WASHINGTON State FACE Program
Fatality Assessment & Control Evaluation

CONSTRUCTION FATALITY NARRATIVE

FACE

Welder Fell 32 Feet from Storage Tank Roof

INCIDENT FACTS

REPORT #:
71-260-2024

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

Hole in roof where welder fell.

For a slideshow version, click here.

SHARP Safety & Health Assessment & Research for Prevention

Washington State Department of Labor & Industries

SUMMARY

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.

Storage tank at incident site.

He was with three other workers constructing the leading edge with sheets of metal sheathing. The roof was 76-feet wide by 34.5-feet 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.

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.

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.
- 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

This narrative was developed to alert employers and workers of a tragic incident and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or the cause of the injury. Developed by WA State Fatality Assessment and Control Evaluation (WA FACE) and the Division of Occupational Safety and Health (DOSH), WA State Dept. of Labor & Industries. WA FACE is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH grant# 5U60OH008487). For more information visit www.lni.wa.gov/safety-health/safety-research/ongoing-projects/work-related-fatalities-face.