

**Attorneys General of New York, Connecticut, Maryland,
Massachusetts, Oregon, Rhode Island, and Vermont
and the Puget Sound Clean Air Agency**

August 1, 2013

By Certified Mail, Return Receipt Requested

Gina McCarthy, Administrator
U.S. Environmental Protection Agency
Ariel Rios Bldg.
1200 Pennsylvania Ave., N.W., Mail Code 1101A
Washington, DC 20460

Re: New Source Performance Standards for Residential Wood Burning
Heaters - Notice of Intent to Sue Pursuant to 42 U.S.C. § 7604(b)(2)

Dear Administrator McCarthy:

The Attorneys General of New York, Connecticut, Maryland, Massachusetts, Oregon, Rhode Island, and Vermont and the Puget Sound Clean Air Agency (together, “States”) hereby provide notice of their intent to sue the Environmental Protection Agency for failing to timely review and revise the New Source Performance Standards (NSPS) for Residential Wood Heaters under the Clean Air Act (Act). EPA’s 25-year old standards are outdated, and do not cover outdoor wood boilers, a major source of air pollution in many communities. This letter is to provide 60 days’ notice pursuant to section 304(a)(2) of the Act of the States’ intent to file a lawsuit for EPA’s failure to perform a mandatory duty under the statute.

1. Background

Section 111(b)(1)(A) of the Act requires EPA to list categories of stationary sources that “cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health and welfare.” 42 U.S.C. § 7411(b)(1)(A). EPA must review and, as appropriate, revise, the standards for stationary sources at least every eight years based on the best technological system of continuous emission reduction. *Id.* § 7411(b)(1)(B).

In 1988, EPA issued emission standards for particulate matter (PM) from new residential wood heaters. 40 C.F.R. Part 60, Subpart AAA. In the intervening 25 years, use of residential wood heaters covered by the standards has greatly expanded. In addition, there has been a dramatic increase in use of residential wood heaters under the category of “boilers,” which EPA exempted from the standards. 40 C.F.R. § 60.530(h)(2). These include outdoor wood boilers, indoor wood boilers, and hydronic heaters (collectively, “unregulated boilers”). Also during

those 25 years, there have been technological advances that enable residential wood heaters and unregulated boilers to achieve much better emission rates for particulate matter than those set forth in the 1988 standards. Those lower-emitting wood-burning devices are currently available in the marketplace.

2. *Public Health Hazards from Wood Smoke*

Wood smoke contains fine PM (PM_{2.5}), carbon monoxide (CO), and polycyclic aromatic hydrocarbons (PAH).¹ These pollutants are linked to adverse coronary and pulmonary health impacts, including premature death. The Center for Disease Control has determined that PAHs are reasonably expected to cause cancer.² The presence of wood-burning units near residences or schools can cause exposure to high levels of these pollutants.

Well-established scientific evidence links exposure to PM_{2.5} with an array of adverse effects. EPA recently revised the National Ambient Air Quality Standards (NAAQS) for annual PM_{2.5}, explaining that doing so “provides increased protection for children, older adults, persons with pre-existing heart and lung disease, and other at-risk populations against an array of PM_{2.5}-related adverse health effects that include premature mortality, increased hospital admissions and emergency department visits, and development of chronic respiratory disease.”³ EPA also noted the risks of acute (short-term) exposures to PM_{2.5}.⁴ Other studies have found that residential wood combustion is responsible for potentially dangerous short-term spikes in PM_{2.5} concentrations, especially in rural areas.⁵ Scientific studies

¹ See 52 Fed. Reg. 5065 (Feb. 18, 1987) (noting increasing quantities of PM emissions from wood heaters, presence of CO and carcinogens in wood smoke, and that these pollutants “are released at low heights in residential areas (resulting in relatively high levels of exposure to human populations”).

² Center for Disease Control, *Toxic Substances Portal: Polycyclic Aromatic Hydrocarbons (PAH)*, at: <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=121&tid=25>.

³ See 78 Fed. Reg. 3086, 3103 (Jan. 15, 2013).

⁴ *Id.* at 3104-06.

