Nitrogen Hook-Up Kills Three Workers



Three employees equipped with respirators were preparing to paint a heat exchanger in a manufacturing plant. Their sandblasting work was almost finished. The portable air compressor used to supply breathing air to the sandblasters' hoods had already been sent on to another job, so the workers hooked their air supply hoses into the plant's air system without getting authorization from the plant management. Meanwhile, the plant operators, not knowing their air compressor was being used for breathing air, shut it down for scheduled maintenance. This caused the nitrogen backup system to come into effect to maintain air pressure. One of the sandblasters died of asphyxiation from the nitrogen in his hood.

A fatality such as this points out the need for training and communication. Any employees working in confined spaces or atmospheres dangerous to life must be thoroughly trained in recognizing and avoiding all hazards. Nitrogen backup systems are often used for compressed air, so it's important to know the type of backup system before using any air supply for breathing purposes. Compressed air used to power equipment and tools is not safe for breathing. It may contain carbon monoxide, fuel vapors and other contaminants. Similar fatalities have occurred when air respirator hoses have been inadvertently connected to nitrogen. Such incidents sometimes involve poor communication between contractors and plant management.