

# TRADE ALLY SOLUTIONS ASSESSMENT DATA

BUILDING PERFORMANCE INSTITUTE (BPI) ASSESSOR: \_\_\_\_\_ ASSESSMENT DATE: \_\_\_\_\_

## 1 General Information

|  |                  |                   |                   |                |                  |
|--|------------------|-------------------|-------------------|----------------|------------------|
| Trade Ally Contractor:                 |                  | Trade Ally Phone: | Trade Ally Email: |                |                  |
| BPI Certified Assessor Name / Company: |                  | Assessor Phone:   | Assessor Email:   |                |                  |
| Homeowner Name:                        | Homeowner Phone: | Homeowner Email:  |                   |                |                  |
| Billing Address:                       |                  | City:             | State:            | ZIP Code:      | Renter or Owner? |
| County:                                |                  | City:             | State: WI         | ZIP Code (WI): |                  |

NOTES:

## 2 Building Information

|  |                  |                       |               |              |  |                                 |
|--|------------------|-----------------------|---------------|--------------|--|---------------------------------|
| Type of Home:<br><input type="checkbox"/> Single Family <input type="checkbox"/> Condo <input type="checkbox"/> Attached | Year Built:      | Orientation:          | House Length: | House Width: | Floors Above Grade:  | Wall Height:                    |
| A Inc. Basement?   | Conditioned Area | # Occupants:          | # Bedrooms:   | # Units:     | Shielding:<br><input type="checkbox"/> Well <input type="checkbox"/> Exposed <input type="checkbox"/> Normal | Cantilevers<br>sq. ft./R Value: |
| Electric Utility Provider:   | Account #:       | Gas Utility Provider: |               | Account #:   |  |                                 |

NOTES:

|                            |   |              |             |
|----------------------------|---|--------------|-------------|
| Gas Leak Detector Present? | Carbon Monoxide (CO) Detector? Basement | Ground Floor | First Floor |
|----------------------------|---|--------------|-------------|

## 3 Homeowner Concern (Reasons They Called)

NOTES:



## 4 Heating & Cooling

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>System One: Heating Equipment Type:</b>   |  |  | <b>Upgrade Action:</b>   |  | <b>Is Condensing:</b>                                    |
| <b>Furnace:</b> <input type="checkbox"/> with Central AC <input type="checkbox"/> with Stand Alone Ducts <input type="checkbox"/> Boiler<br><input type="checkbox"/> Central Heat Pump <input type="checkbox"/> Electric Resistance <input type="checkbox"/> Direct Heater |  |  | <input type="checkbox"/> Install New System <input type="checkbox"/> Keep As Is<br><input type="checkbox"/> Replace with Newer Model |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |

|  |         |             |  |                         |                   |
|--|---------|-------------|--|-------------------------|-------------------|
| Fuel Type: <input type="checkbox"/> Natural Gas (NG) <input type="checkbox"/> Elec<br><input type="checkbox"/> Propane <input type="checkbox"/> Fuel Oil | Load %: | Model Year: | Output Capacity British Thermal Unit per hour (BTU/h): | Manufacturer & Model #: | System Efficiency |
|--|---------|-------------|--|-------------------------|-------------------|

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>System One: Cooling Equipment Type:</b>   |  |  | <b>Upgrade Action:</b>   |  |  |
| <input type="checkbox"/> Central AC/Stand Alone Ducts <input type="checkbox"/> Room AC<br><input type="checkbox"/> Evaporative Cooler <input type="checkbox"/> Direct <input type="checkbox"/> In-Direct |  |  | <input type="checkbox"/> Replace with Newer Model <input type="checkbox"/> Keep As Is<br><input type="checkbox"/> Install New System <input type="checkbox"/> Remove Permanently |  |  |

|  |         |             |                          |                         |      |
|--|---------|-------------|--------------------------|-------------------------|------|
| Fuel Type:<br><input type="checkbox"/> Electric <input type="checkbox"/> Other _____ | Load %: | Model Year: | Output Capacity (BTU/h): | Manufacturer & Model #: | SEER |
|--|---------|-------------|--------------------------|-------------------------|------|