⁵ See New York State Energy Research & Development Authority, No. 10-02, *Spatial Modeling and Monitoring of Residential Woodsmoke Across a Non-Urban Upstate New York Region* xvii-xix, 4-1 (Feb. 2010) (finding that in a seven-county area of upstate New York, “very high spikes in woodsmoke concentrations” of over 100 micrograms per cubic meter were observed and that 26% of the monitored population was exposed to elevated residential woodsmoke), available at www.nyserda.ny.gov; David Snyder, *LADCO Midwest Wood Smoke Study: Grand Rapids Case Study* 6-7 (Aug. 31, 2012) (finding “sustained periods” during which

establish that emissions from highly-polluting wood combustion devices are associated with increased incidence of asthma and other respiratory problems, especially in young children.⁶

According to EPA, fine particulate matter emitted from wood-burning devices comprised 13 percent of all PM_{2.5} pollution in the U.S. in 2008. EPA has also estimated that smoke from these devices can represent a large percentage of this pollution regionally, including 25 percent of wintertime PM_{2.5} pollution in parts of New Hampshire and Wisconsin, and more than 50 percent of wintertime PM_{2.5} in Tacoma, WA and Sacramento, CA.⁷

3. The Growing Problem of Emissions from Unregulated Boilers

The popularity and use of unregulated boilers, such as outdoor wood boilers, has grown since 1988, and their emissions are of particular concern to the Northeast, Midwest and Northwest. *Black Carbon Report to Congress*, § 10.3.1.

In 2006, the Northeast States for Coordinated Air Use Management (NESCAUM) issued a report documenting the severe health effects associated with residential wood smoke inhalation and also documented the inordinate quantity of emissions from outdoor wood boilers. NESCAUM, *Assessment of Outdoor Wood-fired Boilers* (2006).⁸

In 2008, the New York Attorney General's Office issued a report finding that outdoor wood boilers were becoming increasingly common and can emit far more PM_{2.5} than other types of residential heaters -- about 12 times as much as EPA certified wood stoves, 1,000 times as much as oil furnaces, and 1,800 times as much as gas furnaces. NYS Attorney General, Environmental Protection Bureau, *Smoke*

PM_{2.5} concentrations exceeded the 24-hour NAAQS, and finding that wood smoke contributed as much as 63% of elevated PM_{2.5} concentrations), available at: http://www.ladco.org/reports/wood_smoke/grand_rapids_wood_smoke_case_study_final_report_8_31_2012.pdf.

⁶ See, e.g., Luke P. Naeher et al., *Woodsmoke Health Effects: A Review*, 19 *Inhalation Toxicology* 67, 82-87 (2006) (reviewing studies of wood smoke exposure and health impacts); Pernille Høgh Danielsen et al., *Oxidative Stress, DNA Damage, and Inflammation Induced by Ambient Air and Wood Smoke Particulate Matter in Human A549 and THP-1 Cell Lines*, 24 *Chem. Res. Toxicol.* 168 (2011).

⁷ EPA, Residential Wood Heaters New Source Performance Standards (NSPS) Current Draft Revisions; Slide 5; available at: <http://www.epa.gov/burnwise/pdfs/CommunityOutreachWoodHeatersNSPS03-09-11.pdf>

⁸ <http://www.nescaum.org/documents/assessment-of-outdoor-wood-fired-boilers>.

Gets in Your Lungs: Outdoor Wood Boilers in New York State (2008). In 2010, another report found that smoke from outdoor wood boilers can enter even tightly sealed homes and can remain at significantly elevated levels. Environment and Human Health, Inc., *The Dangers to Health from Outdoor Wood Furnaces* (2010).⁹

In January 2013, the New York State Department of Health issued a report finding that, even in the absence of smoke or odor complaints, outdoor wood boilers increase residential wood smoke exposures in neighborhoods. NYSDOH, *Fine Particulate Matter Concentrations In Outdoor Air Near Outdoor Wood-Fired Boilers (OWBs)* (2013).¹⁰ The report noted that comprehensive testing by EPA of various types of wood-fired hydronic heaters (a broad category which includes outdoor wood boilers) under typical operational conditions found that conventional outdoor wood boilers emit more PM_{2.5}, CO, PAHs, and polychlorinated dibenzo-p-dioxins and dibenzofurans than EPA-certified wood stoves. The report noted that in rural New York counties, residential wood combustion is responsible for 90 percent of fine particulate matter pollution. The report recommended that public exposure to outdoor wood boiler smoke be reduced due to the well-established adverse respiratory and cardiovascular health effects of PM_{2.5} exposure, and the adverse quality of life and odor issues associated with excessive smoke exposure.

