

DEPARTMENT OF ENVIRONMENTAL CONSERVATION



This document contains portions of 18 AAC 50 Air Quality Control regulations pertaining to wood-fired heating devices and burning in general as they relate to PM2.5 issues in the Fairbanks North Star Borough as a tool for understanding the topic. These portions of the regulations are current as amended through September 15, 2018.

**18 AAC 50 in its entirety may be found at:
<http://dec.alaska.gov/commish/regulations/>**

**Bill Walker
Governor**

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Commissioner**

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(123) "wood-fired heating device"

(133) "campfire" means an open fire that is

(134) "dry wood"

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(136) "manufactured compressed wood log"

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(138) "solid fuel-fired heating device"

(139) "wet wood" means wood with a moisture content of more than 20 percent;

(140) "woodstove"

18 AAC 50.015. Air quality designations, classifications, and control regions. (a)

To identify an area by its air quality, all geographic areas in the state are designated by the federal administrator as "attainment," "nonattainment," or "unclassifiable." An area is designated "attainment" for a particular air pollutant if its air quality meets the ambient air quality standard for that air pollutant. If air quality does not meet the ambient standard for a particular air pollutant, that area is designated "nonattainment" for that air pollutant. If there is insufficient information to classify an area as attainment or nonattainment for a particular air pollutant, the area is designated "unclassifiable" for that air pollutant.

(b) The following areas have been designated by the federal administrator as "nonattainment" for the specified air pollutants:

- (1) for carbon monoxide
 - (A) repealed 2/20/2004
 - (B) repealed 6/24/2004
- (2) repealed 4/17/2015.
- (3) for PM-2.5: Fairbanks and North Pole urban area.

...

(d) The following areas are subject to maintenance plan requirements for carbon monoxide, as required under 42 U.S.C. 7505a, and as adopted by reference in 18 AAC 50.030 as part of the state air quality control plan:

- (1) the Municipality of Anchorage;
- (2) Fairbanks and North Pole urban area.

(e) The following areas are subject to maintenance plan requirements for PM-10, as required under 42 U.S.C. 7505a, and as adopted by reference in 18 AAC 50.030 as part of the state air quality control plan:

- (1) Eagle River area of Anchorage;
- (2) Mendenhall Valley area of Juneau. (Eff. 1/18/97, Register 141; am 2/20/2004, Register 169; am 6/24/2004, Register 170; am 10/10/2004, Register 171; am 12/9/2010, Register 196; am 10/6/2013, Register 208; am 4/17/2015, Register 214)

Authority: AS 46.03.020 AS 46.14.010 AS 46.14.030

Editor's note: The nonattainment area and maintenance boundaries, the air quality control region boundaries, and the Class I area boundaries are depicted on maps in the state air

quality control plan adopted by reference in 18 AAC 50.030. Air quality control region and nonattainment area boundaries are described in 40 C.F.R. 81, as revised as of July 1, 2003.

As of Register 154, July 2000, the regulations attorney made a technical revision under AS 44.62.125(b)(6) in Table 1 at 18 AAC 50.015(c)(2).

18 AAC 50.065. Open burning. (a) General Requirements. Except when conducting open burning under (g), (h), or (i) of this section, a person conducting open burning shall comply with the limitations of (b) - (f) of this section and shall ensure that

- (1) the material is kept as dry as possible through the use of a cover or dry storage;
- (2) before igniting the burn, noncombustibles are separated to the greatest extent practicable;
- (3) natural or artificially induced draft is present;
- (4) to the greatest extent practicable, combustibles are separated from grass or peat layer; and
- (5) combustibles are not allowed to smolder.

(b) **Black Smoke Prohibited.** Except for firefighter training conducted under (h) or (i) of this section, open burning of asphalts, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written department approval. Department approval of open burning as an oil spill response countermeasure is subject to the department's *In Situ Burning Guidelines for Alaska*, adopted by reference in 18 AAC 50.035. Open burning approved under this subsection is subject to the following limitations:

- (1) open burning of liquid hydrocarbons produced during oil or gas well flow tests may occur only when there are no practical means available to recycle, reuse, or dispose of the fluids in a more environmentally acceptable manner;
- (2) the person who conducts open burning shall establish reasonable procedures to minimize adverse environmental effects and limit the amount of smoke generated; and
- (3) the department will, in its discretion, as a condition of approval issued under this subsection, require public notice as described in (j) of this section.

(c) **Toxic and Acid Gases and Particulate Matter Prohibited.** Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off toxic or acidic gases or particulate matter is prohibited.

(d) **Adverse Effects Prohibited.** Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on

nearby persons or property.

(e) **Air Quality Advisory.** Open burning is prohibited in an area if the department declares an air quality advisory under 18 AAC 50.245 or 18 AAC 50.246, stating that burning is not permitted in that area for that day. This advisory will be based on a determination that there is or is likely to be inadequate air ventilation to maintain the standards set by 18 AAC 50.010. The department will make reasonable efforts to ensure that the advisory is broadcast on local radio or television.

(f) **Wood Smoke Control and PM-2.5 Nonattainment Areas.** Open burning is prohibited between November 1 and March 31 in each wood smoke control area identified in 18 AAC 50.025(b) and in each PM-2.5 nonattainment area identified in 18 AAC 50.015(b)(3). In a PM-2.5 nonattainment area, a local air quality open burn permit program may replace the seasonal open burning prohibition in this section if the program

(1) does not cause or contribute to violations of the PM-2.5 ambient air quality standards set out in 18 AAC 50.010; and

(2) is part of a local air quality plan included in the *State Air Quality Control Plan*, adopted by reference in 18 AAC 50.030.

