

April 20, 2022

# H&S Presentation

What's New for PY22



1

## Outcomes

- Learn what's changed in the newly approved DOE PY22 H&S Plan

2

## Allowable Cost Criteria

### \*NEW\*

5. At least one (1) ECM is charged to the same grant for the same home the H&S cost is charged to.
6. The full H&S measure cost (both labor and material) is charged to one funding source.

Subgrantee Recipient should budget H&S expenditures, in a separate budget category, at no more than **16** percentage of total anticipated annual Program Operation expenditures or approximately **16** percent of the average cost per unit (ACPU) for the program year. A Subgrantee Recipient can request ODOC permission to exceed the **16 percent** threshold if needed. Subgrantee Recipients are strongly encouraged to blend funds not associated with WAP to abate or resolve any H&S issues that are outside the scope of this requirement.

Oklahoma | PY22 H&S Presentation | 4/20/2022

3

## Regulations

All H&S weatherization related activities must comply with **DOE Weatherization Program Notice 22-7** – Health and Safety Guidance, or newer guidance as issued. All measures, including any H&S installations, must follow [the National Resource Energy Laboratory's Standard Work Specifications](#) (NREL's SWS), **the most current Oklahoma Field Guide**, and all ODOC policies and procedures within the Weatherization Program Operations Manual and [ODOC's Policy and Procedures for Energy Audits](#). All state ([Oklahoma Uniform Building Codes](#)) and local codes ([Municode – Oklahoma](#)) must also be followed in the event that they are either in conflict with or are more stringent than ODOC/DOE policy.

Oklahoma | PY22 H&S Presentation | 4/20/2022

4

## Terms & Definitions

### Limited Repairs

Repairs that meet the definition of incidental repairs (\$750 or less). Agencies can perform limited repairs without ODOC prior approval.

### Major Repairs

Those repairs that are \$1,201 or greater. Typically, major repairs are not allowed with H&S.

### Minor repairs

Those repairs that are \$750 - \$1,200. These often need ODOC approval (unless a specific policy grants approval up to this threshold)

Oklahoma | PY22 H&S Presentation | 4/20/2022

5

## Terms & Definitions

### Case by Case

“When a policy refers to “case by case” it means ODOC is not able to create a comprehensive policy for that specific H&S topic, but rather, must provide specific guidance regarding individual events to determine whether the measure is allowable or cost effective. A subgrantee seeking case by case approval must submit documentation to their assigned Energy Project Specialist.”

Oklahoma | PY22 H&S Presentation | 4/20/2022

6

## Terms & Definitions

### At Risk Qualified Home

“The home is owned by the occupant/applicant, and a child under age 5, and/or person over age 65, and/or a disabled person lives in the home. **The applicant must provide proof of homeownership (such as a deed), and self-report demographics on a completed client application.**”

Oklahoma | PY22 H&S Presentation | 4/20/2022

7

**For each health and safety issue listed in this Requirement, the following regulations apply:**

#8. Though not written out in every case, it is implied that workers responsible for carrying out the required tests described throughout the guidance will receive the training needed to competently perform those tests, as applicable. **All required testing/inspection related items must be documented in each client file.** On the same note, where workers will have to make decisions in the field, it is understood that they will receive training on applicable policies that should inform those decisions. For additional guidance and requirements on training, please see Requirement 311.

Oklahoma | PY22 H&S Presentation | 4/20/2022

8

## HEATING SYSTEMS

### Allowability:

- c. Space heaters are not allowed to be primary heat sources.

### Actions

- a. Make sure primary systems are present, operable, and performing correctly. Unsafe units, including space heaters, and any unit that does not conform to ANSI Z21.11.2, must be repaired, removed or rendered inoperable, or deferral is required.
- b. Combustion Analysis must be performed on any forced air combustion heating system following ANSI/BPI 1200 Standards. If analysis could not be performed, indicate your reason on FORM 28 and in the NEAT/MHEA Energy Audit comments.
  - i. This includes diagnostic testing for CAZ depressurization, spillage, carbon monoxide levels, and combustion efficiency.
  - ii. It is allowable to drill into B-vent for the purpose of combustion analysis so long as:
    - (a) The hole drilled is no bigger than required for testing.
    - (b) The holes are sealed with high temperature caulk to seal the inner and, if needed, the outer sleeve. Use high temperature metal tape for extra assurance to seal around the outer hole.