Attempts to control or minimize the adverse health and quality of life impacts from outdoor wood boiler emissions have resulted in a patchwork of enforcement and legislative efforts by various states and localities, with limited success. Because the problems associated with outdoor wood boilers are widespread and exist across much of the U.S., federal standards of performance would provide certainty for both manufacturers and purchasers.

Additionally, the use of indoor wood boilers/hydronic heaters is increasing. These devices -- which are designed for use inside a residence -- also can emit large amounts of smoke and particulate matter.

4. *The Wide Availability of Lower-Emitting Wood-Burning Devices*

Analysis of the emissions profile of various wood burning heaters shows that in general the larger volume of pollutants emitted by some units is related to poor engineering design that results in inefficient burning of the wood fuel, including smoldering. Demonstrated and cost-effective design technologies are now available to significantly increase burning efficiencies and significantly reduce emissions of PM_{2.5} and other pollutants from residential wood heaters currently covered by

⁹ Available at: <http://ehhi.org/reports/woodsmoke/>

¹⁰ Available at: http://www.health.ny.gov/environmental/outdoors/air/owb/docs/owb_report.pdf.

EPA's emission standards and from unregulated boilers. Regarding the former category, EPA's website lists dozens of available residential wood heaters that emit less than half of the current emission standards.¹¹ Several states have regulations requiring residential wood heaters to achieve these more stringent standards. For example, Washington's standard limiting PM_{2.5} from these devices is 40 percent more stringent than the current EPA standards.

With respect to unregulated outdoor wood boilers, there are a number of opportunities to achieve substantial air pollution reductions from the current level that qualifies for EPA's "Phase 2" outdoor wood boiler voluntary program, 0.32 pounds per million British thermal units (lb/mmBTU).¹² EPA's website lists 11 devices that emit less than half the Phase 2 standard, and another seven emit between 0.04 to 0.08 lbs/mmBTU. Furthermore, a June 2012 EPA study found that a pellet-fired hydronic heater compliant with European emission standards significantly outperformed outdoor wood boilers manufactured in the U.S., emitting approximately 94 percent less PM_{2.5}, 92-93 percent less CO and 89-99% less polycyclic aromatic hydrocarbons than the *cleanest* outdoor wood boiler, while using about 33-45 percent less fuel.¹³

Starting in the 1990s, the European Union placed more stringent limits on wood-burning devices. As a result, average heating efficiency has increased from 55 percent to more than 90 percent. These stricter standards did not hurt the market in Europe, which has seen sales of cordwood stoves, furnaces, and boilers increase by 100 percent and pellet stoves, furnaces, and boilers increase by 1500 percent.

5. *Notice of Intent to Sue*

As discussed above, section 111(b)(1)(B) of the Act requires EPA to undertake a notice-and-comment rulemaking to "review and, if appropriate, revise" each NSPS at least once every eight years, and take into account "emission limitations and percent reductions achieved in practice," in cases where those emission reductions exceed those required by existing NSPS regulations. Although the current emission standards for residential wood heaters have been in place since February 1988, EPA

¹¹ See EPA List of EPA Certified Wood Stoves, available at: <http://www.epa.gov/compliance/resources/publications/monitoring/caa/woodstoves/certifiedwood.pdf>

¹² See generally EPA, Partners – Program Participation – List of Cleaner Hydronic Heaters, available at: <http://www.epa.gov/burnwise/owhhlist.html>

¹³ EPA, Environmental, Energy Market, and Health Characterization of Wood-Fired Hydronic Heater Technologies S-11 to S-13, S-18 (NYSERDA, June 2012).

has not completed the required notice-and-comment rulemaking proceeding to review the scope or stringency of those standards and make the necessary revisions in light of the development of lower-emitting heaters.

