

# ARTICLE VIII

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## SOLID FUEL BURNING DEVICE STANDARDS

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**REVISED:** September 6, 2007

**EFFECTIVE:** October 7, 2007

### SECTION 8.01 PURPOSE

This article establishes emission standards, certification standards and procedures, curtailment rules, and fuel restrictions for solid fuel burning devices in order to attain the National Ambient Air Quality Standards for fine particulate matter (PM2.5) and to further the policy of the Agency as stated in Article I, Section 1.01 of this Regulation.

### SECTION 8.02 APPLICABILITY

The provisions of this article apply to solid fuel burning devices in all areas of Spokane County.

### SECTION 8.03 DEFINITIONS

Unless a different meaning is clearly required by context, words and phrases used in this article shall have the following meaning:

- A. Adequate Source of Heat means a permanently installed furnace or heating system, connected or disconnected from its energy source, designed to heat utilizing oil, natural gas, electricity, or propane and to maintain seventy degrees Fahrenheit at a point three feet above the floor in all normally inhabited areas of a residence or commercial establishment.
- B. Certified means a solid fuel burning device has been determined by Ecology to meet emission performance standards, pursuant to RCW 70.94.457 and WAC 173-433-100.
- C. Coal stove means an enclosed, coal burning appliance capable of and intended for residential space heating, domestic water heating or indoor cooking, which has substantially all the following characteristics:
  - 1. An opening for loading coal which is located near the top or side of the appliance;
  - 2. An opening for emptying ash which is located near the bottom or the side of the appliance;
  - 3. A system which admits air primarily up and through the fuel bed;
  - 4. A grate or other similar device for shaking or disturbing the fuel bed; and
  - 5. Listing by a nationally recognized safety testing laboratory for use of coal only, except for coal ignition purposes.

- D. Cook stove means an appliance designed with the primary function of cooking food and containing an integrally built in oven, with an internal temperature indicator and oven rack, around which the fire is vented, as well as a shaker grate ash pan and an ash cleanout below the firebox. Any device with a fan or heat channels used to dissipate heat into the room shall not be considered a cook stove.
- E. Ecology means the Washington State Department of Ecology.
- F. EPA means the United States Environmental Protection Agency or the Administrator of the United States Environmental Protection Agency or his/her designated representative.
- G. Fireplace means a permanently installed masonry fireplace; or a factory-built solid fuel burning device designed to be used with an air-to-fuel ratio greater than or equal to thirty-five to one and without features to control the inlet air-to-fuel ratio other than doors or windows such as may be incorporated into the fireplace design for reasons of safety, building code requirements, or aesthetics.
- H. Furnace means a device which is designed and installed to heat an entire multiple room structure by forcing heated air through permanently installed ducts or by forcing heated water or steam through pipes which result in convective or direct radiation of heat into the rooms.
- I. Reasonable Further Progress has the same meaning as in Section 171(1) of the Federal Clean Air Act (42 USC 7501).
- J. Seasoned Wood means wood of any species that has been sufficiently dried so as to contain twenty percent or less moisture by weight.
- K. Solid Fuel Burning Device (same as solid fuel heating device) means a device that is designed to burn wood, coal, or any other nongaseous or nonliquid fuels, and includes woodstoves, coal stoves, cook stoves and fireplaces, or any similar device burning any solid fuel used for aesthetic or space-heating purposes in a private residence or commercial establishment, which has a heat input less than one million British thermal units per hour.
- L. Smoke Control Zone means the geographic area, impacted by solid fuel combustion smoke, surrounding the Spokane/Spokane Valley Metropolitan area and, after consideration of the contribution of noncertified solid fuel burning devices, population density and urbanization, and impact to the public health (RCW 70.94.477 (2)(a),(b) and (c)), is defined as follows:
- Sections 1 through 6, Township 24 N, Range 42 E; Townships 25 and 26 N, Range 42 E; Sections 1 through 24, Township 24 N, Range 43 N; Townships 25, 26 and 27 N, Range 43 E; Sections 19 through 36, Township 28 N, Range 43 E; Sections 1 through 24, Township 24 N, Range 44 E; Township 25 N, Range 44 E; Sections 19 through 36, Township 26 N, Range 44 E; Township 25 N, Range 45 E; Sections 1 through 4, 9 through 16 and 19 through 36, Township 26 N, Range 45 E; Sections 33 through 36, Township 27 N, Range 45 E; Sections 6, 7, 18, 19, 30, and 31, Township 25 N, Range 46 E; Sections 6, 7, 18, 19, 30 and 31, Township 26 N, Range 46 E; Section 31, Township 27 N, Range 46 E.
- M. Substantially Remodeled means any alteration or restoration of a building exceeding sixty percent of the appraised value of such building within a twelve-month period (RCW 70.94.455).
- N. Treated Wood means wood of any species that has been chemically impregnated, painted, or similarly modified to improve resistance to insects, fungus or weathering.
- O. Woodstove means a wood fueled appliance other than a cook stove with a closed fire chamber which maintains an air-to-fuel ratio of less than thirty-five to one during the burning of ninety percent or more of the fuel mass consumed at the minimum burn rate achievable. Any

