

Chubb Construction 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: | June 2009 | Accident Type: | Confined Space Accident - Asphyxiation |
|--|---------------------------------------|------------------------|---|
| Relevant laws, rules and codes may include: | 29CFR 1926.20(a)(1), (b)(l) & (2), 19 | 26.21(b)(2), (6)(i) ar | nd (6)(ii), 29CFR 1910.146 |
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| Case: | Three construction workers were | killed after entering | an underground storage tank. |

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Accident Detail:

In preparation for construction of a new warehouse facility, three laborers were working for a contractor hired to perform site clearing operations at an abandoned manufacturing facility.

While site clearing, an equipment operator noticed pipe and valves appearing to come out of the ground. He called to the three laborers nearby to investigate. The workers noticed a steel cover nearly buried by dirt and grass that led to a 500 gallon underground storage tank.

When the workers opened the cover they found that the pipe and valve were attached at one end of the tank and had to be broken free in order for the tank to be removed by the operator and backhoe.

One worker climbed in the tank, attempting to free the pipe from the inside but as he entered, he immediately collapsed and was unresponsive. The two other laborers, in an attempt to rescue the first worker, quickly climbed into the tank but were also overcome.

After seeing the two workers quickly enter the tank, the operator became concerned and walked over to see what was taking place. At the tank opening, he noticed all three workers unconscious in the bottom of the tank and immediately called 911. By the time emergency services arrived on the scene and extricated the three men, all were deceased. The workers died of asphyxiated due to lack of oxygen.

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 site work contractor did not have procedures in place to adequately assess or address unanticipated situations that may occur during clearing operations. The deceased workers had not received any Confined Space training nor was there a confined space program in place.

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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.
- Prior to site clearing operations beginning, a survey and investigation of the area to be cleared should be conducted to identify potential hazardous conditions such as buried structures or tanks that may need to be removed.
- Only qualified contractors are used to expose, evaluate, make safe and remove underground storage tanks or other structures.
- If confined space work is required, a confined space program is fully implemented and only authorized personnel are assigned to perform the work.
- If confined space entry is required, workers are trained in the hazards of confined spaces, the work they are to perform in them, personal protective and life saving equipment needed for the task and safe work procedures necessary to perform them.
- Confined space permitting and entry procedures are followed to include an entry attendant with no other duties, pre-entry and routine air monitoring (as determined by the Entry Supervisor) and pre-planned rescue service/team.

| Attenance Roster: | |
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