



SAFETY ALERT # 26



September 28, 2007

In the interest of keeping everyone safe CAMSAFETY will be sharing injury information with preliminary root cause analysis. This information is intended to make you think not assess blame. If you have an incident that you would like to share send us the information and we will pass it along.

GASOLINE VAPOR EXPLOSION KILLS WORKER

What Happened

A laborer was killed when a gasoline storage tank he was cutting with a portable power saw exploded. The worker's company was involved in installing, removing and junking gasoline pumps and underground tanks.

Although he had experienced working with the saw and scrap materials, the worker did not adequately purge the tank and test for vapors before beginning to cut. The 18ft x 6ft, 3000 gallon tank had been used recently for underground storage at a service station. At the time of the explosion, the mechanic was cutting on the tank with a gasoline powered portable saw equipped with an abrasive epoxy disk for cutting metal. The explosion propelled the worker 10 to 15 feet from the tank into another tank.

Prevention:

- Train employees to recognize and avoid unsafe conditions when working with tanks that have previously contained flammable liquids (29 CFR 1926.21(b)(2)).
- Follow recommended procedures set forth in American Petroleum Institute (API) Bulletin 1604, "Recommended Practice for Abandonment or Removal of Used Underground Service Station Tanks".
- Test atmosphere in tank prior to work or cutting.
- Establish guidelines for gas-freeing.
- Train on and understand the following facts.

A Few Facts

- The explosive range for gasoline is between 1.4 and 7.6 percent. Not a wide range but easy to reach.
- The Flash Point is less than -40 degrees Fahrenheit. This means that gasoline is giving off enough vapor to ignite, in the presence of an ignition source, pretty much all the time.
- The Auto Ignition temperature is 482 degrees Fahrenheit. Easy to reach with a power saw.

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