
# CHAPTER 6

## SETUP



**Instructor's Manual**




## Instructor's Manual


## Learning objectives

In this chapter you will learn

- how to keep lead out of the air
- how to protect yourself from lead while you work
- how to clean the work room
- how to set up the work room
- how to set up a decontamination area
- how to use the decontamination area

### Instructor's notes

The purpose of this chapter is for trainees to learn how to properly begin a lead-based paint abatement job. It must be stressed that proper setup can dramatically cut down on the spread of lead dust. This will help to ensure a successful job and make cleanup easier.

An instructor who has had a lot of experience in lead abatement work will reinforce how important setup is. Check into your state's or Indian tribe's regulatory requirements and make sure you discuss any information not included in the manual.

You can also contact a distributor of commercial-grade HEPA vacuums and have them provide a guest speaker. You will want to make sure that the presenter understands the equipment well and is not just a salesperson.

It is suggested that you allow 45 minutes to teach this section.

### Training methods

| | | |
|---|---|---|
| A. | Skit and discussion | 15 minutes |
| B. | Lecture/Slides | 30 minutes |
| C. | Hands-on: Setup | 1 hour & 15 minutes |
| | Preparation of job site and decontamination area | |

**Instructor's Manual**

## Skit and discussion (30 minutes)

This exercise allows the class to talk about the risks involved with setup and factors that affect decision making about their health.

**Materials:** Use the skit on page 6-4 in the student manual.

**Directions:** Ask for two volunteers from the class to do the skit. Give them a little time to review it before doing it. (Review your role as a facilitator on page Intro-14 of this manual.) Discussion questions are on the next page.

**Skit: Starting a new job**

Juan and Ed are getting ready to start on an abatement job in one of the houses in their neighborhood.

**Juan**: We need to replace this window here. Let's get into our suits and masks and start laying out the poly.

**Ed**: I don't need a suit and respirator. It's too hot in here.

**Juan**: But there's lead-based paint in this room. You need to protect yourself from the dust.

**Ed**: All the lead-based paint is on the woodwork. We're not going to disturb it. A respirator and a suit are just going to slow me down in this heat.

**Juan**: I know it's really hot in here, but you need to protect yourself so you don't get lead poisoned.

**Ed:** I don't want to get in trouble for working too slowly. This is the first work I've had in three months. It's hot in here.

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## Discussion questions guide


1. **Do you agree or disagree with the following? Why or why not?**

   ___ Ed and Juan don't really need to wear a suit and respirator if they are just setting up.

   If trainees agree with this statement, how do they know it is safe? Do we know where the lead dust is? Will the setup work disturb the lead dust?

   ___ It's none of Juan's business if Ed doesn't want to wear a suit and respirator.

   Answers will vary. "No, it's not." "Ed can do what he wants." "Juan cares about Ed." "It doesn't reflect well on Juan if his work buddy gets lead-poisoned." "Ed's lack of respirator use may influence Juan to not use his."

   ___ The foreman should install a fan or provide PAPRs to help keep the workers cool during setup.

   Under the OSHA Lead Standard PAPRs must be available to any worker who requests them. A fan may not help much and could spread the lead dust if it's not set up correctly, so how and where it is set up needs to be thought out. The foreman could allow workers to get used to the heat by allowing frequent breaks and providing plenty of fluids.

   ___ It would be better for Ed to work without a respirator than to risk losing his job.

   Answers will vary. "He needs the work." "It's his life, his decision." "The risk isn't very high." "His decision also affects his family."

   If Ed explained things to the foreman, Ed wouldn't get in trouble with him.

   Answers vary here and usually reflect trainees' personal experiences.

2. **Why is Ed in such a hurry?**

   "Ed is hot and uncomfortable." "He feels he works slowly." "It's his first job in three months and he wants to keep it."

3. **What could Juan do to convince Ed to wear his respirator and suit?**

   "Juan can offer to help teach short cuts that can increase his work pace, but not wearing a respirator isn't one of them." "Juan could inform him about the hazards of lead to himself and his family."

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4. **What could the foreman do to make it easier for Ed to wear his respirator and suit?**

   - Allow breaks
   - Provide PAPRs
   - Stress the importance of safety over work pace
   - Ensure adequate ventilation

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## Lecture/Slides (30 minutes)

**Purpose:** To provide the basic information on the rules for lead work and the components of a proper setup.

**Materials:** Slide projector, slides, flip chart, markers

**Directions:** Make sure you involve the class in the slide presentation. One way is to ask questions of the class to keep them involved.

Try not to read from the supplied notes about each slide. Using your own words will make it more interesting for the class. You can add any personal experience that you may have that is relevant. Notes are supplied for slides that are a part of this training kit. The notes include a copy or description of each slide.