**DUCTS**  
 Duct Location:    Conditioned    Unconditioned    Basement    Attic    Crawlspace    Other: \_\_\_\_\_

Duct Leakage:    30%    15%    6%    3%    Measured Cubic Feet per Minute (CFM): \_\_\_\_\_  
 May submit only one level of improvement unless a duct blaster is used to test results. (i.e., 30% to 15% okay, 30% to 6% not okay unless duct blasted.)

Duct Insulation:   Duct Board   Inches: \_\_\_\_\_   Fiberglass   Inches: \_\_\_\_\_   Thermal/Bubble Wrap   Inches: \_\_\_\_\_   Other: \_\_\_\_\_   R Value: \_\_\_\_\_  
 All duct sealing must be completed with R8 insulation.

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>System Two: Heating Equipment Type:</b>   |  |  | <b>Upgrade Action:</b>   |  | <b>Is Condensing:</b>                                    |
| <b>Furnace:</b> <input type="checkbox"/> with Central AC <input type="checkbox"/> with Stand Alone Ducts <input type="checkbox"/> Boiler<br><input type="checkbox"/> Central Heat Pump <input type="checkbox"/> Electric Resistance <input type="checkbox"/> Direct Heater |  |  | <input type="checkbox"/> Install New System <input type="checkbox"/> Keep As Is<br><input type="checkbox"/> Replace with Newer Model |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |

|  |         |             |                          |                         |                   |
|--|---------|-------------|--------------------------|-------------------------|-------------------|
| Fuel Type:<br><input type="checkbox"/> NG <input type="checkbox"/> Elec <input type="checkbox"/> Propane <input type="checkbox"/> Fuel Oil | Load %: | Model Year: | Output Capacity (BTU/h): | Manufacturer & Model #: | System Efficiency |
|--|---------|-------------|--------------------------|-------------------------|-------------------|

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>System Two: Cooling Equipment Type:</b>   |  |  | <b>Upgrade Action:</b>   |  |  |
| <input type="checkbox"/> Central AC/Stand Alone Ducts <input type="checkbox"/> Room AC<br><input type="checkbox"/> Evaporative Cooler <input type="checkbox"/> Direct <input type="checkbox"/> In-Direct |  |  | <input type="checkbox"/> Replace with Newer Model <input type="checkbox"/> Keep As Is<br><input type="checkbox"/> Install New System <input type="checkbox"/> Remove Permanently |  |  |

|  |         |             |                          |                         |      |
|--|---------|-------------|--------------------------|-------------------------|------|
| Fuel Type:<br><input type="checkbox"/> Electric <input type="checkbox"/> Other _____ | Load %: | Model Year: | Output Capacity (BTU/h): | Manufacturer & Model #: | SEER |
|--|---------|-------------|--------------------------|-------------------------|------|

**DUCTS**  
 Duct Location:    Conditioned    Unconditioned    Basement    Attic    Crawlspace    Other: \_\_\_\_\_

Duct Leakage:    30%    15%    6%    3%    Measured CFM25: \_\_\_\_\_  
 May submit only one level of improvement unless a duct blaster is used to test results. (i.e., 30% to 15% okay, 30% to 6% not okay unless duct blasted.)

Duct Insulation:   Duct Board   Inches: \_\_\_\_\_   Fiberglass   Inches: \_\_\_\_\_   Thermal/Bubble Wrap   Inches: \_\_\_\_\_   Other: \_\_\_\_\_   R Value: \_\_\_\_\_  
 All duct sealing must be completed with R8 insulation.

