Weatherization Grantee Health and Safety Plan

Optional Template

☑ POLICY SUBMITTED WITH PLAN

1.0 – GENERAL INFORMATION

Grantees are encouraged to enter additional information here that does not fit neatly in one of the other sections of this document.

In PY2017, Kansas began using a new reporting management tool that is providing additional insight into the H&S expenditures on homes at the state level. In tracking additional H&S measures individually instead of in aggregate, the new system allows for a better perspective on how different funding sources supplement DOE's H&S budget. In recent years, Kansas has been fortunate to have other, non-federal, funding that has helped both to increase the H&S measures possible under the weatherization umbrella and also cover some H&S expenditures to keep DOE's portion near 17%. However, the demand for those more flexible, non-federals has shifted from covering H&S expenses to being needed to help address major deferral issues, such as roof repairs. As such, DOE's share of H&S costs, as well as an overall increase in H&S costs, is increasing the need to budget a higher H&S budget.

The attached PDF shows the accrued H&S expenditures for recently weatherized DOE homes. This data should be a valid representation of anticipated H&S expenses and installation frequency for DOE PY21 and supports a H&S budget near 20%

2.0 – BUDGETING

Grantees are encouraged to budget Health & Safety (H&S) costs as 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. Grantees are reminded that, if H&S costs are budgeted and reported under the program operations category rather than the H&S category, the related H&S costs must be included in the calculation of the ACPU and cost-justified through the approved energy audit.

Select which option is used below.

Separate Health and Safety Budget ☑	Contained in Program Operations ☐

3.0 – HEALTH AND SAFETY EXPENDITURE LIMITS

Pursuant to 10 CFR 440.16(h), Grantees must set H&S expenditure limits for their Program, providing justification by explaining the basis for setting these limits and providing related historical experience.

Low percentages should include a statement of what other funding is being used to support H&S costs, while larger percentages will require greater justification and relevant historical support. It is possible that these limits may vary depending upon conditions found in different geographical areas. These limits must be expressed as a percentage of the ACPU. For example, if the ACPU is $5,000, then an average expenditure of $750 per dwelling would equal 15 percent expenditures for H&S.

15 percent is not a limit on H&S expenditures but exceeding this amount will require ample justification. These funds are to be expended by the Program in direct weatherization activities. While required as a percentage of the ACPU, if budgeted separately, the H&S costs are not calculated into the per-house limitation. DOE strongly encourages using the table below in developing justification for the requested H&S budget amount. Each H&S measure the Grantee anticipates addressing with H&S funds should be listed along with an associated cost for each measure, and by using historical data the estimated frequency that each measure is installed over the total production for the year.

It is also recommend reviewing recent budget requests, versus expenditures to see if previous budget estimates have been accurate. The resulting "Total Average H&S Cost per Unit" multiplied by the Grantee's production estimate in the Annual File should correlate to the H&S budget amount listed in the Grantee's state plan.

Should a Grantee request to have more than 15 percent of Program Operations used for health and safety purposes, DOE will conduct a secondary level of review. DOE strongly encourages use of this H&S template and matrix to help expedite this process.

H&S Measure Matrix - Optional			
Double Click To Open For Editing			
Cells this shade auto calculate			
Enter Measure ↓	Enter Cost ↓	Enter Frequency % ↓	Auto Calculates
See Attached Supporting Detail	$1,356.55	100.0%	$1,356.55
Total Average H&S Cost Per Unit			$1,356.55
Enter Estimated Production (Annual File: IV.2 WAP Production Schedule) →			249
Enter Estimated Program Operations Budget →			$1,688,911.00
H&S Budget (Total Average H&S Cost Per Unit * Estimated Production)			$337,780.95
Requested H&S Percentage Per Unit (H&S Budget/Program Operations)			20.0%

4.0 – Incidental Repair Measures

If Grantees choose to identify any H&S measures as incidental repair measures (IRMs), they must be implemented as such under the Grantee's weatherization program in all cases – meaning, they can never be applied to the H&S budget category. In order to be considered IRMs, the measure must fit the following definition and be cost justified along with the associated efficiency measure;

Incidental Repairs means 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. (10 CFR 440 "Definitions")

Incidental repairs are those repairs necessary for the effective performance or preservation of weatherization materials and are not Health and Safety measures and accordingly would not be charged as such.

Minor wall or roof repairs to preserve installed insulation shall be deemed an IRM, and not H&S. Minor repairs are those that can be corrected with $500 or less.

5.0 – Deferral/Referral Policy

Deferral of services may be necessary if H&S issues cannot be adequately addressed according to WPN 17-06 guidance. The decision to defer work in a dwelling is difficult but necessary in some cases. This does not mean that assistance will never be available, but that work must be postponed until the problems can be resolved and/or alternative sources of help are found. If, in the judgment of the auditor, any conditions exist which may endanger the health and/or safety of the workers or occupants, the unit should be deferred until the conditions are corrected. Deferral may also be necessary where occupants are uncooperative, abusive, or threatening. Grantees must be specific in their approach and provide the process for clients to be 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.
Grantee has developed a comprehensive written deferral/referral policy that covers both H&S, and other deferral reasons?
Yes ☑ No ☐
Where can this deferral/referral policy be accessed?
Section V.1.2 of State Plan.