Oklahoma | PY22 H&S Presentation | 4/20/2022

9

## HEATING SYSTEMS

### C. Testing Protocols:

- a. On combustion equipment, inspect chimney and flue and test for CAZ depressurization, Carbon Monoxide, Spillage, and Combustion Efficiency using ANSI/BPI 1200 Standards.
- b. For solid fuel appliances look for visual evidence of soot on the walls, mantel or ceiling or creosote staining near the flue pipe.
- c. Depressurization and spillage testing is required for all Category 1 appliances pre- and post – weatherization and before leaving the home on any day when work has been done that could affect draft (e.g., air or duct sealing, adding exhaust ventilation).
- d. CO testing is required for all combustion appliances, regardless of venting type.
- e. Verify proper clearances for all combustion venting types.
- f. Visually inspect the entirety of solid fuel-fired appliance installations (e.g., wood stoves, coal stoves, pellet stoves, fireplaces) including the venting system to ensure it adheres to the applicable code or local authority having jurisdiction. Appliances must be inspected pre- and post-weatherization.
- g. Conduct pre- and post- weatherization worst case CAZ depressurization testing in spaces having a fireplace or woodstove. Since there is no consensus method for verifying safe operation of fireplaces and woodstoves, the vent must meet national or local codes or the home cannot be weatherized.
- h. Safety inspections related to space heaters, fireplaces, and woodstoves must include, but not be limited to, verification of adequate floor protection, and code-compliant clearances to walls and other combustible materials.

Oklahoma | PY22 H&S Presentation | 4/20/2022

10

## SECONDARY HEATING SYSTEMS

### **B. Actions**

- g. **No unvented combustion appliances (safe or unsafe) may remain as secondary units in manufactured homes.**

Oklahoma | PY22 H&S Presentation | 4/20/2022

11

## HEATING SYSTEMS

### **D. Client Education for Heating Systems**

- e. Where combustion equipment is present, provide safety information including how to recognize depressurization, **dangers of CO poisoning, and fire risks associated with combustion appliance use.**

### **E. Training for both Heating and Cooling Systems**

- b. **For additional guidance and requirements on training, please see Requirement 311 Section IV Part C.**

Oklahoma | PY22 H&S Presentation | 4/20/2022

12

## BIOLOGICAL AND UNSANITARY CONDITIONS – ODORS, MUSTINESS, BACTERIA, VIRUSES, RAW SEWAGE, ROTTING WOOD

### Allowability:

- a. Limited remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowed (e.g., repairing leaking sewage pipe) provided the cost meets the criteria in [Section I, B.](#)
- b. Limited cleaning of the workspace to protect the health and safety of the workers and occupants.
- c. Addressing bacteria and viruses is not an allowable cost.
- d. It is prohibited to use DOE WAP funding for testing of materials for biological contaminants.

Oklahoma | PY22 H&S Presentation | 4/20/2022

13

## BUILDING STRUCTURE AND ROOFING

### Allowability:

- a. Building Rehabilitation is not an allowable weatherization cost.
- b. Minor structural repairs are allowable and can be done on a home, **provided** they are \$1,200 or less, and meets the criteria in [Section I, B.](#)

### Actions:

- a. Dwellings that require more than minor repairs must not be weatherized and must be deferred.
- b. Minor repairs are those that ~~meet the incidental repair definition~~ are \$1,200 or less.

Oklahoma | PY22 H&S Presentation | 4/20/2022

14

## CODE COMPLIANCE

### Allowability:

- a. 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.**
- b. Measures not triggered by weatherization measures are not required to be brought up to code per state law, nor is it an allowable use of DOE funds.

