

Weatherization Grantee Health and Safety Plan

POLICY SUBMITTED WITH PLAN

1.0 – GENERAL INFORMATION

Allowable energy related health and safety (H&S) actions are those actions necessary to maintain the physical well-being of both the occupants and/or weatherization workers where:

- Costs are reasonable as determined by The Department of Energy (DOE) in accordance with this approved Master Plan;
- The actions must be taken to effectively perform weatherization work; or
- The actions are necessary because of completed weatherization work.

If Deferral is necessary, it is required that the sub-grantee inform the client in writing, describing the condition(s) causing the deferral and what must be done prior to weatherization work. If the sub-grantee knows of another program that could help, they must provide that information to the client in the letter. A copy of this letter must be in the client file.

Prior to a measure being considered an allowable H&S measure, it must first be determined that it is not an energy conservation measure (ECM) or incidental repair to an ECM.

Weatherization Bootcamp is a requirement for most of the measures below. This course combines Energy 101, Pressure Diagnostic 101, General Thermal Performance, Residential Retrofit Application 101, and Combustion Safety course into a weeklong training course that will provide weatherization professionals with an introduction to energy principles, thermal performance, health and safety standards, lead safe weatherization (LSW), auditing, pressure diagnostics, and field repair. This course provides a combination of classroom and hands-on instructions that will prepare candidates to perform the tasks required of weatherization technicians within the current Weatherization Program Guidelines.

In Bootcamp attendees are expected to learn to:

- Recognize H&S issues including (but not limited to):
 - Radon
 - Lead
 - Mold/Moisture
 - Electrical
 - Carbon Monoxide (CO)
- Understand causes and effect of the above H&S issues
- Properly identify through testing or sensory inspection
- Mitigate those issues if mitigation is allowed within H&S measures.

2.0 – BUDGETING

H&S costs are a separate category and, thereby, exclude such costs from the average cost per unit cost (ACPU) limitation. This separate category also allows these costs to be isolated from energy efficiency costs in program evaluations.

Select which option is used below.

Separate Health and Safety Budget

Contained in Program Operations

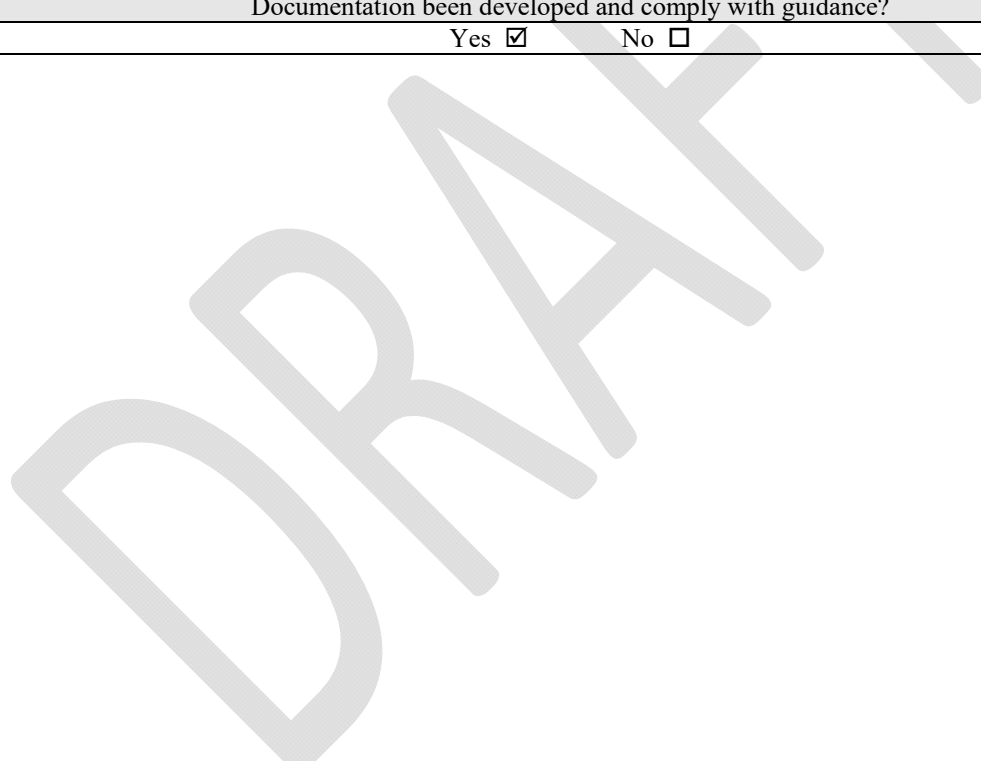
3.0 – HEALTH AND SAFETY EXPENDITURE LIMITS

For DOE, each sub-grantee will have 13% of their program operations set aside for energy related H&S repairs. Each sub-grantee will be responsible for the management of their H&S budget and will be required to bill H&S repairs as a separate budget line item. Sub-grantees will also be required to obtain written approval from The Arizona Department of Housing (ADOH) for all H&S repairs exceeding \$2,000. Any H&S expenses exceeding the 13% cap of the sub-grantee program operations budget will not be reimbursed.