6.0 – HAZARD IDENTIFICATION AND NOTIFICATION FORM(S)

Documentation forms must be developed that include at a minimum: 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.
Documentation Form(s) have been developed and comply with guidance?
Yes ☑ No ☐

7.0 – HEALTH AND SAFETY CATEGORIES

For each of the following H&S categories identified by DOE:

- *Explain whether you concur with existing guidance from WPN 17-06 and how that guidance will be implemented in your Program, if you are proposing an alternative action/allowability, or if the identified category will not be addressed and will always result in deferral. Alternatives must be comprehensively explained and meet the intent of DOE guidance.*
- *Where an Action/Allowability or Testing is "required" or "not allowed" through WPN 17-06, Grantees must concur, or choose to defer all units where the specific category is encountered.*
- *"Allowable" items under WPN 17-06 leave room for Grantees to determine if the category, or testing, will be addressed and in what circumstances.*
- *Declare whether DOE funds or alternate funding source(s) will be used to address the particular category.*
- *Describe the explicit methods to remedy the specific category.*
- *Describe what testing protocols (if any) will be used.*
- *Define minimum thresholds that determine minor and major repairs*
- *Identify minimum documentation requirements for at-risk occupants*
- *Discuss what explicit steps will be taken to educate the client, if any, on the specific category if this is not explained elsewhere in the Plan. Some categories, like mold and moisture, require client education.*
- *Discuss how training and certification requirements will be provided for the specific category. Some categories, like Lead Based Paint, require training.*
- *Describe how occupant health and safety concerns and conditions will be solicited and documented*

Grantees may include additional H&S categories for their particular Programs. Additional categories must include, at a minimum, all of the same data fields as the DOE-provided categories. Two additional tables have been created to utilize.

7.1 – Air Conditioning and Heating Systems				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☑	Alternative Guidance ☐	Results in Deferral ☐		
Air Conditioning Unallowable Measure ☑	Heating Unallowable Measure ☐			
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
How do you address unsafe or non-functioning primary heating/cooling systems?				

Unsafe primary heating units must be repaired or replaced before weatherization can proceed, or deferral is required. Unsafe primary units must be proposed for replacement in the energy audit to determine if the system can be replaced as an ECM prior to repair or H&S replacement. If the unit does not qualify as an ECM, the unit will be assessed for repair or H&S replacement. If the estimated cost of repairs exceeds 50% of the estimated replacement cost, the piece of equipment shall be replaced.

Non-functioning primary heating systems will be inspected to the extent possible for H&S issues and possible repair items. Before any repair, non-functioning units will be proposed for replacement in the energy audit to determine if the system can be replaced as an ECM. The name plate efficiency rating shall be used in the audit tool. This logic potentially allows an inefficient, albeit inoperable, unit to be replaced as an EMC before any repair costs are incurred. If the unit does not qualify as an ECM, the unit will be assessed for repair or H&S replacement. If the estimated cost of repairs exceeds 50% of the estimated replacement cost, the piece of equipment shall be replaced.

Homes without any heating systems will be reviewed on a case by case basis by contacting KHRC before weatherization services begin.

KHRC will require the review of pre-inspection and energy audit documents to evaluate if case by case H&S measures are appropriate and allowable for program expenditures.

Cooling system shall only be replaced as an ECM with DOE funds. No H&S cooling systems are permitted.

Electric space heaters are not considered unvented heaters nor are they considered unsafe heating sources for H&S weatherization purposes. No weatherization funds shall be used for the repair or replacement of electric resistance heaters. Electric resistance heating sources, both forced air and space heaters, should be proposed for ECM replacement with electric heat pumps.

How do you address unsafe or non-functioning secondary heating systems, Including unvented secondary space heaters?

Unsafe or non-functioning secondary heating systems, including unvented space heaters must be repaired, removed, or rendered inoperable, or deferral is required. Replacement or installation of secondary units is not allowed.

Homes heated by unvented combustion space heaters are considered unsafe and shall not be weatherized unless the heaters are removed from the premises, vented to the outside, or replaced with an appropriate primary heating unit. A secondary or backup unvented heater may be allowed to remain in place and operable as long as it is labeled as conforming with ANSI Z21.11.2. These secondary units should be tested for high levels of CO and client education on their risk and hazards must be provided. Electric space heaters are not considered unvented heaters.

Indicate Documentation Required for At-Risk Occupants

NA

Testing Protocols

All mechanical systems will be assessed at both the initial audit and at the post inspection. The most recently approved mechanical inspection forms will be utilized to record and document the results.

Separate mechanical inspections forms will be used for pre- and post-inspections. Separate mechanical forms will be used for each mechanical system.

Mechanical inspection forms will clearly identify the individual conducting the inspection and the date it was performed.

Mechanical equipment forms will collect brand, model, and serial number of equipment. Equipment shall be modeled to reflect published efficiency usage as identified by the model number when available. When published data is unavailable the estimates and assumptions in the Subrecipient Procedures Manual must be used.

Mechanical systems must be deemed safe before weatherization measures are installed and must be documented as safe at the completion of the weatherization work. This requirement applies year-round regardless of whether the equipment is in use.

For solid fuel appliances, look for visual evidence of soot on the walls, mantel or ceiling, or creosote staining near the flue pipe.

Client Education

When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.

Clients shall be instructed in the operation and maintenance of new equipment.

Paperwork and manuals for new equipment will be left at the residence with either the client or near or on the equipment.

Training

All auditors/inspectors are trained to test heating systems to determine proper operating performance and H&S concerns. Training on allowable activities is provided.

HVAC installers will be licensed as required by the authority having jurisdiction and will obtain all required permits.

7.2 - Asbestos - All

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

Where suspected Asbestos Containing Material (ACM) is identified precautions must be taken not to disturb the material. The suspected ACM's overall condition and potential for disturbing the material will be evaluated. Where the material condition is good and intact at time of inspection and there is no risk of disturbing the material, a blower test can be conducted. Where the material is in less than good condition, the material is non-intact, or the material may be disturbed, the home will be deferred until the material is deemed non-asbestos containing, removed, or encapsulated by a certified asbestos professional.

