

FATALITY NARRATIVE

Framer Electrocuted when Crane Hoist Line Contacts Power Line

Industry: Framing contractors

Task: Rigging OSB bundle to be lifted by crane

Occupation: Framer

Type of Incident: Electrocution





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On June 07, 2012, a journeyman framer acting as a rigger was electrocuted when a boom truck's crane hoist line contacted an overhead power line. The 34-year-old victim was employed by a framing contractor. The victim, who was the site lead framer, and two other framers had been working on a new two-story, single-family residence for 15 days. On the day of the incident, an employee of another contractor was operating a telescopic boom truck crane to deliver trusses and lumber. In order to make room for delivery of the trusses, the victim asked the crane operator to lift two bundles of OSB sheathing to the residence's second floor. The victim used a steel chain to rig an OSB bundle. The crane operator then lifted the bundle slightly and the victim placed blocks under the bundle so that he could place a second chain around it. As the victim was placing a second chain around the bundle in preparation for the lift, he grabbed the crane's hoist line in order to hook the chain. The line was in contact with a 7,200 volt overhead power line and carried electric current to the victim. He was electrocuted and died two days later.

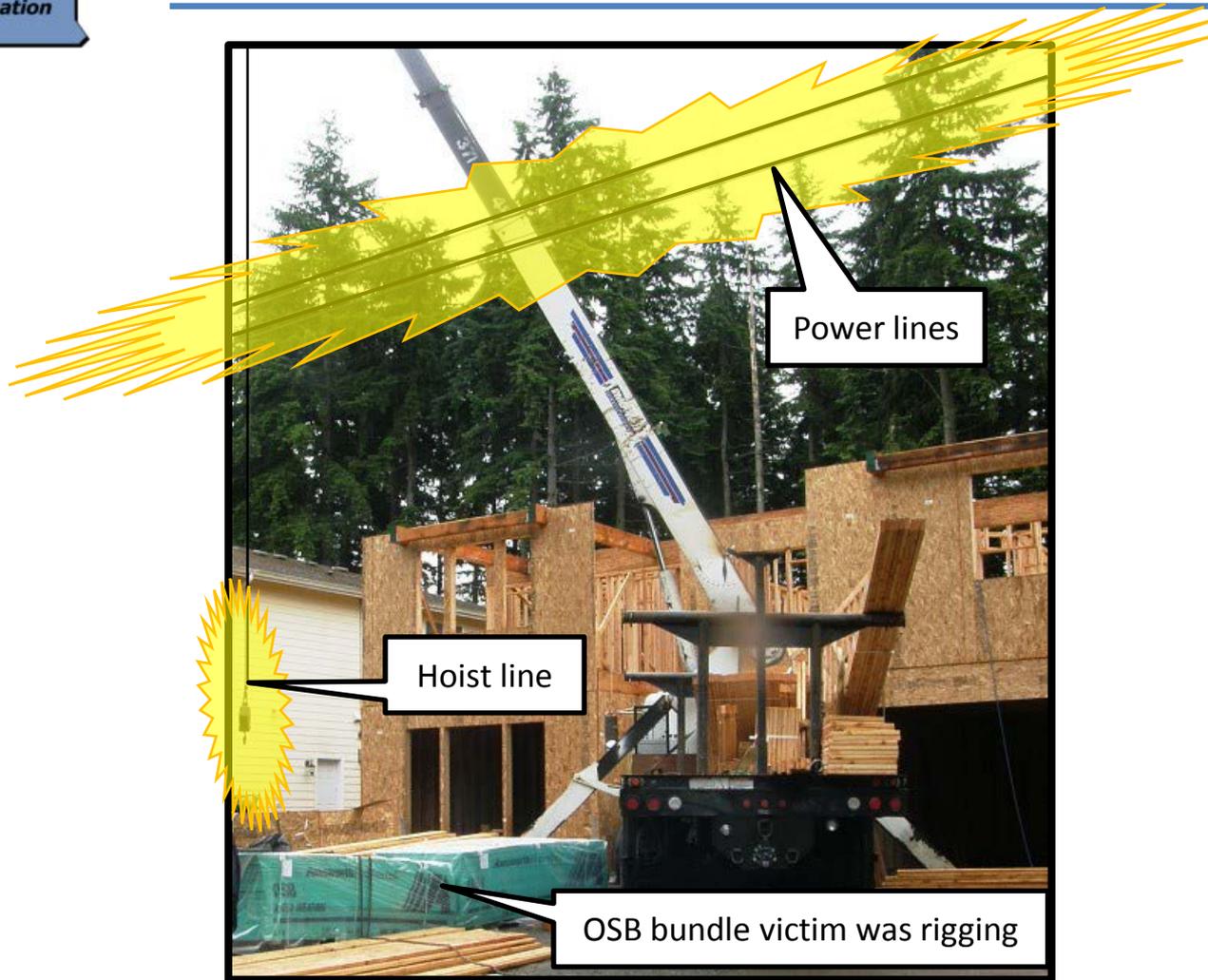


Warning sign on incident boom truck.



Incident scene showing crane boom, power lines, and trusses.

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Boom truck at incident scene where a framer acting as a rigger was electrocuted when the crane hoist line contacted an overhead power line. The worker was rigging a chain around an OSB bundle when he grabbed the energized crane hoist line.



