VI. HEALTH & SAFETY

Arkansas Weatherization and Assistance Program's comprehensive Health and Safety Plan is divided into six sections:

See *Policy Regarding Health and Safety Guidance* (WPN 11-6, Effective January 12, 2011

A. Heating, Ventilation and Air Conditioning (HVAC);
B. Appliances;
C. General Building Structure;
D. Physical Health and Safety (Client and Worker);
E. General Hazards (Physical and Material); and
F. Health and Safety Practices for Weatherization Workers.

This plan was developed as a collaborative effort between the State of Arkansas Energy Office (AEO), the Arkansas Weatherization Assistance Program Network, Northwest Arkansas Community College – Weatherization Training Center and Pulaski Technical College – Weatherization Training Center and Department of Energy Project Officer.

Health and Safety issues have become an important part of the Weatherization Assistance Program (WAP) as knowledge about the hazards within dwellings has increased since the Program's inception.

OSHA's Hazard Communication Standard (HCS) requires the development and dissemination of such information:

- Chemical manufacturers and importers are required to evaluate the hazards of the chemicals they produce or import, and prepare labels and safety data sheets to convey the hazard information to their downstream customers;
- All employers with hazardous chemicals in their workplaces must have labels and safety data sheets for their exposed workers, and train them to handle the chemicals appropriately.

Arkansas performs compliance monitoring for OSHA rules and regulations when performing monitoring on in progress units and ensures Subgrantees have a Hazard Communication Plan in place.

Arkansas will also adhere to the OSHA Confined Space Rule.

When a health or safety hazard is detected, it is the policy of the AEO administrator of the Arkansas Weatherization Assistance Program, to inform the client and address the hazard according to protocol.

Although WAP funds are primarily used for energy conservation, the Department considers establishing a healthy and safe home environment to be an important component to weatherization work. Therefore, the health and safety of the building, occupants and weatherization crews or contractors must not be compromised by any retrofit material, technique or practice.

This Health & Safety Plan shall apply to Arkansas Weatherization Assistance Programs. It is not intended to override federal, state or local health and safety regulations, codes or

ordinances. Such requirements, must be followed if they are more stringent, otherwise, the requirements in this plan will apply.

The expenditure limit for Health and Safety measures is twenty-four point four percent (24.4%) of the average per dwelling unit cost. The twenty-four point four percent (24.4%) limit for Health and Safety expenditures is agency wide and does not need to be applied evenly across homes. The Health and Safety expenditures are not a part of the average cost per unit. However, authorized (necessary) repairs that support weatherization, such as minor wiring, plumbing to space heater, ***are part of the limit*** (as adjusted by DOE) and need to bear whole house Savings to Investment Ratio (SIR) scrutiny.

Incidental repairs may be performed in conjunction with any of the priorities previously listed. Incidental repair costs must be included as part of the total unit cost when determining the maximum and average expenditure per dwelling unit.

An incidental repair is defined as those repairs necessary for the effective performance or preservation of weatherization materials. Such repairs include, but are not limited to: framing or repairing windows and doors which could not otherwise be caulked or weather-stripped and providing protective materials, such as paint, used to seal materials installed under this program.

If health and safety issues identified on an individual unit cannot be addressed within the allowable WAP limits then the unit would exceed the scope of this program and must be deferred.

Subgrantees must test for high carbon monoxide (CO) levels and acceptable levels must be reached before weatherization work can start. Maximum acceptable CO readings are as follows:

Carbon Monoxide Action Levels	
Ambient inside of building	9 ppm as measured
Central Furnace (all categories)	400 ppm air free
Boiler	400 ppm air free
Floor Furnace	400 ppm air free
Gravity Furnace	400 ppm air free
Wall Furnace (BIV)	200 ppm air free
Wall Furnace (Direct Vent)	400 ppm air free
Vented Room Heater	200 ppm air free
Unvented Room Heater	200 ppm air free
Water Heater	200 ppm air free
Oven/Broiler	225 ppm as measured
Clothes Dryer	400 ppm air free
Refrigerator	25 ppm as measured
Gas Log (gas fireplace)	25 ppm as measured in vent
Gas Log (installed in wood burning fireplace)	400 ppm air free in firebox

Air-Free Carbon Monoxide
A measurement of CO in an air sample or flue gas that takes into account the amount of excess air (oxygen, O2) in the sample, incorporating an adjustment to the as-measured CO ppm value, thus simulating air-free (oxygen-free) conditions in the sample. Usually measured in units of parts per million (ppm).

Amendments to Arkansas Weatherization Assistance Program Health and Safety Plan

From time to time, this plan may be amended and/or revised by the AEO to reflect changes in state or federal regulations, advances in technology, and/or innovative approaches to weatherization. The AEO encourages agencies to submit suggested changes to these practices that will result in the delivery of services in a more cost-effective manner while continuing to provide high quality work. Suggested changes **must** be accompanied by supporting documentation.

Amendments to these standards will not become effective until the following program year, unless a Program Notice is received from Department of Energy (DOE). The following conditions are where amendments or revisions will become effective immediately:

a. Changes in State or federal law or regulations mandate immediate implementation; or
b. AEO determines that an emergency situation exists, such as a potential threat to life, limb, or personal property, and the proposed amendment and/or revision is necessary for the protection of the health and welfare of Arkansas citizens.

The following sections provide procedures that include a method used to determine when DOE funds will be used to address specific health and safety issues, and how to treat problems that cannot be addressed with DOE funds as well as required training for field workers to identify and test for the presences of health and safety hazards.

A. Heating, Ventilation and Air Conditioning (HVAC)

1. Ventilation

Action/Allowability: 2016 (or most current) ASHRAE 62.2 is required to be met to the fullest extent possible, when performing weatherization. Implementing ASHRAE 62.2 2016 is not required where acceptable indoor air quality already exists as defined by ASHRAE 62.2 2016. Existing fans and blower systems should be updated if not adequate.

Testing: ASHRAE 62.2 2016 evaluation, fan flow, and follow up testing are required to ensure compliance.

***Client Education/Occupant Health Concerns*:** Provide client with information on function, use, and maintenance of ventilation system and components. Include disclaimer that ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality.

Training: ASHRAE 62.2 2016 training required including proper sizing, evaluation of existing and new systems, depressurization tightness limits, critical air zones and other areas included in ASHRAE 62.2 2016.

Identify Measures:

a) Repair or modify existing ventilation if needed;
b) Install new ventilation system, if needed.