Also, section 111(b)(1)(A) requires EPA to include in the listing of categories of stationary sources a category that “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health and welfare” and then to propose performance standards for those new sources. As summarized above, the overwhelming evidence – much of it compiled by EPA itself – establishes that unregulated boilers emit not only the same types of dangerous pollutants as regulated residential wood heaters, but do so in far greater quantities per unit. Moreover, EPA estimates that outdoor wood boilers will produce more than 20 percent of wood burning emissions by 2017.¹⁴ EPA’s failure to address these emissions (either by revising Subpart AAA to include unregulated boilers or creating a separate subcategory) in light of the Agency’s own findings regarding their health impact is a violation of its non-discretionary duty under § 111(b)(1)(A).

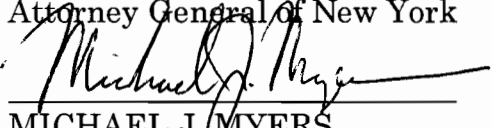
In light of the foregoing, the States request that EPA promptly propose and finalize revised standards for residential wood heaters with emission standards under 40 C.F.R. Part 60, Subpart AAA. The States also request that EPA promptly revise Subpart AAA to include outdoor wood boilers, indoor wood boilers, and hydronic heaters as stationary sources that require performance standards and propose and finalize appropriate standards for them. This letter constitutes notice from the States, pursuant to section 304 of the Clean Air Act and Title 40, Part 54 of the Code of Federal Regulations, of their intent to commence a civil action to enforce the Act due to EPA’s failure to undertake these non-discretionary duties.

Respectfully submitted,

ERIC T. SCHNEIDERMAN
Attorney General of New York

GEORGE JEPSEN
Attorney General of Connecticut

By:


MICHAEL J. MYERS
Chief, Affirmative Litigation Sect.
Env. Protection Bureau, The Capitol
Albany, NY 12224
(518) 402-2594
michael.myers@ag.ny.gov

SCOTT N. KOSCHWITZ
Assistant Attorney General
P.O. Box 120, 55 Elm Street
Hartford, CT 06141
(860) 808-5250
scott.koschwitz@ct.gov

¹⁴ EPA, Residential Wood Heaters New Source Performance Standards (NSPS) Current Draft Revisions; Slide 10; available at: <http://www.epa.gov/burnwise/pdfs/CommunityOutreachWoodHeatersNSPS03-09-11.pdf>

DOUGLAS F. GANSLER
Attorney General of Maryland

MARY E. RAIVEL
Assistant Attorney General
Office of the Attorney General
Department of Environment
1800 Washington Blvd., S. 6048
Baltimore, MD 21230
(410) 537-3035
mary.raivel@maryland.gov

ELLEN F. ROSENBLUM
Attorney General of Oregon

PAUL GARRAHAN
Assistant Attorney-in-Charge
Natural Resources Section
Department of Justice
1515 SW Fifth Ave., S. 410
Portland, OR 97201
(971) 673-1943
paul.garrahan@doj.state.or.us

WILLIAM H. SORRELL
Attorney General of Vermont

THEA SCHWARTZ
Assistant Attorney General
Office of the Attorney General
109 State Street
Montpelier, VT 05609-1001
(802) 828-2359
tschwartz@atg.state.vt.us

MARTHA COAKLEY
Attorney General of Massachusetts

FREDERICK D. AUGENSTERN
Assistant Attorney General
Environmental Protection Division
Office of the Attorney General
1 Ashburton Place, Rm. 1813
Boston, MA 02108
(617) 963-2427
fred.augenstern@state.ma.us

PETER F. KILMARTIN
Attorney General of Rhode Island

GREGORY S. SCHULTZ
Special Assistant Attorney General
Department of Attorney General
150 South Main Street
Providence, RI 02903
(401) 274-4400, ext. 2400
gschultz@riag.ri.gov

PUGET SOUND CLEAN AIR
AGENCY

LAURIE HALVORSON
Director – Compliance and Legal
Puget Sound Clean Air Agency
1904 Third Ave., S. 105
Seattle, WA 98101
(206) 689-4030
laurieh@pscleanair.org