The exception to the above approach is vermiculite. No blower door test will occur, and the home will be deferred until the removal of vermiculite by a certified asbestos professional is completed.

General blower door testing is allowed with slate siding.

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?

Where suspected ACM's will be disturbed, the home will be deferred until the suspected material is deemed non-asbestos containing, removed, or encapsulated by a certified asbestos professional. The exception is slate type siding. Slate type sliding may be removed and reinstalled in order to install sidewall insulation and where the associated costs are charged as part of the ECM. All precautions must be taken not to damage the siding. Slate type siding should not be cut or drilled. Where possible, insulate through home interior.

Testing Protocols

Visually inspect exterior wall surfaces, floors, walls, and ceilings for suspected ACM prior to drilling or cutting. DOE/LIEAP funds cannot be used for removal, encapsulation, or testing.

Client Education

Clients and workers will be instructed not to disturb any suspected ACMs.

When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.

Training and Certification Requirements

Workers are instructed not to disturb any suspected ACMs and to take all precautions to not damage slate type siding. The use of PPEs and safe practices when working around suspected ACMs as outline in the SWS's are recommended.

7.2b – Asbestos - in vermiculite

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 vermiculite that will be disturbed through the course of weatherization work?

NA- When vermiculite is present, the home will be deferred until the removal of vermiculite by a certified asbestos professional is completed. DOE funds cannot be used for removal.
Testing Protocols
NA
Client Education
Clients will be instructed to not disturb the vermiculite and asbestos safety information will be provided. The deferral language will provide information in writing describing that in order for weatherization to proceed there must be documentation that a licensed professional removed the vermiculite.
Training and Certification Requirements
Auditors will receive training on how to recognize vermiculite and to not disturb it.

7.2c – Asbestos - on pipes, furnaces, other small covered surfaces

Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☑		Results in Deferral ☐
Suspected asbestos containing material present on pipes, furnaces, or other small covered surfaces, shall be assumed to contain asbestos, unless testing determines otherwise. The material's overall condition and the potential for disturbing the material will be evaluated. Where the material condition is good and intact at time of inspection and there is no risk of disturbing the material, weatherization work should proceed. Clients and workers will be instructed not to disturb the material. Where the material is in less than good condition, the material is non-intact, or the material may be disturbed, the home will be deferred until the material is deemed non-asbestos containing, removed, or encapsulated by a certified asbestos professional. DOE/LIEAP funds cannot be used for removal, encapsulation, or testing.				
Funding				
DOE ☐	LIHEAP ☐	State ☑	Utility ☐	Other ☐
How do you address suspected ACM's (e.g., pipes, furnaces, other small surfaces) that will be disturbed through the course of weatherization work?				
Where suspected ACM's are present that will be disturbed through the course of weatherization, the home will be deferred until the material is deemed non-asbestos containing or is removed or encapsulated by a certified asbestos professional.				
Testing Protocols				
Auditors will assess whether suspected ACMs are present. DOE/LIEAP funds cannot be used for removal, encapsulation, or testing.				
Client Education				
Clients will be instructed to not disturb the suspected ACMs and asbestos safety information will be provided. When non-federal funds are used for testing, the test results will be shared in writing with the client. When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.				
Training and Certification Requirements				
Auditors will receive training on how to recognize suspected ACMs.				

7.5 – Biologicals and Unsanitary Conditions
(odors, mustiness, bacteria, viruses, raw sewage, rotting wood, etc.)

Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☐		Results in Deferral ☐
Unallowable Measure ☑				
Funding				
DOE ☐	LIHEAP ☐	State ☐	Utility ☐	Other ☐
What guidance do you provide Subgrantees for dealing with biological and/or unsanitary conditions in homes slated for weatherization?				
Removal of mold, odors, viruses, bacteria, unsanitary conditions (including raw sewage), and rotting wood is not a Weatherization responsibility; however, program workers frequently encounter these conditions. DOE funds may not be used to correct the condition and the home may need to be deferred in cases where conditions in the home pose a health risk to occupants and/or weatherization workers. Caution should be taken when selecting air ventilation rates for dwellings with these problems. Since some of these conditions are related to moisture, procedures that allow local agencies to assess moisture conditions as a part of the initial audit procedure and treat them as part of the weatherization work have been established; see Mold and Moisture. If necessary, weatherization services may need to be delayed until the problem can be referred to another agency that can take remedial action.				
Testing Protocols				
Sensory inspection.				
Client Education				
When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.				
Training				
Auditors will receive training and instruction on how to recognize unsafe conditions, when to defer, and safe work practices when encountering such conditions.				

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 Subgrantees for dealing with structural issues (e.g., roofing, wall, foundation) in homes slated for weatherization?				
Building rehabilitation is beyond the scope of the Weatherization Assistance Program; however, program workers frequently encounter homes in poor structural condition. Dwellings whose structural integrity is in question should be referred to housing rehabilitation programs where appropriate. Weatherization services may need to be delayed until the dwelling can be made safe for crews and occupants. Incidental repairs necessary for the effective performance or preservation of weatherization materials are allowed. Examples of these limited repairs include sealing minor roof leaks to preserve new attic insulation and repairing water-damaged flooring as part of replacing a water heater.				
How do you define "minor" or allowable structure and roofing repairs, and at what point are repairs considered beyond the scope of weatherization?				
Minor repairs are those repairs that can be corrected with a maximum $500 incidental repair. All minor repairs must meet and follow the definition and requirement of incidental repairs.				

If priority lists are used, and these repairs are designated as Incidental Repairs, at what point is a site-specific audit required?
NA
Client Education
When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.
Training
Auditors will receive basic information on how to identify structural issues that pose a risk to occupants and/or weatherization workers. Roofing will be inspected for active roof leaks.

