

**Washington State Implementation Plan  
Department of Ecology**

**173-400-010 POLICY AND PURPOSE**

(1) It is the policy of the Department of Ecology (Ecology) under the authority vested in it by chapter 43.21A RCW to provide for the systematic control of air pollution from air contaminant sources and for the proper development of the state's natural resources.

(2) It is the purpose of this chapter to establish technically feasible and reasonably attainable standards and to establish rules generally applicable to the control and/or prevention of the emission of air contaminants.

*State adopted: 3/22/91; EPA effective: 9/10/93*

**173-400-020 Applicability.**

(1) The provisions of this chapter shall apply state-wide.

(2) An authority may enforce this chapter and may also adopt standards or requirements. These standards or requirements may not be less stringent than the current state air quality rules and may be more stringent than the current regulations. Unless properly delegated by ecology, authorities do not have jurisdiction over the following sources:

(a) Specific source categories over which the state, by separate regulation, has assumed or hereafter does assume jurisdiction.

(b) Automobiles, trucks, aircraft.

(c) Those sources under the jurisdiction of the energy facility site evaluation council.

*State adopted: 3/22/91; EPA effective: 9/10/93*

**173-400-030 Definitions.**

Except as provided elsewhere in this chapter, the following definitions apply throughout the chapter:

(1) "Actual emissions" means the actual rate of emissions of a pollutant from an emission unit, as determined in accordance with (a) through (c) of this subsection.

(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. Ecology

or an authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the emissions unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

**(b)** Ecology or an authority may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the emissions unit.

**(c)** For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the emissions unit on that date.

**(2)** "Adverse impact on visibility" means visibility impairment which interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the Federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency, and time of visibility impairment, and how these factors correlate with (a) times of visitor use of the Federal Class I area, and (b) the frequency and timing of natural conditions that reduce visibility. This term does not include effects on integral vistas.

**(3)** "Air contaminant" means dust, fumes, mist, smoke, other particulate matter, vapor, gas, odorous substance, or any combination thereof. "Air pollutant" means the same as "air contaminant."

**(4)** "Air pollution" means the presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities, and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property. For the purposes of this chapter, air pollution shall not include air contaminants emitted in compliance with chapter 17.21 RCW, the Washington Pesticide Application Act, which regulates the application and control of the use of various pesticides.

**(5)** "Allowable emissions" means the emission rate of a stationary source calculated using the maximum rated capacity of the stationary source (unless the stationary source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

**(a)** The applicable standards as set forth in 40 CFR Part 60 or 61;

**(b)** Any applicable state implementation plan emissions limitation including those with a future compliance date; or

**(c)** The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

- (6) "Ambient air" means the surrounding outside air.
- (7) "Ambient air quality standard" means an established concentration, exposure time, and frequency of occurrence of air contaminant(s) in the ambient air which shall not be exceeded.
- (8) "Authority" means any air pollution control agency whose jurisdictional boundaries are coextensive with the boundaries of one or more counties.
- (9) "Best available control technology (BACT)" means an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70.94 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of the "best available control technology" result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard under 40 CFR Part 60 and Part 61, as they exist on May 7, 1993, or their later enactments as adopted by reference by the director by rule. Emissions from any source utilizing clean fuels, or any other means, to comply with this paragraph shall not be allowed to increase above levels that would have been required under the definition of BACT in the Federal Clean Air Act as it existed prior to enactment of the Clean Air Act Amendments of 1990.
- (10) "Best available retrofit technology (BART)" means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing stationary facility. The emission limitation must be established, on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.
- (11) "Bubble" means a set of emission limits which allows an increase in emissions from a given emissions unit(s) in exchange for a decrease in emissions from another emissions unit(s), pursuant to RCW 70.94.155 and WAC 173-400-120.
- (12) "Capacity factor" means the ratio of the average load on equipment or a machine for the period of time considered, to the manufacturer's capacity rating of the machine or equipment.
- (13) "Class I area" means any area designated pursuant to §§ 162 or 164 of the Federal Clean Air Act as a Class I area. The following areas are the Class I areas in Washington state:

Alpine Lakes Wilderness;  
Glacier Peak Wilderness;  
Goat Rocks Wilderness;  
Mount Adams Wilderness;  
Mount Rainier National Park;  
North Cascades National Park;  
Olympic National Park;  
Pasayten Wilderness;  
Spokane Indian Reservation.

