



Weekly Safety Meeting

Your Safety Is Our Business®

Volume 1, Issue 41

October 12th, 2014

Electrical Safety – Overhead Power Lines

Electrocution remains a major cause of deaths in construction. Part of the reason is that at home and on the job we take electricity for granted. This can lead to familiarity and a false sense of security. Relying on the benefits of electricity, we may forget its hazards.

Historically, electrocution accounts for about 20% of all fatalities in construction. Some people think that only cranes are involved in overhead contacts with electrical power lines. But backhoes, dump trucks, and low-tech equipment like ladders and rolling scaffolds have also been involved. Nor does it take high-tension lines to kill construction workers. Too many fatalities involve residential service.

Precautions to Minimize the Risk of Electrocution:

- Conduct initial and daily surveys of the worksite for overhead power lines. LOOK UP!
- BEST SAFETY PRACTICE: NEVER GET CLOSER THAN 10 FEET TO AN OVERHEAD POWER LINE!
- Consider all overhead power lines as energized until the electric utility indicates otherwise or an electrician verifies that the line is not energized and has been grounded.
- In construction work, an overhead power line safety component should be part of your employer's overall safety and health program and safety training to help workers recognize and control the hazards of contact with overhead power lines.
- If overhead lines are present, call the utility company and find out what voltage is on the lines. Ask if the utility company can shut down the lines while you are working near them.
- If overhead lines cannot be shut down, ask the utility company if they can install insulation over the lines during the time you will be working near them.
- If the lines cannot be shut down and/or insulation applied, a minimum safe distance of 10 feet must be established. Have a brief job site meeting to discuss the planned work as it relates to the power lines. Discuss topics such as the use of long-handled tools and equipment (raised dump trucks, back hoes, etc.) that could come in contact with the lines. Consider the need for a designated person to monitor activities around the lines.
- A successful defense against electrical accidents is the continuous exercising of good judgment or common sense. You and all your fellow workers should be thoroughly familiar with the safety procedures for their particular jobs. When work is performed on electrical equipment, for example, some basic procedures are:
 - Have the equipment de-energized.
 - Ensure that the equipment remains de-energized by using some type of lockout and tag procedure.
 - Use grounding lines when they are required.
 - Use insulating equipment.
 - Keep a safe distance from energized parts.
- Don't operate equipment around overhead power lines unless you are authorized and trained to do so.



- If an object (scaffolds, crane, etc.) must be moved in the area of overhead power lines, appoint a competent worker whose sole responsibility is to observe the clearance between the power lines and the object. Warn others if the minimum distance is not maintained.
- Never touch an overhead line if it has been brought down by machinery or has fallen. Never assume lines are dead.
- When a machine is in contact with an overhead line, DO NOT allow anyone to come near or touch the machine. Stay away from the machine and summon outside assistance.
- Also, never touch a person who is in contact with a live power line.
- Be trained in cardiopulmonary resuscitation (CPR).
- If you should be in a vehicle that is in contact with an overhead power line, DON'T LEAVE THE VEHICLE. As long as you stay inside and avoid touching metal on the vehicle, you may avoid an electrical hazard. If you need to get out to summon help or because of fire, jump out without touching any wires or the machine, keep your feet together, and hop to safety.
- When mechanical equipment is being operated near overhead power lines, employees standing on the ground may not contact the equipment unless it is located so that the required clearance cannot be violated even at the maximum reach of the equipment.
- To maximize his or her own safety, an employee should always use tools that work properly. Tools must be inspected before use and those found questionable removed from service and properly tagged. Tools and other equipment should be regularly maintained. Inadequate maintenance can cause equipment to deteriorate, resulting in an unsafe condition.
- Tools that are used by employees to handle energized conductors must be designed and constructed to withstand the voltages and stresses to which they are exposed.
- Use the personal protective equipment appropriate for the job that is performed. This equipment may consist of rubber insulating gloves, hoods, sleeves, matting, blankets, etc. These items must be inspected prior to each use and tested annually.
- When working near overhead power lines, the use of non-conductive wooden or fiberglass ladders is recommended. Aluminum ladders and metal scaffolds or frames are efficient conductors of electricity.
- Avoid storing materials under or near overhead power lines.
- If using a crane/equipment near lines rated at 50,000 volts (50kv) or less, minimum distance between the energized lines and any part of the crane (boom, load line, etc.) should be at least 10 feet.
- If using a crane/equipment near energized lines rated at 50,000 volts (50kv) or more, minimum distance between energized lines and any part of the crane should be at least 10 feet plus 0.4 inch for each 1,000 volts over 50,000 volts.
- Where it is difficult for the operator to maintain the desired clearance by visible means, an employee should be designated to observe the distance between the crane/equipment and the line so as to give timely warning to the operator. This should be the ONLY job the monitor is performing when this hazardous condition is present.

Safety First, Avoid the Worst!



Safety Meeting Sign-In Sheet

Supervisor:	Subject:
Location:	Date:
Conducted By:	Trainer Signature:

Name (print clearly)	Signature	Comments / Safety Concerns / Training Requests