Deferral Policy: Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

2. **Whole-Building Mechanical Ventilation Rate**

The required mechanical ventilation rate, Q fan, shall be the rate Q tot in Section 4.1.1 plus the required additional airflow calculated in accordance with Section A3. If the air tightness of the building envelope has been measured, the required mechanical ventilation rate may be reduced as described in Section 4.1.2. In these cases, Section A3 shall be applied before Section 4.1.2 when determining the final mechanical ventilation rate. For existing buildings, if Q fan is less than or equal to 15 cfm, then whole-building ventilation is not required.

3. **Combustion Gases**

Action/Allowability: Proper venting to the outside for combustion appliances, including gas dryers is required. Correction of venting is allowed when testing indicates a problem.

Testing: Combustion appliances, including furnaces, boilers, space heaters, gas fireplaces, cook stoves, gas dryers and water heaters, must be tested to determine if CO emissions are within allowable CO levels.

a) Inspect venting of combustion appliances to confirm adequate clearances, use of proper venting materials and complete venting to the exterior of the dwelling. Gas dryers must be vented to the outside with rigid material.
b) Test naturally drafting appliances for draft and spillage under worst case conditions before and after air tightening.
c) Inspect cooking burners for operability and flame quality.
d) Conduct visual inspection of gas dryer vent.

Client Education/Occupant Health Concerns: Provide client with combustion safety and hazards information, including the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of CO.

Training: How to perform appropriate testing; determine when a building is excessively depressurized, and the difference between air free and as-measured. Drilling and patching double walled vent pipe.

Identify Measures: Maintenance, repair and replacement of PRIMARY heating systems are allowed. Only maintenance and repair is allowed for SECONDARY systems with DOE funds. Capital Intensive funds (LIHEAP funds) may be used to replace secondary heating systems.

a) Clean gas cook stove, repair or replace appliances with combustion gas problems;
b) Clean, repair or replace to correct hazardous conditions;
c) Replacement of cook stoves is not allowed, *see Appliances and Water Heaters.*

Deferral Policy: If the unacceptable CO reading is from a cook stove, other funding sources must be utilized to rectify the situation before weatherization; follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

4. **Air Conditioning and Heating Systems**

Action/Allowability: Arkansas considers "red tagged", inoperable, or non-existent heating systems to constitute a Health & Safety issue. Evaluation of the home for replacement, repair, or installation is required, unless prevented by other guidance herein. Air conditioning system replacement, repair, or installation is allowed in homes of at-risk occupants.

The Energy Auditor determines the most cost effective and energy efficient way to assure that the dwelling being weatherized will be capable of providing the household with a controlled environment.

Switching out an existing heating and/or cooling appliance with a new one may not be the best option or even an allowable process, i.e., unvented combustible fuel space heaters. Also, the condition of the dwelling or the size of the household may dictate a different measure to provide.

DOE will not permit any DOE-funded weatherization work other than incidental repairs on electric space heaters. DOE allows the use of other funding sources for the replacement of electric space heaters (e.g. Capital Intensive (LIHEAP), other leveraged funds) but the Department does not encourage the repair or maintenance of these units because of:

- The high cost of electricity as compared to fossil fuels;
- Lower output ratings (size);
- Risk of fire hazards; and
- Inadequate electrical systems in older homes frequently cannot safely carry the power required to operate an electric heater.

Work on such systems may make local agencies liable for inadequate electric wiring and damages that may result.

Electric space heaters may only be left in a home as secondary heating source when the unit has a tag indicating compliance with ANSI Z21.11.2.

Testing: Make sure systems are present, operable, and performing.

Client Education/Occupant Health Concerns: Discuss and provide information on appropriate use and maintenance of units and proper disposal of bulk fuel tanks when not removed.

Training: Training curriculum at the Weatherization Training Center addresses CO testing of heating systems. Intermediate Weatherization, Heating, Ventilation, and Air Conditioning (HVAC), Crew Leader, and Weatherization Energy Auditor include details regarding said testing.

Identify Measures:

a) "Red tagged" inoperable system, send HVAC tech.
b) Request waiver from AEO to install heat and/or AC system.

Deferral Policy: Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

5. **Space Heaters, Stand Alone Electric**

Action/Allowability: Repair, replacement, or installation is not allowed. Removal is recommended.

Testing: Check circuitry to ensure adequate power supply for existing space heaters.

Client Education/Occupant Health Concerns: Inform client of hazards and collect a signed waiver if removal is not allowed. Place document in clients' file.

Training: Awareness of guidance.

Identify Measures:

a) Allowable as secondary heat source only but recommend removal; collect a signed waiver from Client stating that dangers have been discussed if removal is not allowed.
b) In "NO HEAT" situations, Arkansas WAP requires evaluation for safe heating system and removal of stand alone space heaters. When "NO HEAT" situation is encountered during an energy audit, a waiver must be required from state WAP office approving heat to be installed.

Deferral Policy: Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

6. **Space Heaters, Unvented Combustion**

Action/Allowability: Removal is required, except as secondary heat where the unit conforms to ANSI Z21.11.2. Units that do not meet ANSI Z21.11.2 must be removed prior to weatherization but may remain until a replacement heating system is in place.

Testing: Testing for air-free carbon monoxide (CO) is allowed. Check units for ANSI Z21.11.2 label.

Client Education/Occupant Health Concerns: Inform Client of dangers of unvented space heaters – CO, moisture, NO2, CO can be dangerous even if CO alarm does not sound.

Training: How to perform air-free CO testing. Understanding the dangers of unvented space heaters.

Identify Measures:

a) Units that do not meet ANSI Z21.11.2 must be removed prior to weatherization but may remain until a replacement heating system is in place;
b) Install vented space heater as primary heating source (if needed);
c) Replace secondary heat source as allowable with ANSI Z21.11.2 compliant unit. Grantees are expected to utilize LIHEAP funding for this type of measure, if the grantee does not have access to LIHEAP funding for this job, they may request approval from the state to use DOE funding.

***Deferral Policy*:**

a) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP;
b) Follow all appropriate Deferral and Referral policies and protocols if Client does not allow removal of unvented, unsafe or non ANSI Z21.11.2 compliant unit.

7. **Space Heaters, Vented Combustion**

Action/Allowability: Should be treated as furnaces.

Testing: Venting should be tested consistent with furnaces.

Client Education/Occupant Health Concerns: Discuss and provide information on appropriate use and maintenance of units and proper disposal of bulk fuel tanks when not removed.

Training: Proper testing methods for safe operation (draft and CO) should be conducted and for steady state efficiency if possible.