(g) **Controlled Burning.** Controlled burning to manage forest land, vegetative cover, fisheries, or wildlife habitat, other than burning to combat a natural wildfire, requires written department approval if the area to be burned exceeds 40 acres yearly. The department will, in its discretion, require public notice as described in (j) of this section.

(h) **Firefighter Training: Structures.** A fire service may open burn structures for firefighter training without ensuring maximum combustion efficiency under the following circumstances:

(1) before igniting the structure, the fire service shall

(A) obtain department approval for the location of the proposed firefighter training; approval will be based on whether the proposed open burning is likely to adversely affect public health in the neighborhood of the structure;

(B) visually identify materials in the structure that might contain asbestos, test those materials for asbestos, and remove all materials that contain asbestos;

(C) ensure that the structure does not contain

(i) putrescible garbage;

(ii) electrical batteries;

(iii) stored chemicals such as fertilizers, pesticides, paints, glues,

sealers, tars, solvents, household cleaners, or photographic reagents;

(iv) stored linoleum, plastics, rubber, tires, or insulated wire;

(v) hazardous waste;

(vi) lead piping;

(vii) plastic piping with an outside diameter of four inches or more; or

(viii) urethane or another plastic foam insulation;

(D) provide public notice consistent with (j) of this section; and

(E) ensure that a fire-service representative is on-site before igniting the structure;

(2) the fire service shall ignite and conduct training on only one main structure and any number of associated smaller structures at a time; examples of associated smaller structures are garages, sheds, and other outbuildings; and

(3) the fire service shall respond to complaints in accordance with (k) of this section.

(i) **Firefighter Training: Fuel Burning.** Unless a greater quantity is approved by the department, a fire service may open burn up to 250 gallons of uncontaminated fuel daily and up to 600 gallons yearly for firefighter training without ensuring maximum combustion efficiency. To conduct this training without prior written department approval, the fire service shall

(1) provide public notice consistent with (j) of this section before burning more than 20 gallons of uncontaminated fuel, unless waived in writing by the department; and

(2) respond to complaints in accordance with (k) of this section.

(j) **Public Notice.** A person required to provide public notice of open burning shall issue the notice through local news media or by other appropriate means if the area of the open burning does not have local news media. The public notice must be issued as directed by the department and must

(1) state the name of the person conducting the burn;

(2) provide a list of material to be burned;

(3) provide a telephone number to contact the person conducting the burn before and during the burn;

(4) for a surprise fire drill, state

(A) the address or location of the training; and

(B) the beginning and ending dates of the period during which a surprise fire drill may be conducted (this period may not exceed 30 days); and

(5) for open burning other than a surprise fire drill, state the expected time, date, and location of the open burning.

(k) **Complaints.** A person required to provide public notice of open burning shall

(1) make a reasonable effort to respond to complaints received about the burn;

(2) keep, for at least 30 days, a record of all complaints received about the burn, including to the extent feasible;

(A) the name, address, and telephone number of each person who complained;

(B) a short summary of each complaint; and

(C) any action the person conducting the open burning took to respond to each complaint; and

(3) upon request, provide the department with a copy of the records kept under (2) of this subsection. (Eff. 1/18/97, Register 141; am 2/28/2015, Register 213; am 3/6/2016, Register 217)

Authority: AS 46.03.020 AS 46.14.010 AS 46.14.030
AS 46.03.710 AS 46.14.020 Sec. 30, ch. 74, SLA 1993

18 AAC 50.075. Solid fuel-fired heating device visible emission standards. (a) A person may not operate a solid fuel-fired heating device in a manner that causes

(1) black smoke; or

(2) visible emissions that exceed 20 percent opacity for more than six minutes in any one hour in an area for which an air quality advisory is in effect under 18 AAC 50.245 or 18 AAC 50.246, except during the first 15 minutes after initial firing of the device; visible emissions are measured following opacity reading procedures as required under 40 C.F.R. Part 60, Appendix A, Method 9, adopted by reference in 18 AAC 50.040, as modified in Volume III, sec. IV-3, Appendix IV-3, of the *State Air Quality Control Plan*, adopted by reference in 18 AAC 50.030; alternatively, visible emissions may be measured using the alternative method to Method 9, ALT-082, approved and revised by EPA as of May 17, 2012.

(b) A person may not operate a wood-fired heating device in an area for which the department has declared an air quality episode under 18 AAC 50.245.

...

(d) A person may operate a solid fuel-fired heating device in an area for which the department has declared a PM-2.5 air quality episode under 18 AAC 50.246 or under emergency episode provisions included in a local air quality plan incorporated in the *State Air Quality Control Plan*, adopted by reference in 18 AAC 50.030, only if

(1) visible emissions or opacity from the solid fuel-fired heating device is below the opacity limits identified in the episode announcement for that area as defined in the *State Air Quality Control Plan*, adopted by reference in 18 AAC 50.030;

(2) the owner or operator of the solid fuel-fired heating device obtains a written temporary waiver from the department or local air quality control program from the opacity limits identified in the episode announcement; the department or local air quality program may grant a temporary waiver after considering

(A) financial hardship information provided by the owner or operator;

(B) technical feasibility and device design information provided by the owner or operator;

(C) potential impact to locations with populations sensitive to exposure to PM-2.5; locations under this subparagraph include hospitals, schools, child care facilities, health clinics, long-term care facilities, assisted living homes, and senior centers;

(D) mitigation measures implemented by the owner or operator to prevent adverse health impacts to individuals sensitive to exposure to PM-2.5; and

(E) the contribution of the device to the exceedance of the PM-2.5 concentration triggering the episode announcement; or

(3) the department has not prohibited operation under (e) of this section.

