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| **Compressed Gases**  |
| **Policy** | This policy provides guidance for handling tanks with Compressed Gases. |
| **Hazards** | Compressed gases constitute several hazards. Any gas cylinder with a broken valve head becomes a missile capable of penetrating walls. Gases released into the atmosphere can be toxic and/or flammable. Heated cylinders can explode. |
| **General Safety** | * All cylinders whether empty or full must be stored upright.
* Cylinders must be secured at all times so they cannot fall.
* Cylinders should never be dropped or allowed to strike each other with force.
* Transport compressed gas cylinders with protective caps in place and do not roll or drag the cylinders.
* Hand trucks or dollies must be used to move large cylinders.
* Valve safety covers should be left on until pressure regulators are attached.
* Containers must be marked with the name of the contents.
* The use of oil, grease or lubricants on valves, regulators or fittings is prohibited.
* Do not attempt to repair damaged cylinders or to force frozen cylinder valves.
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| **Pressure Regulators and Needle Valves** | * Tighten regulators and valves firmly with the proper size wrench. Do not force tight fits.
* Open valves slowly. Do not stand directly in front of the gauges. Do not force valves that stick.
* Check for leaks at connections. Leaks are usually due to damaged faces at connections or improper fittings.
	+ Call Facilities if a leak is suspected.
* Valve handles must be left attached to the cylinders.
* The high-pressure valve on the cylinder should set to the maximum rate of flow. Fine-tuning of flow should be regulated by the needle valve.
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| **Compressed Gases in the Laboratory** | * ABL tanks – contain oxygen, carbon dioxide, nitrogen
* Argon
* Carbon dioxide
* Nitrogen
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| **Empty or Used Cylinders** | * ABL tanks – Bleed per manufacturer’s instructions, label with hazardous waste label and place in the hazardous waste room for disposal.
* Lead room – Empty or used cylinders will be removed by Facilities.
* Microbiology – Empty or used cylinders will be removed by Facilities.
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| **Supporting Documents** | [SA 7.04 Managing Chemical Hazardous Waste](http://khan.childrensmn.org/Manuals/Lab/SOP/Gen/Safety/SA/208728.pdf) |
| **References** | 1. OSHA. *Laboratory Safety Guidance,* 3404-11R 2011, Occupational Safety and Health Administration: 2011.
2. CLSI. Clinical Laboratory Safety; Approved Guideline – Third Edition. CLSI document

GP17-A3. Clinical and Laboratory Standards Institute, Wayne, PA; 2012. |
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| **Historical Record** | **Version** | **Written/Revised by:** | **Effective Date:** | **Summary of Revisions** |
| 1 | Carol Cram |  | Initial  |
|  | 2 | Kerstin Halverson | 07/01/03 |  |
|  | 3 | Kerstin Halverson | 03/15/07 |  |
|  | 4 | Carol Buhl | 06/26/15 | Reformatted to CMS.Renumbered from 4.1.Listed compressed gases used in the laboratory.Added Supporting Documents.Added References. |