Oklahoma | PY22 H&S Presentation | 4/20/2022

15

## CODE COMPLIANCE

### Actions:

#### Combustion Furnaces

If a combustion furnace is being replaced, the following issues must be addressed according to SWS standards:

- a) **Combustion Analysis must be performed on any forced air combustion heating system following ANSI/BPI 1200 Standards. If analysis could not be performed, indicate your reason on FORM 28 and in the NEAT/MHEA Energy Audit comments.**
  - i. **This includes diagnostic testing for CAZ depressurization, spillage, carbon monoxide levels, and combustion efficiency.**
  - ii. **It is allowable to drill into B-vent for the purpose of combustion analysis so long as –**
    1. **The hole drilled is no bigger than required for testing.**
    2. **The holes are sealed with high temperature caulk to seal the inner and, if needed, outer sleeve. Use high temperature metal tape for extra assurance to seal around the outer hole.**
- b) **A sediment trap must be installed if furnace is being replaced. [OUBCC, 748:20-5 IRC 2015 - G2419]**
- c) **Adequate combustion air must be present according to State and local (or AHJ) codes. This can be accomplished EITHER by the volume of air present and available OR by isolating the CAZ and receiving air from outside.**

Oklahoma | PY22 H&S Presentation | 4/20/2022

16



## CODE COMPLIANCE

### Actions:

#### Ventilation for Exhaust Fans

If ventilation for a home is being installed or already exists, the following issues must be addressed according to SWS standards:

(a) Ventilation must be ran to the outside and when going through unconditioned sleeve, be insulated to R8. [OUBCC, 748:20-5 IRC 2015 – N1103.3.1]

(b) Run [Red Calc Ashrae 62.2 2016 calculator](#) to determine what ventilation is needed.

(c) Any home with a gas range must be provided with a range hood vented to outside, if there is no existing ventilation for gas range existing. This fan must be installed to standards of SWS and code of AHJ. This will be a health & safety cost

Oklahoma | PY22 H&S Presentation | 4/20/2022

17

## CODE COMPLIANCE

### Actions:

#### Attic Ventilation

If insulation is being added to an attic space, and the attic is not considered conditioned, this space must meet ventilation requirements of SWS and code of AHJ When the Energy Audit calls for insulation, this attic ventilation should be considered an Incidental Repair to ensure and protect the effectiveness of the attic insulation ECM. See Requirement 302A DHS LIHEAP Weatherization policies and procedures for DHS LIHEAP Attic Ventilation guidance.

(a) See Section R806 of the 2015 IRC for requirements and exceptions.

(b) Minimum net free ventilating area must be 1/150 of the area of the vented space.

- a. Exception: The minimum net free ventilation area must be 1/300 of the vented space provided the following condition is met:
  - b. Not less than 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located not more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet below the ridge or highest point of the space shall be permitted.

Oklahoma | PY22 H&S Presentation | 4/20/2022

18

## COMBUSTION GASES

### Actions:

- a. Combustion safety testing is required to be done when combustion appliances are present.
- b. Combustion Analysis must be performed on any combustion appliance following ANSI/BPI 1200 Standards.
- c. If analysis could not be performed, indicate you're the reason on the data collection form (FORM 28) and in the NEAT/MHEA Energy Audit comments.
  - i. This includes diagnostic testing for CAZ depressurization, spillage, carbon monoxide levels, and combustion efficiency.
  - ii. It is allowable to drill into B-vent for the purpose of combustion analysis so long as –
    - (a) The hole drilled is no bigger than required for testing.
    - (b) The holes are sealed with high temperature caulk to seal the inner and, if needed, outer sleeve. Use high temperature metal tape for extra assurance to seal around the outer hole.

Oklahoma | PY22 H&S Presentation | 4/20/2022

19

## COMBUSTION GASES

### Testing Protocols:

- a. Combustion safety testing is required to be done when combustion appliances are present.
  - i. This includes diagnostic testing for CAZ depressurization, spillage, carbon monoxide levels, and combustion efficiency.
  - ii. It is allowable to drill into B-vent for the purpose of combustion analysis so long as –
    - (a)The hole drilled is no bigger than required for testing.
    - (b)The holes are sealed with high temperature caulk to seal the inner and, if needed, outer sleeve. Use high temperature metal tape for extra assurance to seal around the outer hole.