(e) The department may prohibit operation of a solid fuel-fired heating device in an area for which the department has declared a PM-2.5 air quality episode under emergency episode provisions included in a local air quality plan incorporated in the *State Air Quality Control Plan*, adopted by reference in 18 AAC 50.030, only if the announcement identifies

(1) the air quality zone affected by the prohibition; and

(2) any exceptions as identified in the *State Air Quality Control Plan*, adopted by reference in 18 AAC 50.030.

(f) A solid fuel-fired heating device located in an area identified in 18 AAC 50.015(b)(3) shall be operated so that the visible emissions or opacity do not exceed 20 percent opacity for more than six minutes in any one hour, except during the first 15 minutes after initial firing of the device when the opacity limit must be less than 50 percent. Visible emissions are measured as set out in (a)(2) of this section. (Eff. 1/18/97, Register 141; am 5/6/2009, Register 190; am 2/28/2015, Register 213; am 11/26/2016, Register 220; 1/12/2018, Register 225)

Authority: AS 46.03.020 AS 46.14.020 Sec. 30, ch. 74, SLA 1993
AS 46.14.010 AS 46.14.030

Editor's note: The alternative to EPA Method 9, ALT-082, addressed in 18 AAC 50.075(a)(2) is available at the department's Anchorage, Fairbanks, and Juneau offices, and can be obtained by contacting the Department of Environmental Conservation, Division of Air Quality, at (907) 465-5100. The document is also available from the United States Environmental Protection Agency, Technology Transfer Network, Emission Measurement Center, at <http://www.epa.gov/ttn/emc/tmethods.html>

18 AAC 50.076. Solid fuel-fired heating device fuel requirements; registration of commercial wood sellers. (a) A person operating a solid fuel-fired heating device in an area identified in 18 AAC 50.015(b)(3) may use only the following fuels:

(1) for wood-fired heating devices, and subject to additional limitations under (b) of this section,

(A) wood, if not prohibited under (c) of this section;

(B) the following wood products, if made wholly from wood not prohibited under (c) of this section:

(i) wood pellets;

(ii) manufactured compressed wood logs;

(iii) bricks;

(iv) pucks;

(C) manufacturer-recommended starter fuels, including home heating oil, propane, natural gas, or wood-based material for dual fuel-fired hydronic heaters;

(D) biomass fuels approved by the manufacturer;

(2) for coal-burning devices,

(A) coal;

(B) coal pellets;

(3) for all solid fuel-fired heating devices, a fuel that is approved by the manufacturer and not prohibited under (c) of this section.

(b) Not earlier than October 1, 2015, and between October 1 and March 31 of each year, a person operating a wood-fired heating device in an area identified in 18 AAC 50.015(b)(3) may use only the following fuels:

(1) dry wood, if not prohibited under (c) of this section;

(2) the following wood products, if made wholly from wood not prohibited under (c) of this section;

(A) wood pellets;

(B) manufactured compressed wood logs;

(C) bricks;

(D) pucks;

(3) manufacturer-recommended starter fuels, including home heating oil, propane, natural gas, or wood-based material for dual fuel-fired hydronic heaters;

(4) biomass fuels approved by the manufacturer;

(5) a fuel that is approved by the manufacturer, and that is not wet wood or a fuel prohibited under (c) of this section.

(c) A person operating a solid fuel-fired device may not burn or incinerate in the device

(1) wood that has paint, stains, or other types of coating;

(2) wood that has been treated with preservatives, including copper chromium arsenate, creosote, or pentachlorophenol;

(3) asphalt, rubber, tires, or tar products, including materials contaminated with petroleum, petroleum derivatives, oily wastes, or oil cleanup materials;

(4) chlorinated or halogenated organic compounds, including plastics, polyurethane products, pesticides, herbicides, or fungicides;

(5) compounds containing cyanide or asbestos;

(6) animal carcasses; or

- (7) putrescible garbage;
- (8) construction and demolition debris, including plywood and particleboard;
- (9) flooring products; or
- (10) manure.

(d) A commercial wood seller must register under (e) of this section with the department to sell or provide wood to a person located in an area that is identified in 18 AAC 50.015(b)(3), if

(1) under 42 U.S.C. 7513 and 7602, EPA has designated the area as a “serious” nonattainment area with respect to PM-2.5;

(2) the department issues a finding that wood smoke is a significant component of the PM-2.5 amount that resulted in designation of the area identified in 18 AAC 50.015(b)(3) as “nonattainment”; and

(3) not later than 60 days before the date on which the requirements of this subsection and (e) – (g) of this section are to apply, the department

(A) prepares a notice identifying the need for applying the requirements of this subsection and (e) – (g) of this section with regard to the sale or provision of wood to a person located in the area; and

(B) issues the notice described in (A) of this paragraph by

(i) publication in a newspaper of general circulation;

(ii) posting in the office of the local air pollution control program;

and

(iii) posting on the Alaska Online Public Notice System (AS 44.62.175).