Identify Measures: Repair or remove vented space heater due to problems regarding the operation of the unit or high CO readings.

Deferral Policy:

a) Deferral should be exercised when existing code violations are present and correcting them would be beyond the scope of the DOE WAP, and/or when there are problems affecting the heat system/furnace that are beyond the scope of the DOE WAP, such as certain electrical problems. For additional deferral criteria, see deferral section.
b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

8. **Solid Fuel Heating (Wood Stoves, etc.)**

Action/Allowability: Maintenance, repair, and replacement of primary indoor heating units is allowed where occupant health and safety is a concern. Maintenance and repair of secondary heating units is allowed.

Testing: Required inspection of chimney and flue and combustion appliance zone depressurization.

a) **Wood Stove Clearances**
Stoves that are listed by a testing agency like Underwriters Laboratory have installation instructions stating their clearance from combustibles. Unlisted stoves must adhere to clearances specified in NFPA 211.

b) **Stove Clearances**
Look for metal tags on the wood stove that list minimum clearances. Unlisted stoves must be at least thirty-six (36) inches away from combustibles. However, listed wood stoves may be installed to as little as six (6) inches away from combustibles if they incorporate heat shields and combustion design that direct heat away from the back and sides. Ventilated or insulated wall protectors may also decrease unlisted clearance from one-third to two-thirds, according to NFPA 211. Always follow the stove manufacturer's or heat-shield manufacturer's installation instructions.

c) **Floor Construction and Clearances**
Wood stoves must rest on a floor on noncombustible construction. An example of a noncombustible floor is one composed of only masonry material sitting on dirt. This floor must extend no less than eighteen (18) inches beyond the stove in all directions. Approved floor protectors or the stove-bottom heat shields of listed stoves can allow the stove to rest on a floor containing combustible materials. The floor would need a minimum of one-quarter inch of grouted tile or an approved floor protector extending eighteen (18) inches away from the stove in all directions.

d) **Vent-Connector and Chimney Clearance**
Interior chimneys require a 2-inch clearance from combustibles and exterior chimneys require a 1-inch clearance up to two-thirds. Type-L double wall vent pipe requires only a 9-inch clearance from combustibles.

Client Education/Occupant Health Concerns: Provide client education for every recipient of a new stove which outlines the safe operation and proper maintenance of the unit including recognizing depressurization.

Training: How to perform CAZ depressurization test and proper inspection.

Identify Measures: System must be operational and inspected using all test protocols before any other weatherization begins. Wood stoves may ***only*** be considered if recommended by the ECOS audit. The energy audit must drive the decision regarding whether a wood stove should be replaced. Additionally, local agencies must:

a) Ensure wood stove installations, maintenance and inspections are performed by qualified personnel only:
    a. Must be installed in accordance with manufacturer's recommendations.
b) Ensure that only wood stoves which are certified and labeled by the National Fire Protection Association under 86M-1986 and 211-1984, the International Conference of Building Officials, or other equivalent listing organizations may be purchased with DOE funds and that electrical parts are certified and labeled by Underwriters Laboratory. These organizations require the manufacturer to test the heater and include detailed instructions for safe installation. After July 1990, stoves must also be certified to meet the Environmental Protection Agency (EPA) emission standards or local Standards if they are stricter;
c) Ensure that only a wood stove certified and labeled for mobile homes may be installed in a mobile home. The label should reference the Department of Housing and Urban Development's (HUD) Mobile Home Standard and name the independent testing laboratory. Installation must be done in accordance with the manufacturer's recommendations;
d) Ensure that the inclusion of wood stoves is coordinated with State and County fire marshals (or equivalent) to ensure that restrictions and codes are met. All applicable permits must be obtained, and all work must receive approval from subsequent inspections; and
e) Wood stoves must be removed from manufactured homes if not approved for use with manufactured homes.

Deferral Policy:

a) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.
b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP if Client does not allow removal and/or replacement with listed unit.

B. Appliances

1. Appliances and Water Heaters

Action/Allowability: Replacement of water heaters is allowed on a case-by-case basis. Replacement and installation of other appliances are not allowable health and safety costs. Repair and cleaning are allowed. *Also see Air Conditioning and Heating Systems and Combustion Gases and Refrigerant*.

Testing: Determine whether appliances/water heaters are performing safely. Combustion safety testing is required when combustion appliances are present. In every home that has fuel burning devices that have the capability of malfunction and/or "spill" such as water heaters, stoves/cookers, fireplaces or gas heating there is a risk of a carbon monoxide build up which could result in carbon monoxide poisoning.

Client Education/Occupant Health Concerns:

a) Discuss and provide information on appropriate use and, maintenance of appliances/water heaters. The Client acknowledges that staff has explained and demonstrated how to use their appliance and/or water heater prior to finalizing weatherization work in their home. The Client Education Checklist is signed by the Client; this document is placed in the Clients' file.
b) Arkansas WAP does not consider cook stoves to be a form of safe home heat, and educate clients against using cook stoves for home heating.

Training: Awareness of guidance and diagnostic training and testing.

Identify Measures:

a) Test all combustion appliances;
b) Clean, repair and/or replace appliances with combustion gas problems.

Deferral Policy: Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

2. **Refrigerant**

Action/Allowability: Reclaim refrigerant per Clean Air Act 1900, Section 608, as amended by 40 CFR82, 5/15/93.

Testing: Arkansas WAP Subgrantees shall ensure that sub-contractors who would be charged with refrigerant reclamation (e.g., removal of old refrigerators or air conditioning units) follow all EPA testing protocols and are EPA-approved section 608 type I certified or universal certified.

Client Education/Occupant Health Concerns: Clients should not disturb refrigerant.

Training: EPA-approved section 608 type I or universal certification.

Identify Measures:

a) Proper disposal by WAP. (Disposal of refrigerants must be in accordance with EPA's safe disposal requirements).
b) WAP agency must have signed agreement with the company providing refrigerator/air conditioners stating guaranteeing removal of old appliances and proper disposal of refrigerants according to EPA requirements.

Deferral Policy:

a) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.
b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP if Client does not allow removal of old air conditioner and/or refrigerator.

C. General Building Structure

1. **Building Structure and Roofing**

Action/Allowability: Building rehabilitation is beyond the scope of the Weatherization Assistance Program. Minor roof repair is allowed by DOE in order to protect installed measures.

