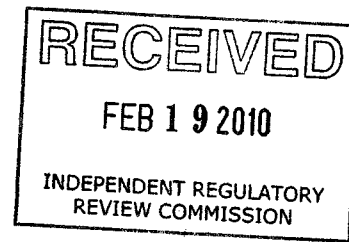


Environmental Quality Board  
 Rachel Carson State Office Building, 16th Floor  
 400 Market Street  
 Harrisburg, PA 17101-2301



Environmental Quality Board:

In regards to the Proposed Rulemaking for Outdoor Wood-Fired Boilers.

I recently attended the public hearing at the Williamsport DEP location. I am pleased to see that DEP is stepping up and addressing this issue. The regulation needs to come from the state or federal government. I have asked the supervisors of East Cameron Township to please put an ordinance into effect to protect the people of this township. Their reply was that they were not trained, didn't have the resources to enact an ordinance. If wood smoke truly was a problem then either the EPA or DEP would address the issue. If they enacted an ordinance and the township was sued, it would bankrupt the township. With NESCAUM test results DEP has the information needed to make it safe to breathe the air in local neighborhoods. DEP should follow the 5 feet above the roof line for chimney height recommendation, not 2 feet as proposed for PA DEP rule making.

This letter is being sent to try and address some common misconceptions.

**Only a few people are complaining about wood smoke.** While at first this appears to be true you need to look at the reason for this. When I asked neighbors to get involved to have an ordinance enacted there was a few common reasons given why they wouldn't. The most common reason was that when a formal complaint was made then your property value would be reduced. It would be a matter of public record and thus need to make it known to the prospective buyers, thus making your property less desirable and of lower value. The second most common reason was the supervisors wouldn't do anything. And the last was retaliation from the people making the smoke. Even at the DEP meeting a gentleman stated that if an ordinance was adopted he would burn garbage and diapers in his burning barrel. He would show what smoke and odors are really about. Some people don't realize the adverse health effects of wood smoke. They become ill and blame it on age, weak immune systems, etc. Additionally the people who sell OWB have a network to alert their counterparts and customers to voice concern about the rule making. A friend told me he heard of the meeting in Williamsport, if not for him making me aware I would not have had a chance to comment.

**A few people state that wood rotting will produce carbon and other materials similar to that in wood smoke.** I don't know if this true but I do know it isn't relevant. During this meeting individuals would quote the population compared to total land in a county. Well on a Macro-Environmental case these statements might be relevant. But in real life most people live relatively close to there neighbors with fields and forest surrounding them. Lets get relevant, this proposed ordinance wouldn't affect many people if they didn't live close together. So by them being at the meeting they are in effect acknowledging that we should be talking about Micro-Environmental issues, distances up to 1000 feet, possible a little further. The people that testified for the **need** of the ordinance all have one thing in common. They live in a **HOT SPOT**; an environmental meteorologist would call this being the closest receptor. While the valley I live in has a constant blue haze through the winter, this would be called smog in California, and does affect all residence to some extent. You just don't realize how bad air can be until you live through this experience. When I was young I was a boy scout, one of the highlights of summer camp was a bonfire, and I can tell you no one stood down wind from the fire. Fortunately we could move if the wind shifted. I can't move my house unfortunately.

**Close your windows stay indoors.** This sounds at first to be a reasonable way to mitigate the health affects of the wood smoke. But all houses have negative air pressure, warm air leaks out of small cracks at window, doors, wall receptacles, etc... A recent study shows that wood smoke pollution indoors can be almost as high as the pollution levels outdoors, even in homes that do not burn wood. #1 In fact the minimum recommended air exchanges for good health is .35 air exchanges per hour.#2 To put a number to this a 2000 square foot home with 8 foot ceilings require 5600 cubic feet of outside air minimally. And remember this is every hour, for 24 hours 134,400 cubic feet of air exchange. And if the house is not new construction it will have air exchanges 3 to 6 times this amount. Fungus: Wood and wood ash are known to be sources that bring mold and fungus into the home. Combustion does not kill mold spores, it spreads them.#3 This causes property damage and lung problems.

**Burning wood saves money for the country as a whole.** We now get back into Micro-economics and Macro-economics. These Wood burners save money for the people that are burning them. When you look at the complete picture health care costs are increased. My family has spent more money on trying to stay healthy than the neighbor will ever save on his heating bill. We have numerous professional air cleaners positioned around our house. We have just installed a Lennox pure air filtration system on my heat pump. My wife needs oxygen to be able to breathe when the OWB is being operated, almost continuously. Heart problems, lung conditions, cancer etc. compromised immune systems, all with large medical bills. There is no savings burning wood it only transfers the costs to the healthcare system, with personal injury.