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 Subgrantees for dealing with code compliance issues in homes receiving weatherization measures?
The 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. State and local (or jurisdiction having authority) codes must be followed while installing weatherization measures. Condemned properties and properties where "red tagged" or health and safety conditions exist that cannot be corrected under this guidance must be deferred.
What specific situations commonly trigger code compliance work requirements for your network? How are they addressed?
Flue liners or resizing of water heater flues when a weatherization installed furnace orphans the water heater. Flue liners and flue corrections are allowable H&S items. Federal Pacific breaker boxes are present in Kansas homes and where mechanical equipment replacements are required, this unsafe breaker box must be replaced. This is an allowable H&S expense, but typically will require additional non-federal funding. The correction of all mechanical code violations may be required when pulling a mechanical permit for the installation of new mechanical equipment. This may include installing a gas line drip leg on water heaters when installing in a new furnace. The correction of code issues when required, is an allowable H&S expense. Electrical code compliance work is allowed when required when installing new ventilation equipment.
Client Education
When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.
Training
Auditors will receive basic information from their agencies on what code compliance may be required in their counties and localities.

7.8 – Combustion Gases				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☑		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
Testing Protocols				

All combustion space and water heating appliances will be assessed at both the initial audit and at the post inspection. The most recently approved mechanical inspection forms available will be utilized to record and document the results. Separate mechanical inspections forms will be used for pre- and post-inspections.

Separate mechanical forms will be used for each mechanical system.

Proper venting to the outside for combustion appliances, including gas dryers and refrigerators, furnaces, vented space heaters, and water heaters is required. Also see Gas Ovens, Stovetops, Ranges.

When testing indicates a performance problem, venting corrections will be made. Prescriptive correction of preexisting venting code compliance issues, or combustion air calculations, are not eligible H&S measures unless triggered by code compliance requirements. When correction of preexisting code compliance issues is triggered and paid for with WAP funds, cite the specific code requirements with reference to the weatherization measure(s) that triggered the code compliance issue in the client file.

Follow the Kansas SWS Field Guide for testing procedures and action levels.

Follow the Subrecipient Procedures Manual, section Mechanical Systems, to assess combustion equipment and determine repair or replacement procedures.

Combustion appliances must be deemed safe before weatherization measures are installed and must be documented as safe at the completion of the weatherization work. This requirement applies year-round regardless of whether the equipment is in use.

All naturally drafting combustion equipment within the home's pressure boundary will be tested with the Combustion Appliance Zone (CAZ) in the worst-case depressurization state. This is required at the initial audit and final inspection.

Fireplaces can present special hazards that may be affected by weatherization. Fireplaces, as well as all solid fuel appliances, should be inspected for visual evidence of soot on the walls, mantel, or ceiling, or creosote staining near the chimney/flue pipe. These can indicate combustion/drafting issues. Assess whether the fireplace is a primary heating source, a backup heating source, or merely decorative in nature. Operational fireplaces used for primary heating should have the CAZ zone tested under worst case conditions. CAZ depressurization exceeding 5 pascals in the space having the fireplace should have pressure imbalances corrected, additional combustion air added, or the fireplace disabled.

When a fireplace is used for primary heating, other combustion appliances, such as gas water heaters, should be tested under simulated worst-case conditions. A blower door can be set to run at 300 CFM (depressurization) to mimic the airflow dynamics likely when the fireplace is in use.

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

Daily Test Out Procedures for Crew Based Weatherization:

Any time the air seal/insulation crew performs work on a home, the crew will utilize a smoke pencil or mirror to conduct testing for spillage of any atmospheric draft appliance and measure ambient CO level present in the home prior to leaving the home. This testing will be conducted with all exhaust appliances running. In the event an appliance spills for more than 2 minutes, the appliance will be turned off, allowed to cool, and re-tested under natural conditions. If the appliance fails spillage under natural conditions, or if at any time the ambient CO level in the home exceeds 35 ppm during testing, the appliance will be turned off and the client will be instructed not to operate the appliance until it has been serviced and re-tested by HVAC or authorized personnel and found to be operating safely. Crews will notify HVAC or other authorized personnel that the home needs immediate attention.

Appliances that fail under CAZ worst-case depressurization but pass at natural are not necessarily immediate hazards but will be addressed before the final inspection. HVAC or other authorized personnel will be notified to schedule servicing. Residents will be instructed to avoid the conditions causing CAZ depressurization until repairs are completed.

Crew HVAC personnel will test any equipment they service or install. They will also conduct spillage, draft, flue CO, and ambient CO testing on any atmospheric drafting appliances during CAZ worst-case depressurization prior to leaving the home. Testing will follow the same procedures as auditors and inspectors. Hazards that require an immediate response will be addressed during the visit. If unable to correct the issue prior to leaving, the client will be instructed not to operate the appliance until it has been serviced and re-tested by HVAC personnel and found to be operating safely.

Client Education

Clients will be instructed on the use of new combustion equipment and provided combustion safety and hazards information.

Training

As part of initial, and on-going training, auditors are trained on how to perform appropriate combustion appliance testing, CAZ depressurization hazards and corrections, and CO action levels.

7.9 – Electrical

Concurrence, Alternative, or Deferral

Concurrence with Guidance ☐	Alternative Guidance ☑	Results in Deferral ☐

Funding

DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐

What guidance do you provide Subgrantees for dealing with electrical hazards, including knob & tube wiring, in homes slated for weatherization?

