Chapter 173-434 WAC
SOLID WASTE INCINERATOR FACILITIES

WAC

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DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

173-434-050	New source review (NSR). [Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-050, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapters 70.94 and 43.21A RCW. 89-02-055 (Order 88-39), § 173-434-050, filed 1/3/89. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-050, filed 3/16/87.] Repealed by 04-01-159 (Order 02-05), filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331 and 70.94.510.
173-434-070	Prevention of significant deterioration (PSD). [Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-070, filed 9/17/90, effective 10/18/90.] Repealed by 04-01-159 (Order 02-05), filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331 and 70.94.510.
173-434-100	Requirement for BACT. [Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-100, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-100, filed 3/16/87.] Repealed by 04-01-159 (Order 02-05), filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331 and 70.94.510.
173-434-120	Emission standards for hazardous air pollutants. [Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-120, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-120, filed 3/16/87.] Repealed by 04-01-159 (Order 02-05), filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331 and 70.94.510.

WAC 173-434-010 Purpose. This chapter, promulgated under chapter 70.94 RCW, establishes emissions standards, design requirements, and performance standards for solid waste incinerator facilities.

[Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-010, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-010, filed 3/16/87.]

WAC 173-434-020 Applicability and compliance. (1) The provisions of this chapter shall apply statewide to all incinerator facilities that:

(a) Are constructed after January 1, 1985, which are designed to burn twelve or more tons per day of solid waste; or

(b) Were constructed prior to January 1, 1985, but begin to burn twelve or more tons per day of solid waste after January 1, 1985.

(2) This chapter subjects solid waste incinerator facilities to either a primary compliance scheme or an alternate compliance scheme. The requirements for the primary compliance scheme are contained in WAC 173-434-090, 173-434-130, 173-434-160, 173-434-170, 173-434-190, 173-434-200, and 173-434-210. The requirements for the alternate compliance scheme are contained in WAC 173-434-110. The alternate compliance scheme applies to solid waste incinerator facilities that meet the criteria specified in WAC 173-434-110 and to solid waste incinerator facilities that opt in to the alternate compliance scheme pursuant to WAC 173-434-110 (3)(b). The primary compliance scheme applies to all other solid waste incinerator facilities.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-020, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-020, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-020, filed 3/16/87.]

WAC 173-434-030 Definitions. The definitions of terms contained in chapter 173-400 WAC are incorporated by reference. Unless a different meaning is clearly required by context, the following words and phrases as used in this chapter, shall have the following meanings.

(1) "Incinerator facility" means all of the emissions unit(s), including quantifiable fugitive emissions, which are located in one or more contiguous or adjacent properties, and are under the control of the same person(s), whose activities are principal or ancillary to the incineration of solid waste. Ancillary activities include, but are not limited to, solid waste receiving, segregating and processing, solid waste derived fuel receiving and handling, fuel storage and mixing, heat recovery equipment, steam generating equipment, cooling towers, emissions control equipment, ash handling, ash storage, and combustion.

(2) "Residence time" means the minimum amount of time that a parcel of gas is subject to a given temperature.

(3) "Solid waste" means all putrescible and nonputrescible solid and semisolid wastes, including but not limited to garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, abandoned vehicles or parts thereof, discarded commodities, septage from septic tanks, dangerous waste, refuse derived fuel, solid waste derived fuel, problem wastes, and all materials which are not primary products of public, private, industrial, commercial, mining, and agricultural operations. This definition includes, but is not limited to, all materials that fit the definitions of municipal solid waste in 40 C.F.R. 60, subparts Cb, Ea, Eb, AAAA, or BBBB, as well as all materials that fit the definitions of commercial and industrial solid waste in 40 C.F.R. 60, subparts CCCC or DDDD, in effect on July 1, 2003. Notwithstanding the above, solid waste does not include:

(a) Creosote treated wood at facilities with an order of approval or Prevention of Significant Deterioration (PSD)

permit issued on or after December 1, 2003, for burning such wood, provided that such wood has not been in or repeatedly splashed by marine or brackish water;

(b) At a Portland cement plant kiln;

(i) Tires; and

(ii) Waste oil that is nonhazardous as defined by WAC 173-303-515, Standards for the management of used oil;

(c) Wood waste; or

(d) Sludge from waste water treatment plants.

(4) "Transmissometer" means a device that measures opacity and conforms to EPA Performance Specification Number 1 in Title 40 Code of Federal Regulations, Part 60, Appendix B in effect on July 1, 2003.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-030, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-030, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-030, filed 3/16/87.]

WAC 173-434-090 Operation and maintenance plan. As part of a condition of approval of the notice of construction, the owner or operator of the incinerator shall develop a plan for the operation and maintenance of all equipment and procedures that can cause or control air pollution. This plan must be approved by ecology or the authority prior to initial startup or testing. Every twenty-four months thereafter, the owner or operator must obtain approval of a new or updated plan to continue operation. The plan may include operating parameters, maintenance procedures and operation personnel training requirements and procedures to assure that the source will comply with all applicable rules, resolutions, regulations, safety practices, and ordinances.

[Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-090, filed 9/17/90, effective 10/18/90.]

WAC 173-434-110 Standards of performance. (1) Notwithstanding WAC 173-400-115, the following sections of 40 C.F.R. part 60, subpart Eb, in effect on July 1, 2003, are hereby incorporated by reference with the exceptions in subsection 110(2):

(a) 40 C.F.R. part 60, subpart Eb, subsections 60.52b (a)(3), (a)(5), (b)(2), (c)(1), and (c)(2);

(b) All the rest of 40 C.F.R. part 60, subpart Eb.

(2) Exceptions.

(a) The 250 tons per day figures throughout 40 C.F.R. part 60, subpart Eb shall be 12 tons per day;

(b) The terms "municipal solid waste," "municipal type solid waste," and "MSW" in subpart Eb shall include all materials that fit the definition of solid waste in this chapter;

(c) 40 C.F.R. part 60, subpart Eb, subsection 60.50b(j) shall not be incorporated by reference with respect to facilities constructed, reconstructed or modified after December 1, 2003;

(d) The November 20, 1997, dates in subsection 60.52b(c) are changed to November 20, 2005.

(3) Except for WAC 173-434-130 (4)(c), the following sections, WAC 173-434-090, 173-434-130, 173-434-160, 173-434-170, 173-434-190 and 173-434-200 shall not apply to:

(a) An incinerator facility regulated under this section; and

(b) An incinerator facility that elects to become subject to this section in an order of approval or other regulatory order from the permitting agency.

(4) The effective date of this section shall be May 1, 2004.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-110, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-110, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-110, filed 3/16/87.]

WAC 173-434-130 Emission standards. In addition to the general applicability of chapters 173-400 and 173-490 WAC to all emission sources; no incinerator facility shall cause or permit air contaminant emissions in excess of the limits listed below. Specific emission standards listed in this chapter will take precedence over the general emission standards of chapter 173-400 WAC.

(1) Particulate.

(a) For incinerator facilities that are capable of burning two hundred fifty or more tons of solid waste per day, emissions from each stack shall not exceed 0.046 grams of particulate per dry cubic meter at standards conditions (0.020 grains/dscf) corrected to seven percent oxygen for an hourly average.

(b) For incinerator facilities that have a maximum capability of burning less than two hundred fifty tons of solid waste per day, emissions from each stack shall not exceed 0.069 grams of particulate per dry cubic meter at standards conditions (0.030 grains/dscf) corrected to seven percent oxygen for an hourly average.

(2) Hydrogen chloride. The hydrogen chloride emissions from each stack shall not exceed fifty ppm on a volumetric dry basis corrected to seven percent oxygen for an hourly average, except if the owner or operator demonstrates that uncontrolled emissions of hydrogen chloride are reduced by at least eighty percent and a procedure acceptable to ecology or the authority for monitoring is developed.

(3) Sulfur dioxide. The sulfur dioxide emissions from each stack shall not exceed fifty ppm on a volumetric dry basis corrected to seven percent oxygen for an hourly average, except if the owner or operator demonstrates that the uncontrolled emissions of sulfur dioxide are reduced by at least eighty percent and a procedure acceptable to ecology or the authority for monitoring is developed.

(4) Opacity.

(a) The opacity as measured visually from any incinerator stack shall not exceed an average of five percent opacity for more than six consecutive minutes in any sixty minute period.

(b) The opacity as measured by a transmissometer shall not exceed an average of ten percent opacity for more than six consecutive minutes in any sixty minute period.

(c) The opacity as measured visually shall not exceed an average of zero percent from any emissions unit except incinerator stacks for more than six consecutive minutes in any sixty minute period.

(5) Fugitive emissions. Each operator or owner shall take reasonable precautions to prevent fugitive emissions which includes the paving of all normally traveled roadways within

the plant boundary and enclosing or hooding material transfer points.

(6) Source testing. To demonstrate compliance with this chapter, refer to WAC 173-400-105.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-130, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-130, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-130, filed 3/16/87.]

WAC 173-434-160 Design and operation. (1) Combustion.

(a) Combustion zone temperature. Whenever solid waste is being burned, the temperature of the final combustion zone shall not be below 982°C (1800°F) for a fifteen minute average nor below 871°C (1600°F) for any reading.

(b) Combustion zone residence time. The minimum combustion chamber temperature must be maintained for at least one second (1.0 second) in a zone after the last over fire air has entered the combustion chamber. If over fire air is not used, the combustion chamber shall maintain the minimum combustion temperature or greater for at least one second with all combustion gases. Procedures for determining the residence time shall be a part of the new source review.

(c) Excess air. The combustion gases leaving the final combustion zone must contain at least three percent oxygen measured on a wet basis.

(d) Combustion air distribution and control. The air distribution shall be fully controllable where pressurized air is introduced and the air flow shall be monitored and recorded.