**(14)** "Combustion and incineration sources" means units using combustion for waste disposal, steam production, chemical recovery or other process requirements; but excludes open burning.

**(15)** "Commenced construction" means that the owner or operator has all the necessary preconstruction approvals or permits and either has:

**(a)** Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

**(b)** Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

**(16)** "Concealment" means any action taken to reduce the observed or measured concentrations of a pollutant in a gaseous effluent while, in fact, not reducing the total amount of pollutant discharged.

**(17)** "Director" means director of the Washington state department of ecology or duly authorized representative.

**(18)** "Dispersion technique" means a method which attempts to affect the concentration of a pollutant in the ambient air other than by the use of pollution abatement equipment or integral process pollution controls.

**(19)** "Ecology" means the Washington state department of ecology.

**(20)** "Emission" means a release of air contaminants into the ambient air.

**(21)** "Emission reduction credit (ERC)" means a credit granted pursuant to WAC 173-400-131. This is a voluntary reduction in emissions.

**(22)** "Emission standard" and "emission limitation" means a requirement established under the FCAA

or chapter 70.94 RCW which limits the quantity, rate, or concentration of emissions of air contaminants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction and any design, equipment work practice, or operational standard promulgated under the FCAA or chapter 70.94 RCW.

**(23)** "Emissions unit" means any part of a stationary source or source which emits or would have the potential to emit any pollutant subject to regulation under the FCAA, chapter 70.94 or 70.98 RCW.

**(24)** "Excess emissions" means emissions of an air pollutant in excess of any applicable emission standard.

**(25)** "Excess stack height" means that portion of a stack which exceeds the greater of sixty-five meters or the calculated stack height described in WAC 173-400-200(2).

**(26)** "Existing stationary facility" means a stationary source of air pollutants which has the potential to emit two hundred fifty tons per year or more of any air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable, must be counted. For purposes of determining whether a stationary source is an existing stationary facility the term "building, structure, facility, or installation" means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same major group (i.e., which have the same two digit code) as described in the *Standard Industrial Classification Manual, 1972*, as amended by the 1977 Supplement.

**(27)** "Federal Clean Air Act (FCAA)" means the Federal Clean Air Act, also known as Public Law 88-206, 77 Stat. 392, December 17, 1963, 42 U.S.C. 7401 et seq., as last amended by the Clean Air Act Amendments of 1990, P.L. 101-549, November 15, 1990.

**(28)** "Federal land manager" means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

**(29)** "Fossil fuel-fired steam generator" means a device, furnace, or boiler used in the process of burning fossil fuel for the primary purpose of producing steam by heat transfer.

**(30)** "Fugitive dust" means a particulate emission made airborne by forces of wind, man's activity, or both. Unpaved roads, construction sites, and tilled land are examples of areas that originate fugitive dust. Fugitive dust is a type of fugitive emission.

**(31)** "Fugitive emissions" means emissions which do not pass and which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(32) "General process unit" means an emissions unit using a procedure or a combination of procedures for the purpose of causing a change in material by either chemical or physical means, excluding combustion.

(33) "Good engineering practice (GEP)" refers to a calculated stack height based on the equation specified in WAC 173-400-200 (2)(a)(ii).

(34) "Incinerator" means a furnace used primarily for the thermal destruction of waste.

(35) "In operation" means engaged in activity related to the primary design function of the source.

(36) "Integral vista" means a view perceived from within a mandatory Class I federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I federal area.

(37) "Lowest achievable emission rate (LAER)" means for any source that rate of emissions which reflects the more stringent of:

(a) The most stringent emission limitation which is contained in the implementation plan of any state for such class or category of source, unless the owner or operator of the proposed new or modified source demonstrates that such limitations are not achievable; or

(b) The most stringent emission limitation which is achieved in practice by such class or category of source.

In no event shall the application of this term permit a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source performance standards.

