolished wood and debris from a different work area onto the same floor currently being demolished. Demolished debris and other debris

were not removed from work area at a distance of not less than 20 feet. Employees are performing demolition work.