You can start off this section by using a flip chart and posing the following questions. You can write their answers on the flip chart

**Ask the class what tasks are a part of setup.** (A checklist is on page 6-8 in the student manual.)

**Ask the class why setup is so important.**

Possible answers include: Make the job and cleanup easier. Make the workplace safer. Ensure that lead dust is contained. Prevent safety problems.

**When is lead a health hazard?**

Possible answers: Whenever the lead paint surface is disturbed. When it peels, chips or flakes. When there is friction or impact. Anytime dust is created.

**What activities create lead dust and fumes?**

Possible answers: All abatement methods. Any burning of lead can create lead fumes. Dry sanding or scraping. Using a heat gun on the high settings.

**Name some ways lead dust and fumes could be decreased.**

Possible answers: No burning of lead paint. Never use a heat gun over 1100º F. Always use wet methods. No dry scraping or sanding. Use a HEPA vacuum. Cleanup as you work.

**Name some rules for working with lead.**

Record their answers and compare to slide 4.

**What kind of protection must your employer provide when you work with lead?**

*Note*: This is an EPA-model course; it does not adequately cover topics required under the OSHA Lead in Construction Interim Standard. Some trainees may not have yet had OSHA training and may not be familiar with the OSHA requirements. Do not go into great detail here; this is to serve as a reminder of the information covered in Chapter 3.

**Instructor's Manual**

This protection must include:

a. Appropriate respiratory protection

b. Protective clothing

c. Hand washing facilities and a shower, if feasible

d. Change area

e. Bloodtests

f. Training on the hazards of lead, respirator use, and safety issues

g. Separate lead-free break area

h. Warning signs within the work area

Note: If the employer has not done an exposure assessment yet, but the worker is doing a lead-related task, then interim protection must be provided. This same protection must be provided if you are exposed above the PEL.

**What kind of protection must your employer provide for the occupants?**

EPA or state/Indian tribe regulations require an occupant protection plan be written before beginning any lead-based paint abatement activity in target housing or child-occupied facilities (e.g., daycares). This is the responsibility of the employer, but the worker should be familiar with its contents to ensure that the protections are maintained throughout setup, abatement, and cleanup.

## Instructor's Manual

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*Now, you will want to start the slides.*

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## Hands-on exercises (1 hour & 15 minutes)

**Job site setup**

Objectives: Trainees will be able to

1. List at least six items that are needed for setup.
2. Identify at least three potential job site hazards.
3. Define at least one way to decrease the tracking of lead dust.
4. State why decontamination areas (decons) are important.
5. Assist in setup of hands-on area.

**Directions:**

Have the participants break into four groups. Each group will assign a notetaker and a reporter. Each group is to write up a design for setup in the hands-on area. Give them 20 minutes to walk through the area and discuss setup.

Then, have each group report on their setup plan to the whole class. Have them limit their report to five minutes per team. Write each group's plan on a flip chart. There may be much discussion about what should happen first. This is good!

Next, have the participants use the student manual checklist to make sure all parts of setup are covered. Have the class fill in any gaps they may have missed—you can help bring up points, too. Have the class agree to an action plan for setup.

Now tell the class you will be talking about setting up a decontamination area.

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### Decontamination unit (decon) setup

Objectives: Trainees will be able to

1. Diagram on a piece of paper the three areas of a decon.
2. Explain why each area is important.
3. List the materials needed to build a decon.
4. Design at least two ways of setting up the three separate areas of a decon.
5. Assist in constructing decontamination areas—clean room, shower (wash room), and dirty (equipment) room.

**Instructor's notes:**

The concept of a decontamination unit is often hard for students to grasp. You can make handouts and overheads to introduce this section (use the illustrations on the next page). Reinforce the information as the trainees build the decon areas in the hands-on exercise.

**Directions:**

Explain to the class what a decontamination unit/area is. The decon area is used to make sure that lead is not carried out of the contained work area. By keeping lead in the work area, workers protect building occupants as well as their own family members from lead poisoning.

There are different types of decons. A typical decon consists of a clean room, a wash room/shower, and a dirty/equipment room. Some are actually three separate rooms, some are portable units, others are constructed on site. A shower and wash basin may be a more realistic decon station for trainees who work for small contractors.

To construct a decon on site you need 6-mil poly, duct tape, and framing materials.

Common mistakes in constructing a decon occur when you build the frame or put up the poly. Ask the class if they have had any experience putting together a decon on site.

Did they have any problems? How did they solve them?

**Instructor's Manual**




**Hands-on practice**

Now break the class into two groups. Have one group set up the work area. Have the second group build the decon. If for some reason you can't build a decon on site, portable decontamination chambers can be bought at most industrial safety equipment distributors.

