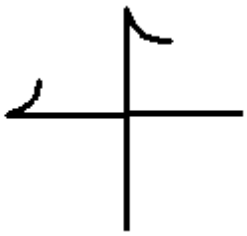
Home Performance with ENERGY STAR®
ASSESSMENT FIELD DATA COLLECTION FORM

Date: **Name:** **Phone:**
Address:

Building Data		☐ Single	☐ Tri-Plex
Building Age:	# of Occupants	☐ Duplex	☐ Mobile Home
Customer Top Concerns:			
1)			
2)			



–Foot Print– Note Cardinal Directions

Air Leakage Data			
Conditioned Floor Area: ft^2	# Stories:	Ceiling Height:	
Pre CFMs Reading:	Total Heated Volume:		
Post CFMs Reading:	Pre ACH 50:	(CFM 50*60/vol.)	
	Post ACH 50 Reading:	(CFM 50*60/vol.)	

Leakage Sites:		
☐ Chimney SC Flues	☐ Dropped Soffit	☐ Attached Garage Wall
☐ Soil Stacks	☐ Recessed Lights	☐ Rim Joist, Sill
☐ Plumbing Chase	☐ Tongue & Groove Ceiling	☐ Doors, Windows
☐ Partition Walls	☐ Band Joist	☐ Porch Ceiling
Other:		
Other:		

Home Performance with ENERGY STAR®
ASSESSMENT FIELD DATA COLLECTION FORM

Insulation Area	Total Sq. Ft.	Pre R-Value	Post R-Value	Insulation Area	Total Sq. Ft.	Pre R-Value	Post R-Value
Attic 1				**Sidewall cavities**			
Attic 2				**Foam Sidewall**			
Attic 3				**Sill Box**			
Slopes/ Cathedral				**Floor**			
Gable End Walls				**Interior Foundation**			
Knee Walls				**Exterior Foundation**			
Other				**Other**			

HEATING EQUIPMENT INFORMATION

Fuel Type

- Natural Gas ☐
- Propane (LP) ☐
- Oil ☐
- Electricity ☐
- Other: _____ ☐

System Type

- Forced Air ☐
- Boiler steam ☐
- Boiler water ☐
- Heat Pump ☐
- Wall furnace ☐
- Space Heater ☐
- Electric Baseboard ☐
- Other: _____ ☐

System Vent

- Atmospheric ☐
- Induced Draft ☐
- Condensing ☐

		Co Level ppm	
Existing Age		**Replace?**	
Existing Afue%		**Fuel Switch?**	

WATER HEATING EQUIPMENT INFORMATION

Fuel Type

- Natural Gas ☐
- Propane (LP) ☐
- Oil ☐
- Electricity ☐
- Other: _____ ☐

System Vent

- Atmospheric ☐
- Power Vented ☐
- Direct Vent ☐

Existing Age		**Existing Gallons**	
Co Level Afue%		**Replace?**	
		Fuel Switch?	

Notes:

Optional: Water Temp

EXHAUST FAN INFORMATION

Location	CFM	Vented to Exterior?

Notes:

AIR CONDITIONING

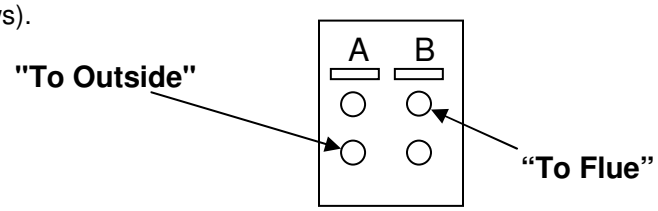
Existing Unit? ☐ **Yes** ☐ **No**	
Room Unit: ☐	How Many?
Central Unit: ☐	
System Age:	
Recommend Replacement?	
Duct Leakage/Open Vents in Basement?	

HOME PERFORMANCE WITH ENERGY STAR

Combustion Safety Testing Form

TEST	Pre test	Post test
Test Date		
Ambient CO		
Outdoor Temperature		

1. Turn combustion appliance(s) to *pilot* (to prevent operation during set-up). Make observation of any supply or return grills in the CAZ.
2. Zero CO detector (follow manufacturer's instructions).
3. Record house ambient CO level.
4. Record outdoor temperature.
5. Put house in winter condition (including latching or locking windows).
6. Install hose; CAZ WRT (with respect to) Outside.
7. Check furnace filter, replace if dirty when possible.
8. Close all operable vents (example - fireplace damper).
9. Clean lint filter in dryer.