Testing: While conducting the initial audit, the building structure will be inspected for structural integrity to ensure that access to areas necessary for weatherization is safe for entry and performance of assessment, work, and inspection.

a) The Energy Auditor must have access to all aspects of the structure in order to adequately and appropriately gather data for the ECOS energy audit. Clothing, dogs, trash or other impediments restricting

access to any portion or portions of the dwelling that block necessary access may constitute a deferral.

b) Minor repairs to protect DOE or LIHEAP materials installed may be used to protect the energy saving investment. However, building rehabilitation is beyond the scope of the WAP. Dwellings whose structural integrity is in question should be referred to other appropriate local and state agencies.
c) Incidental repairs necessary to effectively perform or preserve weatherization materials are allowed.

Client Education/Occupant Health Concerns: Notify client of structurally compromised areas.

Training: How to identify structural and roofing issues.

Identify Measures: Incidental repairs as cost allowable.

Deferral Policy:

a) Weatherization services may need to be delayed until the dwelling can be made safe for crews and occupants.
b) Homes with structural problems that create or exacerbate Health & Safety issues **MUST** be deferred.
c) Homes with conditions that require more than incidental repair should be deferred. *See Mold and Moisture guidance below*.

2. **Drainage-Gutters, Down Spouts, Extensions, Flashing, Sump Pumps, Pumps, Landscape, etc.**

Action/Allowability: Major drainage issues are beyond the scope of the Weatherization Assistance Program.

Testing: Conduct visual inspection.

Client Education/Occupant Health Concerns: Importance of cleaning and maintaining drainage systems. Provide information on proper landscape design.

Training: How to recognize drainage issues.

Identify Measures: Incidental repairs may be performed as preventive measures. Major drainage issues are beyond the scope of the WAP.

Deferral Policy: Homes with conditions that may create a serious health concern that require more than incidental repair should be deferred. *See Mold and Moisture guidance*.

3. **Window and Door Replacement, Window Guards**

Action/Allowability: Replacement, repair, or installation is not an allowable health and safety cost or an efficiency measure unless cost justified. Window guards are not allowed.

Testing:

a) Perform lead testing;
b) Pulling an acceptable SIR.

Client Education/Occupant Health Concerns: Provide information on lead risks.

Training: Awareness of guidance.

Identify Measures:

a) Broken or missing glass in windows must be replaced or repaired. Those merely cracked should receive minimal treatment.
b) Any other measures must be cost effective as determined by the energy audit.
c) Must follow LSW (Lead-Safe Work) requirements for pre-1978 homes when working on windows and doors.

Deferral Policy: Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

D. Physical Health & Safety (Client and Worker)

1. **Code Compliance**

Action/Allowability: Correction of preexisting code compliance issues is not an allowable cost other than where weatherization measures are being conducted. State and local (or jurisdiction having authority) codes must be followed while installing weatherization measures.

Testing: Visual inspection. Local code enforcement inspections.

Client Education/Occupant Health Concerns: Inform Client of observed code compliance issues.

Training: How to determine what code compliance may be required. Subgrantees are required to check with the local code enforcement office in the city or county where the weatherization job is located if:

a) any circumstances in the home are suspected to be out of compliance with applicable code, so that Client may be informed of problems that are beyond the scope of the weatherization program, and

b) any weatherization measure to be installed is governed by codes, including license required of installers and permits necessary for the work to be done.

Identify Measures: Follow all State and Local Codes when installing weatherization measures.

Acquire all required permits and licenses pertinent to installing weatherization measures. These vary by jurisdiction and it is the responsibility of each Subgrantee agency to know what the codes are in each of the areas they work in, as well as what permits and licenses are required in each of the areas they work in.

Deferral Policy: Condemned properties and properties where "red tagged" health and safety conditions exist that cannot be corrected under this guidance should be deferred.

2. **Occupant Preexisting or Potential Health Conditions**

Action/Allowability: When a person's health may be at risk and/or the work activities could constitute a health or safety hazard, the occupant at risk will be required to take appropriate action based on severity of risk. Temporary relocation of at-risk occupants may be allowed on a case by case basis. At-risk is defined as an elderly person, disabled person, child or other person with medical problems affected by heat, cold, poor air quality or disruption of the home environment. A physician's statement is required for Health & Safety measures if the medical condition is the reason that the measure is being installed. Otherwise, Client may self-report health issues so that necessary accommodations may be made during the weatherization process.

Testing: Require occupant to reveal known or suspected health concerns as part of initial application for weatherization. Screen occupants again during audit.

Client Education/Occupant Health Concerns: Provide client information of any known risks. Provide worker contact information so client can inform of any issues.

Training: How to assess occupant preexisting conditions and determining what action to take if the home is not deferred; awareness of potential health hazards.

Identify Measures: Weatherization agencies including subcontractors are required to take all reasonable precautions against performing work on homes that will subject the occupants or themselves to health and/or safety risks.

In cases where an occupant's health is fragile, or an occupant has been identified to have a health condition, including allergies, and/or the crew work activities would themselves constitute a health and/or safety hazard, the occupant(s) at risk shall be required to leave during the performance of the work activities.

In cases where an occupant is identified as having an allergy to a specific weatherization material, that material will not be installed. If comparable alternative materials are available and the occupant has no known allergy to the alternative materials and they meet DOE regulations, crews may substitute the alternative material(s). If no safe alternative material meeting DOE standards is available, the measure shall not be installed. A request to install alternative materials must be submitted to AEO for approval. This must be well documented in the client file.

Deferral Policy:

a) Failure or the inability to take appropriate actions must result in deferral.
b) A dwelling unit should not be weatherized where there is a major code violation or where there is a potentially harmful situation that may adversely affect the occupants or agency's weatherization crew and/or other staff.
c) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

3. **Occupational Safety and Health Administration (OSHA) and Crew Safety**

Action/Allowability: Workers must follow OSHA standards and Material Safety Data Sheets (MSDS) and take precautions to ensure the health and safety of themselves and other workers. MSDS must be posted wherever workers may be exposed to hazardous materials.

Testing: Grantees must perform assessments to determine if crews are utilizing safe work practices. Training will be made available at the Arkansas Weatherization Training Center.

Client Education/Occupant Health Concerns: WAP Workers must follow OSHA standards and Material Safety Data Sheets (MSDS) and take precautions to ensure the health and safety of Clients, themselves and other workers. MSDS must be posted wherever workers may be exposed to hazardous materials.

Training: Use and importance of personal protection equipment.

a) OSHA 10-hour training is required for all weatherization workers.
b) OSHA 30-hour training is required for crew leaders and Weatherization Directors.

Identify Measures: All crew leaders, energy auditors and AEO field staff must complete training by July 1, 2018.