NOTES:



## 5 Appliances/Refrigerators/Bulbs/Doors

|   |   |   |  |   |  |  |
|---|---|---|--|---|--|--|
| Range Fuel Type:<br><input type="checkbox"/> NG <input type="checkbox"/> Elec <input type="checkbox"/> Prop   | Oven Fuel Type:<br><input type="checkbox"/> NG <input type="checkbox"/> Elec <input type="checkbox"/> Prop                            | Dryer Fuel Type:<br><input type="checkbox"/> NG <input type="checkbox"/> Elec <input type="checkbox"/> Prop | Clothes Washer Type:<br><input type="checkbox"/> Front <input type="checkbox"/> Top <input type="checkbox"/> None  | ENERGY STAR®?<br><input type="checkbox"/> Yes <input type="checkbox"/> No   | Dishwasher:<br><input type="checkbox"/> Yes <input type="checkbox"/> No  | ENERGY STAR?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |
| Freezer Usage:<br>kilowatt-hour per<br>year (kWh/Yr)  | Manufacturer:   | Model #:  |  | Model Year:   | ENERGY STAR?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| Dishwasher Energy Factor:   | Manufacturer:   | Model #:  |  | Model Year:   | Improved?<br><input type="checkbox"/> Yes <input type="checkbox"/> No    |  |
| Clothes Washer IMEF:  | Manufacturer:   | Model #:  |  | Model Year:   | Improved?<br><input type="checkbox"/> Yes <input type="checkbox"/> No    |  |
| Refrigerator One Age:<br><input type="checkbox"/> 0-14 <input type="checkbox"/> 15-21<br><input type="checkbox"/> 22-24   | Size:<br><input type="checkbox"/> 13-15 <input type="checkbox"/> 16-18<br><input type="checkbox"/> 19-21 <input type="checkbox"/> 22+ | ENERGY STAR?<br><input type="checkbox"/> Yes <input type="checkbox"/> No                                    | Refrigerator Two Age:<br><input type="checkbox"/> 0-14 <input type="checkbox"/> 15-21<br><input type="checkbox"/> 22-24  | Size:<br><input type="checkbox"/> 13-15 <input type="checkbox"/> 16-18<br><input type="checkbox"/> 19-21 <input type="checkbox"/> 22+ | ENERGY STAR?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| Refrig Usage kWh/yr   | Manufacturer:   | Model #:  |  | Model Year:   | Improved?<br><input type="checkbox"/> Yes <input type="checkbox"/> No    |  |
| Lighting Compact Fluorescent Lights (CFLs) or LEDs:<br><input type="checkbox"/> 0% <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 75-99% <input type="checkbox"/> 100% |   |   | Total # Light Bulbs:<br>CFL _____ LED _____ Incandescent _____ Total: _____  |   |  |  |
| Door One Type:<br><input type="checkbox"/> Steel <input type="checkbox"/> Wood <input type="checkbox"/> Fiberglass <input type="checkbox"/> Hollow <input type="checkbox"/> Storm <input type="checkbox"/> Insulated                            |   |   | Door Two Type:<br><input type="checkbox"/> Steel <input type="checkbox"/> Wood <input type="checkbox"/> Fiberglass <input type="checkbox"/> Hollow <input type="checkbox"/> Storm <input type="checkbox"/> Insulated |   |  |  |
| Notes:  |   |   |  |   |  |  |