<p>notified in writing of the deferral and what conditions must be met for weatherization to continue. Grantees must also provide a process for the client to appeal the deferral decision to a higher level in the organization.</p>
<p>Grantee has developed a comprehensive written deferral/referral policy that covers both H&S, and other deferral reasons?</p>
<p style="text-align: center;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p style="text-align: center;">Where can the deferral/referral policy be accessed?</p>
<p>The deferral policy can be found in the Master File of the State Plan under section V1.2 -Approach to determine building eligibility.</p>

6.0 – HAZARD IDENTIFICATION AND NOTIFICATION FORM(S)

<p>Forms have been developed that include but is not limited to: the client's name and address, dates of the audit/assessment and when the client was informed of a potential H&S issue, a clear description of the problem, a statement indicating if, or when weatherization could continue, and the client(s) signature(s) indicating that they understand and have been informed of their rights and options. The forms can be found on the ADOH website and are titled:</p> <ul style="list-style-type: none"> • Health & Safety Evaluation Form • Hazard Disclosure Form • Residential Diagnostic Evaluation Form
<p style="text-align: center;">Documentation been developed and comply with guidance?</p>
<p style="text-align: center;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>



7.0 – HEALTH AND SAFETY CATEGORIES

7.1 – Air Conditioning and Heating Systems				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Air Conditioning Unallowable Measure <input type="checkbox"/>		Heating Unallowable Measure <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
How do you address unsafe or non-functioning primary heating/cooling systems?				
<p>“Red tagged”, unsafe, in-operable (more than 6 months) or non-existent HVAC system replacement, repair, or installation is allowable (only as a health and safety measure), where climate conditions warrant, unless prevented by state law. Clients must also be at-risk. At-risk occupants are defined as children under the age of 4 and under and adults 50 and above. It is an accepted medical fact that infants and children 4 and under are very sensitive to the effects of high temperatures and rely on others to regulate their environment. Research indicates that of all people who die of heat stroke, about 80 percent are age 50 or older. Deaths attributed to lung disease, diabetes and hypertension increase more than 50 percent during heat waves. Also, the following requirements must be followed:</p> <ul style="list-style-type: none"> • An approved waiver is required from ADOH. • WPN 17-7 attachment A knowledge is required. • Evaporative Cooling is a H&S measure and does not require a waiver unless exceeding the \$2000 threshold. • Size of unit must be decided using Manual J. • If a unit is operable but deemed unsafe, it must be repaired, replaced, rendered inoperable or deferral is required. • All mobile home, fuel burning, heat producing appliances except for ranges and ovens must be vented to the outside and draw their combustion air from outside. 				
How do you address unsafe or non-functioning secondary heating systems, Including unvented secondary space heaters?				
<ul style="list-style-type: none"> • Secondary unvented units that conform to the safety standards of ANSI Z21.11.2 may remain as back-up heat sources. • Secondary unvented units that do not meet ANSI Z21.11.2 must be removed and properly disposed of prior to weatherization but may remain until a replacement heating system is in place. • Repair or replacement of secondary unvented units is not allowed. • Secondary unvented units that meet the ANSI Z21.11.2, but are not operating safely, must be removed and properly disposed of. • WPN 17-7 attachment A knowledge is required. 				
Indicate Documentation Required for At-Risk Occupants				
<p>Client files need to document occupants 4 and under and 50 and above. Medical documentation must be provided, defining said health risk that requires a conditioned environment, for at-risk occupants between the ages of 5 and 49.</p>				
Testing Protocols				
<ul style="list-style-type: none"> • Test the equipment to make sure that it is operable and performing correctly. • Perform static pressure testing to ensure proper installation of unit and duct systems • On combustion equipment, inspect: <ul style="list-style-type: none"> ○ Chimneys and flue for proper installation, restriction and damages ○ Test Combustion Appliance Zones(CAZ) for depressurization • For solid fuel units, inspect: <ul style="list-style-type: none"> ○ Walls, mantels, ceilings and surrounding areas for soot (fire hazard) ○ Chimneys and flues for proper installation, restriction and damages ○ To insure that no creosote staining in near flue pipe • Auditors must insure unit would not meet ECM requirements using a DOE approved method. 				
Client Education				

<ul style="list-style-type: none"> • Client must be provided paperwork, manuals and warranty information for any installed equipment • If a new thermostat is installed, the client must be given a tutorial on how to use it. • Client must be informed on the appropriate use and maintenance requirements of installed equipment. • If combustible equipment is installed, client must be provided with safety information on how to recognize depressurization.
Training
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) • Building Performance Institute- Building Analyst (BPI BA) • Installers must meet the requirements for the state of Arizona on licensing, certifications, and contracting. • Installers must have training on building science principles including CAZ depressurization testing and inspection.

7.2 - Asbestos - All

What is the blower door testing policy when suspected Asbestos Containing Material (ACM) is identified?

Depressurization testing will not be allowed on homes that contain ACMs. A Pressurization test can be performed on the home if it’s determined that it will not disturb the ACM, making it airborne in the client’s home. If the auditor determines there is Friable ACM (material can be crumbled, pulverized, or reduced to powder by the pressure of an ordinary human hand), testing will not be allowed and the home must be deferred until the ACM’s have been remediated.

7.2a – Asbestos - in siding, walls, ceilings, etc.

