TEAMSTERS Safety & Health FACTS
Safety and Health Department, International Brotherhood of Teamsters
25 Louisiana Avenue, NW, Washington, DC 20001 ◆ 202/624-6960 ◆ ibtsafety@teamster.org

Power Line Hazard Awareness

Contact with overhead power lines is one of the leading causes of electrocution for non-electrical workers. Dump Trucks, Roll-Offs, Fork Lifts, Boom Trucks, Grapples, or operate other equipment with hoisting features, are particularly at risk of encountering this occupational hazard. Consequently for workers who work construction and pipeline jobsites, it is very important to be aware of your overhead surroundings.

Avoiding Contact with Overhead Power Lines

Hazard Assessment

A hazard assessment of the construction/pipeline site should be conducted by a competent person[1] during the planning phases of any construction project. Employers should evaluate tasks performed by workers, identify all potential hazards, and then develop, implement, and enforce a safety program that meets applicable OSHA standards addressing these identified hazards. The safety program should include, at a minimum, worker training in hazard identification, and the avoidance and abatement of these hazards. [2]

Training

All drivers and crews who may work near overhead power lines must be trained on eliminating or reducing electrocution hazards, the locations of power lines (re-training when there are changes), maintaining minimum clearance distances from the lines (Spotters), observing posted safety signs to remind operator of high voltage hazards, and actions to take should a vehicle or equipment come into contact with a powerline.

Dedicated Spotters

[1]Competent person — One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authority to take prompt corrective measures to eliminate them.
[2]29 CFR 1926.21(b)(2). Safety Training and Education. Washington, DC: U.S. Printing Office, Office of the Federal Register.

If any part of the equipment while traveling will get closer than 20 feet to the power line, the employer must ensure that a dedicated spotter who is in continuous contact with the driver/operator is used as per 29 C.F.R. 1926.1411(b)(4) and 1926.1408(b)(4)(ii).

According to the regulations[3] the dedicated spotter must:

1. Be positioned to effectively gauge the clearance distance.
2. Where necessary, use equipment that enables the dedicated spotter to communicate directly with the operator.
3. Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to:
    a. A clearly visible line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the dedicated spotter and a building corner ahead of the dedicated spotter). [4]
4. Give timely information to the operator so that the required clearance distance can be maintained.
5. Additional precautions for traveling in poor visibility. When traveling at night, or in conditions of poor visibility, in addition to the measures specified above the employer must ensure that:
    a. The power lines are illuminated or another means of identifying the location of the lines is used.
    b. A safe path of travel is identified and used.

Procedures to Follow in The Event Of Electrical Contact with a Power Line:

1. The operator should remain inside the cab and call 911.
    - Employer shall provide the worker with "Information regarding the danger of electrocution from the operator simultaneously touching the equipment and the ground." [5]
2. All other personnel should keep away from the crane, ropes, and load, since the ground around the machine might be energized.
    - "Due to the high voltage carried within power lines, electrical current can easily travel through the vehicle and into the ground below, electrifying a radius of up to 30 ft. from the vehicle." [6]
3. If possible the operator should try to remove the contact by moving in the reverse direction from that which caused the contact.
4. If the operator cannot be moved away from contact, the operator should remain inside cab

[3] 1926.1411 (b)(4)Cranes & Derricks in Construction - Power line safety-while traveling under or near power lines with no load. Washington, DC: U.S. Printing Office, Office of the Federal Register.
[4] 1926.1408(b)(4)(ii) Cranes & Derricks in Construction Power line safety (up to 350 kV)-- Equipment operations. Washington, DC: U.S. Printing Office, Office of the Federal Register.
[5] 1926.1408(g)(1) Cranes & Derricks in Construction Power line safety (up to 350 kV)-- Equipment operations. Washington, DC: U.S. Printing Office, Office of the Federal Register.
[6] Kentucky State Fatality Assessment & Control Evaluation (FACE) Program: Dump Truck Operator Electrocuted to Death http://www.mc.uky.edu/kiprc/face/reports/pdf/18KY024.pdf

until the lines have been de-energized.

More Resources:

- Electronic Library of Construction Occupational Safety and Health http://elcosh.org/document/1679/d000592/power-line-hazard-awareness.html#4
- Powerline Safety Best Practice for Dump Truck Operators. https://s3.amazonaws.com/images.chaptermanager.com/chapters/cd2f8590-ff70-8eca-4c04-88afc4766544/files/powerline-safety-best-practices-dumptruckoperators-1495666890912.pdf

For more information or assistance regarding this matter, contact the IBT Safety and Health Department at (202) 624-6960 or (314) 651-2645 for Pipeline training.