## 6 Walls

|   |  |                     |                                  |  |                                  |                      |                                  |
|---|--|---------------------|----------------------------------|--|----------------------------------|----------------------|----------------------------------|
| Shared (multifamily only):<br>Includes attic spaces over multiple<br>condos/apartments.                             | <input type="checkbox"/> Shared Basement<br><input type="checkbox"/> Shared Attic  | Front Wall %:       | Back Wall %:                     | Right Wall %:  | Left Wall %:                     |                      |                                  |
| Wall One Insulated?<br><input type="checkbox"/> Well <input type="checkbox"/> Poorly<br><input type="checkbox"/> No | Siding:<br><input type="checkbox"/> Brick Veneer <input type="checkbox"/> Metal/Vinyl <input type="checkbox"/> Shingle <input type="checkbox"/> Stone <input type="checkbox"/> Stucco <input type="checkbox"/> Wood/Fiber/Cement |                     |                                  | Construction:<br><input type="checkbox"/> Block <input type="checkbox"/> Brick <input type="checkbox"/> Frame <input type="checkbox"/> Log |                                  |                      |                                  |
| Area One (sq. ft.):   | R-Value:<br>Cavity<br>Continuous   | Area Two (sq. ft.): | R-Value:<br>Cavity<br>Continuous | Area Three (sq. ft.):  | R-Value:<br>Cavity<br>Continuous | Area Four (sq. ft.): | R-Value:<br>Cavity<br>Continuous |
| Wall Two Insulated?<br><input type="checkbox"/> Well <input type="checkbox"/> Poorly<br><input type="checkbox"/> No | Siding:<br><input type="checkbox"/> Brick Veneer <input type="checkbox"/> Metal/Vinyl <input type="checkbox"/> Shingle <input type="checkbox"/> Stone <input type="checkbox"/> Stucco <input type="checkbox"/> Wood/Fiber/Cement |                     |                                  | Construction:<br><input type="checkbox"/> Block <input type="checkbox"/> Brick <input type="checkbox"/> Frame <input type="checkbox"/> Log |                                  |                      |                                  |
| Area One (sq. ft.):   | R-Value:<br>Cavity<br>Continuous   | Area Two (sq. ft.): | R-Value:<br>Cavity<br>Continuous | Area Three (sq. ft.):  | R-Value:<br>Cavity<br>Continuous | Area Four (sq. ft.): | R-Value:<br>Cavity<br>Continuous |
| Notes:  |  |                     |                                  |  |                                  |                      |                                  |



## 7 Attics/Vaults

|   |                  |                            |   |  |  |  |          |  |
|---|------------------|----------------------------|---|--|--|--|----------|--|
| Insulation Depth:   | Insulation Type: | Area sq. ft.:              | R-Value:  | Radiant Barrier:<br><input type="checkbox"/> Yes <input type="checkbox"/> No | Knee Wall:<br><input type="checkbox"/> Yes <input type="checkbox"/> No | Area sq. ft.:  | R-Value: | Roof:*<br><input type="checkbox"/> Yes <input type="checkbox"/> No<br>*bright white      |
| Insulation Depth:   | Insulation Type: | Area sq. ft.:              | R-Value:  | Radiant Barrier:<br><input type="checkbox"/> Yes <input type="checkbox"/> No | Knee Wall:<br><input type="checkbox"/> Yes <input type="checkbox"/> No | Area sq. ft.:  | R-Value: | Cool Roof:*<br><input type="checkbox"/> Yes <input type="checkbox"/> No<br>*bright white |
| Vault Area:   |                  | Cavity Insulation R-Value: |   | Continuous Insulation R-Value:   |  | Cool Roof:   |          |  |
| Vault Area:   |                  | Cavity Insulation R-Value: |   | Continuous Insulation R-Value:   |  | Cool Roof:   |          |  |
| Exterior Exhaust Vents:<br><input type="checkbox"/> Kitchen <input type="checkbox"/> Dryer <input type="checkbox"/> Bath <input type="checkbox"/> Two |                  |                            | Roof Venting:<br><input type="checkbox"/> Soffit <input type="checkbox"/> Ridge <input type="checkbox"/> Gable <input type="checkbox"/> Pods <input type="checkbox"/> Power |  |  | Attic Access:<br><input type="checkbox"/> Scuttle <input type="checkbox"/> Drop Down <input type="checkbox"/> Wall Panel |          |  |

Notes:

Attic %:

Vault %:

## 8 Foundation

|   |                  |   |                    |   |                      |
|---|------------------|---|--------------------|---|----------------------|
| Foundation Type:<br>% Basement _____ % Crawl _____ % Slab _____   | Ft Above Grade   | Basement Heating Model:<br><input type="checkbox"/> Intentional <input type="checkbox"/> Intentional w/continuous circ<br><input type="checkbox"/> Incidental <input type="checkbox"/> Desired <input type="checkbox"/> Undesired |                    |   | Basement Floor Area: |
| Basement Cooling Model:<br><input type="checkbox"/> Intentional <input type="checkbox"/> Intentional w/continuous circulation<br><input type="checkbox"/> Incidental - Desired <input type="checkbox"/> None/Undesired Incidental | Wall Insulation: | Wall R-Value:   | Perimeter Length:  | Rim Joist Length:   |                      |
| Crawlspace:   | Wall Insulation: | Rim Joist Insulation:   | Rim Joist sq. ft.: | Floor:<br><input type="checkbox"/> Slab <input type="checkbox"/> Soil <input type="checkbox"/> Gravel |                      |

## 9 Windows

|   |   |   |   |                          |
|---|---|---|---|--------------------------|
| Window Type One:<br><input type="checkbox"/> Single <input type="checkbox"/> Single w/storm<br><input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Low-e | Window Frame Type One:<br><input type="checkbox"/> Wood <input type="checkbox"/> Vinyl <input type="checkbox"/> Metal | Window Type Two:<br><input type="checkbox"/> Single <input type="checkbox"/> Single w/storm<br><input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Low-e | Window Frame Type Two:<br><input type="checkbox"/> Wood <input type="checkbox"/> Vinyl <input type="checkbox"/> Metal | Skylight Area (sq. ft.): |
| Window Area Divided by Wall Area (be accurate):   | North %   | South %   | East %  | West %                   |
| Overhang Depth One:   | North   | South   | East  | West                     |
| Width of the soffit/eaves/roof overhang   | North   | South   | East  | West                     |



## 10 Air Leakage

|                                     |                                  |                                  |           |   |            |
|-------------------------------------|----------------------------------|----------------------------------|-----------|---|------------|
| Blower Door<br>CFM@50<br>Pre-Test:  | _____CFM                         | Blower Door CFM@50<br>Post Test: | _____CFM  | Estimate homes with vermiculite/ asbestos by asking your<br>Regional Manager. DO NOT TEST |            |
| FANS<br>Measured (CFM)<br>Pre-Test: | Kitchen One:<br>Operable Window? | Bath One:<br>Operable Window?    | Bath Two: | Bath Three:   | Bath Four: |
| Measured (CFM)<br>Post-Test:        | Kitchen One:<br>Operable Window? | Bath One:<br>Operable Window?    | Bath Two: | Bath Three:   | Bath Four: |

Notes:

## 11 Domestic Hot Water Equipment

|  |  |  |            |   |              |              |
|--|--|--|------------|---|--------------|--------------|
| Primary Fuel:<br><input type="checkbox"/> Nat. Gas <input type="checkbox"/> Electricity <input type="checkbox"/> Other | DHW Type:<br><input type="checkbox"/> Atmospheric <input type="checkbox"/> Power Vented<br><input type="checkbox"/> Indirect Tank <input type="checkbox"/> Tank-less | Age:   | Location:  | Temp Settings:<br><input type="checkbox"/> Low (120-130) <input type="checkbox"/> Medium (130-140)<br><input type="checkbox"/> High (140-150) <input type="checkbox"/> Very High (150+) |              |              |
| Recovery Efficiency:   |  | Must be .67 or higher to qualify for water heater rebate. Natural draft, natural gas units replaced with natural gas power vented or on-demand units only. |            |   |              |              |
| Swimming Pool:<br><input type="checkbox"/> Yes <input type="checkbox"/> No   | Hot Tub?<br><input type="checkbox"/> Yes <input type="checkbox"/> No   | Solar Array?<br><input type="checkbox"/> Yes <input type="checkbox"/> No   | Size (kW): | Array Slope:  | Orientation: | Module Year: |