Oklahoma | PY22 H&S Presentation | 4/20/2022

20

## ELECTRICAL

### Allowability:

- c. Minor knob and tube wiring electrical repairs are allowable, provided the following conditions are met:
- i. The repairs are \$1200 or less.
  - ii. Live Knob and Tube wiring must be replaced or blocked before any insulation measure can be performed that could increase the fire risk from contact with the wiring.
  - iii. Blocking is only a potential option in attics. Walls with live knob and tube will not be insulated unless the knob and tube is replaced.
  - iv. Remediation of live knob and tube wiring may be beyond the budget of weatherization. If so, the home must be deferred. See Requirement 310 for more guidance on deferrals.
  - v. It is mandatory to test whether the knob and tube is live. Photo documentation of the testing is required.
  - vi. If knob and tube wiring is to be replaced, this will be a health and safety expense.
  - vii. If knob and tube wiring is to be blocked, this can be funded as an Additional Cost to the insulation measure or as a health & safety measure.
  - viii. If blocking is to be performed, a 3" distance around any live wiring must be cleared of any insulation or debris, even if that debris was present before weatherization.
  - ix. Blocking is only allowable where the net (weighted-average) R-value in the attic, after weatherization, will be R13 or greater.
    - (a) You can use this link to calculate the net R-value. <https://www.redcalc.com/parallel-path-r-value/>
    - (b) Input R1 for any area that will have no insulation. Do not use any number lower than 1.0 in the calculation.
    - (c) This calculation must be saved as a PDF or printed on paper, and a copy retained in the client folder.
    - (d) If R-13 net (weighted average) is unable to be achieved this home must be deferred due to WPN 19-4 Attachment 8.

21

## ELECTRICAL

### Client Education

- c. Provide written documentation of any electrical hazards identified that will not be addressed by weatherization

22



- Install the batts to leave 3" of clearance around the knob & tube components.
- Blow insulation in remaining areas, using the fiberglass batts to act as a dam for the blown insulation, keeping it away from the wiring.
- Do not insulate wall cavities containing live knob & tube wiring systems."

Oklahoma | PY22 H&S Presentation | 4/20/2022

23

## FUEL LEAKS

### Allowability:

- a. Replacement or repair of leaking bulk fuel tanks and/or lines if connected systems will remain after weatherization.
- b. Replacement of flexible appliance gas connectors that are not compliant with current fuel gas codes.
- c. Fuel leak remediation/repair (that are the responsibility of the utility to correct) are not allowed

### Actions:

- a. During the initial audit, workers **must** test exposed gas lines for fuel leaks from utility coupling into and throughout the home. **As long as a fuel leak is present, weatherization work may not proceed.**

### Testing Protocols:

- b. **Test all gas appliances for fuel leaks at all connections valves, fittings, and burners.**

Oklahoma | PY22 H&S Presentation | 4/20/2022

24

## GAS OVENS/STOVETOPS/RANGES

### Allowability:

- a. Standard maintenance on or repair of gas cooktop and ovens is allowed, provided the cost meets the criteria in [Section I, B.](#)
- b. Replacement is not allowed with DOE funding.
- c. See Requirement 302A for DHS LIHEAP Weatherization policy and procedures for replacements with DHS LIHEAP funding.
- d. Stovetop burner CO testing is allowed.
- e. Limited cleaning or repair of ovens/ranges/stovetops is allowed.

Oklahoma | PY22 H&S Presentation | 4/20/2022

25

## INJURY PREVENTION OF OCCUPANTS AND WEATHERIZATION WORKERS

### Allowability:

- i. Minor repairs are those that meet the following criteria:
  - a) \$1200 dollars or less
  - b) Do not require a special license
  - c) Can be justified as injury prevention in the course of weatherization work through photo documentation.
- c. Some examples of allowable injury prevention measures are: repairing a stair or ramp, replacing a handrail, replacing stairs or ramps, and patching a hole.