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

How do you address suspected ACM’s in siding, walls, or ceilings that will be disturbed through the course of weatherization work?

Asbestos found inside of the dwelling that needs addressing, directly or incidentally, is not allowable under H&S. Testing by an Asbestos Laws and Regulations Act (AHERA) professional for Asbestos is an allowable H&S cost. However, abatement of asbestos is not an allowable H&S cost. Policies have been in effect for asbestos presence and related work practices for many years. The approach is not to disturb, cut or drill contaminated material and avoid those measures that might do so. In instances where measures can be completed without disturbing asbestos surfaces or materials, that approach should be used. In instances where a local authority, such as code enforcement, imposes specific guidelines or requirements, program staff are to make themselves aware of those restrictions and comply.

Prior to drilling or cutting an exterior wall, inspect the subsurface asbestos. If it is determined that weatherization work cannot be performed without creating a hazard, the project must be deferred. The client must be informed in writing of the potential hazard and the agency must not return to weatherize until an AHERA certified professional issues a clearance statement. Obtain a copy of this statement/report in the client file.

Testing Protocols

- Visually inspect exterior wall surface and subsurface, floors, walls, and ceilings for suspected ACM prior to drilling or cutting.
- Asbestos Hazard Emergency Response Act of 1986 (AHERA) sample collection and testing must be conducted by a certified tester. This is an allowable H&S cost.

Client Education

- Inform the client in writing that suspected ACMs are present and what precautions will be taken to ensure the occupants’ and workers’ safety during weatherization.
- Notify client in writing of results, if testing was performed. A copy of the letter must be put in the client file.

Training and Certification Requirements

- WAP Bootcamp (refer to section 1.0 for description of training curriculum)
- Licensing/certification for removal and reinstallation of asbestos siding if required by AHJ

7.2b – Asbestos - in vermiculite				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
How do you address suspected ACM's in vermiculite that will be disturbed through the course of weatherization work?				
When vermiculite is present, unless testing determines otherwise, the unit is to be deferred. Where blower door tests are performed, prior to asbestos free vermiculite certification, it is a best practice to perform pressurization instead of depressurization. Encapsulation by an appropriately trained professional is allowed. Removal costs are not reimbursable.				
Testing Protocols				
<ul style="list-style-type: none"> AHERA sample collection and testing must be conducted by a certified tester. Baseline environmental asbestos sampling is an allowable cost. 				
Client Education				
<ul style="list-style-type: none"> Instruct clients, in writing, not to disturb suspected ACM. Provide asbestos safety information to the client. Notify client in writing of results, if testing was performed. A copy of the letter must be put in the client file. 				
Training and Certification Requirements				
<ul style="list-style-type: none"> AHERA or state certification to conduct testing AHERA or other appropriate asbestos control professional certification/training for encapsulation 				

7.2c – Asbestos - on pipes, furnaces, other small covered surfaces				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
How do you address suspected ACM's (e.g., pipes, furnaces, other small surfaces) that will be disturbed through the course of weatherization work?				
Assume asbestos is present in the 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 with prior approval from ADOH.				
Testing Protocols				
<ul style="list-style-type: none"> Assess whether suspected ACMs are present. AHERA sample collection and testing is allowed and must be conducted by a certified tester. 				
Client Education				
<ul style="list-style-type: none"> Instruct clients, in writing, not to disturb suspected ACM. Provide asbestos safety information to the client. Notify client in writing of results, if testing was performed. A copy of the letter must be put in the client file. 				
Training and Certification Requirements				
<ul style="list-style-type: none"> WAP Bootcamp (refer to section 1.0 for description of training curriculum) AHERA or other appropriate asbestos control professional certification/training is required to abate the ACM 				

7.5 – Biologicals and Unsanitary Conditions (odors, mustiness, bacteria, viruses, raw sewage, rotting wood, etc.)				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Unallowable Measure <input type="checkbox"/>				
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>

What guidance do you provide Sub-grantees for dealing with biological and/or unsanitary conditions in homes slated for weatherization?
<ul style="list-style-type: none"> Remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowable expense up to \$300. Addressing bacteria and viruses is not an allowable cost. See Mold and Moisture section for more information.
Testing Protocols
<ul style="list-style-type: none"> Sensory inspection.
Client Education
<ul style="list-style-type: none"> Inform client in writing of observed conditions. Provide information on how to maintain a sanitary home.
Training
<ul style="list-style-type: none"> WAP Bootcamp (refer to section 1.0 for description of training curriculum)

7.6 – Building Structure and Roofing

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

What guidance do you provide Sub-grantees for dealing with structural issues (e.g., roofing, wall, foundation) in homes slated for weatherization?

Building rehabilitation is beyond the scope of the WAP. H&S funds should not be used when the repair is a component of an ECM. In that case, the repair should be cost justified as an incidental repair. Clients must be notified of structurally comprised areas, if applicable.

- Evaluate building structure & roofing visually so that no existing conditions are disturbed.
- See Mold and Moisture, Code Compliance, and Pests sections for more information.

Testing

- Visual inspection.
- Ensure that access to the portions of the home where weatherization will occur are safe for entry and performance of assessments, work, and inspections.

How do you define “minor” or allowable structure and roofing repairs, and at what point are repairs considered beyond the scope of weatherization?

