

Roles and Responsibilities

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Scope

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Prerequisites

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Potential Hazards

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**Hazard
Specifics:**

Comments:

Engineering Controls (EC)

- Fume hood** **Biosafety Cabinet** **Other Local Exhaust** **Shielding** **Other**

Specifics:

Training Requirements – except for classroom lab safety, must be completed prior to performing the procedure

- Chemical Hygiene Training** **Fire Extinguisher Training**
 Radioactive Materials **Hazard Communication Awareness**
 Analytical X-ray **Biosafety Level 2**
 AED Plus
 AED/CPR
 Other (specify):

Personal Protective Equipment (PPE)

- Safety glasses** **Safety goggles** **Face shield & safety glasses** **Face shield & safety goggles**
 Lab coat **Apron** **Tyvek suit** **Tyvek sleeves**
 Nitrile gloves **Leg coverings** **Hard hat** **Hearing protection**
 Respirator **Shoes** **Fall protection** **Other**

Explanation:

Equipment, Materials, Supplies, & Facility Requirements

Handling, Work Area & Storage Requirements

Emergency Response Equipment & Supplies

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| <input checked="" type="checkbox"/> Eyewash | <input type="checkbox"/> Fire extinguisher | <input checked="" type="checkbox"/> First aid kit | <input type="checkbox"/> Calcium gluconate gel (HF use) |
| <input checked="" type="checkbox"/> Safety shower | <input type="checkbox"/> Fire blanket | <input checked="" type="checkbox"/> Spill kit | <input type="checkbox"/> Emergency gas shutoffs |
| <input type="checkbox"/> Drench hose | <input type="checkbox"/> Other: | | |

Description:

Decontamination & Waste Disposal

Spill Response

Additional Safety Information

References

Procedure:

PUTTING A REGULATOR INTO SERVICE

1. Identify the regulator. Check the label and the inlet and outlet gauges. Ascertain that the high-pressure gauge is suitable for the pressure of the cylinder or source system. 2. Inspect the regulator. Check the regulator for evidence of damage or contamination. If there is evidence of physical damage or foreign material inside the regulator, contact your customer service representative for return information.
3. Inspect the cylinder valve. Check the cylinder valve for evidence of damage or contamination. Remove any foreign material before attaching the regulator. 4. Attach the regulator. Fasten the regulator to the cylinder and tighten the inlet nut securely. 5. Close the regulator. To close the regulator, turn the adjusting knob to the full counterclockwise position. The regulator must be closed before opening the cylinder valve.

SAFETY-CHECKING THE SYSTEM

With the regulator adjusting knob turned fully counterclockwise, place both hands on the cylinder valve and open it slowly, allowing the pressure to rise gradually in the regulator. Stand as shown with the cylinder valve between you and the regulator. When the high-pressure gauge indicates maximum pressure, open the cylinder valve fully.

Always close the cylinder valve when product delivery is not needed. Do not leave it open when the equipment is unattended or not operating.

Adjusting the Pressure Turn the adjusting knob clockwise and establish the required use pressure by referring to the low-pressure gauge. Make sure that the cylinder valve is easily accessible.

Precautionary Measures

1. Never exchange the discharge (low-pressure) gauge for one of lower pressure. The gauge may rupture if the adjusting knob is unintentionally turned too far.
2. Check diaphragm regulators for creep (leakage of gas from the high pressure to the low- pressure side when the adjusting knob is turned fully counterclockwise).
3. Provide check valves. Back-pressure protection is needed to prevent damage to the regulator. Gas from a high-pressure system can flow back into the regulator.

REMOVING A REGULATOR FROM SERVICE

1. Close the cylinder valve.
2. Vent the gas. Vent the gas in the regulator and/or system, or isolate the system, and vent the gas in the regulator by turning the adjusting knob clockwise so that no pressure is trapped inside the regulator. If the gas is flammable, corrosive, toxic, or an oxidant, take appropriate measures to render it innocuous by employing a suitable disposal system before venting the gas to the atmosphere.

3. Close the regulator. After relieving all the gas pressure, turn the adjusting knob counterclockwise as far as it will go.
4. Disconnect low-pressure equipment. All low-pressure equipment connected to sources of high pressure should be disconnected entirely or, if not, independently vented to the atmosphere as soon as the operation is either over or shut down for an extended period of time.
5. Disconnect the regulator.
6. Protect the regulator. If the regulator is to remain out of service, protect the inlet and outlet fittings from dirt, contamination, or mechanical damage.
7. Replace the cylinder outlet seal and valve cap.

