



UNDER PRESSURE

SARAH ARROWSMITH

WHO NEEDS TRAINING?

- Do you use compressed gas?
- Do you use an instrument that is attached to a gas cylinder?
- Do you use the glove box?
- Have you been asked to take an empty cylinder downstairs?
- Then you need to complete ASU's Under Pressure Blackboard Training and Mentoring Program!



TAKE CARE OF BUSINESS

- Every member of the lab, including students, who use cylinders MUST take the online training.
- Go to: <https://cfo.asu.edu/ehs-training>
- Under Blackboard tab, choose “Compressed Gas – Under Pressure”
- Complete the course.
- Have a mentor do in person training and sign the mentor form.

TEST YOUR KNOWLEDGE!

How do we protect ourselves when using gas cylinders?

TEST YOUR KNOWLEDGE!

Wear PPE: Goggles (YES), Lab coat (YES), Closed Toed Shoes (YES) and Gloves (Recommended).

Always secure tank to bench, mount, or dolly.

NEVER leave an unsecured tank unattended.



a



b

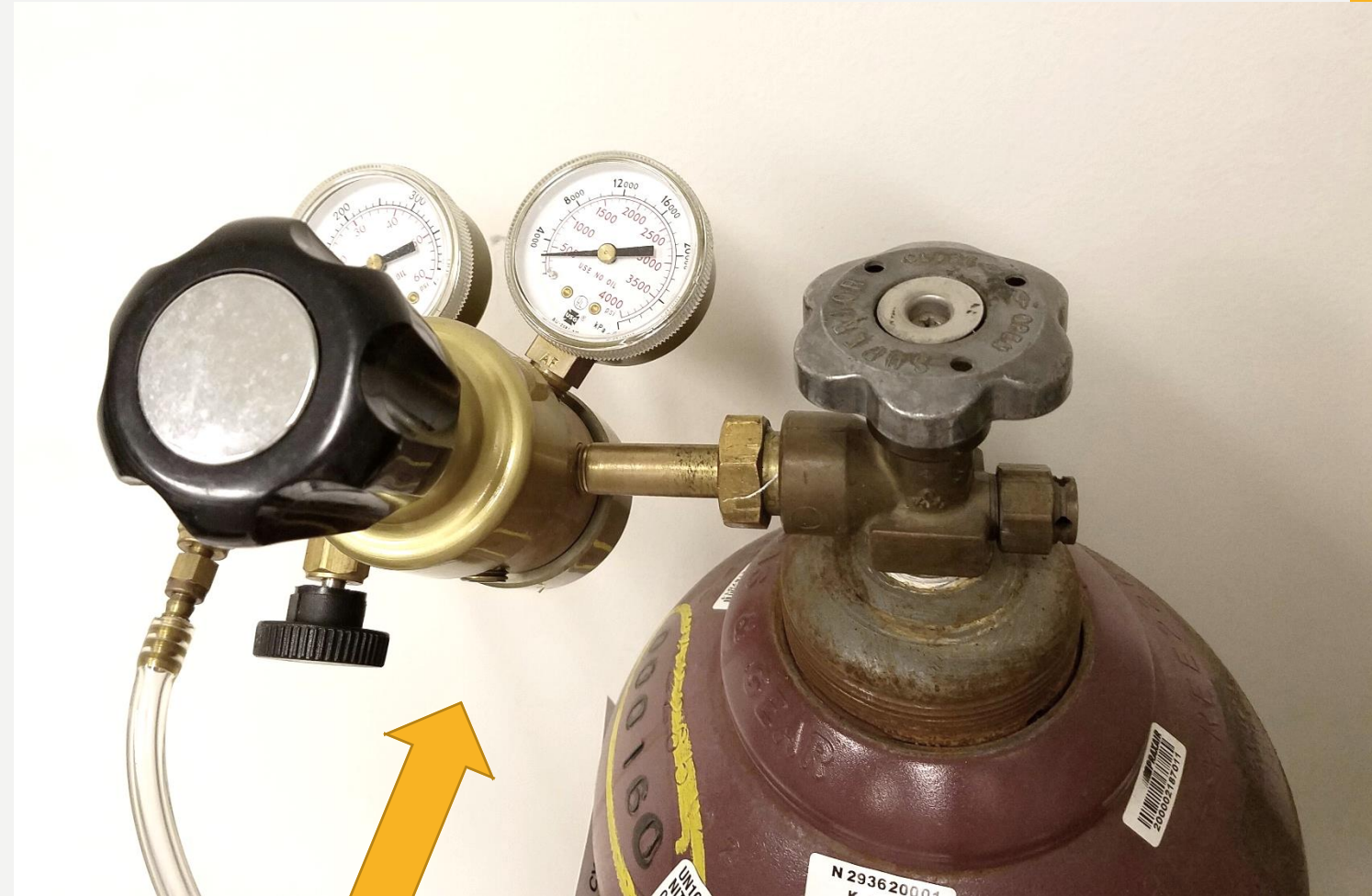


TEST YOUR KNOWLEDGE!

