Chemical Overexposure Takes Life of 17-year-old

At age 17, Timothy had no plans of dying. But fate forced a change in those plans one day.

The laborer was tasked with cleaning the interior of metal molds used to form plastic containers. The job involved applying four ounces of tetrachloroethylene (also known at perchloroethylene) to a cloth rag, which was used to wipe the surface of the mold. The depth of the mold was greater than the length of his arm, so Tim had to bend into the vessel so that his head was inside the mold.

Eight hours later Tim was found dead. He died of asphyxiation as a result of exposure to toxic vapors (tetrachloroethylene). Evidence indicated the young man had propped the mold in an upright position and leaned into it to clean the bottom.

WHAT WOULD YOU DO?

If you were in the same situation as Tim, what should you have done? Based on the investigators' recommendations, an employee in this situation should have:

- Learned the hazards associated with the cleaning fluid. The National Institute for Occupational Safety and Health says an airborne concentration of tetrachloroethylene greater than 150 ppm (parts per million) is immediately dangerous to life and health. The use of four fluid ounces of this chemical in the interior of the mold being cleaned could generate an airborne concentration of 92,000 ppm.
- Received proper training and used the proper personal protective equipment.
- Used a proper tool to reach areas to be cleaned without the need to have his head inside the vessel. The use of a cleaning brush or swab attached to a handle would have allowed the victim to reach the bottom without being partially inside the vessel.