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February 12, 2010

By Federal Express and e-mail (RegComments@state.pa.us)

Environmental Quality Board Rachel Carson State Office Building 16th Floor 400 Market Street Harrisburg, PA 17101-2301

Re: Proposed Rulemaking; 25 Pa Code Chs 121 and 123; Outdoor Wood-Fired Boilers

Dear Ladies and Gentlemen:

This letter is submitted on behalf of Central Boiler, Inc., North America's premier manufacturer of quality outdoor wood-fired hydronic heaters (OWHHs), to comment on the proposed rulemaking by the Pennsylvania Environmental Quality Board regarding outdoor wood-fired boilers or OHHs.

The proposed rules are being proposed at a time when the citizens of the Commonwealth of Pennsylvania face unprecedented increases in the price of heating oil—price increases that will disproportionately affect the citizens of the Commonwealth, both due to their much greater reliance on heating oil than most others in the U. S. and the severe winter temperatures typically experienced in the region.

The cost of home heating oil will undoubtedly lead Commonwealth residents to search for ways to simply afford to heat their homes. Many will turn to heating with wood, which is a plentiful, renewable resource in the region. OWHHs are designed to allow homeowners to safely heat their entire home with wood—safely, because the wood fire is located outside the home.

Thus, while Central Boiler supports reasonable regulations of emissions from OWHHs, Central Boiler opposes unreasonable regulations that discriminate against the use of OWHHs at just the time that many Commonwealth residents need an affordable, renewable, domestic alternative to imported oil. Central Boiler has already demonstrated its commitment to the reduction of emissions from OWHHs. Central Boiler is a proud partner in the U.S. Environmental Protection Agency's Outdoor Wood-fired Hydronic Heater (OWHH) Program (*see* U.S. EPA, Program Partners, (http://www.epa.gov/burnwise/partners.htm) and was the first company to offer OWHHs that meet the OWHH program's Phase 1 and Phase 2 emissions level requirements. Indeed, Central Boiler already sells three models, the E-Classic 1400 and 2300 and the Maxim M 250, that surpass the Phase 2 emission limits in Pennsylvania's draft rules:

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Manufacturer	Model Name & Number	Heat Output Rating ⁽¹⁾	Efficiency ⁽¹⁾	Annual Average Emission Rate	Heat Input ⁽²⁾ Annual Average Emission Level	Heat Output Annuai Average Emission Level	Highest Individual Test Run	Fuel Type
Central Boiler	Maxim M250	212,453 BTU/hr	87.8 % hìgh heating value 95.5 % Iow heating value	1.6 grams/hr 0.07 grams/hr/ 10,000 BTU heat output	0.05 Ibs/million BTU input	0.06 Ibs/million BTU output	4.9 grams/hr	wood pellets; continuous feed
Central Boiler	E - Classic 1400	107,459 BTU/hr	73.7% high heating value 84.2% low heating value	5.5 grams/hr 0.08 grams/hr/ 10,000 BTU heat output	0.19 Ibs/million BTU input	0.27 lbs/million BTU output	8.5 grams/hr	stick wood; batch load
Central Boiler	E - Classic 2300	160,001 BTU/hr	74.9 % hìgh heating value 85.7 % Iow heating value	6.4 grams/hr 0.06 grams/hr/ 10,000 BTU heat output	0.20 łbs/million BTU input	0.31 Ibs/million BTU output	17.6 grams/hr	stick wood; batch load

http://www.epa.gov/burnwise/owhhlist.html

Central Boiler's comments on the proposed rules follow:

(1) The draft rules would become effective upon adoption, without a sell-through exemption for Pennsylvania dealers to sell their existing inventories.

The proposed rule would become effective upon adoption and does not include a "sell-through" exemption for OWHHs in dealer inventory as of that date. Pennsylvania should adopt a "sell-through" exemption similar to that adopted in Maine which permits dealers to sell OWHHs that were in inventory as of the effective date of the rule during the year that follows the effective date. (See, e.g. 06-096-150 Me. Code R. 3 (F) or, as in Vermont, without an arbitrary deadline (Vt. 5-205 (a)).

