# Safe Work Practices

Crew Leader

Learning Objectives

By attending this session, participants will be able to:

* Explain the purpose of OSHA regulations.
* Identify where to find DOE and EPA guidelines for working with lead, mold, asbestos, and other health hazards.
* Describe which homes require lead-safe weatherization practices and certified renovators.
* Explain the importance of a materials safety data sheet (MSDS) and why it is important to keep nearby.
* Name typical personal protective equipment (PPE) and describe the functions.
* Explain the function and importance of using ground fault circuit interrupter (GFCI) equipment.
* Discuss simple workplace safety management methods.
* List which conditions require deferral on a dwelling.

Key Terminology

Certified renovator

Corrective action

Deferral of services

Double-insulated tools

Environmental Protection Agency (EPA)

Foot-candle

Ground fault circuit interrupter (GFCI)

High-efficiency particulate air (HEPA) vacuum

Knob and tube wiring

Lead-safe weatherization (LSW)

Material data safety sheets (MSDS)

Mold

Occupational Safety and Health Administration (OSHA)

Personal fall arrest system (PFAS)

Personal Protective Equipment (PPE)

Subgrantee

Tack pads

U.S. Department of Energy (DOE)

Supplemental Materials

Handouts & Resources

“12 Steps to Lead Safety.” *WxTV.* Montana Weatherization Training Center. <www.wxtvonline.org>.

Beers, Jonathan. “Dryer Venting.” *Home Energy* Nov./Dec. 2003: 14-16. <www.homeenergy.org>.

Deferral of Services Notification.

Gill, Tony. “Safe Work Practices” Classroom Exercise.

“Health and Safety Series: Getting Started.” *WxTV*. Montana Weatherization Training Center. <www.wxtvonline.org>.

“Health and Safety Series: Mold and Moisture.” *WxTV*. Montana Weatherization Training Center. <www.wxtvonline.org>.

“Health and Safety Series: Respirators and Personal Protective Equipment.” *WxTV*. Montana Weatherization Training Center. <www.wxtvonline.org>.

IN WAP Moisture Assessment Findings Form.

National Fire Protection Agency. “Clothes Dryer and Washing Machines Fact Sheet.” National Fire Protection Association. 2 Sept. 2009. <www.nfpa.org>.

National Fire Protection Agency. “Clothes Dryer Safety.” National Fire Protection Association. 2 Sept. 2009. <www.nfpa.org>.

National Institute for Occupational Safety and Health. <www.cdc.gov/niosh>.

Powell, Kevin. “Q&A: What to Do About Mold on Framing Lumber?” *Journal of Light Construction* Mar. 2004. <www.jlconline.com>.

Sample Material Safety Data Sheet (MSDS) and/or Product Data Sheets.

U.S. Department of Energy. Weatherization Assistance Program. “WPN 02-6 Weatherization Activities and Federal Lead-Based Paint Regulations. Attachment B: Lead Paint Decision Chart.” 12 July 2002. <www.waptac.org>.

U.S. Department of Energy. Weatherization Assistance Program. “WPN 08-6: Lead Guidance Program Notice.” 22 Sept. 2008. <www.waptac.org>.

U.S. Department of Energy. Weatherization Assistance Program. “WPN 09-6 Lead Safe Weatherization (LSW) - Additional Materials and Information.” 22 Jan. 2009. <www.waptac.org>.

U.S. Department of Energy. Weatherization Assistance Program. “WPN 11-6 Health & Safety Guidance.” 12 Jan 2011 <www.waptac.org>.

U.S. Department of Labor. Occupational Safety and Health Administration. “Carbon Monoxide Poisoning Factsheet.” <www.osha.gov>.

U.S. Department of Labor. Occupational Safety and Health Administration. “Carbon Monoxide Poisoning QuickCardTM.” <www.osha.gov>

U.S. Department of Labor. Occupational Safety and Health Administration. “Fall Protection Tips QuickCardTM.” <www.osha.gov>.

U.S. Department of Labor. Occupational Safety and Health Administration. “Training Program Fact Sheet.” <www.osha.gov>.

U.S. Department of Labor. Occupational Safety and Health Administration. “Appendix A to § 1910.134: Fit Testing Procedures (Mandatory).” <http://www.osha.gov/pls/oshaweb/owadisp.show\_document?p\_id=9780&p\_table=STANDARDS>.

U.S. Department of Labor. Occupational Safety and Health Administration. “Lockout/Tagout Fact Sheet*.*” *<*www.osha.gov/OshDoc/data\_General\_Facts/factsheet-lockout-tagout.pdf>.

U.S. Environmental Protection Agency. “Asbestos” <www.epa.gov/asbestos>.

U.S. Environmental Protection Agency. “Healthy Indoor Environment Protocols for Home Energy Upgrades” Oct. 2011 <http://www.epa.gov/iaq/homes/retrofits.html>.

U.S. Environmental Protection Agency. “Lead Publications.” <www.epa.gov/lead>.

U.S. Environmental Protection Agency. “Mold” <www.epa.gov/mold>.