Repairs that cannot be included in the ECM and do not exceed \$300. These repairs are recognized as a H&S issue when it puts the client, sub-grantee, or contractor at risk of harm. This would include (but not limited to):

- Unsafe entry stairs
- Minor roof leaks to prevent mold
- Inoperable/broken entry doors

If priority lists are used, and these repairs are designated as Incidental Repairs, at what point is a site-specific audit required?

N/A

Client Education

- Notify client in writing of structurally compromised areas.

Training

- WAP Bootcamp (refer to section 1.0 for description of training curriculum)

7.7 – Code Compliance

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

What guidance do you provide Sub-grantees for dealing with code compliance issues in homes receiving weatherization measures?
<ul style="list-style-type: none"> • Correction of preexisting code compliance issues is not an allowable cost unless triggered by weatherization measures being installed in a specific room or area of the home. • When correction of preexisting code compliance issues is triggered and paid for with WAP funds, cite specific code requirements with reference to the weatherization measure(s) that triggered the code compliance issue in the client file. • Follow State and local or AHJ codes while installing weatherization measures, including H&S measures. • Properties where “red tagged” H&S conditions exist that cannot be corrected under this guidance must be deferred. • If a permit is required for weatherization work to be completed and the local jurisdiction requires additional measures for code compliance due to permit being pulled, those measures are allowable costs. Permits should be billed to program operations, not H&S. • H&S funds should not be used when the repair is a component of an ECM, such as fixing a light fixture in order to install a CFL bulb. These costs should be cost justified as an ECM with the associated incidental repair. <p>Testing</p> <ul style="list-style-type: none"> • Visual inspection.
What specific situations commonly trigger code compliance work requirements for your network? How are they addressed?
When a permit is pulled to install any measure, it requires the installation of hard-wired smoke detectors, on their own circuit. In this case, smoke detectors would be installed per code.
Client Education
<ul style="list-style-type: none"> • Inform client in writing of observed code compliance issues.
Training
<ul style="list-style-type: none"> • As Arizona is a home rule, state code compliance is very complicated. Knowledge of codes in each area is essential in performing weatherization work. Each sub-grantee should reach out the AHJ’s for their area for proper code compliance details.

7.8 – Combustion Gases				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
Testing Protocols and Requirements				
<p>Inspections by the auditor as listed above must include:</p> <ul style="list-style-type: none"> • Combustion safety testing is required when combustion appliances are present. • Proper venting to the outside for combustion appliances, including gas dryers, furnaces, vented space heaters and water heaters is required. <ul style="list-style-type: none"> ○ Correct venting when testing indicates a problem. ○ Inspect venting of combustion appliances and confirm adequate clearances. • Inspection of cooking burners for operability and flame quality. <ul style="list-style-type: none"> ○ Repair of cooking burners is an allowable H&S cost if CO readings are high and/or another H&S concern is found. Replacement of cook stoves is not an allowable cost. • Testing by approved WAP procedures of ambient air in combustion appliance zones & undiluted flue on applicable appliances are above the allowable limits. • If unsafe conditions whose remediation is necessary to perform weatherization cannot be remedied by repair or tuning, replacement is an allowable H&S measure unless prevented by other guidance herein. • Maintain documentation justifying the replacement with a cost comparison between replacement and repair in the client file. • Replacement units must meet safety guidelines as determined in the State Plan or Technical Field Guide. • Test naturally drafting appliances for spillage and CO during CAZ depressurization testing pre- and post-weatherization and before leaving the home on any day when work has been done that could affect draft (e.g., tightening the home, adding exhaust). 				

How are crews instructed to handle problems discovered during testing, and what are the specific protocols for addressing hazards that require an immediate response?

Crews should address any issue(s) that they are qualified to repair and are an allowable expense(s). If unable to repair, they must have a qualified individual complete the work. Follow BPI standards on combustion safety and protocols. When CO issues arise, crews should follow BPI standards on action levels and protocols.

Ambient Combustion Safety Test Action Levels <i>*CO testing is started at time of entry to the home</i>	
CO Test Results*	Retrofit Action
9-35 ppm	Open windows and doors, determine source, service unit
36-69 ppm	Open windows and doors, disable responsible appliance, service unit
>69 ppm	Terminate inspection. Evacuate building, call emergency services from outside the home

CO Thresholds for Fossil-Fuel Fired Combustion Appliances <i>*CO testing is started steady state</i>		
Appliance	Threshold Limit*	Retrofit Action
Central Furnace (all categories)	400 ppm air free	<p>UNACCEPTABLE CO LEVEL: Sub-grantee/contractor must service or replace the appliance. If issue cannot be addressed under the weatherization program, advise the homeowner/occupant that the appliance should be serviced or replaced. Work may not commence until the issue is resolved.</p> <p>Note: If ambient CO levels do not exceed 70 ppm, testing of other appliances and other audit procedures may continue at the discretion of the auditor.</p> <p>ACCEPTABLE CO LEVEL: No action required.</p>
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 air free	
Clothes Dryer	200 ppm air free	
Refrigerator	400 ppm air free	
Gas Log (gas fireplace)	25 ppm air free	
Gas Log (installed in wood burning fireplace)	400 ppm air free	

Follow BPI standards on CAZ:

Action Levels for Spillage in Combustion Appliances <i>If CAZ zone is lower (more negative) than -3 pa corrective action must be performed to alleviate the condition</i>	
Test Result	Action Required
If greatest CAZ depressurization occurs with the air handler on*	Conduct further analysis of the distribution system to determine if leaky ducts or other HVAC-induced imbalances are the cause of the spillage. If so, recommend distribution system repairs that will reduce or eliminate the CAZ depressurization
If greatest CAZ depressurization occurs with the door to CAZ closed, but is alleviated when door to CAZ is open*	Recommend measures to improve air transfer between the CAZ and the core of the house
If the Cause of spillage has been traced to excessive exhaust** independent of CAZ door position, air handler, or a problem with the flue***	Verify that sufficient combustion air is available per ANSI Z223.1/NFPA 54 for gas-fired appliances and NFPA 31 for oil-fired appliances or recommend verification by a qualified professional And/or Recommend further evaluation/service by a qualified professional to address the venting/combustion air issues
<p><i>*In the case where both spillage and excessive CO are present, in addition to the specific recommendations above, recommend that the appliance be shut down until it can be serviced by a qualified professional.</i></p> <p><i>**Refers to exhaust caused by mechanical ventilation and/or other means of exfiltration.</i></p> <p><i>***When a recommendation to replace atmospherically-vented combustion equipment inside the pressure boundary is made, and when cost-effective, recommend replacement with direct-vented, or power-vented equipment (or non-combustion equipment, such as a heat pump).</i></p>	

Client Education		
<ul style="list-style-type: none"> • Provide client with combustion safety and hazards information. • Clients must be provided with information and an explanation of 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		
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) • BPI BA 		

7.9 – Electrical				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Sub-grantees for dealing with electrical hazards, including knob & tube wiring, in homes slated for weatherization?				
<ul style="list-style-type: none"> • When the H&S of the occupant/worker(s) is at risk, minor repairs are allowed when necessary for weatherization measures or the health and safety of the occupant(s), such as <ul style="list-style-type: none"> ○ Installation of a GFCI in wet locations ○ Replacement of wall outlets that are broken ○ Replacement of bad breakers ○ Relocating an electrical outlet to allow a dryer to be relocated to ensure proper ventilation. • When addressing homes with knob and tube wiring: <ul style="list-style-type: none"> ○ Evaluate and if necessary provide sufficient over-current protection ○ Voltage drop and voltage detection testing are allowable costs when determining conditions of wiring. ○ Damming is required prior to insulating building components containing knob and tube wiring, if not already included in the ECM. <p>Inspections include</p> <ul style="list-style-type: none"> • Visual inspection for presence and condition of knob-and-tube wiring. • Check for alterations that may create an electrical hazard. • Voltage drop and voltage detection testing. 				
How do you define “minor” or allowable electrical repairs, and at what point are repairs considered beyond the scope of weatherization?				
Repairs that cannot be included in the ECM and do not exceed \$300.				
If priority lists are used, and these repairs are designated as Incidental Repairs, at what point is a site-specific audit required?				
N/A				
Client Education				
<ul style="list-style-type: none"> • Sub-grantees are required to discuss and provide information to the client on the hazards of overloading circuits, basic electrical safety/risks and over current protection. 				
Training				
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) • BPI BA 				

7.10 – Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and other Air Pollutants				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Sub-grantees for dealing with formaldehyde, VOCs, flammable liquids, and other air pollutants identified in homes slated for weatherization?				

<p>Formaldehyde and Volatile Organic Compounds (VOCs) – Formaldehyde, tobacco smoke, thinners, solvents, cleaners, and any other substances capable of negatively impacting indoor air quality must be identified during the initial audit. Basic strategies such as proper storage and ventilation are used to eliminate problems. Air sealing thresholds are maintained so that the presence of these pollutants are not concentrated and allowed to reach toxic levels. However, this is primarily the responsibility of the client. In some cases, deferral may be necessary.</p> <p>Allowable actions:</p> <ul style="list-style-type: none"> • Removal of pollutants is allowed and is required if they pose a risk to workers. • Removal of pollutants that are not necessary to perform weatherization (e.g. cleaning old paint cans and oil out of the garages) is not allowed. • If pollutants pose a risk to workers and removal cannot be performed or is not allowed by the client, the unit must be deferred. • Refer to Hazardous Materials Disposal section for more information.
Testing Protocols
<ul style="list-style-type: none"> • Sensory inspection.
Client Education
<ul style="list-style-type: none"> • Inform client in writing of observed hazardous condition and associated risks. • If necessary, provide client written materials on safety issues and proper disposal of household pollutants.
Training
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum)

7.11 – Fuel Leaks				
<i>(please indicate specific fuel type if policy differs by type)</i>				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
Remediation Protocols				
<ul style="list-style-type: none"> • When a minor gas leak is found on the utility side of service, the utility service must be contacted before work may proceed. Work can commence when the utility considers it safe. • Fuel leaks that are the responsibility of the client must be repaired before weatherizing a unit. • When leaks are discovered during the course of weatherization, that are the responsibility of the utility, temporarily halt work and notify the utility. Work can commence when the utility considers it safe. 				
Testing				
<ul style="list-style-type: none"> • Test exposed gas lines for fuel leaks from utility coupling into, and throughout, the home using BPI standards. • Conduct sensory inspection on bulk fuels to determine if leaks exist. • If any gas leak is detected, it must be repaired by the responsible party. If it is the client’s responsibility, it can be repaired as an incidental repair or H&S. 				
How do you define allowable fuel leak repairs, and at what point are repairs considered beyond the scope of weatherization?				
Repairs that cannot be included in the ECM and do not exceed \$300.				
Client Education				
<ul style="list-style-type: none"> • Inform clients in writing if fuel leaks are detected. 				
Training				
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) • BPI BA 				