Notes:



## 12 Combustion Safety Testing

|   | Exterior Reading              | Interior Reading |
|---|-------------------------------|------------------|
| Highest Ambient Carbon Monoxide Observed: | _____ parts per million (ppm) | _____ ppm        |

**Construction Appliance Zone (CAZ) Worst-Case Scenario**  
**Not required for power vented/on-demand water heaters with sealed combustion/condensing furnaces.**

CAZ Location  Basement  Attic  Garage  Crawlspace  Other \_\_\_\_\_

**Combustion Safety Tests**  
**(Fire smallest BTU<sub>h</sub> appliance first, then larger BTU<sub>h</sub> appliances, then combined)**

| Appliance                | Spillage Warm Vent Pre-Test (Two min)  |      | Warm Vent Spillage Post Test (Two min)  |      | Steady State Air Free CO Pre-Test     | Steady State Air Free CO Post Test | CAZ CO Pre-Test | CAZ CO Post Test |
|--------------------------|--|------|---|------|---------------------------------------|------------------------------------|-----------------|------------------|
|                          | Pass                                   | Fail | Pass                                    | Fail |                                       |                                    |                 |                  |
| DHW:                     |  |      |   |      |                                       |                                    |                 |                  |
|                          | Spillage Cold Vent Pre-Test (Five min) |      | Spillage Cold Vent Post-Test (Five min) |      |                                       |                                    |                 |                  |
| Heating System One:      |  |      |   |      |                                       |                                    |                 |                  |
| Heating System Two:      |  |      |   |      |                                       |                                    |                 |                  |
| Spillage Time: (Seconds) |  |      |   |      | Oven CO (as measured, 225 ppm limit): |                                    |                 |                  |

\_\_\_\_\_ Power Vented/On-Demand Water Heater Present    \_\_\_\_\_ Sealed Combustion/Condensing Furnace Present

**Commonly Vented Appliances**  
**If any of the appliances fail spillage under worst-case conditions, re-test under natural conditions, and record the results below. Also re-test draft and CO.**

CO detectors? (Required by the state):  
 Yes  No

Ground Floor  Upper Floor  Lower Floor

Notes:

Any safety failures must be presented to the homeowners using a signed Combustion Safety Form.



# SNUGG PRO DATA COLLECTION FORM

## REFERENCE MATERIAL

**Combustion Safety**  
**Carbon Monoxide & Spillage Reference**  
**Action Levels (BPI-1200-S-201x Standard Practice for Basic Analysis of Buildings)**

**Annex D | Action Levels for Spillage and Carbon Monoxide in Combustion Appliances (Normative)**

D.1 Spillage assessment and CO measurement results shall be based on the following criteria:

- CO measured at five minutes of main burner operation.
- Spillage assessed at two minutes of main burner operation for warm vent.
- Spillage assessed at five minutes of main burner operation for cold vent.
- CO level at or below threshold in Section 7.9.5, Table One for the appliance being tested is ACCEPTABLE.
- CO level exceeding threshold in Section 7.9.5, Table One for the appliance being tested is UNACCEPTABLE.

**Table 7.9.5.1 Air Free CO Thresholds for Fossil-Fuel Fired Combustion Appliances**

| Appliance                                     | Threshold Limit             |
|---|-----------------------------|
| Central Furnace (all categories)              | 400 ppm air free            |
| Boiler  | 400 ppm air free            |
| Floor Furnace                                 | 400 ppm air free            |
| Gravity Furnace                               | 400 ppm air free            |
| Wall Furnace (BIV)                            | 200 ppm air free            |
| Wall Furnace (Direct Vent)                    | 400 ppm air free            |
| Vented Room Heater                            | 200 ppm air free            |
| Unvented Room Heater                          | 200 ppm air free            |
| Water Heater                                  | 200 ppm air free            |
| Oven/Broiler                                  | 225 ppm as measured         |
| Clothes Dryer                                 | 400 ppm air free            |
| Refrigerator                                  | 25 ppm as measured          |
| Gas Log (gas fireplace)                       | 25 ppm as measured in vent  |
| Gas Log (installed in wood burning fireplace) | 400 ppm air free in firebox |

