

INCIDENT FACTS

REPORT #:

71-177-2019

REPORT DATE:

January 14, 2019

INCIDENT DATE:

September 6, 2016

VICTIM:

34 years old,
3 years with employer

INDUSTRY:

Berry farming

OCCUPATION:

Laborer

SCENE:

Outdoor site demolition and cleanup

EVENT TYPE:

Explosion/fire



Cut-off saw used to cut drum.

[For a slideshow version, click here.](#)



This narrative is an alert about the serious traumatic injury of a worker 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 (FACE) Program and the Division of Occupational Safety and Health (DOSH), WA State Dept. of Labor & Industries. The FACE Program is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH grant# 2U60OH008487). For more information visit www.lni.wa.gov/Safety/Research/FACE.

Laborer Burned Cutting 55-Gallon Drum when Leftover Fuel Explodes

SUMMARY

A 34-year-old farm laborer was severely burned when he used a cut-off saw to cut into a sealed 55-gallon steel drum that contained residual fuel, causing the drum to explode.

The incident happened during cleanup of property recently bought by the berry farm where the victim worked. The victim had worked on the farm for three years doing various kinds of farm labor. He and the other farm employees working on the cleanup were not doing their normal jobs.

The property had a house, barn, and grounds that had been used as an informal junk yard. The employer planned to remodel the house and extend their berry production acreage.

On the day of the incident, the victim and other employees were cleaning up garbage, old vehicles, and other debris. The foreman told the victim to load scrap metal onto a trailer to be taken to a dump. The victim found a sealed 55-gallon steel drum that he believed to be empty and decided to cut it in half to use as a container for small pieces of scrap metal.

The victim picked up a cut-off saw owned by another worker and started to cut into the drum. A spark from the saw ignited residual diesel fuel inside the drum, causing the drum to explode. The resulting flash fire set his clothing on fire. Three workers responded and extinguished the flames after about 30 seconds. He received third-degree burns to 30% of his body.

The previous workday, the foreman had looked inside the drum and found that there was as much as two gallons of leftover fuel in it. He placed it aside and told the workers in the area not to cut into it. The victim was not there that day and no one told him about the drum when he returned to work.

REQUIREMENTS

- Drums, containers, or hollow structures which have contained toxic or flammable substances must, before welding, cutting, or heating is undertaken on them, either be filled with water or thoroughly cleaned of such substances and ventilated and tested. See [WAC 296-155-410\(9\)](#)
- Conduct crew safety meetings and walk-around safety inspections at the beginning of each job and at least weekly thereafter. See [WAC 296-155-110\(5\)\(a\)](#) and [WAC 296-155-110\(9\)\(a\)](#)

RECOMMENDATIONS

FACE investigators concluded that, to help prevent similar occurrences:

- Avoid hot work -- welding, cutting, grinding, or heating -- on drums that contain or used to contain flammable or toxic substances, or if you do not know the contents. This includes drums that appear to be empty, as residues inside the drums may present explosion and fire hazards.
- When it is necessary to do hot work on drums: 1) Identify what was inside it, and if the substance is flammable or toxic; 2) Follow all precautions on the chemical label or safety data sheet (SDS); 3) Establish safe work procedures, including how to clean a drum and test for residues; 4) Train workers to identify hazards and ensure that they follow safety procedures for hot work on drums.
- Ensure that workers are aware of all job hazards and safety procedures to address the hazards.



Cut made by laborer on 55-gallon drum.