**Wood smoke is natural and doesn't hurt people.** This couldn't be further from the truth. Wood smoke is very dangerous, and has many reasons why it is bad. The headaches, nausea, etc. mentioned previously. This is a common occurrence but one day I finally went to the emergency room and was diagnosed with CO poisoning and received treatment for this condition. Wood smoke particles are submicroscopic; this allows them to get past the lungs natural defenses. The particles get deep into the lung and stay there. Some will even go straight into the blood stream as they will pass right through the lungs into the blood vessels.#4 There are many chemicals released in wood smoke including arsenic, lead, etc. There is a reason that chimneys have been used through out history. Wood smoke is poisonous and toxic.

**An OWB is their only way to heat their residence and hot water.** Well it may be the only heating device currently attached to the home. But it is far from the only way to heat their home. I live west south west of an OWB. What is a fact is that whatever happens on this adjoining property ends up on my property because of the prevailing winds. **A very true and accurate statement is my family only has one source of air to breath.** We have spent thousands of dollars to try to make it bearable to breath in my house. And sometimes it still is too much to bear. If you can provide me with another source of clean air then we don't need an ordinance. Regarding the seasonal provision of turning them off in the summer please include this. We have a swimming pool and pay the chemical and electrical cost to maintain it. But it is used 2 to 4 times a year when the winds shift.

Thank you for your consideration of my comments, my whole family has had adverse reactions, illnesses from wood smoke, please help.

David and Joyce Backes  
5384 Lower Rd.  
Shamokin Pa. 17872  
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#1 <http://www.ecy.wa.gov/pubs/91br023.pdf>

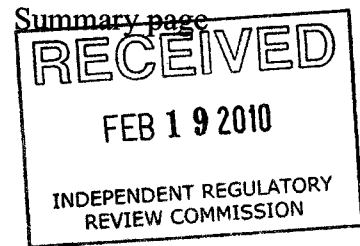
#2 These standards are set by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The minimum air exchange is .35 air changes per hour and not less than 15 cubic feet per minute per person.

#3 "Interstitial Lung Disease and Domestic Wood Burning": Ramage, Roggli, bell and Piantadosi, AM REV RESPIR DIS 1988; 137:1229-1232

#4 *Prof. P.K. Hopke, Dept. of Chemistry, Clarkson University, Potsdam, NY "Measurement of the Hygroscopicity of the Indoor Aerosol". Aug. 1996, Center for Indoor Air Research*

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Environmental Quality Board  
Rachel Carson State Office Building, 16th Floor  
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Environmental Quality Board:

I am writing to make known that I definitely see a need for this proposed rulemaking becoming law. DEP needs to step up and protect the environment, with the NESCAUM report there is ample information to follow through with this rule. DEP should follow the NESCAUM recommendation of 5 feet above the roof line for the chimney height and not 2 feet as proposed by Pa DEP rulemaking. Also there should be no burning in the summer. Let people enjoy their backyards. My whole family has had adverse reactions, illnesses from wood smoke, please help.

The statement that only a few people are complaining about wood smoke, but there are reasons. Some people don't understand the negative health effects of wood smoke. Others worry about losing property value if it is public knowledge that people will become ill if they would purchase the property. Even retaliation from the offender, as they will increase the smoke coming from that property.

Some advice is to just close your windows and stay indoors. This sounds at first to be a reasonable way to mitigate the health affects of the wood smoke. But all houses have negative air pressure, warm air leaks out of small cracks at window, doors, wall receptacles, etc... A recent study shows that wood smoke pollution indoors can be almost as high as the pollution levels outdoors, even in homes that do not burn wood. #1 In fact the minimum recommended air exchanges for good health is .35 air exchanges per hour and not less than 15 cubic feet per minute per person. #2 To put a number to this a 2000 square foot home with 8 foot ceilings require 5600 cubic feet of outside air minimally. And remember this is every hour, for 24 hours 134,400 cubic feet of air exchange. And if the house is not new construction it will have air exchanges 3 to 6 times this amount. Wood and wood ash are known to be sources that bring mold and fungus into the home. Combustion does not kill mold spores, it spreads them.#3 This causes property damage and lung problems. Wood smoke particles are submicroscopic; this allows them to get past the lungs natural defenses. The particles get deep into the lung and stay there. Some will even go straight into the blood steam as they will pass right through the lungs into the blood vessels.#4 There are many chemicals released in wood smoke including arsenic, lead, CO etc.

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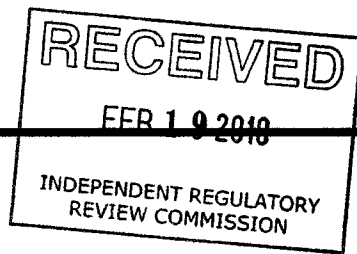
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**From:** David Backes [dbackes@ptd.net]  
**Sent:** Monday, February 08, 2010 7:56 AM  
**To:** EP, RegComments  
**Subject:** outdoor wood-fired boilers  
**Attachments:** summary proposed rulemaking.doc; In regards to the Proposed Rulemaking for Outdoor Wood.doc

Environment Quality Board,

Comments on the proposed ordinance, thank you for your consideration.

David Backes