combination of parts, typically consisting of but not limited to, doors, legs, flue pipe collars, brackets, bolts and other hardware, when manufactured for the purpose of being assembled, with or without additional owner supplied parts, into a woodstove, is considered a woodstove.

#### **SECTION 8.04 EMISSION PERFORMANCE STANDARDS**

The Agency adopts section WAC 173-433-100 "Emission Performance Standards" and Title 40, Part 60, Subpart AAA of the Code of Federal Regulations "Standards of Performance for New Residential Wood Heaters" by reference.

#### **SECTION 8.05 OPACITY STANDARDS**

- A. A person shall not cause or allow emission of a smoke plume from any solid fuel burning device to exceed an average of twenty percent opacity for six consecutive minutes in any one-hour period.
- B. Test method and procedures. EPA reference method 9 – Visual Determination of Opacity of Emissions from Stationary Sources – shall be used to determine compliance with Section 8.05.A.
- C. Enforcement. Smoke visible from a chimney, flue or exhaust duct in excess of the opacity standard shall constitute prima facie evidence of unlawful operation of an applicable solid fuel burning device. This presumption may be refuted by demonstration that the smoke was not caused by an applicable solid fuel burning device. The provisions of this requirement shall not apply during the starting of a new fire for a period not to exceed twenty minutes in any four-hour period.

#### **SECTION 8.06 PROHIBITED FUEL TYPES**

A person shall not cause or allow any of the following materials to be burned in a solid fuel burning device:

- A. Garbage;
- B. Treated wood;
- C. Plastic products;
- D. Rubber products;
- E. Animals;
- F. Asphaltic products;
- G. Waste petroleum products;
- H. Paints;
- I. Any substance, other than properly seasoned fuel wood, or coal with sulfur content less than 1.0% by weight burned in a coal stove, which normally emits dense smoke or obnoxious odors;
- J. Paper, other than an amount of non-colored paper necessary to start a fire.

#### **SECTION 8.07 CURTAILMENT**

- A. Except as provided in Section 8.08, no person shall operate a solid fuel burning device within a defined geographical area under any of the following conditions:
  - 1. Whenever Ecology has declared curtailment under an air pollution episode for the geographical area pursuant to chapter 173-435 WAC and RCW 70.94.715.
  - 2. Whenever the Agency has declared curtailment under a first stage of impaired air quality for the Smoke Control Zone or other geographical area unless the solid fuel burning device is one of the following:
    - a. A nonaffected pellet stove; or

- b. A solid fuel burning device has been determined by Ecology to meet emission performance standards, pursuant to RCW 70.94.457 and WAC 173-433-100; or
- c. A woodstove certified and labeled by EPA under “40 SFR 60 Subpart AAA - Standards of Performance for Residential Wood Heaters”; or
- d. A woodstove meeting the “Oregon Department of Environmental Quality Phase 2” emissions standards contained in Subsection (1) and (2) of Section 340-340-262-0110, and certified in accordance with “Oregon Administrative Rules, Chapter 340, Division 262 – Woodstove Certification” Dated November 1999.

