



Attachment 1

**U.S. Department of Energy
Minimum Standards for LSW**

Safe Work Practices must be implemented to minimize exposure to hazards for residents and the workers, while allowing Weatherization to occur in a cost-effective manner and to not hinder production. The effort required will be based on the hazard, the work specifications, and customer health issues.

CHECK: Federal, state, and local regulations.

- OSHA has rules for worker safety.
- States and local communities may have rules for waste disposal.

To meet the LSW minimum standards, crews and contractors MUST follow the general principles of working in a lead-safe manner. Best practices for working in a lead-safe manner are available in the benchmark LSW procedures and curriculum and should be reviewed and consistently enforced on LSW jobs.

A. Requirements

Client Protection and Notification

For occupied homes, the Weatherization staff, crew, or contractor must have an adult tenant or homeowner sign an acknowledgement after receiving the pamphlet. The pamphlet can also be sent by certified mail with receipt to be placed in the customer file.

In multi-unit housing, the agency must:

- Provide written notice to each affected unit (notice must describe: general nature and locations of the planned renovation activities; the expected starting and ending dates; statement of how occupant can get pamphlet at no charge); or
- Post informational signs (signs must describe general nature and locations of the renovation and the anticipated completion date) and post the EPA pamphlet. (If pamphlet is not posted then agencies are required to provide information on how interested occupants can review a copy of the pamphlet or obtain a copy at no cost from the Weatherization Program).
- Delivery to owner/occupant. Owner's and/or occupant's signature with acknowledgment or certificate of mailing. The owner/occupant must acknowledge receipt of the EPA pamphlet prior to start of renovation that contains the address of unit undergoing renovation, name and signature of owner or occupant, and the date of signature. It must be in same language as "contract for renovation" for an owner-occupied (or the same language as the lease for occupant of non-owner occupied) target housing.

If the Weatherization Program cannot get a signed acknowledgment (either the occupant is not home or refuses to sign the form), then the self-certification section of the form must be signed to prove delivery.

The acknowledgement form must be filed and remain with the client file for three years from date of signature. In addition to providing a copy of the pamphlet to owners and occupants, designated local



agency staff (e.g., intake specialist, auditor, crew chief) must discuss the hazards associated with lead-based paint and lead dust, and describe how they will conduct LSW in the home.

Weatherization Worker Protection

LSW includes these procedures and safety precautions:

- Wear personal protective gear specifically suited for the particular LSW measure. Use the National Institute for Occupational Safety and Health (NIOSH) approved respirators (at least ½ face) with HEPA filters.
- Use disposable overalls (with hood or a disposable painter's cap), gloves (cloth, plastic, or rubber as appropriate), goggles, and disposable shoe/boot covers.
- Keep dust to a minimum and properly contain dust and paint chips to the work area.
- Clean up area during and after work.

For 2010, to comply with EPA's LRRPP Rule requirements, specific clean up procedures will be required as outlined in the April 22, 2008, rule.

- During Weatherization, wash your hands and face frequently, particularly when leaving the work area and especially before leaving the area for the purpose of eating, drinking, or smoking.
- Before leaving a confined work area, remove your protective clothing and protective shoe/boot covers to avoid exposing others.
- Before leaving a confined work area, and before returning tools and equipment to vehicles, clean all tools to avoid exposing others and creating a lead-hazard to the next Weatherization job.
- Get annual medical exams to check blood lead levels. Do non-lead-related work if your blood lead level gets too high.
- Inform your employer if you develop signs of lead poisoning.

B. General LSW Work Practice Standards

- Crews and contractors must take steps to protect occupants from lead-based paint hazards while the work is in-progress using appropriate containment strategies.
- Occupants, especially young children or pregnant women, may not enter the work site. Occupants are allowed to return only after the work is done and the home has passed a visual inspection.

For 2010, to comply with EPA's LRRPP Rule requirements, specific verification inspection procedures will be required as outlined in the April 22, 2008, rule.

- Occupants' belongings must be protected from lead contamination. This can be done by removing them from the work area or covering them in protective bags and sealing it to prevent dust from getting on the items.
- The work site must be set up to prevent the spread of leaded dust and debris.



- Warning signs must be posted at entrances to the worksite when occupants are present; at the main and secondary entrances to the building; and at exterior work sites. The signs must be readable from 20 feet from the edge of the worksite. Signs should be in the occupants' primary language, when practical.
- The work area must be contained. If containment can not be achieved with occupants in the unit (e.g., work will take several days and involves the kitchen, bathrooms, or bedrooms that can not be sealed off from use), occupants must move out of the unit or the work must be deferred until containment can be achieved.
- Ensure containment does not interfere with occupant and worker egress in an emergency.