(2) Combustion air. To minimize odor, fugitive emissions and to maintain a negative pressure in the tipping area, the combustion air shall be withdrawn from the tipping area, or shall utilize an equivalent means of odor and fugitive emission control acceptable to ecology or the authority.

(3) Particulate control device temperature. The inlet temperature of the primary particulate control device shall not exceed 177°C (350°F).

(4) Operation. At all times, the owner or operator shall, to the extent practicable, maintain and operate any incinerator facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practice. This may mean that if the emissions limits are being exceeded, no more waste should be fed into the incinerator until the problem is corrected. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to ecology or the authority which may include, but is not limited to, monitoring and recording results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-160, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-160, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-160, filed 3/16/87.]

WAC 173-434-170 Monitoring and reporting. The owners or operators of each incinerator facility shall conduct routine monitoring of emissions in accordance with a program that has been approved by ecology or the authority. The program must contain quality control and quality assurance procedures.

(1) Monitoring.

(a) The owners or operators shall install, operate, and maintain continuous monitors and recorders for the following:

(i) Opacity;

(ii) Combustion zone temperature;

(iii) Particulate control device temperature;

(iv) Hydrogen chloride and/or sulfur dioxide;

(v) Oxygen;

(vi) Carbon monoxide;

(vii) Combustion air distribution.

(b) The monitors for sulfur dioxide, carbon monoxide, and oxygen shall comply with EPA performance specifications and quality assurance and control criteria in Title 40, Code of Federal Regulations, Part 60, Appendix B and Appendix F respectively, in effect on July 1, 2003.

(c) The monitor for opacity shall comply with EPA performance specifications and quality assurance and control criteria in Title 40, Code of Federal Regulations, Part 60, Appendix B in effect on July 1, 2003, and EPA-340/1-86-010, Recommended Quality Assurance Procedure for Opacity Continuous Emission Monitoring Systems.

(2) Reporting. Results of the monitoring shall be reported within fifteen days of the end of each calendar month and shall include but may not be limited to data such as:

(a) The average daily maximum and the daily maximum concentration of each monitored pollutant and the daily amount of solid waste burned.

(b) The date, time, and magnitude of any periods during which the standards were exceeded, and what corrective action was or will be taken.

(c) Any period(s) of monitor down time.

(3) Testing. The owners or operators shall conduct emission tests for particulate, sulfur dioxide and hydrogen chloride on a regular basis. These tests may be used to determine acceptable operating parameters. Testing shall be at least annually for incinerator facilities capable of burning two hundred fifty tons or more of solid waste per day and biennially for other facilities.

(4) Other data. Each owner or operator shall furnish upon request by ecology or the authority, other data required to evaluate the incinerator's emissions or emissions control program.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-170, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-170, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-170, filed 3/16/87.]

WAC 173-434-190 Changes in operation. (1) If a startup, shutdown, breakdown, or upset condition occurs which could result in an emissions violation or a violation of an ambient air quality standard, the owner or operator of the source shall take the following actions as applicable:

(a) For a planned condition, such as a startup or shutdown, the condition shall be reported to ecology or the authority not less than twenty-four hours in advance of its occurrence. For incinerator facilities that normally operate

for less than twenty-four hours per day, this provision may be waived provided that daily startup and shutdown procedures are developed that are acceptable to ecology or the authority.

(b) For unplanned conditions, such as a breakdown or upset, the condition shall be reported to ecology or the authority as soon as possible, but no later than the end of the next business day.

(2) If, upon reviewing the available information, ecology or the authority determines that continued operation of any emissions unit is likely to cause a significant risk to the public, it may order an immediate shutdown of the emissions unit.

(3) Upon request ecology or the authority, the owner or operator of the source shall submit a full written report including known causes of any infraction, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence.

(4) Compliance with the requirement of WAC 173-434-100 does not relieve the owner or operator of the source from the responsibility to maintain continuous compliance with all the requirements of chapter 173-434 WAC nor from the resulting liabilities for failure to comply.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-190, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-190, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-190, filed 3/16/87.]

WAC 173-434-200 Emission inventory. The owner or operator of any solid waste incinerator shall submit an inventory of emissions that complies with WAC 173-400-105. The inventory shall include but may not be limited to stack and fugitive emissions of particulate matter, PM-10, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, hydrogen chloride, and other contaminants as requested by ecology or the authority or as required by federal emissions reporting requirements.

[Statutory Authority: RCW 70.94.331 and 70.94.510. 04-01-159 (Order 02-05), § 173-434-200, filed 12/22/03, effective 1/22/04. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-200, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapters 70.94 and 43.21A RCW. 89-02-055 (Order 88-39), § 173-434-200, filed 1/3/89. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-200, filed 3/16/87.]

WAC 173-434-210 Special studies. Ecology or the authority may require such additional special studies relevant to process emissions and establish completion dates as it determines necessary. These special studies may include the requirement to conduct studies of dioxin emissions and control measures.

[Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-434-210, filed 9/17/90, effective 10/18/90. Statutory Authority: Chapter 70.94 RCW. 87-07-041 (Order 86-38), § 173-434-210, filed 3/16/87.]