

# Lessons Learned



Date: October 27, 2020

Region: Denver

Project: DIA Pump Room

Incident Title: Chain Fall – Machine Guarding

## Summary

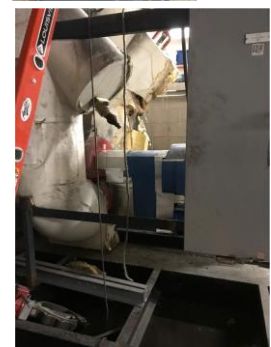
Crew was in the process of lifting a piece of pipe to its hangers with a chain fall, above some existing operational pumps.

The chain on the pull/operator side (Not load chain) slipped into a 1" gap +/- of the existing pump shaft cover guard.

The chain continued to tangle around the pump shaft until it eventually broke.

Pump VFD went into default and shut the pump down.

The pump and VFD were verified operational by Owner. Only damage was to the existing guard to the pump shaft.



## What Went Right?

- Nobody got hurt
- Reported immediately
- No impact to facility operations
- Minimal damage to equipment – sheet metal shaft guard

## What Went Wrong?

- PTP did not identify this hazard potential
- Communication amongst crew isn't complete if hazard isn't identified.
- Working around/above equipment that cannot be shut down requires extra attention to detail, especially to possible inadequate guarding.

## Lessons Learned

- **Pre -Task Planning works when all job hazards are identified. The revised job hazard analysis easily identified a solution to control the hazard. Use of a bucket to catch the chain and the addition of a temporary guard to prevent contact with the moving pump shaft. Simple solution that controls the hazard which could otherwise result in a dangerous and costly incident.**
- **LOTO is always the first choice, in lieu of working around or over operational equipment. If not possible guarding all potential points of contact must be ensured. Even a small gap can result in an injury or property damage.**