

Fatality Narrative

Excavator Operator Killed When Excavator Tips Over*

Industry: Highway street and bridge construction.
Occupation: Heavy equipment operator.
Task: Operating excavator to lift slab of concrete.
Type of Incident: Machinery.

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On January 15, 2008, an excavator operator died when the excavator tipped, and fell off a bridge into a river. The 62-year-old journeyman operator with certification to operate cranes was employed with a heavy/highway construction company. He was working on a project requiring the removal of an existing bridge deck and replacing it with a new deck. The current phase of the project involved the demolition of the bridge deck or roadway by cutting the existing concrete deck into slabs that would then be removed by an excavator. The excavator the victim was operating was equipped with a "slab crab" bucket which would grab the slabs and then the excavator would rotate 180 degrees and place the slabs on the deck for removal by a forklift. For this particular lift, due to bridge structural constraints, the excavator was rigged with a two-leg bridle chain sling attached to the slab and bucket in order to lift this 8x10 foot slab estimated to weigh 6,600 lbs. When the operator made the pick of the slab it hung vertically instead of horizontally. The victim extended the boom's arm, raising the load higher so that it could be moved. If the load is raised by the arm, the load is extended outwards. The operator began to swing the load in one direction, but quickly swung it in the opposite direction when he saw someone in his swing radius. When the operator began to swing the load toward the bridge guardrail it appeared that the load might strike the rail. The operator extended the arm, raising the load which cleared the guardrail, but at this point the load capability of the excavator was exceeded and the excavator tipped sideways and fell over the side of the bridge, landing in the river 60 feet below.

Incident scene showing the bridge and the broken walkway and guardrails where the excavator fell through and plunged into the river.



Requirements/Recommendations (! Indicates items required by code)

- ! Excavators being used as cranes must have functional load charts posted in the operator's cab.
- ! Train equipment operators in the proper use of equipment they are assigned to operate. Be sure to follow the manufacturer's specifications and recommendations.
- A clear margin of safety regarding the maximum load extension should be established and communicated in writing to the operator before work starts.
- Plan load picks with excavators and cranes so that operators can control equipment and eliminate any instability of the machine.

State Wide Statistics: This was the 1st out of 70 work-related fatalities in Washington State during 2008, and was the 1st out of 18 construction-related fatalities.

**This bulletin was developed at the Washington State Department of Labor and Industries to alert employers and employees of a tragic loss of life of a worker in Washington State. The information in this notice 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.*

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