(38) "Mandatory Class I federal area" means any area defined in Section 162(a) of the FCAA. The mandatory Class I federal areas in Washington state are as follows:

Alpine Lakes Wilderness;  
Glacier Peak Wilderness;  
Goat Rocks Wilderness;  
Mount Adams Wilderness;  
Mount Rainier National Park;  
North Cascades National Park;  
Olympic National Park;  
Pasayten Wilderness;

(39) "Major modification" means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject

to regulation under the FCAA. Any net emissions increase that is considered significant for volatile organic compounds or nitrogen oxides shall be considered significant for ozone. A physical change or change in the method of operation shall not include:

- (a) Routine maintenance, repair, and replacement;
- (b) Use of an alternative fuel or raw material by reason of an order under Sections 2(a) and (b) of the Energy Supply and Environmental Supply Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
- (c) Use of an alternative fuel by reason of an order or rule under section 125 of the FCAA, 42 U.S.C. 7425;
- (d) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
- (e) Use of an alternative fuel or raw material by a stationary source which:
  - (i) The stationary source was capable of accommodating before December 21, 1976, unless such change would be prohibited under any federally enforceable permit condition which was established after December 12, 1976, in a prevention of significant deterioration permit or notice of construction approval; or
  - (ii) The stationary source is approved to use under any federally-enforceable notice of construction approval or a PSD permit issued by the environmental protection agency;
- (f) An increase in the hours of operation or in the production rate, unless such change is prohibited under any federally enforceable permit condition which was established after December 21, 1976, in a prevention of significant deterioration permit or a notice of construction approval;
- (g) Any change in ownership at a stationary source.

**(40)** "Major stationary source" means:

- (a) Any stationary source which:
  - (i) Emits or has the potential to emit one hundred tons per year or more of any air contaminant regulated by the state or Federal Clean Air Acts; or
  - (ii) Is located in a "marginal" or "moderate" ozone nonattainment area and which emits

or has the potential to emit one hundred tons per year or more of volatile organic compounds or oxides of nitrogen.

**(b)** Any stationary source (or group of stationary sources) which:

**(i)** Is located in a "serious" carbon monoxide nonattainment area where stationary sources contribute significantly to carbon monoxide levels and which emits or has the potential to emit fifty tons per year or more of carbon monoxide; or

**(ii)** Is located in a "serious" particulate matter (PM<sub>10</sub>) nonattainment area and which emits or has the potential to emit seventy tons per year or more of PM<sub>10</sub> emissions.

**(c)** Any physical change that would occur at a stationary source not qualifying under (a) or (b) of this subsection as a major stationary source, if the change would constitute a major stationary source by itself;

**(d)** A major stationary source that is major for VOCs or NO<sub>x</sub> shall be considered major for ozone;

**(e)** The fugitive emissions of a stationary source shall not be included in determining whether it is a major stationary source, unless the stationary source belongs to one of the following categories of stationary sources or the source is a major stationary source due to (b) of this subsection:

**(i)** Coal cleaning plants (with thermal dryers);

**(ii)** Kraft pulp mills;

**(iii)** Portland cements plants;

**(iv)** Primary zinc smelters;

**(v)** Iron and steel mills;

**(vi)** Primary aluminum ore reduction plants;

**(vii)** Primary copper smelters;

**(viii)** Municipal incinerators capable of charging more than two hundred fifty tons of refuse per day;

- (ix) Hydrofluoric, sulfuric, or nitric acid plants;
- (x) Petroleum refineries;
- (xi) Lime plants;
- (xii) Phosphate rock processing plants;
- (xiii) Coke oven batteries;
- (xiv) Sulfur recovery plants;
- (xv) Carbon black plants (furnace process);
- (xvi) Primary lead smelters;
- (xvii) Fuel conversion plants;
- (xviii) Sintering plants;
- (xix) Secondary metal production plants;
- (xx) Chemical process plants;
- (xxi) Fossil-fuel boilers (or combination thereof) totaling more than two hundred fifty million British thermal units per hour heat input;
- (xxii) Petroleum storage and transfer units with a total storage capacity exceeding three hundred thousand barrels;
- (xxiii) Taconite ore processing plants;
- (xxiv) Glass fiber processing plants;
- (xxv) Charcoal production plants;
- (xxvi) Fossil fuel-fired steam electric plants of more than two hundred fifty million British thermal units per hour heat input; and
- (xxvii) Any other stationary source category which, as of August 7, 1980, was being regulated under sections 111 or 112 of the Federal Clean Air Act.