**Group 1**

**Materials:**

- barrier tape
- warning signs, with big letters
- rolls of 6-mil plastic sheeting (poly)
- duct tape
- staple gun and industrial staples
- spray poly
- materials for building decon
- flipcharts, paper, and pens
- movable objects in the room (chair, table, etc.)
- lock out tags
- ground fault circuit interrupter (GFCI)
- negative air machine
- HEPA vacuum
- labeled container for dirty clothes

**WARNING**
**LEAD WORK AREA**
**POISON**
**NO SMOKING, EATING, DRINKING**

**WARNING**
**LEAD PAINT REMOVAL**
**NO ENTRANCE BY UNAUTHORIZED PERSONNEL**

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**Checklist**

Make sure the students do the following:

___Post warning signs

___Move all portable items out of the area

___Turn off HVAC system (HVAC and electrical boxes should be locked and labeled with a tag saying **DANGER/DO NOT OPEN**. If these boxes are not in the area designated for training, then instructors can post signs on the wall labeled "electrical box" and "HVAC control unit.")

___Cover air vents with poly and sealed with tape;

___Bring a negative air machine into the work area (optional);

___Clean everything left in the room with a wet wash and a clear rinse;

___Cover and seal with 6-mil poly and duct tape everything left in the room;

___Cover the floor with two layers of poly (students should note that carpets should be removed and discarded with the owner's permission);

___Bring equipment and tools into the work area;

___Seal the work site off from the rest of the building (using duct tape, poly and industrial staples);

___Lay out a path of poly to enter and exit the work area.

**Instructor's Manual**

## Group 2

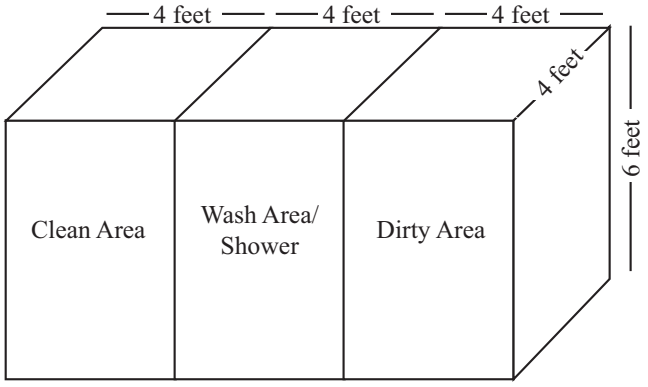
The hands-on exercise must be done in a space big enough to accommodate 20 to 30 students. Make sure that there are enough materials on hand for the students to use and that everything is of good quality. You should have assistant instructors for this section to serve as facilitators. They must not do the work for the trainees, but give hints as needed if students ask questions or seem hung up on something.

**Materials:**

- 6 12-foot 2x4's (or PVC piping)
- 10 8-foot 2x4's (or PVC piping)
- 1 roll of 6-mil poly
- 6 rolls of duct tape
- 1 box of T-50 staples
- 2 T-50 staplers
- 2 hammers
- 2 utility knives
- 1 measuring tape
- 1 box of nails (10 penny)
- 1 hand saw or electric saw

## Instructor's Manual

The unit will stand 12 feet long, 4 feet wide, and 6 feet high. It will be separated into three sections, each 4 feet long.




### Checklist

Make sure the students do the following:

1. Construct the frame.
2. Cover the floor with two layers of poly, sealing each one down with duct tape.
3. Make walls and a ceiling. Use one layer of poly. Overlap the ends of the poly by 6 to 12 inches and duct tape them.
4. Make the door flaps. Each flap should consist of one layer of poly. Each door should have two flaps. The first flap should open in the opposite direction from the second flap. (This helps to prevent dust from leaking out of the work area.) There should be four doors with flaps: (1) the entrance, (2) the exit, (3) between dirty area and wash area, and (4) between wash area and clean area.

### Outside setup

(Optional addition to setup hands-on discussion and exercises)

**Ask the class to compare and contrast outside work and inside work.**

(Answer: Similar because you try to keep people out and cover surfaces with poly. Different because it is much harder to contain lead dust and it may be harder to keep people away at the outdoor sites.)

**Ask the class how they have managed to keep curious neighbors away from dangerous work areas.**

**Setup for outside work:**

1. Post warning signs.
2. Rope off the area.
3. Put out the poly.
4. Build trenches to direct liquid waste.
5. Daily cleanup.
6. Store waste in a locked area until you can dispose of it.

**Instructor's Manual**

## For more information

These publications or resources have more information on the topics covered in this chapter. You should have a copy of the publications marked with a star (*). You can order your own copy by calling 1-800-424-LEAD.

EPA, *Reducing Lead Hazards When Remodeling Your Home* (September 1997).

*EPA, HUD, and CDC, *Lead Paint Safety: A Field Guide for Painting, Home Maintenance, and Renovation Work* (June 1999).

* EPA, HUD, and CPSC, *Protect Your Family From Lead in Your Home* (June 2003).

* HUD, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* (June 1995).

NIBS, *Lead-Based Paint: Operations & Maintenance Work Practices Manual for Homes and Buildings* (May 1995).

National Lead Information Center Hotline: 1-800-424-LEAD.

**Instructor's Manual**