

Environmental Health & Safety

Title: Compressed Gas Cylinders	
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I. Purpose of the Policy: To ensure that compressed gas cylinders are managed in a manner that is safe to faculty, staff, and students in accordance with the requirements established by Occupational Health and Safety Administration (OSHA) regulations.

II. Scope: This Policy and Procedure identifies the requirements for visual inspection and safe handling, use, storage and transport of compressed gas cylinders on the State University of New York College at Buffalo premises.

III. Applicability/Responsibility:

- 1) All State University of New York College at Buffalo (BSC) employees who service, move, transport, inspect, use or otherwise handle compressed gas cylinders as part of their job duties are responsible for compliance with the provisions of this Policy and Procedure and referenced regulations.
- 2) BSC employees, who procure, specify, monitor, or supervise vendor/contractor services, where compressed gas cylinders are used, are also responsible for ensuring contractors/vendors comply with the applicable provisions of this Policy and Procedure and referenced regulations. Methods to ensure compliance include communicating appropriate requirements as specifications into procurement documents and work instructions, monitoring of vendor/contractor activities, and interfacing with the vendor during field work.
- 3) The BSC Environmental Health and Safety (EH&S) Office is responsible for:
 - A) Monitoring, assessing, and improving the process for compliance with this Policy and Procedure;
 - B) Monitoring regulations and disseminating information to affected BSC employees on new or modified requirements for managing compressed cylinders;
 - C) Providing consultative advice to BSC employees on appropriate methods to ensure compliance with regulations governing compressed gas cylinders; and
 - D) Preparing reports and notifications to regulatory agencies as necessary.

IV. References:

29 CFR Part 1910.101 "Compressed Gases (General Requirements)."

V. Policy and Procedure:

- 1) Visual inspection
 - A) BSC employees shall determine that compressed gas cylinders under their control are in a safe condition by performing visual inspections.

- i) Visual inspections shall be performed 1) prior to moving or transporting cylinders; 2) each day compressed gas is being used or consumed; and 3) at a minimum frequency of monthly;
 - ii) Visual inspections shall be documented at least monthly and performed in accordance with Compressed Gas Association Pamphlets C-6 and C-8. The inspection log sheet/book shall be maintained and made available to the EH&S Office personnel upon request;
 - B) Compressed gas cylinders shall be equipped with safety relief devices and properly labeled to identify the cylinder contents.
 - C) In the event visual inspection results in the identification of deficiencies with respect items a or b above, the cylinder supplier, whether it is BSC Campus Services (878-6111) or a vendor/contractor, and the EH&S Office (878-4038) shall be immediately notified to initiate follow-up action.
- 2) Prior to Moving, Transporting, Storing, or Using Compressed Gas Cylinders
 - A) The product label shall be read to identify the hazards and the label instructions shall be followed.
 - B) Prior to moving or transporting the compressed gas cylinder, the following shall be performed and adhered to:
 - i) Ensure that the cylinder valve is fully closed and the protection cap (where applicable) is secured in place; and
 - ii) Do not smoke and extinguish any nearby ignition sources.
- 3) Moving Full or Empty Compressed Gas Cylinders
 - A) The following safety precautions shall be adhered to:
 - i) Safety gloves, glasses and safety shoes shall be worn;
 - ii) Carts or hand trucks shall be used to move the cylinder;
 - iii) Ensure the cylinder is properly placed and secured to the cart or hand truck before using the cart or truck;
 - iv) Never drop cylinders or allow them to strike each other violently; and
 - v) Never lift cylinders with a lifting magnet.
- 4) Storing Compressed Gas Cylinders
 - A) Compressed gas cylinders shall be stored upright and in accordance with the following:
 - i) Single cylinders shall be secured in place using stands, clamps, or other securing devices;
 - ii) Multiple cylinders should be stored in compact interlocked groups so that each cylinder contacts those around it;

- iii) Stored cylinders shall be kept out of high traffic areas or in areas where activities could damage or contaminate the cylinders;
 - iv) Use great care when welding near cylinders. Electric arc welding can destroy the integrity of a metal cylinder if a welder carelessly strikes an arc on a cylinder; and
 - v) Cylinders shall not be stored together with flammable materials.
- 5) Transporting Compressed Gas Cylinders with a Motor Vehicle
- A) The following practices shall be followed when transporting a compressed gas cylinder in a vehicle:
 - i) Compressed gas cylinders containing combustible gases, such as acetylene shall not be transported in enclosed and confined compartments, such as the trunk of motor vehicles, lacking adequate ventilation. The preferred vehicle is one with adequate ventilation such as the back of a properly placarded truck;
 - ii) Properly secure the cylinder in an upright position in the vehicle;
 - iii) Be aware of environmental conditions such as heat exposure, which may cause cylinder temperature to rise to excessive levels that could lead to a release of compressed gas, even if the ambient temperature is relatively low; and
 - iv) Take the most direct route to the destination with the least amount of intermediate stops. When the destination is reached immediately remove the cylinder.
- 6) Non-Refillable Cylinders
- A) Non-refillable cylinders are typically manufactured to DOT-39 specifications and should have gray painted shoulders. These containers shall **not** be refilled.
 - B) Prior to disposal, non-refillable cylinders must have contents properly drained, then the valve opened and the cylinder punctured before placement into a metal recycling bin.
- 7) Refillable Cylinders
- A) Refillable cylinders generally must comply with DOT 49 CFR specifications. These cylinders should: 1) be painted yellow on top and shoulders; 2) be stamped with manufactured date; 3) have maximum gross weight stenciled on the cylinder; 4) be labeled with the content identified. If the cylinder does not have all of these features, it should not be refilled.
 - B) Refillable cylinders shall not be filled to more than 80% of capacity.
- 8) Related Information
- A) Information on requirements and practices specific for safe and proper handling of refrigerants may be found in the EH&S Policy and Procedure # REF-007-001.
 - B) If there are any questions about requirements and practices for safe and proper handling of compressed gases, contact the EH&S Office at 878-4038.

