Case 57. 39-year-old male truck driver was struck by a hose under pressure that came loose during a leak test of a tanker.

On May 11, 2004, a 39-year-old male truck driver was preparing to unload a 6,600 gallon tanker of 80% methyl mercaptan and 20% dimethyl sulfide which are used to odorize natural gas. In preparing to unload, he conducted a leak test. To conduct the leak test, the deceased hooked up a 20-foot long hose to a nitrogen cylinder and the tanker manifold system to pressurize the tanker's vapor line. The male and female cam lock fittings used at the nitrogen end of the hose and the manifold hook up end of the hose were forged brass ¾-inch ID fittings. The hose was rated at 1,250 psi, and the cam lock fittings were rated at 350 psi. It appeared that the hose had been hooked at one end with a female cam lock fitting to the nitrogen cylinder and the other end of the hose was hooked with a ¾-inch ID male cam lock fitting to a vaporline ¾ inch female fitting mounted on the tanker's manifold system. It appeared that the vapor line valve on the tanker was not opened at the time of the incident. The piping coming from the gauge/regulator to the tanker was not hooked to the port on the regulator where the nitrogen pressure could be regulated. When the nitrogen bottle valve was turned on it allowed the full pressure of approximately 2,500 pounds of nitrogen to flow through the 1,250 psi rated hose into the 350 psi rated cam lock fitting used to hook to the tanker piping. As the 2,500 psi flow of nitrogen reached the cam lock fitting, the pressure caused the hose end and fitting to come off the tanker. The cam locking device came loose causing the hose end to whip through the air with great force and struck the victim in the abdomen, causing severe injuries and ultimately his death.

MIOSHA issued the following Serious citation to the employer:

Serious:

ACT 154 PA of 1974, SEC 11(a)
The employer did not furnish to each employee employment and a place of employment which is fee from recognized hazards that are causing or are likely to cause death or serious physical harm to the employee in that the employer allowed employees to use high pressure nitrogen to check for leaks and purge tanker piping without being adequately trained on proper procedures, hose and fitting failures.

a. "Among other methods, one feasible and acceptable abatement method to correct this hazard is to institute procedures for hook up of piping to the gauge/regulator, including step-by-step instructions on regulating the nitrogen pressure when performing tests on tankers. These procedures should be reduced to writing and all affected employees trained.