Oklahoma | PY22 H&S Presentation | 4/20/2022

26

## LEAD BASED PAINT

### Allowability:

- a. All agencies must comply with lead safe work practices as required by the Environmental Protection Agency's Lead Renovation, Repair, and Painting Program (EPA RRP) for all weatherization work done in pre-1978 constructed homes. **Beginning September 1, 2018, Subgrantee Recipients are NO longer required to follow Montana State University's (MSU) Lead Safe Weatherization (LSW) Training Manual – but must still comply with the EPA RRP requirements.**
- b. Any additional regulations (HUD, OSHA, or State/Local AHJ) must be followed if more stringent than the guidelines in this manual.
- c. Testing to determine the presence of lead in paint that will be distributed by WAP measure installation is allowed with EPA-approved testing methods.
- d. Only those costs directly associated with the testing and lead safe practices for surfaces directly disturbed during weatherization activities should be charged to the health and safety budget. Testing methods must be economically feasible and justified.

Oklahoma | PY22 H&S Presentation | 4/20/2022

27

## LEAD BASED PAINT

### Actions:

- a. Criteria for determining when lead safe practices must be performed by the subgrantee:
  - i. The dwelling was constructed pre-1978; and
  - ii. The dwelling has not been determined lead free by appropriate testing; and
  - iii. The amount of surface area to be disturbed exceeds the standards and regulations set by the AHJ.
- b. The following documentation must be kept in the client file to verify that proper RRP procedures and testing was taken on the home:
  - i. Fully documenting all lead safe testing and possible procedures in the initial inspection of the unit on the Weatherization Dwelling H&S Checklist [**Form 25**].
  - ii. A completed "Cleanup" checklist [Attachment 12]
  - iii. Documentation on any and all lead safe training for new or uncertified RRP employees [Forms 40 or 41].

Oklahoma | PY22 H&S Presentation | 4/20/2022

28

## LEAD BASED PAINT

### Actions:

- e. Deferral is required when the extent and condition of lead-based paint in the house would potentially create further H&S hazards **[Form 33]**. The mere presence of lead based paint is not considered a justifiable reason to defer or walk away from a home. **Deferrals must be accompanied by proper documentation including, but not limited to;**
  - i. Documentation of RRP training requirements met;
  - ii. Copy of insurance policy;
  - iii. Copy of NEAT/MHEA audit identifying measures to be completed, accompanied by a description of how the performance of these measures would disturb lead areas which exceed the minimum required measurements of AHJ.

Oklahoma | PY22 H&S Presentation | 4/20/2022

29

## LEAD BASED PAINT

### Testing Protocols:

- a. Subgrantees may expend DOE funds for testing under the following consideration. The following guidance is offered as a guide to determining whether testing is worth the time and money on a case-by-case basis:
  - i. Houses built from 1978 on may be assumed free of lead without testing;
  - ii. In houses built prior to 1940, it is logical to assume the presence of lead and save the cost of testing;
  - iii. In homes built between 1940 and 1978, testing may not be warranted if the amount of area to be disturbed is small, since it may be cheaper to perform LSW for a small area than to incur the expense of testing. However, where the amount of area to be disturbed exceeds the standards and regulations set in this manual or the AHJ, it may be worth the cost of testing, since a negative result would mean that the crews could dispense with having to perform the lead safe protocols;
- b. Routine testing is not an allowable DOE expense.

Oklahoma | PY22 H&S Presentation | 4/20/2022

30

## LEAD BASED PAINT

### Client Education:

- a. Fully notifying client of potential lead safe hazards prior to and after weatherization work on [Form 25]. This must be signed and kept in client file.
- b. Provide client with EPA's most current guide - "[The Lead Safe Certified Guide to Renovate Right](#)" [Attachment 35] to educate client of the dangers of lead poisoning and the lead renovation process. **ALL homes built prior to 1978 MUST receive this guide and client education regardless lead testing results.**

Oklahoma | PY22 H&S Presentation | 4/20/2022

31

## LEAD BASED PAINT

### E. Training:

- a. 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. For additional training guidance, see Requirement 311.
- b. **Subgrantees must document training dates and a list of the staff trained. This list must be kept on file by the subgrantee and updated as necessary. This information must be available for ODOC review upon request.**
- c. In Oklahoma, Certified Renovator training and certification is through Oklahoma's Department of Environmental Quality (ODEQ). The Oklahoma Association of Community Action Agencies provides ODEQ RRP training regularly.