The two primary energy-related health and safety electrical concerns are insulating homes that contain knob-and-tube wiring and identifying overloaded electrical circuits. Knob-and-tube wiring located in a wall cavity or exposed on an attic floor was intended by code to have free air movement to cool the wire when it is carrying an electric current. Laboratory tests have shown that retrofitting thermal insulation around electric wiring can cause it to overheat, resulting in a fire hazard. For this reason, the installation of insulation around live knob and tube wiring should not be performed. Sidewalls that contain live knob and tube wiring are not to be blown with insulation. In attics, a reasonable cost of rewiring live knob and tube should be included in the cost of the attic insulation for audit approval. The cost of rewiring will be charged with the cost of the energy conversation measure of attic insulation if audit approved. If the cost of rewiring is prohibitive, the cost of attic insulation shall be run independently and should be valleyed or dammed to prevent covering live knob and tube. Subrecipients are to abide by more stringent applicable codes in jurisdictions where the work is being performed.

Voltage detection testing is required on knob and tube wiring.

Serious electrical hazards exist when gross overloads are present. Should auditors and crews find such existing problems, they should notify the owner. Weatherization measures that involve the installation of new equipment such as air conditioners, heat pumps, ventilation systems, or electric water heaters can exacerbate previously marginal overload problems to hazardous levels. The problem should also be noted in the client file. To the extent that these problems prevent adequate weatherization, the agency should consider repairing them on a case-by-case basis.

KHRC will require the review of pre-inspection and energy audit documents to evaluate if case by case H&S measures are appropriate and allowable for program expenditures.

Deferral may be necessary.

How do you define "minor" or allowable electrical repairs, and at what point are repairs considered beyond the scope of weatherization?

When the H&S of the occupant or worker(s) is at risk, minor repairs are allowed when necessary for weatherization measures. Minor repairs are those repairs that can be corrected with a maximum $500 repair. Electrical upgrades or repairs which are a direct component of an energy conservation measure must be charged as part of the energy conservation measure and cannot be charged to the health and safety budget category. Electrical upgrades or repairs which are part of a H&S furnace, H&S water heater, or H&S ventilation system (ASHRAE) must be charged as part of the associated H&S measure.

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

NA

Client Education

When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.

Training

As part of initial training, auditors are trained on how to identify and test knob and tube wiring. OSHA training can provide additional electrical safety training.

7.10 – Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and other Air Pollutants

Concurrence, Alternative, or Deferral

Concurrence with Guidance ☐		Alternative Guidance ☑		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
What guidance do you provide Subgrantees for dealing with formaldehyde, VOCs, flammable liquids, and other air pollutants identified in homes slated for weatherization?				
Formaldehyde vapors may be slowly released by some new carpets, waferboard, plywood, etc. VOCs are also emitted by some household cleaning agents. Ventilation rates will be taken into consideration in dwellings with VOC or other air pollutant issues. 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 Protocols				
Sensory inspection.				
Client Education				
When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.				
Training				
EPA's information on indoor air quality will assist auditors on how to recognize potential hazards and when removal is necessary.				

7.11 – Fuel Leaks *(please indicate specific fuel type if policy differs by type)*				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☑		Alternative Guidance ☐		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
Remediation Protocols				
Exposed gas lines will be inspected using an electronic combustion gas detector from the utility coupling into and throughout the home. Gas leaks should be verified with a soap solution and marked for repair. When a gas leak is found on the utility side of service, the client must contact the utility service before work may proceed. Fuel leaks that are the responsibility of the client must be repaired before weatherizing the unit. Fixing minor fuel leaks inside the home are allowable H&S expenses.				
How do you define allowable fuel leak repairs, and at what point are repairs considered beyond the scope of weatherization?				
Minor gas leak repairs are allowable weatherization H&S measures. Minor repairs are those that can be corrected with $500 or less.				
Client Education				
Clients will be notified in writing if fuel leaks are detected.				
Training				
As part of initial training, auditors are trained on how to conduct fuel leak testing.				

7.12 – Gas Ovens / Stovetops / Ranges				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☑		Results in Deferral ☐

Funding
DOE ☑ LIHEAP ☑ State ☑ Utility ☐ Other ☐
What guidance do you provide Subgrantees for addressing unsafe gas ovens/stoves/ranges in homes slated for weatherization?
Replacement of gas ovens, stovetops, and ranges is not allowed. Gas ovens will be tested for CO following BPI's test procedures. If units exceed 450 ppm air-free at steady state, a clean and tune will be conducted. Clients will be notified if units do not improve after cleaning and tuning and a CO alarm will be installed. Gas ranges will be visually inspected. Clients will be notified that a clean and tune or repair is recommended if the flame has any discoloration, flame impingement, an irregular pattern, or if the burners are visibly dirty, corroded, or bent. Client education will be provided on how to minimize CO exposure such as running exhaust fans when cooking and the importance of keeping the oven and burners clean.
Testing Protocols
See above
Client Education
See above
Training
Oven and range inspection procedures and CO action levels will be part of comprehensive training for auditors.

7.13 – Hazardous Materials Disposal [Lead, Refrigerant, Asbestos, Mercury (including CFLs/fluorescents), etc.] *(please indicate material where policy differs by material)*

Concurrence, Alternative, or Deferral
Concurrence with Guidance ☐ Alternative Guidance ☑ Results in Deferral ☐
Funding
DOE ☑ LIHEAP ☑ State ☑ Utility ☐ Other ☐
Client Education
All clients will receive a pre-renovation lead pamphlet. Clients will be instructed to not disturb suspected asbestos containing material and asbestos safety information will be provided in writing if suspected ACM's are present. Clients will be informed in writing of hazards associated with hazardous waste materials being handled in the home.
Training
Appropriate PPE will be used for working with hazardous waste materials and weatherization staff will be reminded of the health and environmental risks related to hazardous materials and the requirement for proper disposal.

