Brookhaven National Laboratory/National Synchrotron Light Source			
Subject:	**Devalving of compressed gas cylinders**		
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1. Purpose

The purpose of this procedure is to provide guidance on safely removing valves (devalving) from empty, inert compressed gas cylinders. Sudden releases of energy have been associated with removing valves from cylinders that were assumed to be empty and were actually pressurized. This procedure was developed in accordance with the Compressed Gas Association Guidelines for Devalving Cylinders CGA P-38-2003.

2. Scope

This procedure applies to devalving cylinders at the NSLS complex.

3. Personal Protective Equipment

PPE required includes steel toed shoes, work gloves and safety glasses.

4. Procedures

A) Procedure for cylinder inspection/verification.

Only non-returnable cylinders will be devalved. Before devalving cylinders, the NSLS Safety Engineer shall:

i. Place a regulator on cylinder to check for residual pressure.

ii. If the pressure regulator indicates the cylinder is empty, the NSLS Safety Engineer verifies that valve is operational and the valve is in the open position. To verify the cylinder valve is open, water is injected into the cylinder using a disposable plastic syringe.

iii. Physically mark exterior of cylinders as “verified empty” and date cylinder.

iv. Place “verified empty” cylinders with valves in the open position in secure area to ensure unverified cylinders are not mistakenly comingled with verified empty cylinders.

v. Inform NSLS technician of need to devalve cylinders.

B) Procedure for NSLS technician to devalve cylinders:

i. Set up in well-ventilated area with clear means of egress.

ii. Ensure cylinders are marked “verified empty” and valves are in the open position.

iii. Secure cylinder in vise, begin to remove valve with pipe wrench or other suitable tool. Use leak detection fluid on valve threads to verify cylinder is not pressurized.

iv. Immediately stop the devalving process if leak detection fluid indicates cylinder is pressurized.

v. If at any time during the process, it is determined that the cylinder is pressurized, retighten the valve, immediately stop the process, and contact NSLS ESH staff to investigate.

Document Review Frequency
5 Years

Review signatures on file with master copy of controlled document

NSLS REVISION LOG

Document Number:	**LS-ESH-0052**
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Rev	Description	Date
1	Original document.	11/12/2007
2	Added “inert” to first sentence	08/05/2008