**Title:** 1310 - Understanding Compressed Gases in the Laboratory

**Type:** ☑ Skill  ☑ Knowledge

**Performance Objective:** Trainee will be able to...
- Discuss basic compressed gas safety.
- Locate compressed gas storage areas at the KSSL.
- Identify compressed gases used in the laboratory.
- Demonstrate safe cylinder receiving, handling, transport, and securing.

**Target Proficiency:**
- Awareness ☐ Understanding ☑ Perform with supervision
- Apply independently ☑ Proficiency, can teach others

**Trainer Preparation:**
- Be familiar with the assigned review material in the lesson plan that follows.
- Provide laboratory equipment, compressed gas cylinder, hand truck, security strap, and gas tag for exercise.

**Special Requirements:**
An external learning request must be initiated with an SF-182 in AgLearn for this activity. Instructions and a template are located on the training webpages for OJT modules.

**Prerequisite Modules:**
1300 - New Employee - Understanding LincPass/Personal Identification Verification (PIV) eAuthentication and How to Gain Temporary Access

**Notes:**
None

**Authors:**
Adrien Metcalf

**Approved by:**
Shawn McVey, National Training Coordinator
The Five Step OJT Cycle for **Declarative** Training (Knowledge)

**Cycle Step 1**
- Trainer/Trainee establish shared mental model

**Cycle Step 2**
- Trainee reviews materials provided

**Cycle Step 3**
- Trainer and Trainee discuss information

**Cycle Step 4**
- Trainer observes Trainee perform task provided as feedback

**Cycle Step 5**
- Trainer/Trainee debrief
# OJT Module Lesson

**Title:** 1310- Understanding Compressed Gases in the Laboratory

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<thead>
<tr>
<th>WHAT</th>
<th>WHY, WHEN, WHERE, HOW, SAFETY, QUALITY</th>
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</table>
| **Cycle Step 1** | Trainer and Trainee review module objectives and agree that this module is an overview of compressed gas handling and safety procedures in the laboratory as identified in the Kellogg Soil Survey Laboratory’s Chemical Hygiene and Safety Plan. 
S:\Laboratory_Safety\Chemical Hygiene Plan |
| **Cycle Step 2** | Trainee will access pdf attachments and read/review:
  - Safe Handling of Compressed Gases
  - Videos - Compressed Cylinder Safety
  - Gas Cylinder Tag
  - Gas Order Form example

Trainee will review attached Matheson Safety Data Sheets (MSDS) for all compressed gasses used at the KSSL. |
| **Cycle Step 3** | Trainer and Trainee discuss reviewed materials emphasizing:
  1. Use of personal protective equipment while being around, transporting, and utilizing compressed gases in the laboratory.
  2. Types of gases used in the laboratory and associated MSDS.
  3. Receiving ordered cylinders: Proper tagging and documentation.
  4. Safe transport and securing of cylinders.
  5. Designated gas cylinder storage areas within the laboratory.

Trainee demonstrates how to safely load and secure a cylinder onto a hand truck; transport, unload, and secure a stationary cylinder; and tag and document the cylinder while the Trainee observes. |
| **Cycle Step 4** | Trainee demonstrates and explains all steps taken to safely transport, secure, tag, and document a compressed gas cylinder within the laboratory. |
| **Cycle Step 5** | Trainer and Trainee discuss what has been covered and what has been learned. Trainer answers any questions and repeats any steps as necessary. |
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<tbody>
<tr>
<td>Trainee applies knowledge and skill gained to current work.</td>
<td>Trainee demonstrates proper PPE, safe relocation and strap security, and tagging and documentation of a compressed gas cylinder during demonstration, as indicated in Cycle Step 4.</td>
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<td>Trainee’s learning is measured.</td>
<td>Trainee completes the attached quiz to reinforce the concepts in this module.</td>
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Trainee OJT Performance Report Form

Trainee’s Name: __________________________ Job Title: __________________________

Trainer’s Name: __________________________ Date: __________________________

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<thead>
<tr>
<th>Task (module title)</th>
<th>Date(s) of Training</th>
<th>Rating</th>
<th>Trainer’s Comments</th>
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Additional Trainer’s comments:

Trainee’s comments:

Action to be taken if performance is unacceptable:

Signatures

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<th>Trainee</th>
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