RUDOLPH LIBBE INC
RUDOLPH LIBBE GROUP

Safety Flash: Near-miss incident

Incident: After finishing layout work, an RLI carpenter was walking up the bottom rebar mat to exit a 2-foot-deep sloped excavation for a flume. He placed his hand on a 3-foot-high concrete foundation to stabilize himself, then moved his hand to the double-stacked steel beams on top of the concrete. When he saw the steel beams were becoming unstable, he stepped backward out of the line of fire as the top beam rolled into the excavation, landed upright and displaced two pieces of tied rebar. The rebar pushed against the carpenter's leg, but the beam did not hit him and he was not injured.

Possible contributing factors

- The beams and other steel had been placed close to the excavation edge, the crane and the installation area because interferences with existing utilities did not allow installation. They were stored close to the crane and installation area to eliminate double-handling once design was modified to eliminate interferences.
- The carpenter put his hand on the steel for support, causing the top beam to topple.
- The top-heavy beams – 6 inches wide, 18 feet tall and 9 feet long – were double-stacked due to limited storage area.
- Photos show the beams were initially properly placed with three pieces of cribbing, but for unknown reasons, the cribbing was later reduced and moved to an angle that no longer provided support, with only two pieces of different heights under and between the beams – one on the end and the second piece about 3-4 feet away, leaving the other end of the beams unsupported.

Primary contributing factor:

- Photos show the beams were initially properly placed with three pieces of cribbing, but for unknown reasons, the cribbing was later reduced and moved to an angle that no longer provided support, with only two pieces of different heights under and between the beams – one on the end and the second piece about 3-4 feet away, leaving the other end of the beams unsupported.

Possible solutions:

- Consider single-stacking or laying down narrow I-beam pieces on the flat side.
- Inspect laydown areas more often to identify and correct changes in site conditions that can make stored materials unstable.
- Make sure all material used for cribbing is the same size.
- Make sure everyone on site understands how to identify and eliminate hazards created by improperly stacked steel and materials.

Action plan:

- A stand-down was held to review proper material handling and storage methods, and the importance of periodic inspections of laydown areas.

Keep improving:

Your health and safety are our core value on every project. If you see a way we can support you in keeping our job sites safe, see your supervisor or contact: Jim Philo, 419/654-2043; Rich Franklin, Michigan, 734/679-7283; Alan Doane, Cleveland, 440/429-0639; Chad Metzger, Lima, 419/279-5348 or Mark Hoffman, 419/360-9280.