(2) The rules impose unnecessarily long setback requirements on Phase 2 OWHHs

Central Boiler believes that the 150-foot setback requirement from the property line applicable to any Phase 2 OWHH in the draft rules is unnecessary to protect neighboring property owners and, in any event, would be difficult to measure without an expensive property survey. Even then, adjacent property owners may contest the accuracy of the surveyed property line, leading to unnecessary contention among neighbors. As an alternative, Pennsylvania should establish 50 feet from the property line or 70 feet from the nearest dwelling not served by the Phase 2 OWHH, as Maine recently did to better address this issue (see, Maine Legislative Resolve H.P 1393-L.D. 2009).

Moreover, even a 50-foot setback from the property line or a 70 foot setback from the nearest dwelling for Phase 2 compliant OWHHs is environmentally unnecessary. Dispersion modeling analysis has shown that for a boiler with an emission rate of 0.60 lb/MMBtu, a stack height of two feet above neighboring structures and a setback of just fifty feet would keep the unit safely in compliance with the new 24-hour NAAQS for fine particulate matter (PM_{2.5}). (See Peter Guldberg, Outdoor Wood Boilers – New Emissions Test Data and Future Trends, presented at USEPA's 16th Annual International Emission Inventory Conference, May 16, 2007 (available at http://www.epa.gov/ttn/chief/conference/ei16/session5/guldberg.pdf) hereinafter "Guldberg") Phase 2 compliant OHHs would emit even less particulate—0.32 lb/MMBTU heat output, and thus a 50 foot setback from the property line or 70 feet from neighboring dwellings is more than adequate to assure NAAQS compliance.

(3) The requirement in the proposed rule that existing non-phase 2 compliant OWHHs be retrofitted with a stack two feet higher than any residence located within 500 feet of the OWHH would pose an unnecessary burden

The proposed rule would require that any OWHH that does not meet the phase 2 emissions limitations must have a stack installed that extends at least 2 feet higher than any residence located within 500 feet of the OWHH. The industry's "best burn practices" that have been in effect since 2006, which provide that stacks should be 2 feet higher than any residence not served by the OWHH located within 100 to 300 feet from the OWHH have proven to be effective in reducing complaints and preventing air pollution. In addition, modeling studies have shown that compliance with national ambient air quality standards can easily be maintained by following these recommendations. (Guldberg and Maine Air Dispersion Modeling—Summary for OWB ISC-PRIME Modeling, Round 2, 5/30/07)

(4) The proposed rule incorporates opacity requirements that are environmentally unnecessary and would be difficult to enforce with reliability

The proposed rules incorporate opacity requirements (Section 123.41) that are unnecessary to protect the environment or public health and cannot be reliably enforced. The phase 2 emission limits as well as the installation, siting, and operational requirements contained in the proposed rules will insure that phase 2 compliant units will not cause significant adverse air quality impacts. In addition, it will be extremely difficult, time-consuming, and expensive to obtain reliable opacity readings of emissions from OWHHs. Unlike the setback and stack height requirements, OWHH owners will not be able to determine whether they are in compliance with the proposed opacity emission standards.

Even for qualified observers, conducting a proper visible emission reading is difficult. The observer must "stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back." (U.S. EPA, Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources, Oct. 25, 1990, at §2.1 (available at http://www.epa.gov/ttn/emc/ promgate/m-09.pdf).) If possible, the observer should also be "perpendicular to the plume direction[.]" (Id.) And, most importantly, the observer is supposed to make the opacity observations "beyond the point in the plume at which condensed water vapor is no longer visible." (Id. at §2.3.1.) This requirement is the most likely source of error when reading visible emissions from OWHHs. Emissions from OWHHs can be expected to contain condensed water vapor, since the wood itself will likely contain at least 20% water by weight. In addition, the water jacket surrounding the boiler and the long stack required by the draft rule for new units and commonplace in many existing units can be expected to reduce the temperature of the emission plume below its dew point, creating a long condensed water vapor trail. Because the emission plume is of relatively low velocity, by the time the condensed vapor trail has disappeared, the emission plume will have largely dissipated, making it very difficult to obtain a proper opacity reading. This, in turn, could lead to disagreements among certified opacity observers and contentious litigation.