Disposal Procedures and Documentation Requirements
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. Contract language will reflect this requirement.

7.14 – Injury Prevention of Occupants and Weatherization Workers
(Measures such as repairing stairs and replacing handrails)

Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☑		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
What guidance do you provide Subgrantees regarding allowable injury-related repairs (e.g., stairs, handrails, porch deck board)?				
Minor repairs to stairs, steps, railings, etc., are allowed incidental repairs under the program if necessary to complete the weatherization work. For example, broken steps to the basement where the furnace is located may be repaired if necessary in order to complete furnace work. Items not necessary for the installation of a weatherization measure are not allowed. Minor repairs made to remedy the issues must meet the definition of incidental repairs and will be charged as incidental repairs rather than H&S. Necessary repairs beyond the scope of the program will result in a deferral. When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.				
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.				
Minor repairs to this section will follow the incidental repair policy which outlines a $500 cap.				
Training				
Auditors will be trained on the use of the hazard identification form.				

7.15 – Lead Based Paint

Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☑		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
Safe Work Protocols				

All weatherization auditors, inspectors, field monitors, agency crew members, general weatherization contractors and their crew members must attend and successfully complete a Kansas Department of Health and Environment (KDHE) approved Lead Safe Work Practice Training course and fulfill KDHE requirements to become Certified Renovators. Work must follow KDHE's Renovation, Repair, and Painting Program (RRP) when working in pre-1978 housing unless KHDE approved testing confirms the work area to be lead free.

All general weatherization contractors and agency crews will be responsible for complying with the Lead Based Paint Renovation, Repair, and Painting Rule (RRP) as enforced by KDHE in Kansas. Weatherization contractors and agencies with crews must be KDHE Licensed Renovation Firms.

RRP and Kansas weatherization requires all licensed firms to employ a Certified Renovator who is registered with the KDHE. Weatherization jobs will have a designated Certified Renovator on each job site at all times during weatherization activities. The Certified Renovator will document that RRP requirements were followed. Agency crews will include this documentation in the client file. Contractors are responsible to KDHE for completing and retaining proper documentation. Contractors, and agency crews, will provide a signed Lead Safe Work Practices Declaration form with the certified renovator's signature for the client file for all weatherization jobs. A copy of this documentation is required in the client file.

Only those costs directly associated with the lead safe practices for surfaces directly disturbed during weatherization activities are allowable H&S expenditures.

Testing Protocols

See above

Client Education

Clients will receive a pre-renovation lead pamphlet.

When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.

Training and Certification Requirements

See above

Documentation Requirements

All client files will have a lead pamphlet delivery declaration. The Lead Safe Work Practices Declaration form with the certified renovator's signature is also required in the client file.

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 ☑ Alternative Guidance ☐ Results in Deferral ☐

Funding

DOE ☑ LIHEAP ☑ State ☑ Utility ☐ Other ☐

What guidance do you provide Subgrantees 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?

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 measure. Repairs not directly necessary for the installation of an ECM or H&S item are not allowed. Repair costs must be included with the associated weatherization measure.

Source control (i.e. correction of moisture and mold creating conditions) is allowed when necessary in order to weatherization the home and to ensure the long-term stability and durability of the measure. Source control is independent of latent damage and related repairs. Source control includes but is not limited to: gutters, down spouts, extensions, flashing, sump pumps, minor dirt work for drainage, and landscaping. The installation of dehumidifiers is typically beyond the scope of weatherization and requires a field waiver from the grantee. Major drainage issues are beyond the scope of the program. Source control is allowable only as they relate to mold and moisture creating conditions.

Ground moisture barriers will be installed in accordance with the approved Kansas SWS Field Guide. Ground moisture barriers will be installed over exposed soil in crawl spaces and basement where 2/3 or more of the area is accessible AND the installed portion can be adequately sealed to the adjacent foundation walls. Accessibility is to be determined by the initial auditor. Ground moisture barriers will not be installed where bulk water intrusion/standing water is a concern.

Mold cleanup or testing is not an allowable Health and Safety 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 and cannot be charged to the H&S budget category.

Where severe mold and moisture issues cannot be addressed, deferral is required.

How do you define "minor" or allowable moisture-related measures, and at what point is work considered beyond the scope of weatherization?

Minor repairs are those that can be corrected with $500 or less.

Client Education

Auditors will complete a mold assessment and release form for each home. Where mold or moisture issues are identified, clients will receive information concerning the issue and will sign the release form.

When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.

When source moisture problems are identified, clients will be provided information on them. For example, the importance of cleaning and maintaining drainage systems such as gutters, or how proper landscape design and site drainage impacts moisture control.

Training

During initial training, auditors will be provided the following resources:

- EPA Handout: A Brief Guide to Mold, Moisture, and Your Home
- DOE Energy-Related Mold and Moisture Training: https://www.youtube.com/playlist?list=PLe9LTtgvpB4EP_Cbx26KsVtjAzUupC8gf
- WxTV Mold and Moisture Issue: http://wxtvonline.org/2011/01/mold/

7.17 – Pests

Concurrence, Alternative, or Deferral

Concurrence with Guidance ☑		Alternative Guidance ☐		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
What guidance do you provide Subgrantees for dealing with pests and pest intrusion prevention in homes slated for weatherization?				
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. Incorporating pest exclusion into air sealing practices to prevent intrusion is allowed as part of the air sealing ECM. The use of harsh chemicals is to be avoided.				
Define Pest Infestation Thresholds, Beyond Which Weatherization Is Deferred				
Discretion to defer homes based on pests is left up to the individual auditor and work crews. Unsafe or unsanitary conditions are allowable deferral conditions.				
Testing Protocols				
Sensory inspection.				
Client Education				
When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.				
Training				
Auditors are instructed to assess the presence and degree of infestation and associated risks.				