(f) For purposes of determining whether a stationary source is a major stationary source, the term "building, structure, facility, or installation" means all the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same major group (i.e., which have the same two digit code) as described in the *Standard Industrial Classification Manual, 1972*, as amended by the 1977 Supplement.

(41) "Masking" means the mixing of a chemically nonreactive control agent with a malodorous gaseous effluent to change the perceived odor.

(42) "Materials handling" means the handling, transporting, loading, unloading, storage, and transfer of materials with no significant chemical or physical alteration.

(43) "Modification" means any physical change in, or change in the method of operation of, a stationary source that increases the amount of any air contaminant emitted by such source or that results in the emissions of any air contaminant not previously emitted. The term modification shall be construed consistent with the definitions of modification in Section 7411, Title 42, United States Code, and with rules implementing that section.

(44) "National Emission Standards for Hazardous Air Pollutants (NESHAPS)" means the federal regulations set forth in 40 CFR Part 61.

(45) "Natural conditions" means naturally occurring phenomena that reduce visibility as measured in terms of visual range, contrast, or coloration.

(46) "Net emissions increase" means:

(a) The amount by which the sum of the following exceeds zero:

(i) Any increase in actual emissions from a particular change or change in method of operation at a source; and

(ii) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

(b) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between the date ten years before construction on the particular change commences and the date that the increase from the particular change occurs.

(c) An increase or decrease in actual emissions is creditable only if:

(i) It occurred no more than one year prior to the date of submittal of a complete notice of construction application for the particular change, or it has been documented by an emission reduction credit, in which case the credit shall expire ten years after the date of original issue of the ERC. Any emissions increases occurring between the date of issuance of the ERC and the date when a particular change becomes operational shall be counted against the ERC.

(ii) Ecology or the authority has not relied on it in issuing any permit or order of approval for the source under regulations approved pursuant to 40 CFR 51 Subpart I or the EPA has not relied on it in issuing a PSD permit pursuant to 40 CFR 52.21, which order or permit is in effect when the increase in actual emissions from the particular change occurs.

(d) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(e) A decrease in actual emissions is creditable only to the extent that:

(i) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(ii) It is federally enforceable at and after the time that actual construction on the particular change begins;

(iii) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and

(iv) Ecology or the authority has not relied on it in issuing any permit or order of approval under regulations approved pursuant to 40 CFR 51 Subpart I, the EPA has not relied on it in issuing a PSD permit pursuant to 40 CFR 52.21, or ecology or the authority has not relied on it in demonstrating attainment or reasonable further progress.

(f) An increase that results from a physical change at a source occurs when the emission unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed one hundred eighty days.

(47) "New source" means:

(a) The construction or modification of a stationary source that increases the amount of any air contaminant emitted by such source or that results in the emission of any air contaminant not

previously emitted; and

**(b)** Any other project that constitutes a new source under the Federal Clean Air Act.

**(48)** "New source performance standards (NSPS)" means the federal regulations set forth in 40 CFR Part 60.

**(49)** "Nonattainment area" means a clearly delineated geographic area which has been designated by EPA promulgation as exceeding a national ambient air quality standard or standards for one or more of the criteria pollutants.

**(50)** "Notice of construction application" means a written application to permit construction of a new source, modification of an existing stationary source or replacement or substantial alteration of control technology at an existing stationary source.

**(51)** "Opacity" means the degree to which an object seen through a plume is obscured, stated as a percentage.

**(52)** "Open burning" means the combustion of material in an open fire or in an outdoor container, without providing for the control of combustion or the control of the emissions from the combustion. Wood waste disposal in wigwam burners is not considered open burning.