Oklahoma | PY22 H&S Presentation | 4/20/2022

32



## LEAD BASED PAINT

### F. Additional Considerations For Lead Safe Practices:

- a. **Medical Surveillance:** Crew members may receive blood level testing as required by OSHA standards. It is recommended that blood testing be done on each crewmember prior to the implementation of lead safe practices.
  - a. The employer shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician
  - b. The cost of the blood level testing is an allowable DOE Health & Safety expense
  - c. Refer to OSHA 29 CFR 1926.62 for further regulations and guidance.
  
- b. **Liability Issues:** Subgrantees are required to check their liability insurance to ensure there are no exclusion clauses for doing weatherization in a home with lead paint when the energy efficiency measures require the disturbance of lead paint areas.
  - i. The home must be referred out, or deferred by the subgrantees, if weatherization work will be performed that will disturb surfaces that may contain lead, until they have insurance that will provide coverage for lead safe practices in situations involving lead.
  - ii. The cost of this insurance is an allowable DOE expense and ODOC urges subgrantees to seek ways to obtain the coverage at reasonable rates.
  - iii. For additional coverage, subgrantees must take before and after pictures of the home to document the presence of lead prior to weatherization work. At the end of weatherization work, the areas where energy efficient measures have been added must be photographed to document the area was cleaned after weatherization.

Oklahoma | PY22 H&S Presentation | 4/20/2022

33

## LEAD BASED PAINT

### F. Additional Considerations For Lead Safe Practices:

- a. **Materials and Equipment:** Subgrantees are required to provide OSHA-specified safety equipment to their weatherization staff. The purchase of materials and equipment is an allowable DOE expense. This includes but is not limited to the following:
  - i. Nitrile gloves (hypo-allergenic gloves are allowed);
  - ii. Eye wear, shoe covers, coveralls, hat covers, and other needed PPE;
  - iii. HEPA Vacuums (required by EPA RRP);
  - iv. Respirators (fitted) :
    - (a) When work creates dust or chips and lead is presumed or known to exist, wear the approved respirator with HEPA filters.
    - (b) All crew members must be fit tested for a respirator; this is an allowable cost.
    - (c) Medical surveillance must be completed for each crewmember being fitted for a respirator. The cost of the medical test for this purpose is an allowable expense under DOE Health & Safety.
    - (d) See OSHA 29 CFR 1926.62 and EPA RRP Final Rule for further requirements and guidance.
  
- a. **Substance Data Sheet for Occupational Exposure to Lead:**
  - i. The "Substance Data Sheet for Occupational Exposure to Lead" must be distributed to every employee who could be exposed to lead while on the job. A copy must also be at each job site where lead exposure could occur.
  - ii. OSHA requires extensive record keeping for employees at risk for lead exposure. As part of this record keeping, it is recommended that each employee receiving a "Substance Data Sheet" be required to sign some sort of a verification of receipt and understanding form. This must be kept on file with the employees' other health and safety records.

Oklahoma | PY22 H&S Presentation | 4/20/2022

34

## MOLD AND MOISTURE

**Allowability:**

- a. Limited water damage repairs are allowed that meet the following criteria:
  - i. \$750 dollars or less

Oklahoma | PY22 H&S Presentation | 4/20/2022

35

## PESTS

**Allowability:**

- a) Limited pest removal is allowable. If pests cannot be reasonably removed or poses a H&S concern for workers, the home must be deferred.
- b) Screening of windows and points of access is allowed to prevent infestation.