All readings: CHANNEL A: CAZ WRT OUTSIDE

Pre Test	Post Test

1. **Baseline** test (interior doors open, all exhaust appliances off).
2. Turn on all exhaust appliances in home.
3. Turn on furnace air handler. Check for system integrity, verify all registers are open and unobstructed.
4. Close interior doors. Measure the pressure difference between main body and the room you are testing. (IF NEGATIVE, OPEN door. IF POSITIVE, close door.) Start with furthest door, working back to CAZ.
5. Record **worst case depressurization**.
6. Subtract Initial CAZ Baseline from #5 reading. Record number here: This is **NET Worse Case Depressurization**.
7. Record House Depressurization Limits (HDL) from table below. If readings in line #7 EXCEED the HDL, system FAILS. Inform customer via Disclosure Form.
8. Record dominant force(s) causing depressurization.

Maximum Depressurization for Combustion Appliance Zones by Appliance Type	
Venting Condition	**Pascals Limit**
Orphaned natural draft water heater (including outside chimneys)	-2
Natural draft boiler, furnace or stove commonly vented with water heater	-3
Natural draft boiler, furnace or stove with damper commonly vented with water heater	-5
Individual natural draft boiler, furnace or stove	-5
Induced draft boiler or furnace commonly vented with natural draft water heater	-5
Power vented or induced draft boiler or furnace alone, or fan assisted DHW alone	-15
Chimney-top draft inducer; exhaust type or equivalent; high static pressure flame retention head oil burner; direct vented appliances; sealed combustion appliances	-50

Maintaining house under Worst Case conditions, proceed to test combustion appliances.
Test oven under natural conditions – run exhaust fan or open window during oven test.
Monitor ambient CO during all combustion tests – abort test if CO ambient exceeds 35 ppm.

Back-draft and CO Testing Results of Natural and Induced Draft Combustion Appliances

Cycle combustion appliance(s). Spillage after 1 minute fails test. Record draft and CO readings at steady state. Do not drill holes in power vented or sealed combustion units - measure CO at exterior outlet, if accessible.

Recommend CO detector when gas furnaces/water heaters/ranges, or attached garages are present.

Appliance	Draft Test Vent Pipe WRT CAZ				Carbon Monoxide Measure before diverter				Spillage Y/N Record at 1 minute			
	Stand Alone Test		Combined Test		Stand Alone Test		Combined Test		Stand Alone Test		Combined Test	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Water Heater												
Heating System												
Other												
Power/Direct Vent Water Heater												
Condensing Furnace												
Gas Oven												

REMINDER: A combined test of heating system and water heater must be performed if both appliances are tied into the same flue before the masonry chimney.

Check for spillage at base of masonry chimney or diverter of water heater for induced draft furnaces.

IF UNIT(S) FAIL at WCD: Repeat test under natural conditions.

Combustion Safety Test Action Levels

CO Test Results	*And / Or*	Draft Test Results	*Action*
0 – 25 ppm	And	Passes	System is okay.
26 – 100 ppm	And	Passes	Recommend clean and tune to fix CO problem.
26 – 100 ppm	And	Fails at worse case only	1. Recommend clean and tune to fix CO problem and repairs to home to correct back drafting, or replace with power vent unit. 2. A spill alarm may be installed in this situation.
100 - 400 ppm	Or	Fails under natural conditions	1. Stop work: Work may not proceed until system is serviced and problem corrected. 2. Disclosure Form must be signed.
>400 ppm	And	Passes	1. Stop work: Work may not proceed until system is serviced and problem corrected. 2. Disclosure Form must be signed.
>400 ppm	And	Fails under any condition	Emergency: Shut-off fuel to appliance. Instruct homeowner to call for service immediately

Minimum Acceptable Draft Readings in pascals = (T_out F°÷40) - 2.75

Acceptable Draft Test Readings - Outdoor Temperature										
F	**<10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**>90**	F
Pa	-2.5	-2.25	-2	-1.75	-1.5	-1.25	-1	-0.75	-0.5	Pa

Carbon Monoxide Action Levels for Gas Ovens	
100 ppm to 300 ppm – Install CO detector and recommend service.	**Greater than 300 ppm –** Unit must be serviced prior to work. If greater than 300 ppm after service, install exhaust ventilation – 25 CFM continuous or 100 CFM intermittent.