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Requirements

- Have a formal Accident Prevention Program tailored to the needs of the particular operation and potential overhead power line electrocution hazards involved with operating, rigging, and signaling a crane. See WAC 296-155-110(2).
- Identify potential hazards by performing a site walk-around safety inspection.
See WAC 296-155-110(9).
- Conduct a crew safety meeting. See WAC 296-155-110(5).

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Requirements

Chapter 296-155 WAC Construction Work Part L-Cranes, Rigging, and Personnel Lifting

Define a work zone by demarcating boundaries (such as with flags, or a device such as a range limit device or range control warning device) and prohibiting the operator from operating the crane past those boundaries. Or, define the work zone as the area 360 degrees around the crane, up to its maximum radius. See WAC 296-155-53408(2)(i)(A)(B).

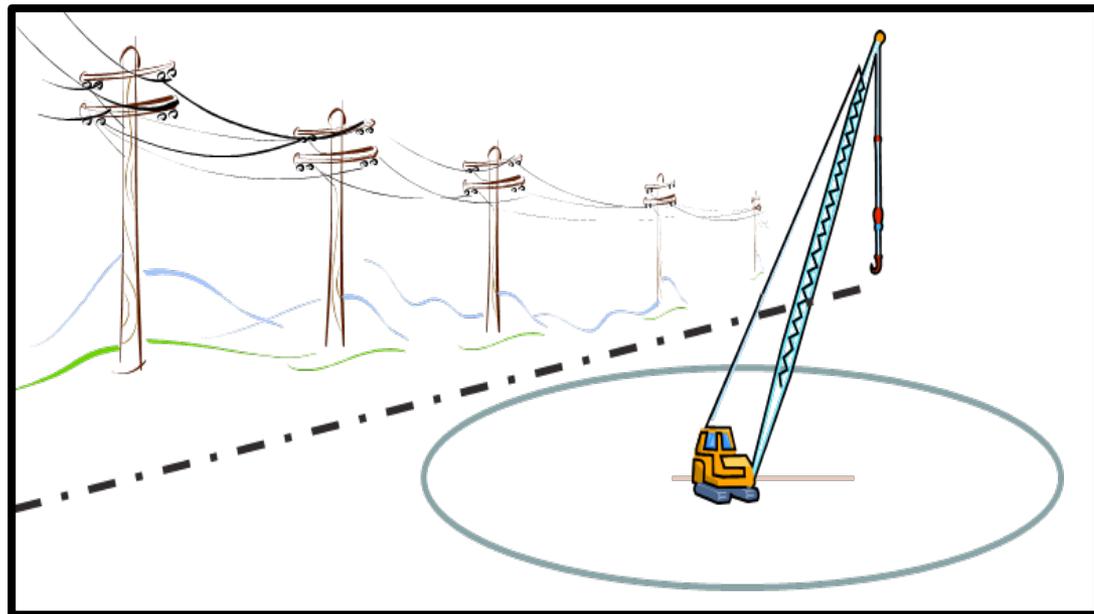


Illustration of crane work zone – 360 degrees around crane.



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Requirements

Chapter 296-155 WAC Construction Work Part L-Cranes, Rigging, and Personnel Lifting

Determine if any part of the crane, load line or load (including rigging and lifting accessories) if operated up to its maximum working radius in the work zone, could get closer than 20 feet of a power line that is up to 350 kV or closer than 50 feet of a power line that exceeds 350 kV. See WAC 296-155-53408(2)(ii)(A)(B).

If so, then either

- Contact the utility owner/operator to de-energize and ground the power line and confirm this has been done.
- Ensure that no part of the crane, load line, or load gets closer than 20 feet to the power line.



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Requirements

Chapter 296-155 WAC Construction Work Part L-Cranes, Rigging, and Personnel Lifting

- If the employer determines that the equipment could operate within reach of the minimum clearance distance, then steps must be taken to prevent contact with power lines by using encroachment/electrocution prevention methods outlined in WAC 296-155-53408(2)(b).
- Prevention methods as required by WAC 296-155-53408(2)(b) include: a planning meeting with the operator and other workers to determine the location of power lines and how to prevent encroachment/electrocution; use nonconductive tag lines; and erect and maintain an elevated warning line. And at least one of the following: a proximity alarm; a dedicated spotter who is in continuous contact with the operator and has a visual aid to assist in identifying the minimum clearance distance; range control warning device; range limit device; or an insulating link/device installed at a point between the end of the load line (or below) and the load.

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Warning line with flags.



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For all requirements concerning the operation of construction cranes and workers in support of lifting activities in the vicinity of power lines see Chapter 296-155 WAC Construction Work Part L-Cranes, Rigging, and Personnel Lifting

<http://www.lni.wa.gov/wisha/rules/construction/default.htm>

Statewide Statistics: This was number 33 of 62 work-related fatalities in Washington State during 2012, and was number 3 of 8 construction-related fatalities.

This bulletin was developed to alert employers and employees of a tragic loss of life of a worker in Washington State and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the fatality.

Developed by WA State Fatality Assessment and Control Evaluation (FACE) Program and the Division of Occupational Safety and Health (DOSH), WA State Dept. of Labor & Industries. The FACE Program is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH). For more information, contact the Safety and Health Assessment and Research for Prevention (SHARP) Program, 1-888-667-4277.

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