Even for qualified observers, visible emissions readings are also highly subjective. The EPA's own documentation for Test Method 9 acknowledges that trained observers are likely to overestimate opacity:

The appearance of a plume as viewed by an observer depends upon a number of variables, some of which may be controllable in the field. * * * [V]ariables which may not be controllable in the field are luminescence and color contrast between the plume and the background against which the plume is viewed. These variables * * * can affect the ability of the observer to assign accurately opacity values to the observed plume. Studies of the theory of plume opacity and field studies have demonstrated that a plume is most visible and presents the greatest apparent opacity when viewed against a contrasting background. Accordingly, the opacity of a plume viewed under conditions where a contrasting background is present can be assigned with the greatest degree of accuracy. However, the potential for a positive error is also the greatest when a plume is viewed under such contrasting conditions. * * *

For white plumes [the color of plume that emanates from OWHHs], 99 percent of the sets were read with a positive error of less than 7.5 percent opacity; 95 percent were read with a positive error of less than 5 percent opacity.

(Id. at 1-2.)

Combined, the inability of OWHH owners to check their own visible emissions, the difficult requirements for a qualified observation, the subjective nature of the reading, the proven likelihood of positive errors, and the redundancy of opacity requirements with emissions limitations, all weigh against including visible emission standards in the proposed OWHH rules. If Pennsylvania chooses to keep the proposed visible emissions standards, Central Boiler asks that the standard not apply during initial start up, when no established coal bed exists and following re-fueling, when the water vapor in the exhaust from the new wood fuel (as noted above, even seasoned wood has approximately 20% moisture by weight) will in any event prevent accurate opacity readings.

(5) The proposed rule would permit local governments to impose inconsistent emissions standards, setbacks and/or stack heights which will frustrate the ability of manufacturers and dealers to sell OWHHs in Pennsylvania and the ability of Pennsylvania residents to find economical, sustainable and renewable alternatives to imported heating oil.

The proposed rule provides that purchasers of Phase 2 compliant OWHHs must be provided with a written statement to the effect that even if the requirements of the proposed rule are met, the installation and operation of the OWHH may be subject to inconsistent local rules. Because the proposed rules fully protect the environment and public health, local rules imposing more restrictive emission standards, setbacks or stack heights cannot have a rational basis and would only frustrate the desire of Commonwealth residents to affordably heat their homes, farms and small businesses without reliance on expensive imported heating oil when there is a renewable locally sustainable resource which can be used consistent with the national and state air quality standards. Central Boiler asks that the proposed rules be modified to clarify that local ordinances and rules establishing emission standards, setbacks, stack heights or fuel use requirements shall not be inconsistent with those established under the proposed rules.

Thank you for the opportunity to submit these comments, on behalf of Central Boiler, Inc., on the Pennsylvania's proposed rules on outdoor wood-fired boilers. If you have any questions about these comments, please do not hesitate to let me know.

VPhilip H. Gitlen

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From: Sent: To: Cc: Subject: Attachments:	Blood-Ramos, Lee [Iramos@woh.com] Friday, February 12, 2010 12:04 PM EP, RegComments Gitlen, Philip; 'davidm@centralfireplace.com' Proposed Rulemaking; 25 Pa Code Chs 121 and 12 Pa Comments 2 12 10.pdf	INDEPENDENT REGULATORY REVIEW COMMISSION 23; Outdoor Wood-Fired Boilers

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On behalf of Philip Gitlen, attached please a comment letter in connection with the above. If you have any questions, please feel free to call.

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