

CSI Country Wide Case Study Safety Strategy Discussion

Construction Safety Investigator



Instructions

The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety related concerns that they may encounter. Safety discussions should not be limited to the subject above and should pertain to the activities that workers will be involved in that may have the potential for safety related exposures.

Case Day:

February 2007

Accident Type:

Motor Carrier Vehicle Accident -Securement

Relevant laws, rules and codes may include:

29CFR 1926.20(a)(1), 1926.21(b)(2), 49 CFR section 393.100

Case:

A 36 year-worker was struck and crushed by a steel pipe which came off of a truck that was being unloaded at a construction site.

Accident Detail:

A low-boy trailer was loaded with several lengths of steel pipe and other material of different dimensions and was to be delivered to a new roadway construction project. The pipe and other materials were secured with chains at the base and again over the top. To keep the load from shifting, the driver installed bollards (vertical load support) to the trailer but only to one side.

Because the loaded materials and pipe were of differing dimensions, they did not seat together properly when secured. This caused pressure to be exerted down into the layer of pipe located at the bottom of the load and toward the outside of the trailer (side without a bollards installed).

After arriving at the construction site, the driver positioned the truck to be unloaded. He then released all of the chains at the same time, causing the top loaded material (exerting downward pressure) to force the pipe on the bottom outward, which then rolled off the trailer, striking and killing a laborer assisting with the off loading.

Reconstructive Safety Evaluation:

- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident from occurring?

Accident Scene Conclusion:

The investigation revealed that load restraint bollards were only in place on one side of the truck. Due to the differing dimensions of the materials and steel pipe, the load configuration resulted in stored energy. Without maintaining adequate restraint during the unloading process, the load was forced off of the truck. Workers other than the driver (laborer) were allowed to stand in a location that was hazardous when unloading the trailer.

Preventive Safety Measures Include:

- All operations are preplanned using a Job Safety Task Analysis (JSTA) to ensure potential safety hazards associated with an operation are identified and appropriate steps are taken to eliminate or control them.
- Workers should be trained in the hazards of the work they are to perform, the personal protective equipment and safe work procedures necessary to perform their assigned tasks.
- Drivers of trucks are trained in the requirements of the Federal Motor Carrier Safety Regulations that apply to, at a minimum, proper loading and securing procedures before they are authorized to transport materials and/or equipment.
- Workers are not allowed to stand/work in locations where there is the potential to be struck by or caught between loaded or unloaded materials, equipment or vehicles.

Attendance Roster

Reference: This case is fictitious, and any resemblance to any persons, living or dead, is entirely coincidental. However, the type of accident described in this case summary happens all too often on construction sites.

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