What is a regulator?

TEST YOUR KNOWLEDGE!

Pressure regulators are pieces of equipment that reduce the pressure leaving the cylinder to a level that can be safely used in your operating system.



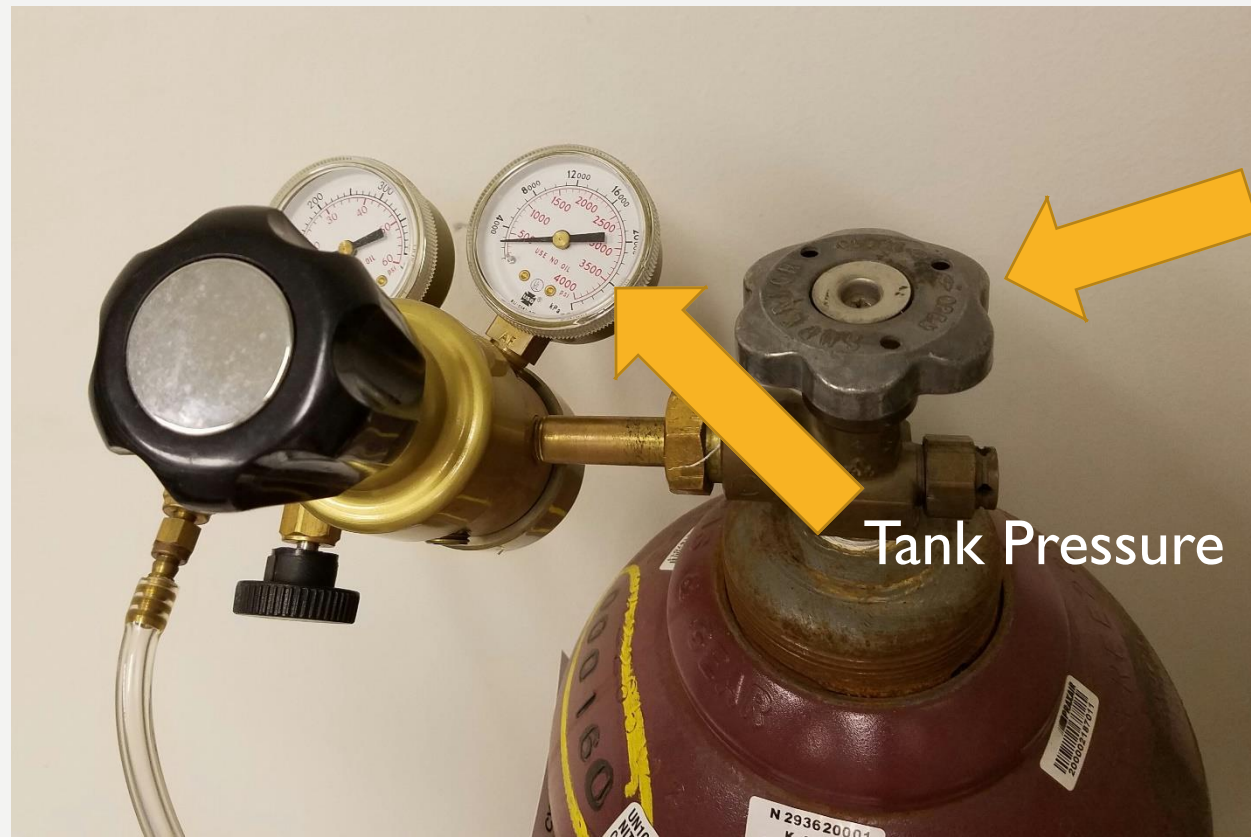
TEST YOUR KNOWLEDGE!

What is the first thing you check before you remove a regulator?

TEST YOUR KNOWLEDGE!

How much gas is left! Open the valve. The first gauge will show you how much pressure is left in the tank.

CLOSE the valve all the way before removing the regulator.



Main Tank Valve

Tank Pressure

TEST YOUR KNOWLEDGE!

How much do we tighten
regulators?

How do you check for leaks?

TEST YOUR KNOWLEDGE!

Until the nut is secure and there is no leak. You should not be able to hand loosen or move the regulator.

SNOOP at the connection between nut and tank valve opening.
Methanol and Soap Solutions can be used.



