

**\* Authorization and Consent for Combustion Analysis and Carbon Monoxide Testing \***

I hereby authorize Consolidated Plumbing & Heating, Inc. to perform a Combustion Analysis of my heating system and/or, at their discretion, a Combustion Efficiency Test of any or all fuel burning equipment. Consolidated Plumbing & Heating, Inc. will follow standard guidelines such as the 'National Comfort Institute Protocols' (see info on back). Should an unsafe and/or dangerous condition(s) be discovered, Consolidated Plumbing & Heating, Inc., has been given the right, at it's discretion, to shut down and physically disable any equipment they feel could be a health or safety hazard and that the 'Authority(s) Having Jurisdiction' may also be informed of such hazard(s).

**It is agreed by me, the Property Owner, that no attempt will be made to put any equipment shut down for safety reasons back into operation until proper corrective measures have been taken which may include equipment repair, replacement and/or other corrective measures and/or equipment is otherwise certified by properly qualified personnel that it is safe to operate. Consolidated Plumbing & Heating, Inc. will not be held liable for any consequential damage(s) or expense(s) incurred due to disabling of any equipment.**

Another entity may re-evaluate our findings and/or, if requested by the Homeowner, take whatever corrective measures they feel necessary, and on their own responsibility put such equipment back into operation. Entities doing so, releases Consolidated Plumbing & Heating, Inc., from any and all liability. This, however, does not release the Property Owner from any financial obligation to Consolidated Plumbing & Heating, Inc., for services rendered and Consolidated will not be held liable for any expenses incurred.

I understand that such testing is a 'snapshot in time', that the testing is only providing results for how systems are functioning at that 'exact time and set of circumstances'; I do not hold Consolidated Plumbing & Heating, Inc., responsible for errors or omissions. It is understood that unsafe conditions or inaccessible system components may also reduce the ability to properly test. And, that there is no substitution for proper electronic monitors, regular scheduled maintenance and inspections of the mechanical and flue systems. This document also covers associated companies hired by or assisting Consolidated Plumbing & Heating, Inc.

All testing, attempts to repair, consultation(s), etc., will be performed on a Time & Material basis, which may also include equipment usage and other fees.

Please see additional information on the back side of this document on Carbon Monoxide.

**Initial 1 option below**

\_\_\_\_\_ I hereby **authorize** Consolidated Plumbing & Heating, Inc. to perform the work as described above.

\_\_\_\_\_ I **refuse** the Combustion Efficiency & Carbon Monoxide Analysis and accept full responsibility for this action.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

**Consolidated Plumbing & Heating, Inc.**

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Web address: [www.consolidatedph.com](http://www.consolidatedph.com)

Email: [consolidatedph@comcast.net](mailto:consolidatedph@comcast.net)

\* Licensed Master Plumber #10626

\* Licensed Construction Supervisor #058250

\* Oil Burner Certificate #29338

\* I=B=R Certified Residential Hydronic Heating

\* Home Improvement Contractor #108362

\* Refrigeration Technician #19619

\* Fully Insured

\* PHCC Member

\* Peterson School of Engineering: Oil heat and Commercial HVACR Theory, Code & Controls

\* National Comfort Institute certified for Carbon Monoxide & Combustion Analyst #CO509915

## Carbon Monoxide Statistics

Carbon Monoxide (CO) is a major cause of poisoning deaths in the United States, the use of low level CO Alarms could potentially prevent many fatalities. Carbon monoxide can kill in minutes or hours depending on the level of CO in the air. If CO is inhaled at damaging levels it can lead to breathing difficulties, impaired judgment & memory, nervous system damage, cardiac trauma, brain damage, coma and even death. Everyone is susceptible, but experts agree that unborn babies, young children, pregnant women, senior citizens and people with heart or respiratory problems are especially vulnerable and are at the highest risk for death or serious injury.

**Symptoms of Carbon Monoxide Poisoning** ~ Initial symptoms are similar to the flu, food poisoning or other illnesses but with no fever. Dizziness, fatigue/weakness, mental confusion, headache, nausea/vomiting, irregular breathing, and sleepiness can all be possible symptoms.

**Potential sources of Carbon Monoxide** ~ Any fuel burning appliance can be a source of Carbon Monoxide; especially one that is malfunctioning or improperly installed. CO can be produced when burning any fuel: gasoline, propane, natural gas, oil, wood or coal, it is the product of incomplete combustion. Appliances can include boilers and furnaces, gas range/stove, gas clothes dryer, water heater, gas or wood fireplaces, wood-burning stove and auto exhaust. Other sources include clogged chimneys or flues, vent pipes, fuel burning space heaters, tools that run on fuel, a gas or charcoal grill used in an enclosed area. Back drafting and changes in air pressure can cause indoor levels of CO.

### Safety tips:

- \* Install Low Level Carbon Monoxide Alarms in a central location outside each separate sleeping area and on every level of the home to provide early warning of accumulating CO.
- \* Test CO alarms at least once a month and replace CO alarms according to the manufacturer's instructions.
- \* If you need to warm a vehicle, remove it from the garage immediately after starting. Do not run a vehicle, generator or other fueled engine/motor indoors, even if garage doors are open. Never leave a vehicle running when it is parked or covered in snow.
- \* Every year before cold weather sets in have fuel-burning household heating equipment (fireplaces, furnaces, water heaters, wood/coal stoves, space or portable heaters) vents, chimneys, and flue(s) tested, inspected and cleaned by a qualified Professional Technician and/or Chimney Sweep.
- \* When using a fireplace, open the flue for adequate ventilation.
- \* Never use your oven to heat your home.
- \* Only use barbecue grills - which can produce CO - outside. Never use them in the home or garage.

### If your CO alarm sounds:

- \* Immediately move everyone outdoors.
- \* Report the CO alarm warning by calling the appropriate phone number.
- \* Call a qualified technician to inspect all equipment.

**National Comfort Institute Protocols that guide testing** - Note: These guidelines also follow other associations, AGA & EPA may vary. (ppm = parts per million of carbon monoxide)

### Ambient Levels (open living spaces) - (No CO allowed to spill from vented appliances)

- 1-9 ppm – OK, normal, maximum 8 hours exposure however 0-1 ppm is typically found in living spaces
- 10-35 ppm – Advise occupants, check symptoms (acceptable short term-unvented appliances & infiltration)
- 36-99 ppm – Recommend fresh air, check symptoms, ventilate
- 100+ ppm – Evacuate, check symptoms, call 911

### Equipment level (maximums) residential, as measured at breach or similar area

Gas 400ppm start up, 100ppm (and stable) running, must decrease on shut down Oxygen 6 to 9%, 4 to 9% power burner

Oil 100ppm start up, 100ppm (and stable) running 100ppm on shut down Oxygen 6% to 9%

Unvented appliance 400ppm start up, 30 to 50 ppm (and stable) running, must decrease on shut down (An unvented appliance is a range, room heater or similar appliance).

**NOTE:** Heating appliances running 100 to 399ppm (and stable) may be run “**under discretion**” until repaired or replaced, equipment left running under these conditions must have no spillage and are only run to protect property. Equipment running at 400ppm and up, or unstable at any level, must be shut down until repaired or replaced. Atmospheric heating equipment should have draft of .01 to .02 inches water column.

### Additional information on Carbon Monoxide can be found at:

[www.nationalcomfortinstitute.com](http://www.nationalcomfortinstitute.com)

[www.coexperts.com](http://www.coexperts.com)

and

[www.heatinghelp.com](http://www.heatinghelp.com)