7.12 – Gas Ovens / Stovetops / Ranges				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>

What guidance do you provide Sub-grantees for addressing unsafe gas ovens/stoves/ranges in homes slated for weatherization?
<ul style="list-style-type: none"> • When testing indicates a problem, entities may perform standard maintenance on or repair gas cooktops and ovens. • Replacement is not allowed.
Testing Protocols
<ul style="list-style-type: none"> • Test gas ovens for CO. • Inspect cooking burners and ovens for operability and flame quality. • Follow BPI standards on combustion safety and protocols. (See section 7.8 above)
Client Education
<ul style="list-style-type: none"> • Inform clients of the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of CO
Training
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) • BPI BA

7.13 – Hazardous Materials Disposal [Lead, Refrigerant, Asbestos, Mercury (including CFLs/fluorescents), etc.]				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
Client Education				
<ul style="list-style-type: none"> • Inform client in writing of hazards associated with hazardous waste materials being generated/handled in the home. 				
Training				
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) <ul style="list-style-type: none"> ○ Appropriate Personal Protective Equipment (PPE) for working with hazardous waste materials. ○ Disposal requirements and locations. ○ Health and environmental risks related to hazardous materials. • Workers are required to have Safety Data Sheet (SDS) Training. • LEAD Renovation, Repair and Paint (RRP) 				
Disposal Procedures and Documentation Requirements				
<ul style="list-style-type: none"> • Hazardous Waste Materials generated in the course of weatherization work shall be disposed of according to all local laws, regulations and/or Federal guidelines, as applicable. • Document proper disposal requirements in contract language with responsible party. 				

7.14 – Injury Prevention of Occupants and Weatherization Workers (Measures such as repairing stairs and replacing handrails)				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Sub-grantees regarding allowable injury-related repairs (e.g., stairs, handrails, porch deck board)?				

<ul style="list-style-type: none"> When necessary to effectively weatherize the home, workers may make minor repairs and installations, such as, but not limited to: <ul style="list-style-type: none"> Unsafe entry stairs Loose or broken hand rails Trip/fall hazards Inspect for dangers that would prevent weatherization. If conditions will not be repaired, inform client in writing of observed hazards and associated risks.
How do you define “minor” or allowable injury prevention measures, and at what point are repairs considered beyond the scope of weatherization? Quantify “minor” or allowable injury prevention measures.
Repairs that cannot be included in the ECM and do not exceed \$300.
Training
<ul style="list-style-type: none"> WAP Bootcamp (refer to section 1.0 for description of training curriculum) OSHA 10

7.15 – Lead Based Paint				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
Safe Work Protocols				
<ul style="list-style-type: none"> Crews must follow EPA's Lead; Renovation, Repair and Painting Program (RRP) when working in pre-1978 housing unless testing confirms the work area to be lead free. Deferral is required when the extent and condition of lead-based paint in the house would potentially create further H&S hazards. Only those costs directly associated with the testing and lead safe practices for surfaces directly disturbed during weatherization activities are allowable. Whole house remediation is not an allowable cost. Documentation in the client file must include <ul style="list-style-type: none"> Certified Renovator certification any training provided on-site description of specific actions taken lead testing and assessment documentation photos of site and containment set up (include the location of photos referenced if not in file) All crews and contractors are required to: <ul style="list-style-type: none"> Carry a High-Efficiency Particulate Air (HEPA) vacuum. Wear a tight fitting respirator and disposable coveralls. Seal work areas within a home using tape and plastic. Cover furniture, carpet, and other surfaces with plastic drop cloths or tarps. Spray water on disturbed areas to minimize dust. Clean-up work area each day. Sweep carefully and wet mop, as needed. Use a HEPA vacuum cleaner to collect dust and paint chips. Keep children away from work area at all times. 				
Testing Protocols				
<ul style="list-style-type: none"> Testing to determine the presence of lead in paint that will be disturbed by WAP measure installation is allowed with EPA-approved testing methods. Testing methods must be economically feasible and justified i.e. test swabs. Job site set up and cleaning verification by a Certified Renovator is required. Grantees must verify that crews are using lead safe work practices during monitoring. 				
Client Education				
<ul style="list-style-type: none"> Follow pre-renovation education provisions for RRP. Provide a copy of "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" to an adult occupant prior to work commencing on the home, within the EPA guidelines. Written acknowledgement must be received. 				
Training and Certification Requirements				