Oklahoma | PY22 H&S Presentation | 4/20/2022

36

## RADON

### Actions:

- a. All clients, in all zones, must sign an informed consent form prior to receiving weatherization services. This form must be kept in the client file [see client education section below]. Major radon problems should be referred to the appropriate local environmental organization or agency for abatement.
- b. In homes where radon may be present, work scope must include precautionary measures based on [the Buildings Assessment of Radon Reduction Interventions with Energy Retrofits Expansion Study \(The BEX Study\)](#) [**Attachment 31**], to reduce the possibility of making radon issues worse.
- d. Other precautions may include, but are not limited to, sealing any observed floor and/or foundation penetrations, including open sump pits (**with airtight cover**), isolating the basement from the conditioned space, ensuring crawl space venting is installed **and implementing ventilation as required by ASHRAE 62.2-2016**

Oklahoma | PY22 H&S Presentation | 4/20/2022

37

## RADON

- The SWS now contains specifications for the precautionary package of measures
  - [Radon Precautionary Measures | Standard Work Specifications \(nrel.gov\)](#)
    - [Soil-Gas Retarder | Standard Work Specifications \(nrel.gov\)](#)
    - [Sump Well/Pit Covers | Standard Work Specifications \(nrel.gov\)](#)

Oklahoma | PY22 H&S Presentation | 4/20/2022

38

## SAFETY DEVICES: SMOKE & CARBON MONOXIDE ALARMS, FIRE EXTINGUISHERS

### B. Actions:

- a. During the energy audit, a unit must be inspected for smoke and carbon monoxide alarms, and fire extinguishers [if applicable].
- b. **Follow NFPA 72 guidance on smoke alarms and CO monitors.**
- c. If an alarm or fire extinguisher is located, it must be tested to determine whether it is an operable device.

Oklahoma | PY22 H&S Presentation | 4/20/2022

39

## VENTILATION AND INDOOR AIR QUALITY

### Allowability:

- a. Costs associated with implementing and following ASHRAE 62.2 2016 are allowed, provided the cost meets the criteria in Section I.B.
- b. **Bathroom local exhaust fans can be installed as per the requirement of ASHRAE 62.2.**
  - i. **ASHRAE 62.2 Section 5 requires bathroom local exhaust fans to be vented outside and to have a minimum demand-controlled airflow of 50 CFM or continuous airflow of 20 CFM.**
  - ii. **See Table 5.1 from ASHRAE 62.2 for further guidance.**
- c. **ASHRAE 62.2 also requires local exhaust kitchen fans to be vented outside and have a minimum demand-controlled airflow of 100 CFM.**
  - i. **Any home with a gas range must be provided with a range hood vented to outside. This can be an ASHRAE continuous run fan or an intermittent fan. This will be a health & safety cost.**
  - ii. **See Table 5.1 from ASHRAE 62.2 for further guidance.**
- d. **The installation of required local ventilation may meet ASHRAE 62.2 requirement for additional dwelling unit ventilation, and this needs to be considered during the audit.**
- e. **Run Red Calc to determine if additional dwelling unit ventilation is needed. See Appendix F for guidance.**
- f. **Any functioning exhaust fan that will remain in the home after weatherization must be vented to the outside. This shall be funded with Health and Safety funds.**

Oklahoma | PY22 H&S Presentation | 4/20/2022

40

## WATER HEATERS

### Allowability:

- a. Repair and cleaning is allowed, provided the cost meets the criteria in Section I.B.
- b. If repair and cleaning is not sufficient, and the water heater is leaking and rusted, limited case by case water heater replacement is allowed, provided the agency has first attempted to justify replacement as an ECM, and the costs meet the criteria in Section I.B. Furthermore, the water heater must post a life safety risk to occupants (e.g., leaking primary tank, high CO measurements).
- c. Minor safety repairs of water heaters (e.g. T&P valve piping, backflow prevention devices, expansion tanks) .
- d. Replace, repair, or install primary eater heater when existing primary water heater is unsafe, inoperable, or nonexistent.

Oklahoma | PY22 H&S Presentation | 4/20/2022