# 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:** September 2009

Accident Type: Fire Protection Accident - Torch Cutting a Drum

**Relevant laws, rules and codes may include:** 29CFR 1926.20(a)(1), 1926.21(b)(2), 1926.352

#### Case:

a maintenance yard worker was severely burned while attempting to cut the top off of a 55-gallon drum.

## **Accident Detail:**

The worker, who was employed by a construction company, was assigned to work in the equipment/maintenance yard.

During his shift, he was asked to cut the tops off of empty 55-gallon drums, which would then be used for storage of nuts and bolts and other parts.

While using an oxy/acetylene torch to cut the tops off, one drum suddenly exploded

#### **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 worker was using a torch to remove the top off an empty chemical drum. It is believed that some residual fumes/residue in the container ignited, causing the explosion and resulting burn injuries. The drums chosen to have the tops removed were not evaluated or cleaned prior to the cutting beginning.

#### **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.
- A fire protection program is in place which includes procedures for evaluating and directing welding and cutting operations.
- Welding and cutting does not take place on containers previously used to store flammable materials/liquids unless they are first properly cleaned and then verified by a qualified person to be free of any flammable residue.
- A hot work permit system in place to ensure that all necessary steps are taken to control potential fires such as ensuring all flammable or combustible materials are either removed from the area or appropriate protective measures are in place to prevent a fire.

#### 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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