Deferral Policy:

a) Weatherization work may be deferred if doing the work would put crews at undue health and safety risk.
b) Referral should be made when problems are identified that are beyond the scope of the DOE WAP, such as electrical or other code violations, or conditions that pose a health or safety risk to crews and/or Clients. Examples of referral agencies include, but are not limited to, local housing authority agencies, other CAA local agencies, landlords, other appropriate funding sources.
c) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

4. **Injury Prevention of Occupants and Weatherization Workers—Measures Such as Repairing Stairs and Replacing Handrails**

Action/Allowability: Workers must take all reasonable precautions against performing work on homes that will subject workers or occupants to health and safety risks. Minor repairs and installation may be conducted only when necessary, to effectively weatherize the home; otherwise these measures are not allowed.

Testing: Observe if dangers are present that would prevent weatherization.

Client Education/Occupant Health Concerns: Inform Client of observed hazards and associated risks.

Training: Awareness of potential hazards.

Identify Measures: Workers will take all reasonable precautions against performing work on homes that will subject workers or occupants to health and safety risks *see Other Health and Safety Practices section*.

a) If crews encounter a situation where a staircase is deemed unsafe, for example, and the staircase is necessary to reach the area where the crews need to perform the weatherization work, and repairing the staircase requires only minor repair work and installation measures, crews shall perform the minor repair work so that they may safely perform the weatherization work to the home.
b) Injury Prevention Issues are addressed in the Client Education Checklist (WAP 13) and Health and Safety Checklist (WAP 10). A copy of the Client Education Checklist is placed in the clients' file.

Deferral Policy: If the repair work required is deemed to be beyond the scope of the DOE WAP (major repair is required such as rebuilding an entire staircase), the weatherization work to that area of the home shall be deferred

until the home owner has satisfactorily installed the required repair(s). Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

E. General Hazards Physical & Material

1. Spray Polyurethane Foam (SPF)

Action/Allowability: Use EPA recommendations (available online at http://www.epa.gov/dfe/pubs/projects/spf/spray_polyurethane_foam.htl) when working within the conditioned space or when SPF fumes become evident within the conditioned space. When working outside the building envelope, isolate the area where foam will be applied, take precautions so that fumes will not transfer to inside conditioned space, and exhaust fumes outside the home.

Testing: Check for penetrations in the building envelope including while blower door is running. Sensory inspection inside the home for fumes during foam application.

Client Education/Occupant Health Concerns: Precautions for using Spray Polyurethane Foam is addressed in the Client Education Checklist (WAP 13) and Health and Safety Checklist (WAP 10). A copy of the Client Education Checklist is placed in the Clients' file.

Training:

a) Training on use of various products with specification for each application type. MSDS sheets. Temperature sensitivity.
b) Workers using foam products must receive training on the proper use of these various products and understand the specification for each application type.
c) Documentation of installers viewing an installation video or online training and verification of reading and understanding product use information must be kept at the Subgrantee agency.

Identify Measures:

a) Comply with all applicable codes, OSHA, NIOSH and MSDS and Instructions.
b) MSDS sheets are mandatory for any foam product used and a thorough understanding of the temperature sensitivity of the product in use is required.
c) Liquid Foam Air Sealant. Liquid closed-cell polyurethane foam is a versatile air sealing material. Closed-cell foam is packaged in a one-part injectable variety and a two-part sprayable variety. It has a very high R-value per inch and is ideal for insulating and air sealing small, poorly insulated, and leaky areas in a single application. Installation is easy compared to other materials to accomplish the same air sealing tasks. However, cleanup is difficult enough that you probably don't

want to clean up multiple times on the same job. Instead identify all the spots needing foam application, make a list, and foam them one after another.

d) One-Part Foam: This gap filler has tenacious adhesion. One-part foam is best applied with a foam gun rather than the disposable cans. Cleanup is difficult if you get careless. When squirted skillfully into gaps, this material reduces air leakage, thermal bridging, and air convection through the assemblies to which it is applied. One-part foam isn't effective or easy to apply to gaps over about one (1) inch or to bottomless gaps. This product can leave small air leaks unless applied with skill.
e) Two-Part Foam: Good for bridging gaps larger than one (1) inch. Two-part foam has become very popular for use with polyurethane foam board to sealing large openings. Cut foam board to close-enough tolerances around obstacles and fill the edges with the two-part foam. Two-part foam should be sprayed to at least an inch of thickness when it serves as an adhesive for foam board patches over large holes for strength.
f) Foam Construction Adhesive: Polyurethane foam dispensed from foam guns is an excellent adhesive for joining many kinds of building materials. It works well in joining foam sheets together into thick slabs for access doors through insulated building assemblies.

Deferral Policy:

a) Deferral should be exercised when existing code violations are present and correcting them would be beyond the scope of the DOE WAP.
b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.
c) If any household members have any respiratory problems use alternative sealing materials.
d) Alternative sealing materials may be used.

2. **Electrical, Knob-and-Tube Wiring**

Action/Allowability: Minor electrical upgrades and repairs necessary in order to install specific weatherization measures and where health or safety of the occupant is at risk are allowed. Arkansas state code prohibits installing insulation over knob-and-tube wiring. Thus, insulating over knob-and-tube wiring is not allowable in Arkansas.

Testing: Visual inspection for knob-and-tube wiring. Voltage drop and voltage detection testing are allowed. Check for alterations that may create an electrical hazard.

Client Education/Occupant Health Concerns: Provide information on overloading circuits, over-current protection, and basic electrical safety/risks.

Training: How to identify electrical hazards; Local code compliance.

Identify Measures: Arkansas WAP will screen for the presence of knob-and-tube wiring during the application process (Client Application-WAP 02). If the applicant acknowledges the presence of knob-and-tube wiring at the time of application, the client will be referred to the appropriate agency for assistance to remedy this problem. The client may possibly have new wiring by the time the client's name is at the top of the priority list.

3. **Electrical, Other than Knob-and-Tube Wiring**

Action/Allowability: Minor electrical repairs are allowed where health or safety of the occupant is at risk. Upgrades and repairs are allowed when necessary to perform specific weatherization measures.

Testing: Visual inspection - Voltage drop and voltage detection testing are allowed.

Client Education/Occupant Health Concerns: Provide information on over-loading circuits, electrical safety/risks.

Training**:** How to identify electrical hazards; Local code compliance.