TEST YOUR KNOWLEDGE!

My tank is empty.

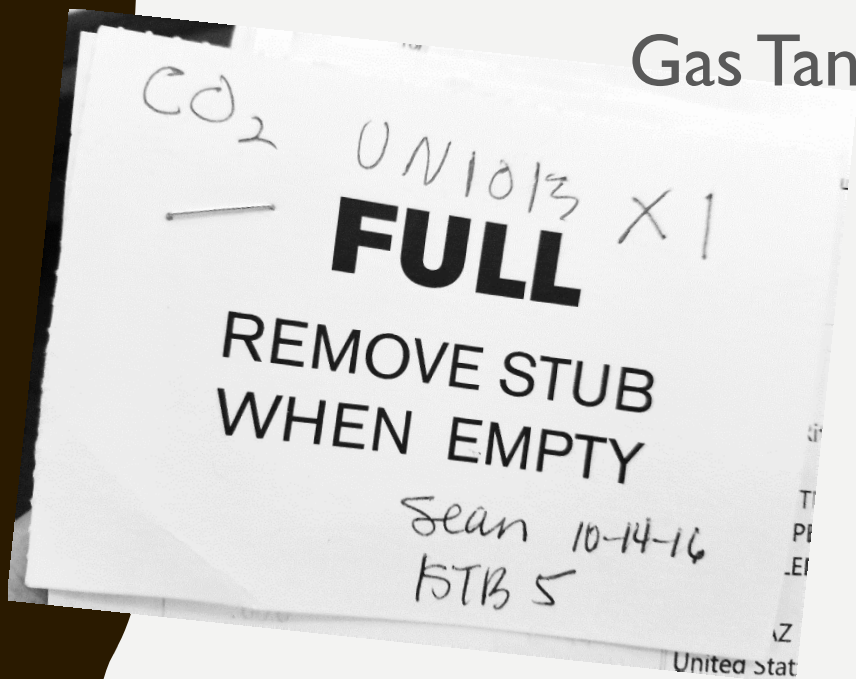
What do I do?

TEST YOUR KNOWLEDGE!

Please remove the “Full” tag, write your name, date, and the gas name. Give tag stub to Carole.

Take empty tank downstairs. Every time. Do not leave empty tanks in holding areas in your lab.

Gas Tank Receiving is open 7:30am to 4pm.



TEST YOUR KNOWLEDGE!



Receiving Area for Gas Cylinders, Basement



Holding area for full tanks!

TEST YOUR KNOWLEDGE!

My tank is leaking?

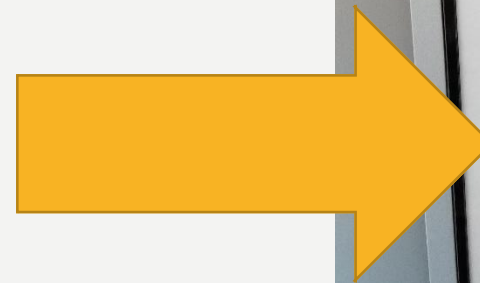
Now what?

TEST YOUR KNOWLEDGE!

Snoop lines to find leak. Fix if possible, find help immediately if not.

If tank itself is compromised, call gas service
480-965-6546

Broken, screaming tank? Evacuate the area.



A207

ENVIRONMENTAL HEALTH & SAFETY REGISTRATION

BIOHAZARD
BSL-1

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W

Registration Number: 08/20/2016

ROOM: A207
BUILDING: (104A) BIODSIGN INSTITUTE BLDG A
DEPARTMENT: Biodesign SCGB
TYPE: Research Wet Lab
MSDS Location: Biodesign A219BA
EHS Risk Level: 2

EMERGENCY CONTACT	NAME	DAY PHONE
Principal Investigator	Bruce Rittmann	(480) 727-0434
Alternate Contact 1	Young, Michelle	(202) 283-4702
Alternate Contact 2	Hart, Steven	(270) 283-6756
Alternate Contact 3	Tavakoli, Behrouz	(780) 383-9408
Alternate Contact 4	Hagner, Diane	(480) 945-5847

Hazard Details:
Corrosive, Compressed Gas, Cryogenic, Flammable

**IN CASE OF EMERGENCY
DIAL 911**

ASU
Certified Green Lab

Created by ASU Environmental Health & Safety

TEST YOUR KNOWLEDGE!

Took training a thousand years ago but still nervous about handling tanks?

TEST YOUR KNOWLEDGE!

Come find me! I will help you.

“I must not fear. Fear is the mind-killer” –Frank Herbert,
Dune

QUESTIONS?

