

Chemical Release Alert

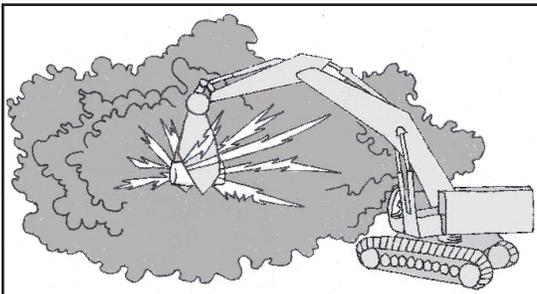
August 2010

Chlorine Gas Release at Two Scrap Recycling Facilities

Prevention Points

- Only accept containers that are cut open, dry, and without a valve or plug.
- Treat closed containers as potential hazardous waste.
- Develop and practice an evacuation plan. Train workers to stay upwind when evacuating for a chemical release.

The Division of Environmental and Occupational Disease Control (DEODC) Emergency Planning and Preparedness (EPP) Team tracks and investigates cases of chemical and other hazardous materials releases and makes prevention recommendations for employers, employees, and other affected individuals. In the past 6 months, the EPP Team, in collaboration with the Agency for Toxic Substances and Disease Registry (ATSDR) and the Centers for Disease Control and Prevention (CDC), has investigated two releases of chlorine gas from closed cylinders brought to scrap metal recycling facilities. In both of these incidents, the recycling facilities accepted the cylinders for processing but were not aware that they contained chlorine gas.



A shearing machine cut into a cylinder causing chlorine gas to be released; many workers were exposed.

In the first incident, chlorine gas was released when a one-ton gas cylinder was being moved and was punctured by a crane. Five workers were hospitalized with respiratory problems after they breathed the chlorine gas. In the second incident, chlorine gas was released when a one-ton gas cylinder was crushed by a shearing machine. Several workers evacuated in the downwind direction in the path of the chlorine cloud. Twenty-three workers and nearby residents were treated at the emergency room and six were hospitalized with respiratory problems.

As an immediate step to prevent future incidents, scrap recycling facilities should only accept containers that are cut open, dry, and do not have a valve or plug. If a closed container is found, it should be treated as if it contains hazardous material. Closed containers should be moved using a cylinder cart or basket and stored upright in an isolated, well-ventilated area protected from flames, oil, grease, sun, and heat. The employer should contact a local HazMat team or a company specializing in handling hazardous materials to have the container removed. Employers should also develop and practice an evacuation plan and train workers to stay upwind when evacuating for a chemical release.



Two cylinders that were brought to a scrap recycling facility; the cylinder on the left contained chlorine.

Guidance and regulations on working safely around containers can be found at:

Federal OSHA - <http://www.osha.gov/Publications/OSHA3348-metal-scrap-recycling.pdf>

Cal/OSHA - <http://www.dir.ca.gov/title8/4650.html> and <http://www.dir.ca.gov/title8/3306.html>

ISRI* - http://www.scrap.org/ArticlesArchive/2010/March-April/turning_risk_into_reward.htm

*Institute of Scrap Recycling Industries, Inc.

The EPP Team works with local, state, and federal agencies to identify and reduce risks from chemical and hazardous incidents that affect the health of Californians. If you have questions or comments about this alert or about the EPP Team, please contact Dr. Rachel Roisman at 510-620-3606 or at rachel.roisman@cdph.ca.gov.