In Spokane County until June 30, 2009 as allowed by RCW 70.94.473 §1(2) (Effective July 22, 2007) a first stage of impaired air quality is reached and curtailment may be declared when particulates two and one half microns and smaller in diameter (PM2.5) are measured at any location inside Spokane County at an ambient level of twenty micrograms per cubic meter of air by a method which has been determined, by Ecology or the Agency, to have a reliable correlation to the federal reference method, CFR Title 40 Part 50 Appendix L, or equivalent.

- 3. Whenever the Agency has declared curtailment under a second stage of impaired air quality for the Smoke Control Zone or other geographical area. In Spokane County until June 30, 2009 as allowed by RCW 70.94.473 §1(2) (Effective July 22, 2007) a second stage of impaired air quality is reached and curtailment may be declared when particulates two and one half microns and smaller in diameter (PM2.5) are measured at any location inside Spokane County at an ambient level of thirty micrograms per cubic meter of air by a method which has been determined by Ecology or the Agency, to have a reliable correlation to the federal reference method, CFR Title 40 Part 50 Appendix L, or equivalent.
- 4. After July 1, 1995, if the limitation in RCW 70.94.477(2) is exercised, following the procedure in Section 8.09, and the Agency has declared curtailment under a single stage of impaired air quality for the Smoke Control Zone or other geographical area. A single stage of impaired air quality is reached and curtailment may be declared when particulates two and one half microns and smaller in diameter (PM2.5) are measured at any location inside Spokane County at an ambient level of twenty five micrograms per cubic meter of air by a method which has been determined, by Ecology or the Agency, to have a reliable correlation to the federal reference method, CFR Title 40 Part 50 Appendix L, or equivalent.
- 5. After July 1, 1995, if the limitation in RCW 70.94.477(2) is exercised, following the procedure in Section 8.09, and the solid fuel burning device is not one of the following:
  - a. A fireplace
  - b. A nonaffected pellet stove; or
  - c. A solid fuel burning device has been determined by Ecology to meet emission performance standards, pursuant to RCW 70.94.457 and WAC 173-433-100; or
  - d. A woodstove certified and labeled by EPA under “40 SFR 60 Subpart AAA - Standards of Performance for Residential Wood Heaters”; or
  - e. A woodstove meeting the “Oregon Department of Environmental Quality Phase 2” emissions standards contained in Subsection (1) and (2) of Section 340-340-262-0110, and certified in accordance with “Oregon Administrative Rules, Chapter 340, Division 262 – Woodstove Certification” Dated November 1999.

- B. In consideration of declaring curtailment under a stage of impaired air quality, the Agency shall consider the anticipated beneficial effect on ambient levels of particulates two and one half microns and smaller in diameter (PM2.5), taking into account meteorological factors, the contribution of emission sources other than solid fuel burning devices, and any other factors deemed to have an impact.
- C. Any person responsible for a solid fuel burning device which is subject to curtailment and is already in operation at the time curtailment is declared under an episode or a stage of impaired air quality shall extinguish that device by withholding new solid fuel for the duration of the episode or impaired air quality. Smoke visible from a chimney, flue or exhaust duct after a time period of three hours has elapsed from the time of declaration of curtailment under an episode or a stage of impaired air quality shall constitute prima facie evidence of unlawful operation of an applicable solid fuel burning device. This presumption may be refuted by demonstration that smoke was not caused by an applicable solid fuel burning device.
- D. The Agency, Ecology, Spokane County Health District, fire departments, fire districts, Spokane County Sheriff's Department, or local police having jurisdiction in the area may enforce compliance with solid fuel burning device curtailment after a time period of three hours has elapsed from the time of declaration of curtailment under an episode or a stage of impaired air quality.

