|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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. | | | |
| **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. | | | |
| **Compressed Gases in the Laboratory** | * ABL tanks – contain oxygen, carbon dioxide, nitrogen * Argon * Carbon dioxide * Nitrogen | | | |
| **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. | | | |
| **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. | | | |
|  | | | | |
| **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. |