

FATAL ALERT

March 24, 2005

A laborer was working at a closed bentonite plant performing work on a full bentonite storage tank, cutting on one of eight supporting legs of the tank. The leg was going to be removed so they could empty the tank on the ground and then remove the bentonite from under the tank with a bobcat. Once that was completed, they would rig the tank to a crane and cut the other legs from the concrete pad and remove the tank from the site. The project manager and foreman were supervising the laborer when the accident occurred. The laborer had cut approximately two thirds of the way through the leg when the tank collapsed. The tank initially fell away from the laborer hitting a crane and then fell toward the laborer crushing him. The laborer received severe crushing trauma to the head and thorax, resulting in uncontrolled bleeding and dislocation to the neck, spine, pelvis, and lower extremities. He died instantly from the injuries received from the full bentonite tank falling on him. The tank also struck the project manager and foreman, but due to their location and quick movement, they were barely injured. The foreman only received minor abrasions.

Significant Factors:

- The tank was not properly inspected prior to the leg being cut on and was not braced to prevent it from falling.
- No engineering survey was developed documenting the condition of the tank prior to commencing the demolition work.
- Engineering guidelines were not being followed during the demolition process.
- Only a visual inspection of exposed legs and above ground portion of the tank had been conducted prior to the decision to remove the leg.
- Workers were not aware that another leg of the tank had been cut completely through at the base on the opposite side of the tank.
- Significant portions of the tank's support structure had been previously cut and/or removed.
- There was evidence of poor workmanship of the original tank support structure in that incomplete and poor welds were made.
- On-site management had minimal experience with demolition work.
- Most employees indicated they had not received site-specific training with regard to the hazards associated with demolition work or the OSHA Standard for demolition work.
- There was significant corrosion on the areas where the rebar and the base plates for the legs are connected.

Recommendations:

- Brief all employees on the facts and circumstances of this fatal mishap.
- Ensure a competent person conducts a comprehensive engineering survey of the structures associated with demolition activities prior to work commencing.
- Train all employees on the site engineering survey for dismantling or removing supporting structures, the hazards associated with the work, and the requirements of the OSHA demolition standard.
- Change procedures to ensure all storage containers are empty prior to sale of property or prior to any demolition work.
- Do not remove, or alter, any supporting members of a structure if it might reduce the structure's integrity without procedures in place to address potential hazardous conditions.
- Replace any damaged or missing materials intended to provide structural support, or bracing according to the engineering survey.
- Ensure supervisors directing work have experience, knowledge, and training in demolition work.