

Laborer Crushed during Demolition of Steel Structure

Industry: Site Preparation Contractors

Task: Demolition of steel structure

Occupation: Laborer

Type of Incident: Struck by





FATALITY NARRATIVE

In June of 2015, a 52-year-old laborer was crushed and killed by a falling steel beam. He was helping to demolish a 30-foot-high steel structure that had supported a piece of machinery when it unexpectedly collapsed.

The victim was a friend of his employer, who had hired him and another laborer to assist in a demolition and metal scrapping project. The employer had been involved in demolition work and scrapping for 40 years. The victim had not previously done demolition work.

The employer had arranged with a food processing plant to demolish the steel structure that had supported a retired cyclone air separator and then sell the steel for scrap. The structure was supported by four steel column legs. It had been moved from its original location and placed on slightly sloping pavement in the plant's yard.

The structure's legs were of different lengths, which, combined with the slope, caused it to lean about four feet in the direction of the slope. The employer and his crew decided to lower it in the direction of the lean using a rope attached to a forklift. Working from a platform elevated by the forklift, the victim used a cutting torch to make several cuts to the structure. The forklift was repositioned and a rope was attached to it and rigged to several parts of the metal structure. The victim then climbed up a couple of rungs on a stepladder and cut through a cross bracing. As he was doing this, the structure unexpectedly collapsed. It fell in the opposite direction than was planned. He was crushed under a steel beam and died at the scene.



Photo 1



Photo 2

Photo 1 shows the 30-foot-high steel structure that supported a cyclone air separator before demolishing activities began.

Photo 2 shows the collapsed structure. The red circle indicates the victim's location after being struck by a steel beam.



Incident scene showing the collapsed steel supporting structure for a cyclone air separator.



FATALITY NARRATIVE

Requirements

Preparatory Operations

- Prior to permitting employees to start demolition operations, you must make an engineering survey by a competent person, of the structure to determine structural integrity and the possibility of unplanned collapse of any portion of the structure. You must similarly check adjacent structures where employees may be exposed. You must have in writing, evidence that such a survey has been performed.

See [WAC 296-155-775\(1\)](#)

- You must conduct demolition of all buildings and structures under competent supervision, and you must afford safe working conditions to the employees.

See [WAC 296-155-775\(5\)](#)



FATALITY NARRATIVE

Recommendations

- All personnel involved in a demolition project need to be aware of the types of hazards that are present and the safety precautions necessary to control these hazards.
- Create a project specific demolition safety work plan with step-by-step instructions how the work can be accomplished in a safe manner.
- Inform employees of the elements of the demolition plan and ensure they conduct their work activities in a safe manner.



FATALITY NARRATIVE

Resources

Demolition requirements, Washington Administrative Code 296-155 Part S.

[Demolition, Part S, WAC 296-155](#)

Demolition Fact Sheet. OSHA

[Demolition Fact Sheet OSHA](#)



FATALITY NARRATIVE

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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