

Welder Fell 32 Feet from Storage Tank Roof

INCIDENT FACTS

REPORT #: 71-260-2024s

REPORT DATE: November 1, 2024

INCIDENT DATE: April 27, 2023

WORKER: 60 years old

INDUSTRY: Oil and Gas Pipeline and Related Structures Construction

OCCUPATION: Construction Welder

SCENE: Storage tank construction site

EVENT TYPE: Fall from elevation



FATALITY NARRATIVE



A 60-year-old welder fell 32 feet while constructing the leading edge of a storage tank roof. His employer was an aboveground storage tank manufacturer. He had over 40 years of job experience.

He was with three other workers constructing the leading edge with sheets of metal sheathing. The roof was 76-foot wide by 34.5-foot high, with a 1 in 12 pitch. He was acting as a “spotter” for a crane operator who was hoisting the sheets to cover a 16-foot hole remaining on the roof. After unloading the sheets, he needed to tack weld one near the center peak of the roof. He stepped from the leading edge to a rafter over part of the hole. He then sat down on the rafter and extended his legs two and a half feet across the hole to another rafter.

FATALITY NARRATIVE



While sitting on the rafter, he used a pry bar to bend and move the sheet into place for welding. As he pried, he fell backward through the hole between the rafter and leading edge. After landing on the ground, he was badly hurt but still conscious and breathing. Emergency responders arrived and had a critical care helicopter airlift him to the hospital. He died the next day.

Following the incident, investigators found:

- The welder and his co-workers had tied off while riding a boom lift to the roof, but their supervisor allowed them to remove their personal fall arrest system (PFAS) harnesses on the roof.
- The workers and their supervisor discussed the fall hazards and the general contractor's fall protection expectations on the roof, but they chose not to use PFAS believing that lifelines would create a tripping hazard.
- The employer lacked a fall protection work plan (FPWP) and did not know about state requirements to have one. The supervisor only told the workers not to walk out on the rafters. The project manager also never conducted any safety inspections at the jobsite.

FATALITY NARRATIVE



Photo 1. Storage tank at incident site.

FATALITY NARRATIVE



Photo 2. Hole in top of tank roof where the welder fell through.



Photo 3. Alternate view of hole in tank roof where the welder fell.

FATALITY NARRATIVE



Photo 4. Floor at base of tank where the welder landed.

Requirements

Employers must:

- Ensure that a fall protection system is provided, installed, and implemented in accordance with [WAC 296-880-400](#) Fall protection system specifications when employees are exposed to fall hazards of six feet or more to the ground while constructing a leading edge. See [WAC 296-880-30005\(1\)\(b\)](#)
- Develop and implement a written FPWP including each area of the work place where the employees are assigned and where fall hazards of ten feet or more exist. See [WAC 296-880-10020](#)
- Conduct, document, and maintain records of pre-work walk-around safety inspections until the completion of the job. See [WAC 296-155-110\(9\)\(b\)](#)

Recommendations

FACE investigators concluded, that to help prevent similar occurrences, employers should:

- Use a crane instead of workers to move sheathing near roof leading edges.
- Develop FPWP and PFAS policies in their accident prevention program (APP). Policies should require pre-planning the use, training, and inspection of site-specific fall protection to meet the needs of different work environments.

Recommendations

- Have supervisors review fall protection requirements with workers at pre-job crew meetings, routinely check that they are following them, and implement corrective action when needed.
- Demonstrate fall prevention leadership by prioritizing fall prevention at pre-job crew meetings, monthly safety meetings, annual stand-downs, and in company newsletters and social media.

Resources

[Fall Prevention Overview, Policies, Training](#)

Washington State Dept. of Labor & Industries

FATALITY NARRATIVE



This narrative was developed to alert employers and workers of a tragic incident 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 injury.

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