7.18 – Radon				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☑		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
What guidance do you provide Subgrantees around radon?				
Radon testing and mitigation is not an allowable activity under the weatherization program. However, since radon may be present in all Kansas homes, precautionary measures to reduce the possibility of making radon issues worse are allowable H&S expenditures. Whenever site conditions permit, exposed dirt floors within the pressure/thermal boundary must be covered with an appropriately installed and sealed vapor barrier. Other precautions may include, but are not limited to, sealing any observed floor and/or foundation penetrations, installing a cover over open sump pits, or air sealing unconditioned cellars or crude basements to minimize connection with the living space.				
Testing Protocols				
Radon testing is not an allowable weatherization measure.				
Client Education				
All clients will be provided EPA's *A Citizen's Guide to Radon* and will be required to sign off on a Radon Informed Consent Form.				
Training and Certification Requirements				
Auditors, assessors, and inspectors will be familiar with the EPA's *A Citizen's Guide to Radon* and will be able to discuss it with clients. They will also know the precautionary measures that may be helpful.				
Documentation Requirements				

All client files will have a signed Radon Informed Consent Form. A sample of this form is available on the WAP SharePoint site.

7.19 – Safety Devices: Smoke and Carbon Monoxide Alarms, Fire Extinguishers				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☑		Alternative Guidance ☐		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
What is your policy for installation or replacement of the following:				
Smoke Alarms: Where alarms are not present or are inoperable, one UL-217 listed smoke alarm will be installed outside sleeping areas and on each habitable floor within every weatherized home. Alarms shall have non-removable, non-replaceable 10-year lithium batteries.				
Carbon Monoxide Alarms: Where alarms are not present or are inoperable, one CO alarm will be installed outside the primary sleeping area and on each habitable floor within every weatherized home. Alarms shall be sealed lithium battery unit.				
Fire Extinguishers: Fire extinguishers are not an allowable H&S measure.				
Testing Protocols				
Existing alarms will be tested for operation and checked for remaining life. New installed alarms will be tested to verify operation.				
Client Education				
Where alarms are installed, clients will be provided with verbal and written information on the use of the devices.				
Training				
The Kansas SWS Field Guide provides instruction on alarm installation.				

7.20 – Occupant Health and Safety Concerns and Conditions				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☑		Alternative Guidance ☐		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
What guidance do you provide Subgrantees for soliciting the occupants' health and safety concerns related to components of their homes?				

K-WAP staff and contractors will be required to take all reasonable precautions against performing work on homes that will subject workers or clients to health and safety risks.

Before work begins on the residence, the agency/contractor must take into consideration the health concerns of each occupant, the condition of the dwelling, and the possible effect of work to be performed on any particular health or medical condition of the occupants.

Subrecipients will provide a "Occupant Pre-Existing or Potential Health Conditions" form to the client which explains that some weatherization measures create dust, smells, or other conditions that may aggravate certain health conditions in some individuals. The client will then have the opportunity to self-identify any pre-existing or potential health concerns that may be aggravated by weatherization services.

Agencies, and contractors, are to take into account the client's concerns to the extent feasible to minimize health risks, such as scheduling weatherization work when the at-risk occupants aren't present. It is the responsibility of the occupants to take the appropriate safety precautions to protect themselves and notify weatherization workers in advance of any health risks they may have. Clients will be provided a point of contact, in writing, so that the client can inform the subrecipient of any new or developing health conditions. Failure or the inability to take appropriate actions must result in deferral.

What guidance do you provide Subgrantees for determining whether occupants suffer from health conditions that may be negatively affected by the act of weatherizing their home?

Same as above

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

See above

Client Education

See above.

Clients will be provided a point of contact in writing so that the client can inform the subgrantee of any new or developing health condition.

When deferral is necessary, the client will be informed in writing of the observed condition triggering the deferral and the actions necessary in order for weatherization to commence.

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

A sample of this form is available on the WAP SharePoint site.

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 (optional: identify Addenda used)

ASHRAE 62.2-2016, appendix A utilized.

Testing and Final Verification Protocols

For all DOE funded homes, ASHRAE 62.2-2016 minimum ventilation standards are required to be met to the fullest extent possible and are allowable Health and Safety costs. Weatherization auditors/inspectors are required to received training on ASHRAE 62.2 evaluation, fan flow, and post weatherization testing to ensure compliance. Additional ventilation will be added, or existing ventilation modified where required. When installing a new fan to meet whole-house ventilation requirements, actions will be taken to prevent zonal pressure differences greater than 3 pascals across the closed door. The KHRC provided ASHRAE 62.2-2016 spreadsheet or the ASHRAE 62.2-2016 calculator from the Residential Energy Dynamics (RED) website will be utilized. Client files will contain ASHRAE testing and verification records.
Client Education
Clients will be provided information on the function, use, and maintenance (including location of service switch and cleaning instructions) of ventilation systems and components. Equipment manuals will be left with the client. Clients will receive a disclaimer that ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality.
Training
ASHRAE 62.2 training will be provided as part of initial and on-going comprehensive training for auditors and inspectors.

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 Subgrantees regarding window and door replacement and window guards?				
Replacement, repair, or installation is not an allowable Health and Safety cost but may be allowed as an incidental repair or an efficiency measure if cost justified.				
Testing Protocols				
NA				
Client Education				
Clients are provided written information on lead risks wherever issues are identified.				
Training				
Auditor and inspectors are made aware of this guidance.				

7.23 – Worker Safety (OSHA, etc.)				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☑		Alternative Guidance ☐		Results in Deferral ☐
Funding				
DOE ☑	LIHEAP ☑	State ☑	Utility ☐	Other ☐
How do you verify safe work practices? What is your policy for in-progress monitoring?				

