CSI Country-Wide Case Study Safety Strategy Discussion

Construction Safety Investigator

CHUBB

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 typically pertain to all activities that workers will be involved in that may have the potential for safety related exposures. This case study is based on facts and materials developed and first published by the agency/organization identified in the section below entitled Source of Case Study Investigative Information.

Case Day:

September 2018

Accident Type:

Electrocution Accident — Interior Lighting Fixtures

Relevant Laws, Rules, and Codes May Include:

29CFR 1926.20(a)(1); 29 CFR 1926.20(b)(2); 29 CFR 1926.20(b)(4); 1926.20(f)(2); 1926.21; OAR 437-001-0760(7)(a); 29 CFR 1926.416(a)(3); 29 CFR 1926.416(a); 29 CFR 1926.417

- Oregon Administrative Rule
- National Electric Code

Case:

Newly hired lighting technician electrocuted while working night shift

Accident Detail:

A prime contractor had won a bid to replace fluorescent light fixtures with LED light fixtures in all 30+ stores of a national retail chain. The prime contractor then hired a staffing agency to contract lighting technicians to do the work.

The staffing agency (employer) who has been in business for approximately 30 years, recently acquired (5 months before incident) a small electrical contracting company based in California that was owned by a journeyman electrician. This was hired to be the technical manager of the staffing agency's new electrical contracting division and had 35+ years of experience as an electrician, and approximately 30+ years as a journeyman. In the staffing agency's employee handbook, the technical manager is listed as a "job site supervisor."

The acquired company had applied for and received a Construction Contractors Board license to operate in Oregon in 2015, but the license was not valid at the time of the incident. The staffing agency had been working in but was not licensed by the Construction Contractors Board to operate in Oregon at the time of the incident, did not have a valid Workers Compensation insurance policy, and was not licensed by the Electrical and Elevator Board with the Building Codes Division.

The decedent and the rest of the 6-person lighting technician crew had completed lighting fixture replacement in 11 stores in the 3 weeks prior to the incident.

At the time of the incident, the lighting technicians were replacing lights at another store location while the lighting circuits were energized.

Before work began in the store where the incident occurred, the foreman located what he thought was the lighting electrical panel, which was a 208/120V single-phase panel, but this panel was for accent lighting only. The main store lighting was in an uninspected panel and was a 480/277V 3-phase panel.

At the time of the incident, the decedent was working on a fixture without a quick disconnect. About 3:30am, co-workers noticed the decedent was slumped over the scaffold and not moving. CPR was initiated and co-workers called 911. The decedent was declared dead at the scene by EMS.

After the decedent was removed and law enforcement left, the foreman and remaining crew continued to work, completing the disconnect installation the decedent was working on, exposing themselves to similar, and potentially fatal, hazards.

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?

Agency's Accident Scene Conclusion:

- The decedent had been employed with a staffing agency for approximately 3 weeks, which, according to co-workers, was the extent of his experience in the electrical trade. This 3-week period served as his on-the-job training
- The technical manager, a journeyman electrician, who resided in California, did not inspect any stores in Oregon and the employer did not ensure a competent person was at the job site
- Some of the lighting systems in the stores had previously been retrofitted with quick disconnect circuits so that maintenance workers can replace fluorescent bulbs without having to turn off the circuit breaker to the lighting system. In the store where the incident occurred, about 60% of the light fixtures were not retrofitted with the quick disconnects. It was assumed that all stores were on the 120V single-phase circuits and previously retrofitted with luminaire (i.e., "quick") disconnects
- The employer had written policies on workplace safety for the mechanical and manufacturing divisions but did not develop workplace safety policies for the newly formed electrical division and did not assess the workplace safety policies of the newly acquired electrical contracting company that became the newly formed electrical division
- The employer had a written policy on de-energizing manufacturing equipment and installing lockout/tagout (LOTO) devices during machine repair and maintenance, but the recently acquired company had no written policy for de-energizing lighting circuits or for installing LOTO devices on electrical systems
- Lighting technicians were not trained in LOTO procedures and were not provided LOTO devices to lockout an electrical system
- Lighting technicians were not evaluated for workplace safety knowledge or practice, nor did they receive safety training or direction from either the employer or the technical manager. Thus, employees were not aware of any company policies, or dangers of working on energized circuits
- The employer and the technical manager of the newly formed electrical division were unable to produce any documentation of workplace safety training for any lighting technician. This included a lack of documentation of any assessment or training provided to the decedent during his tenure with the employer
- The technical manager stated he was not surprised the foreman did not locate the correct electrical panel as he probably did not know what he was looking for. These comments by the technical manager suggest that supervision and training was inadequate for the foreman and his crew

Preventive Safety Measures Identified by the Investigating Agency Include:

- A competent person should be at the job site and has an obligation to examine workplace conditions and ensure hazards are identified and mitigated. The competent person must visit the job site at least once, and ideally stay at the job site while work is being performed. In workplaces where workers are potentially exposed to hazardous energy, the competent person should be able to identify the voltage and amps of the circuits to which workers will be exposed, have LOTO devices on hand, be able to de-energize and lock out the circuit, and be authorized to select the appropriate PPE for the work performed
- Employers should ensure live circuits are de-energized, especially when employees are working with bare wires to install luminaire disconnects, and ensure employees use appropriate lockout-tagout devices on de-energized circuits
- Ensure the contracted firms are licensed in the state where the work will be performed
- Employers should specify and provide all appropriate PPE needed for the task

Additional Commentary on Preventive Safety Measures from Chubb Include:

- Complete a Job Safety Task Analysis that includes scope of work, anticipated exposures, and safety equipment and/or procedures needed to ensure the task is completed successfully and safely.
- Conduct a pre-work meeting to review the JSTA and ensure workers understand the task to be completed, any safe working procedures and have the necessary safety equipment

Employers should provide training, including written procedures, to employees performing the work and ensure employees understand the risks associated with exposure to the hazards involved

Attendance Roster

Source of Case Study Investigative Information:

This case study is based on facts and materials developed and first published by the following agencies during their investigation of the applicable incident:

- U.S. Centers for Disease Control and Prevention (CDC) and National Institute for Occupational Safety and Health Office of the Director (NIOSH)

The source material is otherwise available on the agency website for no charge. Chubb's use of information sourced from these or any other governmental agency does not constitute endorsement or recommendation of Chubb by these governmental agencies.

Source and Links to Relevant Material:

Oregon State FACE Program Case Report 2018OR40;
https://www.cdc.gov/niosh/face/stateface/or/18or040.html

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