(e) Before selling or providing wood to a person located in the areas that is identified in 18 AAC 50.015(b)(3), a commercial wood seller subject to (d) – (g) of this section must

(1) submit a registration application in a format provided by the department;

(2) have available for use a moisture content meter that the department has approved under (g)(1) of this section;

(3) have a valid business license issued under AS 43.70; and

(4) renew the registration every three years by submitting, at least 30 days before the expiration date of the existing registration, an application for renewal to the department in a

format provided by the department.

(f) Upon receipt of a complete registration application and the department's determination that the commercial wood seller is in compliance with (e)(2) and (3) of this section, the department will

(1) issue a unique registration identification number to the commercial wood seller;

(2) issue the commercial wood seller a batch of uniquely numbered three-part moisture content disclosure forms for use under (g) of this section; and

(3) add the commercial wood seller to a list of registered commercial wood sellers that the department maintains and makes available to the public.

(g) A commercial wood seller who is registered as required under (d) – (f) of this section

(1) shall test, using a commercially available moisture test meter that the department has approved for accuracy, the moisture content of a load of wood at the time of sale or provision to the consumer, or if the consumer purchases one or more loads of wood for later delivery or arranges for the later delivery of one or more loads of wood, shall test the moisture content of each load at the time of delivery, unless the wood sold or delivered is subject to (2), (3) or (4) of this subsection; the department will maintain a list of commercially available moisture test meters that the department has approved for accuracy; for split wood, wood rounds, or logs that are cut at the time of or before sale and that are marketed, sold, or provided as dry wood, the commercial wood seller shall

(A) measure moisture content in at least three pieces of wood for each cord of wood purchased;

(B) randomly select the wood to be tested from differing locations throughout the entire load;

(C) ensure that each selected piece of wood undergoes a fresh cut and is tested in the center of the fresh cut end; and

(D) document the measured moisture content on the moisture content disclosure form that the department provides under (f)(2) of this section, and fully complete and sign the form;

(2) if selling or providing frozen wood, shall note on the moisture content disclosure form that the wood is frozen and assumed to be wet wood with greater than 20 percent moisture content, and shall fully complete and sign the rest of the form; for purposes of this paragraph, "frozen wood" means wood that is

(A) cut at a temperature below 32 degrees Fahrenheit for immediate sale or provision to the consumer; or

(B) delivered at a temperature below 32 degrees Fahrenheit, if the consumer purchase one or more loads of wood for later delivery or arranges for the later delivery of one or more loads of wood;

(3) if marketing, selling, or providing wet wood, shall note on the moisture content disclosure form that the wood is wet and assumed to be greater than 20 percent moisture content, and shall fully complete and sign the rest of the form;

(4) if marketing, selling, or providing, as dry wood,

(A) wood that was split before freezing, may market, sell, or provide the wood as dry wood only if

(i) the split wood is covered and stacked for ventilation;

(ii) after splitting, covering, and stacking the wood, the commercial wood seller tests the wood as required under (1)(A) – (D) of this subsection and the test results demonstrate that each piece of wood tested is dry wood;

(iii) the commercial wood seller records and saves the test results and the date of the test; and

(iv) upon actual sale, provision, or delivery, if the temperature is below 32 degrees Fahrenheit, the commercial wood seller documents the previously recorded test results and the date on the moisture content disclosure form and fully completes and signs the rest of the form;

(B) wood that was split after freezing, may market, sell, or provide the wood as dry wood after freezing only if

(i) the wood is mechanically dried;

(ii) the wood is manufactured as pellet logs; or

(iii) the source of the wood is from fire-killed trees and has been inspected by the department and found to be dry wood;

(5) shall obtain the consumer's signature on the moisture content disclosure form, or if the consumer is unavailable, shall mark on the form that the consumer is unavailable;

(6) shall provide the consumer with a copy of the signed moisture content disclosure form;

(7) shall submit to the department, not later than the 15th day of each month, the

department's copy of each moisture content disclosure form completed during the previous month;

(8) shall retain the seller's own copy of each completed moisture content disclosure form for two years after the date of the sale, provision, or delivery;

(9) shall account for each moisture content disclosure form received from the department; when making a monthly submission under (7) of this subsection, the commercial wood seller shall

(A) submit any moisture content disclosure form not given to a consumer due to damage or errors; and

(B) report the unique number of any moisture content disclosure form that is lost;

(10) shall return any unused moisture content disclosure forms if the commercial wood seller's registration expires or is revoked;

(11) is subject to one or more of the following if the commercial wood seller fails to comply with a provision of this subsection:

(A) remedial training on the requirements of (d) – (f) of this section and this subsection;

(B) a notice of violation;

(C) until the department determines that the commercial wood seller is in compliance, removal of the seller from the list that the department maintains under (f)(3) of this section;

(D) revocation of registration;

(E) enforcement under AS 46.03.020, 46.03.760, or 46.03.790; and

(12) may request an informal or adjudicatory hearing as prescribed in 18 AAC 15.185 and 18 AAC 15.195 – 18 AAC 15.340 if the department denies registration, denies renewal of a registration, or takes an action under (11)(A) – (D) of this subsection.