Local agencies and contractors must comply with Occupational Safety and Health Administration (OSHA) requirements in all weatherization activities. Costs for subrecipients to comply with OSHA requirements may be charged to program support as tools and equipment. Safe work practices are verified during in-progress monitoring. In-progress monitoring will occur annually. Workplace chemicals are to be accompanied by the associated Safety Data Sheets (SDSs). Contractor and crew SDS books will be requested during in progress inspections and can be requested by agency inspectors at any point in time. KHRC personnel, agency personnel, and contractors do enter confined spaces, however, we do not enter permit-required confined spaces. Personnel are encouraged to wear personal protection monitors at all times when working in the client residence. All personnel have the option to refuse entry, without repercussion, if they consider any situation unsafe.
Training and Certification Requirements
Because of the wide range of activities involved in weatherizing a house, ensuring crew health and safety requires a broad knowledge of the appropriate safety requirements. Some of these requirements include, but are not limited to: respirator protection, techniques for safely lifting heavy objects, electrical equipment safety, ladder safety, and general worker protection. OSHA standards should be consulted for further details.

7.24 – <Add in Topic>				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance ☐		Alternative Guidance ☐		Results in Deferral ☐
Funding				
DOE ☐	LIHEAP ☐	State ☐	Utility ☐	Other ☐
Remediation Protocols				
Testing Protocols				
Client Education				
Training				

H&S Job Cost Report- All grants YTD

Report Created: 2/11/2021

Total Billed Jobs:	595.

Budget Type: Health & Safety

Measure	Measure Average Cost	Percentage	Total Average Cost
DWH Flue Liner (H&S)	$463.9	3.36%	$15.59
DWH Flue Repairs (H&S)	$174.89	17.82%	$31.16
DWH Flue Replacement (H&S)	$458.16	2.69%	$12.32
DWH Gas line leak repair (H&S)	$131.71	0.34%	$0.44
Filter Slot Cover (H&S)	$29.58	4.20%	$1.24
Flex Dryer Hose (H&S)	$27.1	5.55%	$1.5
H&S Condensate Line/Pump Replacement	$262.02	0.50%	$1.32
H&S Furnace Flue Repair	$179.9	2.52%	$4.54
H&S Furnace Gas Line Repair/Replacement	$1,250.	0.17%	$2.1
H&S Furnace Replacement - Gas 92%+ AFUE	$2,535.27	24.71%	$626.36
H&S Furnace Replacement - Gas Console/Wall Unit	$2,000.9	4.87%	$97.52
H&S Furnace Replacement - Gas Package Unit	$3,379.06	1.01%	$34.07
H&S Replacement Water Heater - Electric	$1,300.	0.17%	$2.18
H&S Replacement Water Heater - Gas	$1,804.13	3.53%	$63.68
Hard Pipe Dryer Hose (H&S)	$63.87	2.18%	$1.4
Install CO Detector (Battery) (H&S)	$89.75	37.65%	$33.79
Install Combustion Grill (Wall or Door) (H&S)	$86.21	9.24%	$7.97
Install Combustion Tubes (H&S)	$259.1	1.68%	$4.35
Install Dryer Vent Kit w/ Flapper - Install New (H&S)	$98.48	20.34%	$20.03
Install Dryer Vent Kit w/ Flapper - Replace Existing (H&S)	$46.27	12.61%	$5.83
Install Roof Cap (H&S)	$55.41	0.67%	$0.37
Install Roof Flashing (H&S)	$56.28	0.34%	$0.19
Install Smoke Detector (Battery) (H&S)	$61.49	27.23%	$16.74
Install Smoke/CO Combo Detector (Battery)	$96.92	55.46%	$53.75
Install Storm Collar (H&S)	$23.95	0.17%	$0.04
Lead Safe Work - Wall Work (H&S)	$275.14	12.77%	$35.14
Lead Safe Work - Window Work (H&S)	$163.5	1.01%	$1.65
Lead Safe Work- Ceiling/Attic (H&S)	$175.33	0.34%	$0.59
Lead Safe Work- Door Work (H&S)	$48.89	0.17%	$0.08
Mechanical Ventilation - Caulk and Vent Existing Fan to Exterior (H&S)	$161.34	38.99%	$62.91
Mechanical Ventilation - Install Dryer Termination Kit for existing fan (H&S)	$105.	0.17%	$0.18
Mechanical Ventilation - Install New Exhaust Fan (complete install) (H&S)	$700.14	18.66%	$130.61
Mechanical Ventilation - Install Roof Termination Kit for existing fan (H&S)	$80.85	8.91%	$7.2
Mechanical Ventilation - Insulate Existing Fan Vent (R-8) (H&S)	$96.25	7.39%	$7.12
Modify Duct System (H&S)	$110.58	8.40%	$9.29
Other Work Not Specified (H&S)	$206.32	6.22%	$12.83
Oven/Range Clean and Tune (H&S)	$148.6	0.84%	$1.25
Remove Unvented Heater- Cap Gas Line (H&S)	$134.05	2.52%	$3.38
Sump Pump Cover -Install (H&S)	$100.	0.17%	$0.17
Vapor Barrier (H&S)	$588.72	13.78%	$81.13
Total Average H&S Cost Per Unit YTD			**$1,392.01**

PY2021 Estimated Average H&S Cost Per Unit	**$1,356.55**
Estimated Production	249
Estimated Program Operations Budget	$1,688,911.00
H&S Budget (Total H&S cost per unit x production)	$337,780.95
	Should be 20.0% based on a $6800 ACPU
Requested H&S percentage per unit (H&S budget/Program Operations)	