CSI Country Wide Case Study Safety Strategy Discussion

Construction Safety Investigator

Instructions

CHUBB

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 23, 2010

Accident Type: Drilling Operation Accident - Drilling Rig Topples Over

Relevant laws, rules and codes may include:

29CFR 1926.20(a)(1), 1926.21(b)(2), 1926.550(a)(1), Drilling Machine Manufacturer's Specifications

Case:

A worker was injured when the drilling rig he was operating fell over.

Accident Detail:

A construction worker was injured when the drilling rig he was operating fell on top of him. Workers were cleaning up and gathering materials and equipment after completing a drilling operation along a highway project located in Texas.

During the clean up and demobilization process, the operator of the drilling rig attempted to move the rig; the soft ground underneath gave way causing the rig to topple over. The operator was trapped in the cab but was rescued by emergency workers.

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 the drilling rig was positioned on an unstable foundation/soil base. The ground/soil condition was a soft clean fill material. The clean fill was placed to level and elevate the working location but had not been compacted properly. During the drilling operation, the machine's stabilizers were in place and set upon appropriate cribbing to distribute its weight. However, when it was time to move the machine, the stabilizers had to be taken up. When the machine was moved, the ground shifted and the now unstable machine toppled over.

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.
- The crane/drilling machine should be set up on a sound and level base foundation. This base is determined and evaluated by a qualified person to ensure it can support, at a minimum, the weight of the crane/drilling machine, its accessories and any materials utilized during the drilling operations.
- Verify that the crane/drilling machine is set up properly and operating according to manufacturer's requirements. Ground conditions should be inspected prior to each shift and throughout the operation to ensure no unsafe conditions have occurred.
- Equipment operators are trained and qualified on the specific type of crane/drilling machines being operated.

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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