(h) In this section, "commercial wood seller"

(1) means a person who sells wood for use in space heating;

(2) does not include a person whose sales of wood consist wholly of

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(A) wood products permissible under (a)(1)(B) or (b)(2) of this section; or

(B) bundles of split dry wood that are sized not more than 0.75 cubic feet a bundle; or

(C) logs or rounds intended for resale, where the resale of the wood and measurement and documentation of their moisture content will be addressed by a commercial wood seller.

(i) A commercial wood seller is not required to meet the requirements of (g) of this section for any portion of its sales that are

(1) wood products permissible under (a)(1)(B) or (b)(2) of this section;

(2) bundles of split dry wood that are sized not more than 0.75 cubic feet per bundle; or

(3) logs or rounds intended for resale, where the resale of the wood and measurement and documentation of their moisture content will be addressed by another commercial wood seller. (Eff. 2/28/2015, Register 213; am 3/2/2016, Register 217; am 11/26/2016, Register 220)

Authority: AS 46.03.020 AS 46.14.020 Sec. 30, ch. 74, SLA 1993
AS 46.14.010 AS 46.14.030

Editor's note: A copy of the list of commercially available moisture test meters that the Department of Environmental Conservation has approved under 18 AAC 50.076(g) for use by commercial wood sellers is available at the department's offices in Anchorage, Fairbanks, and Juneau, and can be obtained by contacting the Department of Environmental Conservation, Division of Air Quality, at (907) 465-5100, or can be obtained from the Internet at http://burnwise.alaska.gov/moisture_disclosure_program.htm.

The list of registered commercial wood sellers described in 18 AAC 50.076(f) is available at the department's offices in Anchorage, Fairbanks, and Juneau, and can be obtained by contacting the Department of Environmental Conservation, Division of Air Quality, at (907) 465-5100, or can be obtained from the Internet at http://burnwise.alaska.gov/moisture_disclosure_program.htm.

18 AAC 50.077. Standards for wood-fired heating devices. (a) This section applies to a person who

(1) owns or operates a wood-fired heating device in an area identified in 18 AAC 50.015(b)(3), if the wood-fired heating device

(A) is installed on or after February 28, 2015;

(B) was installed before February 28, 2015, and the wood-fired heating device

(i) is being sold, leased, or conveyed as part of an existing building or other property; and

(ii) lacked a valid EPA certification under 40 C.F.R. 60.533 or a qualifying “white tag” under EPA’s Phase 2 voluntary partnership program for hydronic heaters; or

(C) is not otherwise exempted in this section;

(2) intends to supply, sell, lease, distribute, convey, or install a wood-fired heating device for operation in an area identified in 18 AAC 50.015(b)(3).

(b) Except as provided under (f), (g), or (h) of this section, a person may not operate, install, or reinstall a wood-fired hydronic heater in an area identified in 18 AAC 50.015(b)(3), and may not supply, sell, lease, distribute, or convey a wood-fired hydronic heater for operation or installation in an area identified in 18 AAC 50.015(b)(3), unless

(1) the model

(A) has been certified under 40 C.F.R. 60.5474(a)(1) and (b)(1) (Subpart QQQQ, “Step 1” emission rates), revised as of July 1, 2017, and adopted by reference;

(B) meets the particulate matter annual average emission limit in (2) of this subsection; and

(C) has a rated size under 350,000 Btu per hour; or

(2) a laboratory with current EPA accreditation under 40 C.F.R. 60.535 has tested the model to meet an average emission level of 0.32 pounds per million Btu of heat output, a particulate matter annual average emission limit of 2.5 grams per hour, and a maximum individual test-run emission rate of 18.0 grams of fine particles per hour; the test results

(A) must be obtained using one of the following test procedures applicable to the specific device;

(i) ASTM International E 2618-13, *Standard Test Method for Measurement of Particulate Emissions and Heating Efficiency of Solid Fuel-Fired Hydronic Heating Appliances*, approved September 1, 2013, and adopted by reference, subject to conditions in 40 C.F.R. Part 60, Subpart QQQQ, revised as of July 1, 2017, and adopted by reference;

(ii) 40 C.F.R. Part 60, Appendix A-8, Method 28WHH-PTS,

revised as of July 1, 2017, and adopted by reference;

(B) must be obtained by using one of the following test procedures applicable to the specific devices:

(i) ASTM International E 2515-11, *Standard Test Method for Determination of Particulate Matter Emissions Collected by a Dilution Tunnel*, approved November 1, 2011, and adopted by reference;

(ii) 40 C.F.R. Part 60, Appendix A, Method 5G, revised as of July 1, 2017, and adopted by reference; and

(C) obtained under (A) and (B) of this paragraph must be submitted to and approved by the department as described in (e) of this section, if the wood-fired hydronic heater is not already listed under (e) of this section by the department.