Prohibited Work Activities

The following are frequent questions related to prohibitions when working in pre-1978 homes:

- NEVER - use reusable cloth or fabric, such as a painter's drop cloth, as protective containment sheeting. Polyethylene and in some cases when working on the exterior garden fabric are the only acceptable protective containment sheeting and must never be reused.
- NEVER - use brooms and shop vacuums for cleanup. Wet cleaning and HEPA vacuums are the only acceptable methods for cleanup.
- NEVER – use a conventional shop vacuum with HEPA filters – only HEPA-designed vacuums are acceptable for LSW.
- NEVER - turn leaded paint into leaded dust by dry scraping or sanding (unless needed around electrical outlets) or grinding, abrasive blasting or planing.
- NEVER - use an open-flame torch or heat gun (above 1100°F) to remove paint or window glazing. Open flame/high heat methods to remove paint create fumes that are dangerous for workers to breathe. Small lead particles created by burning and heating also settle on surrounding surfaces and are very hard to clean up.

C. Containment

Containment is anything that stops any dust or debris from spreading beyond the work area to non-work areas. The level of containment must be determined by the auditor/inspector or supervisor before work is assigned to a crew or contractor.

For 2010, to comply with EPA's LRRPP Rule requirements, a Certified Renovator will be required at the jobsite to assess and set up the containment site.

- NEVER - allow residents and pets access to the work area while work is underway.
- NEVER - open windows and doors allowing lead dust to float into other parts of the building or outside.
- NEVER - allow furniture and other objects to remain in the Weatherization work area while Weatherization work is being performed unless they are covered and sealed in polyethylene sheeting or bags.



Every home and every specific Weatherization measure is unique, therefore the level of containment required will be based on the hazards present, the age of the home, the scope of work activities, and any customer health issues. Although Weatherization jobs require individual assessments, LSW work generally falls into two levels of containment and the related standards are outlined below.

Level 1 Containment

Level 1 containment is required in pre-1978 homes when *less than* 6 ft² of interior painted surface per room or 20 ft² of exterior painted surface will be disturbed.

Level 1 containment consists of methods that prevent dust generation and contains all debris generated during the work process. The containment establishes the work area which must be kept secure.

Measures that *may* fall within this guideline include:

- Installing or replacing a thermostat
- Drilling and patching test holes
- Replacing HEPA filters and cleaning HEPA vacuums
- Changing Furnace Filter
- Removing caulk or window putty (interior)
- Removing caulk or window putty (exterior)
- Removing weather-stripping

Level 2 Containment

Level 2 containment is required when Weatherization activities will disturb *more than* 6 ft² of interior surface per room or 20 ft² of exterior surfaces in homes built prior to 1978. Level 2 containment consists of methods that define a work area that will not allow any dust or debris from work area to spread. Level 2 containment requires the covering of all horizontal surfaces, constructing barrier walls, sealing doorways, covering HVAC registers with approved materials, and closing windows to prevent the spread of dust and debris.

Measures requiring level 2 containment *may* include:

- Drilling holes in interior walls
- Drilling holes in exterior walls, removing painted siding
- Cutting attic access into ceiling or knee walls
- Planing a door in place
- Replacing door jambs and thresholds
- Replacing windows or doors
- Furnace replacements

Additionally, Level 2 containment must **ALWAYS** be used where any of the following is conducted (even if the activities will disturb less than the hazard de minimis levels within the Level 1 category):

- Window replacement
- Demolition of painted surface areas



- Using any of the following:
 - Open-flame burning or torching;
 - Machines to remove paint through high-speed operation without HEPA exhaust control; or
 - Operating a heat gun at temperatures at or above 1100 degrees Fahrenheit.

D. Proper LSW Clean-Up and Debris Disposal

Following the containment standards in the previous section will minimize the level of effort required to properly clean up the job site. All dust, dirt, material scraps, containers, wrappers, and work related debris must be removed from the customer's home. A HEPA vacuum should be used to clean up the work areas. Further cleaning may be necessary based on the hazard.

At the conclusion of the job, once all workers have "cleaned" the work areas thoroughly, Weatherization workers must adhere to the following:

Safe and Secure Disposal

- Bag and gooseneck-seal all waste in 6-mil plastic bags
- Safely dispose of all waste in accordance with federal, state, and local regulations

Visual Inspection Verification

Checking the quality of worksite cleanliness is a two-phase process:

- Phase 1: Worker visual inspection during the cleaning process; look for any visible paint chips, dust, or debris as you clean, using proper techniques.
- Phase 2: Supervisor visual inspection after cleanup. There should be no evidence of settled dust following a cleanup effort. If dust is observed, the Weatherization crew must be required to repeat the cleaning.

If work is done outside the house, the grounds around the dwelling and all exterior horizontal surfaces should also be examined visually to make certain that all waste and debris have been removed and that paint chips were not left behind.

For 2010, to comply with EPA's LRRPP Rule, cleaning verification using EPA-developed cards will be required. EPA expects to have them widely available in late 2008/early 2009; however, using verification cards is not a requirement until 2010.

Specific steps are required of the Certified Renovator during the cleaning verification and are addressed in the EPA LRRPP Rule.