



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

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Seattle, WA 98101-3140

OFFICE OF THE
REGIONAL
ADMINISTRATOR

DEC 26 2012

The Honorable Tammie Wilson
State of Alaska, House of Representatives
301 Santa Claus Lane, Suite 3B
North Pole, AK 99705

Dear Representative Wilson:

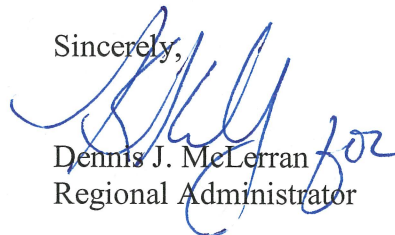
Thank you for contacting the U.S. Environmental Protection Agency about wood smoke emissions in the Fairbanks North Star Borough. The attached document addresses both your questions to John Dupree as well as those sent to me, in a separate e-mail transmission, as Regional Administrator of the EPA Region 10.

We share your concern about the harmful effects of high levels of fine particle pollution in Alaska and across the country. As we have learned more about the health impacts, the EPA has taken a number of steps designed to reduce this type of pollution in our communities, including reducing emissions from new diesel vehicles, power plants and stationary diesel engines. The EPA has regulated particulate matter from wood heating appliances since 1988. The Agency is currently revising these regulations to incorporate more stringent emission standards for a range of wood heating appliances. We expect to release a draft rule for public comment this spring. We welcome any comments you might have on this proposal once it is available for comment.

The EPA has also developed a number of voluntary wood smoke reduction strategies and education materials which concerned citizens may use to reduce wood smoke emissions in their communities, under the national Burn Wise Program.

Thank you again for contacting the EPA. I hope this information will help your efforts to develop a legislative strategy to address wood smoke emissions in the Fairbanks North Star Borough. If you have any questions or need additional information, please feel free to contact Lucy Edmondson or me on my staff, at Edmondson.lucy@epa.gov.

Sincerely,


Dennis J. McLerran
Regional Administrator

Questions to John Dupree, EPA Headquarters:

I. December 7, 2012 email:

Question 1: Today it is -30 and all of our monitors comply with EPA standards. The area is utilizing their solid fuel devices but the air is clear. My question is: how do we figure in the impact of our weather to being in compliance every day of the year. Is there an appliance out there, which no matter how many are being used, can prevent our levels of PM 2.5 to exceed the current standards?

- *Response:* The combination of pollution from woodstoves and other sources, extreme cold temperatures, and air stagnation causes your airshed to exceed the PM 2.5 standards. The Alaska Department of Environmental Conservation has compiled extensive data regarding wood smoke emissions and has performed analyses on PM 2.5 compliance. When ADEC runs scenarios of compliance for future years, or for proposed control strategies, they conduct the analysis using different temperature scenarios to determine the potential impact of control strategies for a range of weather conditions. I encourage you to contact the ADEC for more information on this and to follow-up with us if they do not have the analysis you seek.

II. December 4, 2012 email:

Question 1: I am seeking information on how wood stoves are tested.

- *Response:* Wood heating appliances such as wood stoves and pellet stoves are regulated by the EPA under regulations adopted under authority of the Clean Air Act (40 CFR Part 60, Subpart AAA). These regulations set forth a particulate matter emission limit of 7.5 grams per hour for non-catalytic wood stoves and 4.1 grams per hour for wood stoves equipped with catalysts. Manufacturers demonstrate compliance with these emission limits by having their stoves tested at an EPA accredited laboratory in accordance with EPA test methods. Based on the test results each wood stove model line is given a particulate matter emission rating. The test results must be reviewed and approved by EPA before the stove can be offered for sale in the United States. EPA certified wood stoves are 70% cleaner than non-certified wood stoves. For a listing of these wood stoves, visit our website at www.epa.gov/burnwise or www.epa.gov/compliance/monitoring/programs/caa/woodheaters.html.

Question 2: Does the amount of emissions change due to the climate they are used in? Today the temperature is negative 40 and our air quality is poor.

- *Response:* Yes, colder temperatures increase emissions of particulate matter and volatile organic compounds. ADEC's modeling mentioned above considers this.

Question 3: If the state decided to only allow solid fuel devices that burn at a 2.5 emissions rate G/Hour would that significantly improve our air shed?

- *Response:* Yes, limiting the installation and/or operation of wood heating appliances to those that emit no more than 2.5 grams per hour could greatly reduce wood smoke pollution and improve air quality in the Fairbanks North Star airshed. The State of Washington has seen reductions in air pollution levels by establishing a 4.5 gram per hour limit on wood stoves

operated and or sold in that state. Rod Tinnemore from the Washington Department of Ecology can provide additional information on the effectiveness of this program. Mr. Tinnemore may be reached at 360-407-6978.

Question 4: Is the start up emissions on these cleaner units different?

- **Response:** Yes, the startup period can be shorter and cleaner with an EPA certified wood stove or pellet stove. In addition, following proper start up practices (e.g., start fires with newspaper and dry kindling, and use only dry, well-seasoned wood) will help ensure fewer emissions.

Question 5: I would appreciate any studies or information that could help us determine what our next step should be.

- **Response:** Below are some links to additional information from the EPA and other sources that may be helpful to you as you determine your next steps.
- EPA Burnwise Public information: <http://www.epa.gov/burnwise/burnwisekit.html>
- Strategies for Reducing Residential Wood Smoke (<http://www.epa.gov/pm/measures/strategies-doc-8-11-09.pdf>)
- Libby Montana Wood Stove Change Out Final Report -- http://www.woodstovechangeout.org/fileadmin/PDF/Libby_Report-Final.pdf
- Wood Stove Change Out Tool Kit -- <http://www.epa.gov/burnwise/how-to-guide.html>
- Fireplace and Freestanding Stove Usage and Attitude Study -- <http://www.hpba.org/media/hearth-industry-prs/hpbexpo-2010-state-of-the-hearth>

Questions to Dennis McLerran, EPA Region 10, December 10, 2012 email.

Question 1: I would like to know if we only allowed stoves 2 g/hour or less and hydronic heaters at 4 g/hour or less to be sold in the state whether or not this would help us reach attainment quicker.

- **Response:** Yes, Limiting the installation and/or operation of wood stoves to those that emit no more than 2 grams per hour and hydronic heaters to 4 grams per hour could greatly reduce wood smoke pollution and improve air quality. As mentioned above, the State of Washington's tighter wood stove standards have helped to reduce air pollution in that state.

Question 2: If we were only using lower emitted stoves, would that affect how much smoke is produced when one starts up their appliance?

- **Response:** Yes, the startup period can be shorter and cleaner with an EPA certified wood stove or pellet stove. In addition, following proper start up practices (e.g., start fires with newspaper and dry kindling, and use only dry, well-seasoned wood) will help ensure fewer emissions.