(c) Except as provided under (f), (g), or (h) of this section, a person may not operate, install, or reinstall a woodstove in an area identified in 18 AAC 50.015(b)(3), and may not supply, sell, lease, distribute, or convey a woodstove for operation or installation in an area identified in 18 AAC 50.015(b)(3), unless

(1) the model

(A) has a valid certification under 40 C.F.R. 60.533 from EPA;

(B) meets the particulate matter annual average emission limit in (2) of this subsection; however, this subparagraph applies only to a woodstove that is installed on or after August 31, 2015; and

(C) has a rated size under 350,000 Btu per hour; or

(2) a laboratory with current EPA accreditation under 40 C.F.R. 60.535 has tested the model to meet a particulate matter annual average emission limit of 2.5 grams per hour; the test results must be

(A) obtained using

(i) the test procedures applicable to the specific device; those procedures are set out in 40 C.F.R. Part 60, Appendix A, Methods 28, 28 A, and 28R, revised as of July 1, 2017, and adopted by reference; or

(ii) alternative cordwood methods that have been approved by EPA;

(B) obtained using the emission concentration measurement procedures applicable to the specific device; those procedures are set out in 40 C.F.R. Part 60,

Appendix A, Methods 5G and 5H, revised as of July 1, 2017, and adopted by reference;

(C) calculated in grams per hour; and

(D) submitted to and approved by the department as described in (e) of this section, if the woodstove is not already listed under (e) of this section by the department.

(d) Except as provided under (f), (g), or (h) of this section, and if a wood-fired heating device has a rated size of 350,000 Btu or greater per hour, a person may not operate or install the wood-fired heating device in an area identified in 18 AAC 50.015(b)(3), and may not supply, sell, lease, distribute, or convey the wood-fired heating device for operation or installation in an area identified in 18 AAC 50.015(b)(3), unless a laboratory with current EPA accreditation under 40 C.F.R. 60.535 has tested the model to meet a particulate matter annual average emission limit of 2.5 grams per hour; the test results

(1) must be obtained using one of the following test procedures applicable to the specific device;

(A) ASTM International E 2618-13, *Standard Test Method for Measurement of Particulate Emissions and Heating Efficiency of Solid Fuel-Fired Hydronic Heating Appliances*, adopted by reference in (b)(2)(A)(i) of this section;

(B) 40 C.F.R. Part 60, Appendix A-8, Method 28WHH, revised as of July 1, 2017, and adopted by reference;

(C) Canadian Standards Association (CSA) Method B415.1-10, *Performance Testing of Solid-Fuel-Burning Heating Appliances*, dated March 2010, reaffirmed 2015, and adopted by reference, as referenced in 40 C.F.R. Part 60, Subpart QQQQ, revised as of July 1, 2017, and adopted by reference;

(2) must be obtained by using ASTM International E 2515-11, *Standard Test Method for Determination of Particulate Matter Emissions Collected by a Dilution Tunnel*, adopted by reference in (b)(2)(A)(i) of this section; and

(3) obtained under (1) and (2) of this subsection must be submitted to and approved by the department as described in (e) of this section, if the wood-fired heating device is not already listed under (e) of this section by the department.

(e) The department may review, without a prior submission by the manufacturer, test results under (b)(2), (c)(2), or (d) of this section. If the department determines that the model tested complies with the requirements of (b)(2), (c)(2), or (d) of this section, as applicable, the department will approve the test results and place the model on the list that the department prepares under this subsection. If a wood-fired heating device subject to this section is not already on that list, and is not a wood-fired hydronic heater allowable under (b)(1) of this section or a woodstove allowable under (c)(1) of this section, the installation or operation of the wood-

fired heating device or the supplying, sale, lease, distribution, or conveyance of the wood-fired heating device for operation or installation may not occur unless the manufacturer submits, and the department reviews and approves, proof of compliance with the requirements of (b)(1) or (c)(1) of this section, as applicable, or test results demonstrating compliance with the requirements of (b)(2), (c)(2), or (d) of this section, as applicable. The department will make a list of the wood-fired heating devices that the department has approved under this subsection or that are allowable under (b)(1) or (c)(1) of this section and will make the list available to the public.

(f) A person described in (a)(2) of this section may supply, sell, lease, distribute, convey, or install a wood-fired heating device if that person has confirmed in writing with the buyer or operator of the device that the device will be installed and used in an area other than an area identified in 18 AAC 50.015(b)(3).

(g) Subsections (b) – (d) of this section do not apply to operation of a wood-fired heating device that is located in an area that is identified in 18 AAC 50.015(b)(3), if the wood-fired heating device was installed in that building or on that property before February 28, 2015.

(h) Subsections (b) – (d) of this section do not apply to the conveyance of a wood-fired heating device under (a)(1)(B) of this section if the owner requests and receives a temporary waiver from the department or a local air quality program. The department or local air quality program may grant a temporary waiver after considering

(1) financial hardship information provided by the owner or operator;

(2) technical feasibility information provided by the owner or operator; and

(3) potential impact to locations with populations sensitive to exposure to PM-2.5; locations under this paragraph include hospitals, schools, child care facilities, health clinics, long-term care facilities, assisted living homes, and senior centers.

(i) A person who disputes a decision by the department under this section may request review under 18 AAC 15.185 or 18 AAC 15.195 – 18 AAC 15.340. (Eff. 2/28/2015, Register 213; am 11/26/2016, Register 220; am 1/12/2018, Register 225)

Authority: AS 46.03.020 AS 46.14.020 Sec. 30, ch. 74, SLA 1993
AS 46.14.010 AS 46.14.030

Editor’s note: For the convenience of consumers, the United States Environmental Protection Agency (EPA) keeps a list of wood-fired hydronic heaters with qualifying “white tags” under EPA’s Phase 2 voluntary partnership program for hydronic heaters. That list is part of EPA’s *Partners – Program Participation – List of Qualified Hydronic Heaters*, and is available on the Internet at <http://www.epa.gov/burnwise/owhhlist.html>. For additional information whether a heater appearing on that list is in compliance with 18 AAC 50.077, please contact the Department of Environmental Conservation at: Department of Environmental Conservation, Division of Air Quality, 410 Willoughby Avenue, Suite 303, P.O. Box 111800,

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Juneau, AK 99811; telephone (907) 465-5100.

