**When are vented caps needed on waste bottles and when is over pressurization from gas generation a concern?**

Hydrogen peroxide, strong oxidizing acids such as nitric, perchloric and sulfuric acids and mixtures such as Piranha or Aqua regia are used as etches to remove organic residues from silicon wafers and other research materials.  These chemicals are dangerous because of their strong corrosivity and the tendency of such waste solutions to evolve gas due to oxidation of organics or decomposition. When such wastes are collected, pressurization from gas generation in the container becomes a safety risk.

A vented cap should be used in labs on campus who generate wastes from use of the above chemicals/solutions.  We know from inspections and experience this occurs in Material Science and Engineering, Geology, Electrical and Computer Engineering, Mechanical Engineering, Biology, Chemistry, and may, of course, be elsewhere.

Special care must be taken if you generate waste containing these chemicals. We recommend the following safety precautions:

• Collect waste containing oxidizing acids or peroxides in plastic containers sealed with special gas venting caps. EHS can provide vented caps for use. **Do not use glass containers.** Plastic waste containers with gas venting caps are available from EHS.  Do not overfill the container - several inches of headspace from the top is necessary.

• The waste bottle must be stored in a hood with the sash lowered or in a deep secondary containment bucket that will shield lab occupants from corrosive spray if the container ruptures.

• Attach the waste label to the container: NOT the secondary containment.

• Ensure the waste is placed in a secondary containment (if in a chemical fume hood). Keep the sash closed when not working in the fume hood.

•  Inform EHS that your waste may off-gas when you request a waste pickup. Use the comments section on the ticket.

*Note: Additional precautions may be required based on your processes and materials in use.*