<ul style="list-style-type: none"> • All employees and contractors working on pre-1978 homes must receive training to install measures in a lead-safe manner in accordance with the SWS and EPA protocols, and installation must be overseen by an EPA Certified Renovator. • Grantee Monitors and Inspectors must be Certified Renovators. • Any agency/contractor that works in a pre-1978 home, must be a Lead Certified Firm. • WAP Bootcamp, including Lead Safe Weatherization (refer to section 1.0 for description of training curriculum) • Lead RRP Certification
Documentation Requirements
<ul style="list-style-type: none"> • Sub-grantees will be required to show that all lead based paint protocols are up to date and in compliance to all regulations, including: <ul style="list-style-type: none"> ○ Client communication ○ Lead safe work practices ○ Proper equipment including (but not limited to): <ul style="list-style-type: none"> ▪ Tyvek Suit ▪ Booties ▪ Respirators ▪ Hoods ▪ Goggles ▪ Tack pad

7.16 – Mold and Moisture				
(Including but not limited to: drainage, gutters, down spouts, extensions, flashing, sump pumps, dehumidifiers, landscape, vapor retarders, moisture barriers, etc.)				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Sub-grantees for dealing with moisture related issues (e.g., drainage, gutters, down spouts, moisture barriers, dehumidifiers, vapor barrier on bare earth floors) in homes slated for weatherization?				
<ul style="list-style-type: none"> • Limited water damage repairs that can be addressed by weatherization workers are allowed when necessary in order to weatherize the home and to ensure the long-term stability and durability of the measures. • Source control (i.e. correction of moisture and mold creating conditions) is allowed when necessary in order to weatherize the home and to ensure the long-term stability and durability of the measures. Source control is independent of latent damage and related repairs. • Where severe Mold and Moisture issues cannot be addressed, deferral is required. • Mold clean-up is not an allowable H&S cost. • Surface preparation where weatherization measures are being installed (e.g., cleaning mold off window trim in order to apply caulk) must be charged as part of the ECM, not to the H&S budget category. • Mold testing is not an allowable cost. <p>Inspecting includes, (not limited to):</p> <ul style="list-style-type: none"> • Visual assessment including exterior drainage. • The use of diagnostic tools, such as moisture meters, are recommended at pre-weatherization and at the final inspection. 				
How do you define “minor” or allowable moisture-related measures, and at what point is work considered beyond the scope of weatherization?				
Repairs that cannot be included in the ECM and do not exceed \$300.				
Client Education				
<ul style="list-style-type: none"> • Provide client written notification and disclaimer on mold and moisture awareness. • Provide information, when necessary, on the following (not limited to): <ul style="list-style-type: none"> ○ The importance of cleaning and maintaining drainage systems. ○ Proper landscape design and how this impacts site drainage and moisture control. ○ Proper bathroom ventilation to release humidity and moisture. 				

Training				
<ul style="list-style-type: none"> WAP Bootcamp (refer to section 1.0 for description of training curriculum) 				
7.17 – Pests				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Sub-grantees for dealing with pests and pest intrusion prevention in homes slated for weatherization?				
Pest removal is allowed only where infestation would prevent weatherization. <ul style="list-style-type: none"> Infestation of pests may be cause for deferral where it cannot be reasonably removed or poses H&S concern for workers. Screening of windows and points of access, and incorporating pest exclusion into air sealing practices to prevent intrusion is allowed. 				
Define Pest Infestation Thresholds, Beyond Which Weatherization Is Deferred				
The cost of pest control cannot exceeded \$300				
Testing Protocols				
<ul style="list-style-type: none"> Assessment of presence and degree of infestation and risk to worker 				
Client Education				
<ul style="list-style-type: none"> Inform client in writing of observed condition and associated risks. 				
Training				
<ul style="list-style-type: none"> How to assess presence and degree of infestation, associated risks, and deferral policy 				
7.18 – Radon				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Sub-grantees around radon?				
<ul style="list-style-type: none"> Radon mitigation is not an allowable H&S cost. Clients must sign an informed consent form prior to receiving weatherization services. This form must be kept in the client file. In homes where radon may be present, work scope should include precautionary measures based on EPA Healthy Indoor Environment Protocols for Home Energy Upgrades, to reduce the possibility of making radon issues worse. Whenever site conditions permit, cover exposed dirt floors within the pressure/thermal boundary with 6 mil (or greater) polyethylene sheeting, lapped at least 12” and sealed with appropriate sealant at all seams, walls and penetrations. Other precautions may include, (but are not limited to): <ul style="list-style-type: none"> Sealing any observed floor and/or foundation penetrations, including open sump pits Isolating the basement from the conditioned space Ensuring crawl space venting is installed. 				
Testing Protocols				
In the State of Arizona, radon testing and/or remediation is not an allowable H&S measure.				
Client Education				

<ul style="list-style-type: none"> • Provide all clients with EPA’s A Citizen’s Guide to Radon and inform them of radon related risks. Confirmation that EPA’s A Citizen’s Guide to Radon was received must be in the client file. • If other funds are used for testing, informed consent form must include: <ul style="list-style-type: none"> ○ Information from the results of the IAQ Study that there is a small risk of increasing radon levels when building tightness is improved; ○ A list of precautionary measures WAP will install based on EPA Healthy Indoor Environment Protocols; ○ Some of the benefits of Weatherization including energy savings, energy cost savings, improved home comfort, and increased safety; and
Training and Certification Requirements
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) • A zonal map can be located at http://www.epa.gov/radon/pdfs/zonemapcolor.pdf • EPA Healthy Indoor Environment Protocols
Documentation Requirements
<ul style="list-style-type: none"> • Confirmation that EPA’s A Citizen’s Guide to Radon was received must be in the client file.

