

Fatal Alert

On September 23, 2014 four employees were hospitalized after a gas well condensate tank they were cleaning suddenly exploded. Three of the employees received second and third degree burns, and one employee died on the morning of September 24, 2014 from injuries sustained. The employees were using a vacuum truck to spray clean the inside of the tank and vacuum solids from the floor through a lower access hatch. Most of the condensate had been drained out and the vent hatch at the top of the tank had been open for approximately 24 hrs.

Significant Factors

- The victim was standing approximately 12 feet in front of the access hatch when the blast occurred.
- LEL monitoring was not done prior to the start of this tank cleaning process.
- The grounding cable from the vacuum truck was not bonded to the bonding grid from the tank.
- The crew had improvised a 10 foot long piece of 4' PVC pipe and attached it to the end of the vacuum hose so they could reach farther back into the tank.
- There was no safety meeting conducted prior to this task.

Recommendations

- LEL or (lower explosive limit) should be checked prior to the start of a condensate tank cleaning process in a potentially explosive environment.
- A JSA or (job safety analysis) should be conducted prior to condensate tank cleaning.
- Employees should be trained on vacuum truck safety as it relates to the American Petroleum Institute 2219 Standard for recommended practice.
- Employees should be trained on all ignition sources including static while working around an explosive environment.