#### **SECTION 8.08 EXEMPTIONS**

- A. The provisions of Section 8.07 shall not apply to any person who possesses a valid written exemption, issued by the Agency. The Agency may issue written exemptions to any person who demonstrates any of the following to the satisfaction of the Agency:
  - 1. An economic need to burn solid fuel for residential space heating purposes by qualifying for energy assistance according to economic guidelines established by the U.S. Office of Management and Budget under the low income energy assistance program (L.I.E.A.P.).
  - 2. That his/her heating system, other than a solid fuel heating device, is inoperable for reasons other than his/her own actions.
  - 3. That there is no adequate source of heat and the structure was constructed or substantially remodeled prior to July 1, 1992.
  - 4. That there is no adequate source of heat and the structure was constructed or substantially remodeled after July 1, 1992 and is outside an urban growth area, as defined in RCW 36.70A.
- B. Written exemptions shall be valid for a period determined by the Agency, which shall not exceed one (1) year from the date of issuance. Exemptions may be renewed, provided the applicant meets the applicable requirements at the time of exemption renewal.
- C. The provisions of Section 8.07 and the requirement in Section 8.08.A. to obtain a written exemption shall not apply to any person who operates a furnace that is designed to burn wood, coal, or any other nongaseous or nonliquid fuels.

#### **SECTION 8.09 PROCEDURE TO GEOGRAPHICALLY LIMIT SOLID FUEL BURNING DEVICES**

- A. After July 1, 1995, if the EPA finds that the Spokane PM10 Nonattainment Area, as defined in CFR Title 40, Part 81, has either:
  - 1. Failed to make Reasonable Further Progress, or

2. Failed to timely attain a National Ambient Air Quality Standard for particulates ten microns and smaller in diameter (PM10), as defined in CFR title 40, Part 50.6, or
3. Violated a National Ambient Air Quality Standard for PM10 after redesignation as an attainment area,

and emissions from solid fuel burning devices are determined by the EPA, in consultation with Ecology and the Agency, to be a contributing factor to such failure or violation, then one year after such determination, the use of solid fuel burning devices not meeting the standards set forth in RCW 70.94.457, is restricted to areas outside the Smoke Control Zone.

- B. Within 30 days of the determination pursuant to Section 8.09.A., the Agency shall publish a public notice in a newspaper of general circulation, informing the public of such determination and of the date by which such restriction on the use of solid fuel burning devices becomes effective.
- C. Nothing in Section 8.09 shall apply to the use of fireplaces or to persons who have obtained an exemption pursuant to Section 8.08.A.1.

#### **SECTION 8.10 RESTRICTIONS ON INSTALLATION OF SOLID FUEL BURNING DEVICES**

- A. After July 1, 1992, no person shall install a solid fuel burning device that is not a certified device in any new or existing building or structure unless the device is a cook stove, a fireplace, or a device which has been rendered permanently inoperable.
- B. After July 1, 1992, no person shall sell, offer for sale, advertise for sale, or otherwise transfer a solid fuel burning device that is not a certified device to another person unless the device is a cook stove, a fireplace, or a device which has been rendered permanently inoperable.
- C. After January 1, 1997, no person shall sell, offer for sale, advertise for sale, or otherwise transfer a fireplace to another person, except masonry fireplaces, unless such fireplace meets the 1990 United States environmental protection agency standards for wood stoves or equivalent standard that may be established by the state building code council by rule (RCW 70.94.457(1)(b)).
- D. After January 1, 1997, no person shall build, sell, offer for sale, advertise for sale, or otherwise transfer a masonry fireplace, unless such fireplace meets Washington State building code design standards as established by the state building code council by rule (RCW 70.94.457(1)(c)).

#### **SECTION 8.11 REGULATORY ACTIONS AND PENALTIES**

A person in violation of this article may be subject to the provisions of Article II, Section 2.11, Penalties.