7.19 – Safety Devices: Smoke and Carbon Monoxide Alarms, Fire Extinguishers				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What is your policy for installation or replacement of the following:				
<ul style="list-style-type: none"> • Smoke Alarms: must be installed where alarms are not present or are inoperable. • Carbon Monoxide Alarms: must be installed where alarms are not present or are inoperable. • Fire Extinguishers: Where solid fuel burning equipment is present, fire extinguishers may be provided as an allowable H&S measure. 				
Testing Protocols				
Testing				
<ul style="list-style-type: none"> • Check existing alarms for operation. If they fail to operate properly, they must be replaced. • Verify operation of installed alarms. 				
Client Education				
<ul style="list-style-type: none"> • Provide client with verbal and written information on use of devices installed. 				
Training				
<ul style="list-style-type: none"> • WAP Bootcamp (refer to section 1.0 for description of training curriculum) • Each sub-grantee should reach out the AHJ’s for their area for proper code compliance details. 				

7.20 – Occupant Health and Safety Concerns and Conditions				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Sub-grantees for soliciting the occupants’ health and safety concerns related to components of their homes?				
<ul style="list-style-type: none"> • When a person’s health may be at risk and/or WAP work activities could constitute a H&S hazard, the occupant will be required to take appropriate action based on severity of risk. • Failure or the inability to take appropriate actions must result in deferral. 				
What guidance do you provide Sub-grantees for determining whether occupants suffer from health conditions that may be negatively affected by the act of weatherizing their home?				

A Special consideration should be given to at-risk clients. At risk clients include but are not limited to children (4 or younger); elderly (50 or older); person(s) currently under the care of a doctor for asthma or other conditions that could be affected by extreme heat or cold.

The use of Health and Safety Evaluation Form is required to screen occupants to reveal known or suspected health concerns as part of initial assessment/audit.

What guidance do you provide Sub-grantees for dealing with potential health concerns when they are identified?

- If it is determined there is a potential health risk with one or more materials to be used, an alternative material may be substituted if the cost is justified.
- If normal practices of material installation may put the client at-risk, alternative methods may be used. An example is: going through a gable to install insulation instead of going through an interior access point/ attic hatch.

Client Education

- Review Health and Safety Evaluation Form with client and have client sign in acknowledgement. A copy of this signed form should be provided to the client.
- Provide client with Sub-grantee point of contact information in writing so client can inform of any issues.

Documentation Form(s) have been developed and comply with guidance? Yes No

- Health and Safety Evaluation Form, completed by auditor, signed by auditor and homeowner.

7.21 – Ventilation and Indoor Air Quality

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

Identify the Most Recent Version of ASHRAE 62.2 Implemented

- Install ventilation as required by ASHRAE 62.2 - 2016.
- If the ASHRAE normative Appendix A is employed and an existing fan is being replaced or upgraded to meet whole-house ventilation requirements, take actions to prevent zonal pressure differences greater than 3 pascals across the closed door, if one exists.

Testing and Final Verification Protocols

- ASHRAE 62.2 calculator to determine required ventilation.
- Measure fan flow of existing fans and of installed equipment to verify performance.

Client Education

- Provide client with information on function, use, and maintenance (including location of service switch and cleaning instructions) of ventilation system and components.
- Provide client with equipment manuals for installed equipment.
- Include disclaimer that ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality.

Training

- WAP Bootcamp (refer to section 1.0 for description of training curriculum)
- ASHRAE 62.2 training, including proper sizing, evaluation of existing and new systems.

7.22 – Window and Door Replacement, Window Guards

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

What guidance do you provide to Sub-grantees regarding window and door replacement and window guards?

- Replacement, repair, or installation is not an allowable H&S cost.
- Replacement, repair, or installation is only allowable as an ECM.

Testing Protocols		
N/A		
Client Education		
<ul style="list-style-type: none"> If disturbing lead paint, follow lead safe weatherization practices and inform the client on lead risks, as indicated in this H&S plan, when applicable. 		
Training		
<ul style="list-style-type: none"> WAP Bootcamp (refer to section 1.0 for description of training curriculum) 		
7.23 – Worker Safety (OSHA, etc.)		
Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>
Funding		
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/> Utility <input type="checkbox"/> Other <input type="checkbox"/>
How do you verify safe work practices? What is your policy for in-progress monitoring?		
<ul style="list-style-type: none"> Annual submission to ADOH of Employee Certification Verification Form is required (including OSHA certification(s)). ADOH does in-progress monitoring when training and technical assistance is requested. During monitoring ADOH staff will verify compliance with the current OSHA Hazard Communication Standard, including on-site organized Safety Data Sheets (SDS). 		
Training and Certification Requirements		
<ul style="list-style-type: none"> WAP Bootcamp (refer to section 1.0 for description of training curriculum) Use and importance of Personal Protection Equipment (PPE) OSHA 10 hour training Ongoing training as required in Hazard Communication Program Workers must follow OSHA standards where required and take precautions to ensure the H&S of themselves and other workers. 		