For the convenience of consumers, the United States Environmental Protection Agency (EPA) keeps a list of wood heaters certified under 40 C.F.R. 60.533. That list, entitled *List of EPA Certified Wood Heaters (Heaters certified as meeting the 1988 Standards of Performance for New Residential Wood Heaters)*, is available on the Internet at <http://www.epa.gov/Compliance/resources/publications/monitoring/caa/woodstoves/certifiedwood.pdf>. For additional information whether a heater appearing on that list is in compliance with 18 AAC 50.077, please contact the Department of Environmental Conservation, Division of Air Quality, 410 Willoughby Avenue, Suite 303, P.O. Box 111800, Juneau, AK 99811; telephone (907) 465-5100.

The test methods adopted by reference in 18 AAC 50.077 may be reviewed at the department's Anchorage, Fairbanks, or Juneau office. For information on how to obtain a copy of the ASTM International documents adopted by reference in 18 AAC 50.077, contact ASTM International, Publications Department, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania, 19428-2959; telephone (877) 909-2786; fax (610) 832-9555. For information on how to obtain a copy of the Canadian Standards Association document adopted by reference in 18 AAC 50.077, contact the Canadian Standards Association (CSA), 178 Rexdale Boulevard, Etobicoke, ON, M9W 1R3, Canada; telephone (416) 747-4139; fax (416) 401-6621

The list of wood-fired heating devices maintained under 18 AAC 50.077(e) is available at the department's offices in Anchorage, Fairbanks, and Juneau, is available on the Internet at <http://burnwise.alaska.gov/>, or can be obtained by contacting the Department of Environmental Conservation, Division of Air Quality, 410 Willoughby Avenue, Suite 303, P.O. Box 111800, Juneau, AK 99811; telephone (907) 465-5100.

18 AAC 50.245. Air quality episodes and advisories for air pollutants other than PM-2.5.

(a) The department or a local air quality control program may declare an air quality episode and prescribe and publicize curtailment action if the concentration of an air pollutant in the ambient air has reached, or is likely in the immediate future to reach, any of the concentrations established in Table 6 in this subsection.

**Table 6.
Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5**

Episode Type	Air Pollutant	Concentration in micrograms per cubic meter {and in ppm where applicable}
Air alert	Sulfur dioxide	365 (24-hour average) {0.14 ppm}
	PM-10	150 (24-hour average)

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	PM-10 from wood burning (wood smoke control areas)	92 (24-hour average)
	Carbon monoxide	10,000 (8-hour average) { 8.7 ppm}
Air warning	Sulfur dioxide	800 (24-hour average) { 0.31 ppm}
	PM-10	350 (24-hour average)
	Carbon monoxide	17,000 (8-hour average) { 15 ppm}
Air emergency	Sulfur dioxide	1,600 (24-hour average) { 0.61 ppm}
	PM-10	420 (24-hour average)
	PM-10 from wood burning (wood smoke control areas)	During an air alert, a concentration measured or predicted to exceed 92 (24-hour average), and to continue to increase beyond the concentration that triggered the air alert
	Carbon monoxide	34,000 (8-hour average) { 30 ppm}

(b) The department or a local air quality control program will declare an air quality advisory if, in its judgment, air quality or atmospheric dispersion conditions exist that might threaten public health.

(c) If the department or a local air quality control program declares an air quality advisory under (b) of this section, the department or a local air quality control program will

(1) request voluntary emission curtailments from any person issued a permit under this chapter whose stationary source's emissions might impact the area subject to the advisory; and

(2) publicize actions to be taken to protect public health.

(d) Nothing in this section alters a local government's powers or obligations under a local air quality control program established under AS 46.14.400 and other local laws, as applicable. (Eff. 1/18/97, Register 141; am 10/1/2004, Register 171; am 2/28/2015, Register 213)

Authority: AS 46.03.020 AS 46.14.020 Sec. 30, ch. 74, SLA 1993

AS 46.14.010

AS 46.14.030

18 AAC 50.246. Air quality episodes and advisories for PM-2.5. (a) The department or a local air quality control program may declare an air quality episode and prescribe and publicize the actions to be taken if the concentrations of PM-2.5 in the ambient air has reached, or is likely in the immediate future to reach, any of the concentrations established in Table 6a in this subsection. The episode thresholds and actions prescribed for any area that has a local air quality plan included in the *State Air Quality Control Plan* adopted by reference in 18 AAC 50.030 must be consistent with the emergency episode provisions included in that plan.

Table 6a

Concentrations Triggering an Air Quality Episode for PM-2.5

Episode Type	Air Pollutant	Concentration in micrograms per cubic meter
Air alert	PM-2.5	35.5 (24-hour average)
Air warning	PM-2.5	55.5 (24-hour average)
Air emergency	PM-2.5	150.5 (24-hour average)

(b) The department or a local air quality control program authorized by the department under AS 46.14.400 will declare a PM-2.5 air quality advisory if, in its judgment, PM-2.5 air quality or atmospheric dispersion conditions exist that might threaten public health.

