

To the Chairs and Members of the CT Environment Committee

I am testifying in favor of a ban on outdoor wood furnaces and Senate Bill 830

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While I am not a resident of Connecticut, I am providing this testimony at the request of Connecticut residents in the hope that **it will be useful to the CT legislature in understanding the nature of the problems that Phase II Outdoor Wood Boilers cause.**

I live about 100 feet from a **Phase II Outdoor Wood Boiler** located on an adjacent residential property in Sudbury, MA. The OWB has a stack that is over 30 feet tall to make it at least two feet above the ridgeline of all structures within 150 feet as required by Massachusetts law. Getting the stack above the roofline is important to keep it from eddying about on the ground. But there is not requirement to get the smoke above the tree canopy, which can also cause downdrafts.

This boiler has been a problem since its original installation. **A coalition of approximately fifteen neighboring families with homes between 100 feet and 700 feet from the boiler have petitioned the Board of Health for relief because of noticeable odor from the smoke inside their homes.** We have asked for the Building Inspector to shut it down because it does not conform to zoning regulations. We have spoken with the Selectmen in the town; we have asked for help from the Conservation Commission, we have asked for tax abatements. None have been of any assistance. I have now filed suit in land court to force the town to enforce the Town Bylaws.

The owner appears to operate the boiler correctly, with the possible exception that he does not store his wood properly to keep it dry. Wood for the neighbor's OWB is stored outside uncovered and is always wet as evidence by the high steam content of the smoke immediately obvious to anyone watching the boiler in operation.

The OWB is operated by the owner to heat his home and to provide domestic hot water. In the winter it is on continuously. Smoke from the boiler enters my home and other nearby homes. It produces a noticeable odor inside other homes under almost all weather conditions. Whenever my furnace runs it draws makeup air from the basement of our home and pulls in outside air throughout the house. The problem is especially bad when weather conditions cause the smoke from the OWB to lie close to the ground.

The constant odor is annoying. During the winter we frequently notice that incidence of coughing and sore throat correlate with the intensity of the odor of smoke. A major concern we have is there is no practical way to monitor the long term effects of a constant infusion of smoke into our home. It is a problem much like the second hand smoke issue cause by the chain smoker in the next office.

We have sought relief from the town, since the OWB was installed without a building permit. The town has been of no help at all, declaring the OWB to be an "appliance of the home". State law in Massachusetts offers no guidance for local officials about how to monitor smoke, measure pollution, ensure use of dry wood, or ensure that the boiler owner does not dispose of household trash by burning it. The law contains no indication of penalty or process and consequently any enforcement requires expensive litigation.

It is important to recognize the difference between a wood stove and an Outdoor Wood Boiler. The former heats a room. The later can heat a 3000 square foot ten room house. They operate on a different scale and the amount of smoke produced is proportionally greater.

The claimed improvements of Phase II units require the boiler to be properly sited and operated. There are typically no annual licensing or inspection requirements. **Further, the laws governing Phase II units appear to have only made it more difficult for local health officials and building inspectors to control installation and use of OWBs because as a practical matter there is no way for a local town government to afford the cost of monitoring operation. Here is a list of issues that town officials and abutters will find particularly difficult to document and enforce.**

- Proper operation requires use of dry wood. Moisture content is difficult to measure except in a laboratory, an expensive process. There is no practical way apparent for local town official to monitor how dry the wood is or how it is dried and stored.
- Certain species of wood produce obnoxious odor when burned. For instance, the high urea content of red oak causes an odor of urine when red oak is burned. Burning wood from trees infested with poison ivy can produce smoke that is especially toxic to persons sensitive to poison ivy.
- Measuring the distance of the OWB from property lines requires a surveyor and will typically cost between \$500 and \$1000 per instance. Such measurements often require entering the OWB owner's property, which is usually allowed for a surveyor but not for others.
- Town enforcement officials are typically available only nine-to-five on weekdays, so even documenting improper operation issues for OWBs is problematic at night and on weekends or holidays.
- Smoke is difficult to observe and trace to origin at night. Rain, snow, and fog also interfere with enforcement.

Here is one final thought to keep in mind. **Operated correctly a Phase II OWB will produce approximately 1000 times as much fine particle emission as an oil burner of equal heating capacity. In a town with 10,000 homes, or approximately 25,000 residents, only ten OWBs will produce as much pollution as all the oil burners in those 10,000 homes.**

In conclusion, it is my opinion that Phase II units will not protect health or property values - only a ban of outdoor wood furnaces will do that.

Joseph M. Onorato

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