Identify Measures**:** Energy audit must identify electrical hazards. Repair of problems must be by a licensed electrician.

a) Frayed, loose, or damaged wiring.
b) Missing junction boxes where wires meet: must be installed prior to insulating.
c) Light fixtures hanging by wire.
d) Electrical outlet or switch with loose wires or other issues.
e) Appliances or electrical equipment incorrectly wired or otherwise incorrectly connected to electrical power.
f) Electrical problems/upgrades necessary to install weatherization measures.

Deferral Policy: Any electrical problem that is beyond the scope of WAP.

4. **Fire Hazards**

Action/Allowability: Correction of fire hazards is allowed when necessary to safely perform weatherization.

Testing: Check for fire hazards in the home during the audit and while performing weatherization.

Client Education/Occupant Health Concerns: Inform client of all observed hazards.

Training: How to identify fire hazards.

Identify Measures: At all times crews are to look for potential fire hazards:

a) Combustion appliances shall be checked for inadequate clearances between the appliances (including venting systems) and combustible materials.
b) Chimneys and wood stove flues shall be checked for potentially dangerous levels of creosote build-up.
c) Observations of fire hazards (existent/nonexistent) will be noted on the Health and Safety Checklist (WAP 10) and placed in the Clients' file.

Deferral Policy: Local agencies may use health and safety funds to remedy potential fire hazards prior to and during the course of weatherization work within reasonable limits. If the issue cannot be remedied, crews may defer weatherization work until the owner or other qualified agency has remedied the potential fire hazard problem.

5. **Smoke, Carbon Monoxide Detectors, and Fire Extinguishers**

Action/Allowability: Installation of smoke/CO detectors is allowed where detectors are not present or are inoperable. Replacement of operable smoke/CO detectors is not an allowable cost. Providing fire extinguishers is allowed only when solid fuel is present.

Testing: Check for operation.

Client Education/Occupant Health Concerns: Provide Client with verbal and written information on use of smoke/CO detectors and fire extinguishers where allowed.

Training: Where to install detectors; Local code compliance.

Identify Measures:

a) Check any existing smoke/CO detectors for functional/accurate operation.
b) Install smoke/CO detectors when accurately operating units do not already exist.
c) Provide fire extinguishers when clients are heating with solid fuel, such as wood.
d) Must follow all local codes when installing smoke/CO detectors.

Deferral Policy: No Deferrals

6. **Asbestos - In Siding, Walls, Ceilings, etc.**

Action/Allowability: In Arkansas, no handling and/or altering of asbestos materials is allowed. All precautions must be taken not to damage siding. Siding suspected of containing asbestos should never be cut or drilled or removed from the home; if asbestos is present the agency is required to insulate through home interior.

Testing: Inspect exterior wall surface and subsurface for asbestos siding prior to drilling or cutting.

Client Education/Occupant Health Concerns: Inform the Client that suspected asbestos siding is present and how precautions will be taken.

Clients are educated on asbestos dangers. A copy of "*Asbestos In Your Home*" is given to each Client during the initial audit process. These actions are documented on the Client Education Check List (WAP 13) and placed in the Client's file.

Training: AHERA course for testing and asbestos control professional training for abatement. How to identify asbestos containing materials.

Identify Measures: Keep activities to a minimum in any areas having damaged material that may contain asbestos. Do not further disturb the material. If necessary, weatherization work to that area may have to be deferred.

Deferral Policy: If weatherization work would create a hazard, the home **must** be deferred. Client must be informed in writing of the potential hazard. Clearance statement by Asbestos Hazards Emergency Response Act (AHERA) certified professional must be obtained by Client before weatherization can occur. A copy of the statement/report must be kept in the Client's file.

7. **Asbestos - In Vermiculite**

Action/Allowability: When vermiculite is present, unless testing determines otherwise, take precautionary measures as if it contains asbestos, such as not using blower door tests and utilizing personal air monitoring while in attics. Where blower door tests are performed, it is a best practice to perform pressurization instead of depressurization. Encapsulation by an appropriately trained asbestos control professional is allowed. Removal is not allowed.

Testing: Assess whether vermiculite is present. Asbestos Hazard Emergency Response Act of 1986 (AHERA) certified prescriptive sampling is allowed by a certified tester.

Client Education/Occupant Health Concerns: Clients should be instructed not to disturb suspected asbestos containing material. Provide asbestos safety

information to the Client. Formally notify Client if test results are positive for asbestos and signed by the Client. Precautions' regarding handling asbestos is given to the Client during the initial audit of the home. Documentation of this instruction is maintained in the Client's file (Client Education Checklist WAP 13).

Training: AHERA course for testing and asbestos control professional training for abatement. How to identify asbestos containing materials.

Identify Measures:

a) When vermiculite is present, unless testing determines otherwise, take precautionary measures as if it contains asbestos, such as **not** using blower door tests and utilizing personal air monitoring while in attics.
b) Where blower door tests are performed, it is a best practice to perform pressurization instead of depressurization.
c) Removal is **not** allowed.

Deferral Policy: Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

8. **Asbestos – On Pipes, Furnaces, Other Small Covered Surfaces**

Action/Allowability: Assume asbestos is present in covering materials. Encapsulation is allowed by an AHERA asbestos control professional and should be conducted prior to blower door testing. Removal may be allowed by an AHERA asbestos control professional on a case by case basis.

Testing: AHERA testing is allowed by a certified tester.

Client Education/Occupant Health Concerns: Clients will be instructed not to disturb suspected asbestos containing material. Provide asbestos safety information to the client.

Precautions regarding asbestos is given to the Client during the initial audit of the home. Documentation of the instruction is maintained in the Client's file (Client Education Checklist WAP 13).

Training: AHERA course for testing and asbestos control professional training for abatement. How to identify asbestos containing materials.

Identify Measures:

a) Inspect pipe and other coverings for asbestos. It is difficult to tell whether a material contains asbestos simply by looking at it, unless it is labeled. If in doubt, treat the material as if it contains asbestos.
b) Do not disturb materials containing asbestos unless necessary during the installation of energy saving measures.

c) Check state and local codes prior to removal and replacement of asbestos containing materials. All local, state and federal requirements and regulations shall be followed by Arkansas Subgrantees.

Deferral Policy: Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

9. **Biologicals and Unsanitary Conditions – Odors, Mustiness, Bacteria, Viruses, Raw Sewage, Rotting Wood, etc.**

Action/Allowability: Remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowed. Addressing bacteria and viruses is not an allowable cost.

Testing: Sensory inspection.

Client Education/Occupant Health Concerns: Inform Client of observed conditions. Provide information on how to maintain a sanitary home and steps to correct deferral conditions.