(c) If the department or a local air quality control program declares a PM-2.5 air quality advisory under (b) of this section, the department or a local air quality control program will

(1) request voluntary emission curtailments from any person issued a permit under this chapter whose stationary source's emissions might impact the area subject to the advisory; and

(2) publicize actions to be taken to protect public health.

(d) Nothing in this section alters a local government's powers or obligations under a local air quality control program established under AS 46.14.400 and other local laws, as applicable. (Eff. 2/28/2015, Register 213)

Authority: AS 46.03.020 AS 46.14.020 Sec. 30, ch. 74, SLA 1993
AS 46.14.010 AS 46.14.030

18 AAC 50.990. Definitions.

(65) "open burning"

(A) means the burning of a material that results in the products of combustion being emitted directly into the ambient air without passing through a stack, flare, vent, or other opening of an emissions unit from which an air pollutant could be emitted;

(B) does not include

- (i) a campfire;
- (ii) a barbecue;
- (iii) a ceremonial fire;
- (iv) use of a candle;
- (v) the use of a cigar, cigarette, or pipe;
- (vi) the use of celebratory fireworks;

...

(123) "wood-fired heating device"

(A) means a device designed or used for wood combustion so that usable heat is derived for the interior of a building;

(B) includes

- (i) wood-fired or pellet-fired stoves;
- (ii) woodstoves;
- (iii) fireplaces;
- (iv) wood-fired forced air furnaces;
- (v) masonry heaters;
- (vi) wood-fired or pellet-fired cooking stoves;

(vii) wood-fired hydronic heaters; and

(viii) combination fuel furnaces or boilers that burn wood;

(C) does not include a device that is primarily a part of an industrial process and incidentally provides usable heat for the interior of a building.

...

(133) “campfire” means an open fire that is

(A) less than three feet in diameter;

(B) used for cooking, personal warmth, lighting, ceremonial, or aesthetic purposes;

(C) hand built; and

(D) not associated with a debris disposal activity;

(134) “dry wood” means wood with a moisture content of 20 percent or less;

(135) “hydronic heater”

(A) means an outdoor or indoor fuel burning device, that may be equipped with a heat storage unit, and that heats building space by means of the distribution, typically through pipes, of fluid that is typically water or a mixture of water and antifreeze and that is heated in the device;

(B) does not include a forced-air furnace;

(136) “manufactured compressed wood log” means a log that has been made from 100 percent compressed sawdust, wood chips, or other organic material and that does not have additives;

(137) “masonry heater” means a heating appliance that

(A) is constructed of concrete or solid masonry that is designed to absorb and store heat from a solid fuel fire built in the firebox by routing the exhaust gases through internal heat exchange channels in which the flow path downstream of the firebox may include flow in a horizontal or downward direction before entering the chimney; and

(B) delivers heat by radiation from the masonry surface of the heater;

(138) “solid fuel-fired heating device”

(A) means a device used for wood or coal combustion so that usable heat is derived for the interior of a building;

(B) includes

- (i) wood-fired heating devices;
- (ii) coal-fired stoves;
- (iii) coal-fired forced air furnaces;
- (iv) coal-fired cooking stoves;
- (v) coal-fired hydronic heaters; and
- (vi) combination fuel furnaces or boilers that burn wood and coal;

(C) does not include a device that

(i) is primarily part of an industrial process and incidentally provides usable heat for the interior of a building; or

(ii) is a cogeneration boiler that provides both steam for electrical generation and steam for a centralized heat distribution system;

(139) “wet wood” means wood with a moisture content of more than 20 percent;

(140) “woodstove” has the meaning given in “wood heater” in 40 C.F.R. 60.531; the definition of “wood heater” in 40 C.F.R. 60.531, as revised as of July 1, 2015, is adopted by reference;

(Eff. 1/18/97, Register 141; am 6/14/98, Register 146; am 6/21/98, Register 146; am 9/4/98, Register 147; am 11/4/99, Register 152; am 1/1/2000, Register 152; am 2/2/2002, Register 161; am 5/3/2002, Register 162; am 11/15/2002, Register 164; am 8/8/2003, Register 167; am 10/1/2004, Register 171; am 12/3/2005, Register 176; am 12/30/2007, Register 184; am 7/25/2008, Register 187; am 4/1/2010, Register 193; am 12/9/2010, Register 196; am 9/17/2011, Register 199; am 9/14/2012, Register 203; am 10/6/2013, Register 208; am 11/9/2014, Register 212; am 2/28/2015, Register 213; am 4/17/2015, Register 214; am 3/2/2016, Register 217; 1/12/2018, Register 225; am 9/15/2018, Register 227)

Authority:	AS 44.46.025	AS 46.14.140	AS 46.14.250
	AS 46.03.020	AS 46.14.150	AS 46.14.255
	AS 46.03.710	AS 46.14.160	AS 46.14.280
	AS 46.14.010	AS 46.14.170	AS 46.14.285

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AS 46.14.020
AS 46.14.030
AS 46.14.120
AS 46.14.130

AS 46.14.180
AS 46.14.210
AS 46.14.230
AS 46.14.240

AS 46.14.290
AS 46.14.300
AS 46.14.560
Sec. 30, ch. 74, SLA 1993