**Online Platform Lessons**

Use these online interactive training modules as prerequisites before students attend the course, or as in-class computer lab sessions. Users must first create an account at [www.nterlearning.org](http://www.nterlearning.org) to access the lesson.

a- 2.8 Gas Leak Detection <https://www.nterlearning.org/web/guest/course-details?cid=248>

i- 5.1 Insulation Options and Safety <https://www.nterlearning.org/web/guest/course-details?cid=249>

Relevant Standard Work Specifications

1.100.1 – Global Worker Safety

1.110.1 – Materials Selection, Labeling, and Materials Safety Data Sheets

Classroom Props & Activities

Typical supplies for managing dust and debris, including:

* Plastic sheeting
* Tapes (duct tape, painters’ tape, etc.)
* Tack pads
* Wet/dry sandpaper and mister
* HEPA vacuum

Typical PPE, including:

* Safety glasses, work gloves, and hard hats
* Variety of respirators and dust masks
* Positive pressure respirator with hood and compressor
* Protective suits

Typical portable power tools and accessories, including:

* Reciprocating saw
* Circular saw
* Drill
* Nail gun

**Classroom Exercise – Safe Work Practices**

* Pass out the “Safe Work Practices” handout. Allow the class several minutes to complete it.
* For each scenario, record how many students choose each answer with a show of hands. (The responses will give you the general mindset of your class and help steer your comments. Don’t put too much weight on this. Because the correct answer is rather obvious, your sample will probably be skewed to it.)
  1. *The “git ‘er done” crowd*. They’re goal-oriented but not too concerned about rules. Talk about why rules exist and how to accomplish goals within the rules.
  2. *The “rule is sacred” group*. They’re often more interested in why something can’t be done than in doing it. Again, talk about why rules exist⎯to prevent problems and make things easier⎯and how to work to the intent of a rule rather than just the letter.
  3. *The really anti-rule “git ‘er done at all costs” folks*. They are willing to ignore dangerous situations and take chances in the name of production. Talk about what happens when a serious injury occurs⎯lost work time and pay, higher insurance rates, reactionary rules and restrictions, and pain.
  4. *The practical leaders*. They know, understand, and follow rules but don’t use them as roadblocks or crutches. Reaffirm these people by talking about how working conditions have improved over the years chiefly because of like-minded individuals who insisted that safe working conditions and protective equipment are part of a proper labor/management relationship.
* Go over each scenario; as a class, discuss the pros and cons of each answer.

Close the exercise by asking the class to list any other safety codes/rules that typically might come into play when weatherizing. Lead a discussion of each, stressing how to fully meet the intent of the rule.

Hands-on Props & Activities

**Power Tool Maintenance and Operation:** If it hasn’t been covered in previous lessons already, demonstrate basic tool maintenance and operation for the class. Make it interactive by asking for experienced volunteers from the class to demonstrate general maintenance, hook-up, blade or bit changes, and safe operation of various tools and equipment. Have them first select the appropriate PPE to be worn when using a given tool, and then demonstrate the use. Provide tips and pointers if the volunteer leaves anything out.

**Fit Test Demonstration:** After covering the materials on the slide “PPE” in the presentation, demonstrate the proper steps of a fit test using a volunteer from the class. If possible, do not choose a volunteer with facial hair, as that will hinder the fit test. Have the volunteer try on respirators from the sample you have available as classroom props. Once a selection is made based on comfort, have the volunteer assess the respirator according to fit test requirements: general fit and comfort, room for eye protection and talking, and head movement; then go through the general exercises of breathing, moving, talking, grimacing, and bending. Refer to OSHA 1910.134 Appendix A for a complete outline of the required steps.

**Masking a Work Area:** After discussing how to create a safe job site in the presentation, designate an area of the classroom or lab as the temporary “job site.” Prepare ahead of time so there are objects that will need to be moved and some larger items that will need to be covered. Provide plastic sheeting, drop cloths, tape, and signs, and have the class prepare the job site as if they were going to conduct an interior or exterior dense pack sidewall insulation installation (or choose another measure but choose a messy one). Decide whether lead paint is an issue or not. Time them to see how quickly they can set up the area once they determine the approach. Evaluate their set up. Debrief in the classroom to determine what worked, what didn’t, and how it might go more quickly next time.

**Class Overview**

Field staff members can grow restless in a lecture setting. Make the class as interactive as possible by integrating lecture with workshop/exercise sessions, such as the following:

* Begin the class with some examples of how creating a safe, organized job site makes everything run more smoothly. It takes a little more time at the beginning but saves time and energy in the long run.
* Introduce students to guidelines and examples for reporting potentially hazardous pre-existing conditions that should result in corrective action or deferral of WAP services if discovered on the job site.
* During the interactive slides on deferral, give the students a chance to determine whether a scenario is a “walk away” or “run away” situation before revealing the answer.
* Use the Moisture Assessment Findings Form (or a similar, locally relevant form) to illustrate the proper documentation of conditions that should be part of the client file, in case of an appeal.
* Review and demonstrate proper tool maintenance and operation.
* Demonstrate a respirator fit test on a volunteer from the class.
* After discussing masking interior and exterior environments, provide a little more information on the specifics of lead safe work practices by showing the “12 Steps to Lead Safety” episode of *WxTV*. Follow the viewing with the “Masking a Work Area” activity previously described.
* Give participants a chance to practice using various hand and power tools under supervised conditions to ensure they are practicing safe tool use.
* Demonstrate common safety functions of power tools (safety guards, blade tightening) and general safety practices (cutting away from oneself, keeping hands clear).
* Teach students about the value of safe work practices and where to find proper guidance. Keep sample PPE on hand to hold up as you discuss them.
* Refer to treatment section of an MSDS when teaching the importance of having these sheets in each work vehicle. Walk students through reading an MSDS, pointing out important safety information from the sample you use as a handout.
* Refer to the information and safety principles introduced in this presentation during the rest of the training, both in hands-on and other portions. Make students guardians of each other’s safety practices.