Safety and preventive measures regarding any observed biological and unsanitary conditions are addressed with the Client during the initial audit of the home. The Client is also given a copy of "*A Brief Guide to Mold, Mildew and Moisture, and Your Home.*" The Client acknowledges receipt of this information and signs off on the Client Education Checklist (WAP 13). Documentation of the instruction is maintained in the client file.

Training: How to recognize conditions and when to defer. Worker safety when coming in contact with these conditions.

Identify Measures:

a) Assess the cost-effectiveness and necessity of remediation of these conditions on a case by case basis with prior approval from AEO;
b) The use of personal protective equipment shall be strictly enforced. Respirators, protective eyewear, and protective clothing will be worn when biological agents are present or suspected in order to eliminate or minimize crew exposure;
c) Caution should be taken when selecting air tightness limits for dwellings with these conditions. Since these conditions are often related to moisture, Arkansas requires local agency crews to assess moisture conditions as part of the initial energy audit procedure;
d) Virus and bacteria remediation is **not** allowable.

Deferral Policy: There will be times when weatherization measures may need to be delayed until the problem can be remedied by the home owner or another qualified agency. Referral to the local Health Department may be warranted.

10. **Formaldehyde, Volatile Organic Compounds (VOC), and Other Air Pollutants**

Action/Allowability: Removal of pollutants is allowed and is required if they pose a risk to workers. If pollutants pose a risk to workers and removal cannot be performed or is not allowed by the Client, the unit must be deferred.

Testing: Sensory inspection.

Client Education/Occupant Health Concerns: Inform Client of observed condition and associated risks. Provide Client written materials on safety and proper disposal of household pollutants.

Training: Arkansas WAP staff are trained to take all reasonable precautions against performing work on homes that will subject them or occupants to health and safety risks.

Identify Measures: Arkansas WAP crews shall take every precaution necessary to minimize exposure to air pollutants. When using chemicals and products that may contain any of the pollutants within this category, strict adherence to label instructions and precautions shall be required. When possible known pollutants shall be removed safely and disposed of properly.

Deferral Policy: If the pollutant cannot be removed due to Client unwilling to allow its removal, and exposure cannot be safely and adequately minimized, weatherization work may have to be deferred to ensure the safety of the crew. This action will be noted in the Client's Deferral/Denial Letter, a copy will be placed in the Clients' file.

Clients must be informed by evaluators and/or workers of observed hazards and associated risks (where applicable).

11. **Mold and Moisture**

Action/Allowability: Limited water damage repairs that can be addressed by weatherization workers and correction of moisture and mold creating conditions are allowed when necessary in order to weatherize the home and to ensure the long term stability and durability of the measures.

Testing: Visual assessment is required and diagnostics such as moisture meters are recommended pre and prior to final inspection. Mold testing is not an allowable cost.

All units must be inspected for problems associated with excess moisture. Identification of potential moisture problems shall be documented in the Client file. If possible, and within the scope of the DOE WAP, repair minor moisture problems that will diminish the effectiveness of weatherization measures.

a) Humidity inside the home should measure less than sixty-five percent (65%).
b) When test shows more than sixty-five (65%) humidity, the weatherization technician should work with the Client to eliminate the source of the excess moisture. A spot or continuous vent fan should be installed when the source of the problem cannot be eliminated.
c) Clothes dryers should be vented to the outside of the dwelling. Venting for dryers must be rigid metal. UL 181 listed flexible duct may be utilized for transitional ducts from appliance to permanent duct. It may not pass through walls, floors or ceilings.
d) DOE recommended optimum relative humidity level in cold climates = 35 – 50% RH; 40 – 60% RH in hot-humid climates.

Examples of where mold problems may be found in the home:

- Dirty air conditioners
- Dirty humidifiers
- Bathroom without vents or windows
- Kitchen without vents or windows
- Dirty refrigerator drip pans
- Laundry room with unvented dryer
- Unventilated attic
- Carpet on damp basement floor
- Bedding
- Closet on outside wall
- Dirty heating/air conditioning system
- Water damage (around windows, roof, or basement)

Molds can be a problem in mobile homes:

- Small volume – less dilution of relative humidity
- Many cold surfaces for condensation
- Many sources of process wood – mold food
- Roofing – no ventilation or ventilation poor distributed
- Crawlspace – no ventilation or poorly distributed/tight skirting; plumbing leaks

Client Education/Occupant Health Concerns: All local agencies must include some form of notification or disclaimer to the Client upon the discovery to the Client upon the discovery of a mold condition and what was specifically that was done to the home that is expected to alleviate the condition and/or that the work performed should not promote new mold growth. In addition, educate the Client concerning:

a) Symptoms related to mold exposure:
    - Nasal and sinus congestion
    - Sore throat, coughing
    - Shortness of breath, chest tightness
    - Eye irritation

- Headache
- Fatigue
- Rashes
- Known asthma trigger

b) Sources of home moisture:
   - Shower (excludes towels and spillage) – 1.0 pint (pt)/10 minute shower
   - Clothes drying (vented indoors) – 5.0 pt/load
   - Combustion (unvented space heater) – 7.6 pt/gallon kerosene
   - Cooking dinner (family of four) – 1.2 pt (1.6 if gas cooking)
   - Floor mopping – 1.5 pt/50 sq. ft.
   - Respiration (family of four) – 0.4 pt/hour
   - Desorption of materials: seasonal – 6 to 17 pt/day
   - New construction – 10+ pt/day
   - Ground moisture migration = Up to 100 pt/day

Training: National curriculum on mold and moisture or equivalent.

Identify Measures: All units must be inspected for problems associated with excess moisture. Identification of potential moisture problems shall be documented in the Client file. Vent dryers to the outside. Gas dryers must be vented with rigid material.

Deferral Policy: Most typically, deferral may be needed.

Where severe Mold and Moisture issues cannot be addressed, deferral is required.

When possible, referral should be made when problems are identified that are beyond the scope of the DOE WAP, such as electrical or other code violations or severe health and safety issues such as severe mold which cannot be adequately addressed within the scope of the DOE WAP.

12. **Pests**

Action/Allowability: Pest removal is allowed only where infestation would prevent weatherization. Infestation of pests may be cause for deferral where it cannot be reasonably removed or poses health and safety concern for workers. Screening of windows and points of access is allowed to prevent intrusion.

Testing: Assessment of presence and degree of infestation and risk to worker.

Client Education/Occupant Health Concerns: Inform Client of observed condition and associated risks.

Training: Training is provided at the WTC regarding how to assess presence and degree of infestation, associated risks, and need for deferral.