Did you:

- Completely fill out the Whole Home Application (for assessments and installations submissions).
- Turn on the required pages in Snugg Pro.
- Fill out the HES and Certificate of Completion and turn them in.
- Send an email to home performance at [homeperformance@focusonenergy.com](mailto:homeperformance@focusonenergy.com) to let them know the job is submitted.
- Contact Snugg Pro to assist with alerts.



## CAZ Worst Case Depressurization Worksheet (optional)

Table D.1.A ACTION LEVELS FOR SPILLAGE IN COMBUSTION APPLIANCES

The following actions shall be taken when spillage occurs under the specific circumstances detailed below.

| TEST RESULT   | ACTION REQUIRED.  |
|---|---|
| Greatest CAZ depressurization occurs with the air handler on*   | Conduct further analysis of the distribution system to determine if leaky ducts or other HVAC-induced imbalances are the cause of the spillage. If so, recommend distribution system repairs that will reduce or eliminate the CAZ depressurization.  |
| Greatest CAZ depressurization occurs with door to CAZ closed, but is alleviated when door to CAZ is open*                               | Recommend measures to improve air transfer between the CAZ and the core of the house.   |
| The cause of spillage has been traced to excessive exhaust** independent of CAZ door position, air handler, or a problem with the flue† | Verify that sufficient combustion air is available per American National Standards Institute Z223.1/National Fire Protection Association (NFPA) 54 for gas-fired appliances and NFPA 31 for oil-fired appliances or recommend verification by a qualified professional.<br><br>AND/OR<br>Recommend further evaluation/service by a qualified professional to address the venting/combustion air issues. |

\*In the case where both spillage and excessive CO are present, in addition to the specific actions required above, recommend that the appliance be shut down until it can be serviced by a qualified professional.

\*\*Refers to exhaust caused by mechanical ventilation and/or other means of exfiltration.

†When a recommendation to replace atmospherically-vented combustion equipment inside the pressure boundary is made, and when cost-effective, recommend replacement with direct-vented, or power-vented equipment (or non-combustion equipment, such as a heat pump), which is ENERGY STAR labeled.

### Ranges and Ovens (continually monitor ambient CO levels during test)

|   |  |
|---|--|
| 1 | Remove any items/foil in or on oven/range top.   |
| 2 | Turn to bake at 500 °F. Make sure self-cleaning features are not achieved.   |
| 3 | Test oven in throat of oven exhaust, before dilution air.  |
| 4 | Unacceptable CO level—Advise the homeowner/occupant that the appliance should be serviced immediately by a qualified professional. |
|   | Acceptable CO level—No action required.  |

### Acceptable Appliance Spillage Periods

|   |     |     |
|---|-----|-----|
| Water Heater, Gravity Furnace, Boiler<br>Always test water heaters as warm. | 5.0 | 2.0 |
| Space Heater  | 5.0 | 2.0 |
| Forced Air Furnace  | 5.0 | 2.0 |

#### Ambient CO Action Levels:

**70 ppm or greater:** Terminate the inspection, notify all building occupants to evacuate the building. Notify emergency services.

**36 ppm-69 ppm:** Advise homeowner that elevated levels were detected, windows and doors opened, turn off CO source immediately.

**9 ppm-35 ppm:** Advise homeowner that CO has been detected and recommend all CO sources be checked and windows/doors opened.

#### REDUCING ENERGY WASTE ACROSS WISCONSIN

Focus on Energy, Wisconsin utilities' statewide program for energy efficiency and renewable energy, helps eligible residents and businesses save energy and money while protecting the environment. Focus on Energy information, resources, and financial rebates help to implement energy efficiency and renewable energy projects that otherwise would not be completed.

