

Operator Dies When Orchard Tractor Rolls Down Embankment

INCIDENT FACTS

REPORT #: 71-191-2020s

REPORT DATE: February 1, 2020

INCIDENT DATE: July 26, 2019

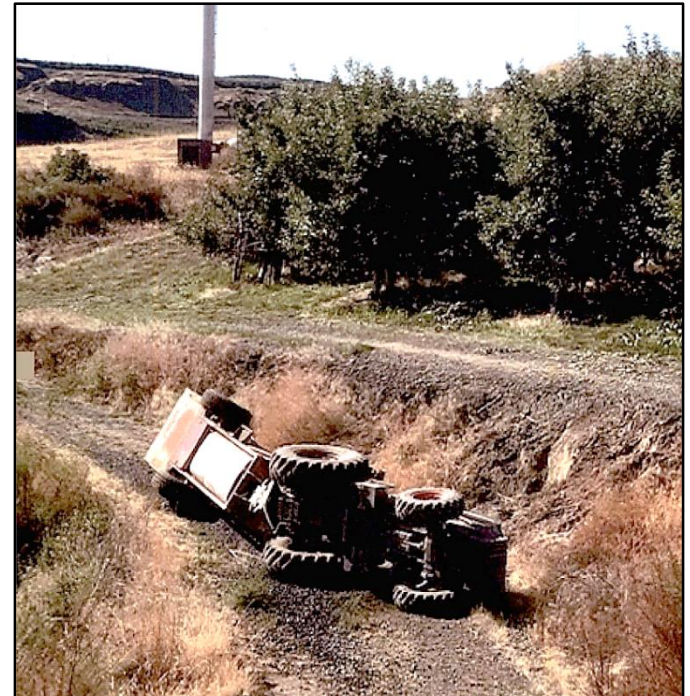
VICTIM: 28 years old

INDUSTRY: Apple orchard

OCCUPATION: Orchard tractor operator

SCENE: Orchard service road

EVENT TYPE: Tractor rollover



A 28-year-old worker died when the orchard tractor he was operating with an attached sprayer went down an embankment and rolled over.

He had worked as a tractor operator for three months at the apple orchard and had completed the employer's tractor training program.

On the day of the incident, he was applying insecticide to trees at the orchard. The tractor was a low profile, narrow chassis orchard/vineyard type tractor. Its wheel track was four feet wide. The sprayer contained an estimated 350 gallons (approximately 2800lbs.) of insecticide solution.

He started his shift at 12 midnight. He and other members of the spray crew met with their supervisor who explained their duties for that shift. He and another tractor operator were working as a team spraying trees in a block he had sprayed multiple times over the past several months.

The trees in this block were mature with a full canopy. Because of this, the area was exempt from the Washington State rollover protective structure (ROPS) requirement, as use of ROPS would have interfered with normal operations. Both operators had their tractor ROPS in the down position and their headlights on.

At about five a.m., the operator's coworker went ahead down a sloping orchard row and then turned onto a dirt service road to go to another area.

Shortly after, the coworker looked behind and did not see the lights of the operator's tractor so he turned around to look for him.

He found the operator's tractor at the bottom of a 6-foot embankment. It had left the service road a few yards from the orchard row and rolled down the embankment. The operator was lying next to the tractor.

He died from a skull fracture due to blunt force trauma.

Investigators concluded:

- The operator had most likely misjudged the turning distance of the tractor and steered too wide as he came out of the row onto the road.
- The weight of the tractor and sprayer caused the edge of the road to crumble, leading it to roll down the embankment.
- In addition, the lighting near daybreak may have affected his visibility of the embankment at the edge of the road.



Photo 1. Overturned tractor with sprayer at bottom of embankment.



Photo 2 & 3. Approximate path of the tractor as it exited the row of apple trees, went along the service road, and where its front right tire went over the side of the embankment, causing the tractor to roll down the 6-foot embankment. Note the loose gravel and unclear border between road and embankment.



Photo 4. The area of the embankment that crumbled under the tractor's weight.



Photo 5. The overturned tractor and sprayer at the bottom of the 6-foot embankment.

Between 2001 and 2019, 18 orchard tractor operators died in Washington State when their tractors rolled over. In all of these incidents, ROPS were either not installed or were in the down position.

Requirements

Washington Administrative Code, Chapter 296-307 Safety Standards for Agriculture, Part F, Rollover Protective Structures (ROPS) for Tractors.

See [WAC 296-307](#)

Recommendations

- Employers should mark edges of hazardous embankments with visual cues, such as elevated reflective stakes, fencing, or permanent barriers to alert equipment operators.
- Workers should be trained to use extreme caution when using tractors on or near sloped terrain, ditches, or embankments.

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.

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