Identify Measures:

a) Initial assessment of presence and degree of infestation and risk to workers.
b) Determine whether the pest infestation would prevent or hamper the weatherization work.
    i. If yes, inform Client to take the necessary steps to remove the pest infestation problem so that the weatherization work can proceed. Document the Client file.
    ii. WAP may not use toxic and poisonous chemicals inside the Clients' home.

Deferral Policy: Infestation of pests may be cause for deferral where it cannot be reasonably removed or poses health and safety risks for workers.

13. **Radon**

Action/Allowability: Whenever site conditions permit, exposed dirt must be covered with a vapor barrier except for mobile homes. In homes where radon may be present, precautions should be taken to reduce the likeliness of making radon issues worse.

Testing: DOE allows testing in locations with high radon potential. **Arkansas is not currently identified as an area with high radon potential.**

Client Education/Occupant Health Concerns: Provide Client with EPA consumer's guide to radon. Safety and preventive measures regarding Radon is provided to the Client during the initial audit of the home. The Client is also given a copy of "*A Citizen's Guide to Radon or A Consumer's Guide to Radon Reduction.*" The Client acknowledges receipt of this information and signs off on the Client Education Checklist (WAP 13). Documentation of the instruction is maintained in the Client file.

Training: What is it, how it occurs. What factors may make radon worse. Weatherization measures that may be helpful; Vapor barrier installation; Training is provided at the WTC.

Identify Measures: Install vapor barrier except in mobile homes.

Deferral Policy: Deferral not applicable.

14. **Lead Based Paint**
(see Lead Safe Work Practices)

See *Policy Regarding WAP Activities and Federal Lead-Based Paint Regulations* (WPN 02-6, Effective July 12, 2002)

Action/Allowability: Follow EPA's Lead; Renovation, Repair and Painting Program (RRP). In addition to RRP, Weatherization requires all weatherization crews working in pre-1978 housing to be trained in Lead Safe Weatherization (LSW). Deferral is required when the extent and condition of lead-based paint in the house would potentially creature further health and safety hazards.

Testing: Testing is allowed. Job site set up and cleaning verification is required by a Certified Renovator.

Client Education/Occupant Health Concerns: The head of household of every home to be weatherized receives the informational pamphlet: "*Renovating Right*". The inspector also conducts a client education segment as part of the initial inspection to assure that the occupants are fully aware of the hazards posed by Lead Based Paint exposure. This procedure is documented by using a signed receipt from the head of household which confirms that the information was not only distributed, but also explained. This receipt is kept in the Client file.

Training: All weatherization crews working on pre-1978 homes must receive LSW training and be accompanied by an EPA Certified Renovator. Grantee Monitors/Inspectors must be Certified Renovators and receive LSW training.

Identify Measures:

a) Test areas where weatherization work is likely to occur.
b) Follow the proper DOE LSW protocols, OSHA regulations and EPA regulations in all pre-1978 homes.
c) Don't just assume that all mobile homes are categorically exempt. Any home built before 1978, or any mobile home remodeled using paints and varnishes prior to 1978, may contain lead-based paint. These paints should considered "guilty until proven innocent" by way of testing.

Deferral Policy: When it is determined that the level of lead present in the home is so high that it presents a hazard to workers, the weatherization work should be deferred until a licensed lead abatement professional has eliminated the health hazard. Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

Lead Work Safety (LWS) Practices

See *Policy Regarding Lead Safe Weatherization Guidance* (WPN 08-06, Effective September 22, 2008)

Presence of lead based paint associated with dwellings built before 1978. State policy mandates that all personnel working directly on dwellings shall participate in an eight (8) hour Lead Workers Safety class. Moreover, the presence of lead is an inspection issue and current procedures are designed to identify the presence of lead on Work Orders and work safely in those situations.

With respect to Lead Based Paint issues, Arkansas WAP uses an approach that addresses Client safety and awareness, worker safety and awareness, and on-site practices.

The head of household of every home to be weatherized receives the informational pamphlet: "*Renovating Right*". The inspector also conducts a client education segment as part of the initial inspection to assure that the occupants are fully aware of the hazards posed by Lead Based Paint exposure. This procedure is documented by using a signed receipt from the head of household which confirms that the information was not only distributed, but also explained. This receipt is kept in the Client file.

AEO's monitoring staff will have oversight responsibility in this area. While Lead Safe Work practices have long been built into the program, the monitors will focus more directly on this area as they conduct their monitoring visits. Program operators will be required to show that all Lead Based Paint protocols: information sharing, Lead safe work practices, proper equipment, and so forth are up to date and in compliance to all regulations whatever they turn out to be. Those programs that are not in compliance, and fail to comply once identified, will face the most serious sanctions that can be leveled: reduced allocation to start with, loss of contract if necessary. Special attention will be aimed at those programs failing to meet requirements in the area of Lead Safe Work Practices since it poses such tangible consequences for the households that are served.

Subgrantees must follow EPA's lead; Renovation, Repair and Painting (RRP). In addition to RRP, Weatherization requires all weatherization crews working in pre-1978 housing to be trained in Lead Safe Weatherization (LSW). Deferral is required when the extent and condition of lead-based paint in the house would potentially create further health and safety hazards.

Arkansas' current status is as follows: all Subgrantees have applied for and received Lead Renovator Firm status. All evaluators (inspectors) have acquired Lead Renovator (RRP) certification as well as select crew leaders. Private contractors must also meet the requirement of having adequate RRP certified employees among their ranks. As new contractors apply to work on weatherization projects the EPA requirements are explained during the application process. No private contractors will be awarded work on any pre-1978 dwellings that don't meet the EPA rules.

Private contractors will be required to furnish proof of RRP and Lead Renovator Firm status as a condition of working for the weatherization programs. The monitoring staff will routinely check that documentation is on file at each agency verifying compliance to the EPA rules.

All weatherization crews working on pre-1978 homes must receive the 8-hour LSW training or a certified renovator must be assigned to the project and be readily available.

State Monitors must be Lead Renovator (RRP) and receive the 8-hour LSW training by July 1, 2018.

The certified renovator must be physically present at the work site while signs are being posted, containment is being established, and the work area is being cleaned after the renovation to ensure that these tasks are performed correctly. Although the certified renovator is not required to be on-site at all times, while the renovation project is ongoing, a certified renovator must nonetheless regularly direct the work being performed by other workers to ensure that the work practices are being followed. When a certified renovator is not physically present at the work site, the workers must be able to contact the renovator immediately by telephone or other mechanism. In addition, the certified renovator must perform the post-renovation cleaning verification.