**(53)** "Order" means any order issued by ecology or a local air authority pursuant to chapter 70.94 RCW, including, but not limited to RCW 70.94.332, 70.94.152, 70.94.153, and 70.94.141(3), and includes, where used in the generic sense, the terms order, corrective action order, order of approval, and regulatory order.

**(54)** "Order of approval" or "approval order" means a regulatory order issued by ecology or the authority to approve the notice of construction application for a proposed new source or modification, or the replacement or substantial alteration of control technology at an existing stationary source.

**(55)** "Particulate matter" or "particulates" means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.

**(56)** "Particulate matter emissions" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method specified in 40 CFR Part 60 or by a test method specified in the Washington state implementation plan.

**(57)** "Parts per million (ppm)" means parts of a contaminant per million parts of gas, by volume, exclusive of water or particulates.

**(58)** "Person" means an individual, firm, public or private corporation, association, partnership, political subdivision, municipality, or government agency.

**(59)** "PM-10" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on 40 CFR Part 50 Appendix J and designated in accordance with 40 CFR Part 53 or by an equivalent method designated in accordance with 40 CFR Part 53.

**(60)** "PM-10 emissions" means finely divided solid or liquid material, including condensible particulate matter, with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternate method, specified in Appendix M of 40 CFR Part 51 or by a test method specified in the Washington state implementation plan.

**(61)** "Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

**(62)** "Prevention of significant deterioration (PSD)" means the program set forth in WAC 173-400-141.

**(63)** "Projected width" means that dimension of a structure determined from the frontal area of the structure, projected onto a plane perpendicular to a line between the center of the stack and the center of the building.

**(64)** "Reasonably attributable" means attributable by visual observation or any other technique the state deems appropriate.

**(65)** "Reasonably available control technology (RACT)" means the lowest emission limit that a particular source or source category is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. RACT is determined on a case-by-case basis for an individual source or source category taking into account the impact of the source upon air quality, the availability of additional controls, the emission reduction to be achieved by additional controls, the impact of additional controls on air quality, and the capital and operating costs of the additional controls. RACT requirements for any source or source category shall be adopted only after notice and opportunity for comment are afforded.

**(66)** "Regulatory order" means an order issued by ecology or an authority to an air contaminant source

which applies to that source, any applicable provision of chapter 70.94 RCW, or the rules adopted thereunder, or, for sources regulated by a local air authority, the regulations of that authority.

**(67)** "Significant" means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emission equal to or greater than any one of the following rates:

Pollutant	Tons/Year
Carbon monoxide	100
Nitrogen oxides	40
Sulfur dioxide	40
Particulate matter (PM)	25
Fine particulate matter (PM <sub>10</sub> )	15
Volatile organic compounds (VOC)	40
Lead	0.6
Fluorides	3
Sulfuric acid mist	7
Hydrogen sulfide (H <sub>2</sub> S)	10
Total reduced sulfur (including H <sub>2</sub> S)	10
Municipal waste combustor organics. (measured as total tetra-through octa- chlorinated dibenzo-p-dioxins and dibenzofurans	0.0000035
Municipal waste combustor metals (measured as PM)	15
Municipal waste combustor acid gases (measured as SO <sub>2</sub> and hydrogen chloride)	40

**(68)** "Significant visibility impairment" means visibility impairment which interferes with the management, protection, preservation, or enjoyment of visitor visual experience of the Class I area. The determination must be made on a case-by-case basis, taking into account the geographic extent, intensity, duration, frequency, and time of the visibility impairment, and how these factors correlate with the time of visitor use of the Class I area and frequency and timing of natural conditions that reduce visibility.

**(69)** "Source" means all of the emissions unit(s) including quantifiable fugitive emissions, that are located on one or more contiguous or adjacent properties, and are under the control of the same person or persons under common control, whose activities are ancillary to the production of a single product or functionally related groups of products. Activities shall be considered ancillary to the production of a single product or functionally related group of products if they belong to the same major group (i.e., which have the same two digit code) as described in the *Standard Industrial Classification Manual, 1972*, as amended by the 1977 Supplement.

**(70)** "Source category" means all sources of the same type or classification.

(71) "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct.

(72) "Stack height" means the height of an emission point measured from the ground-level elevation at the base of the stack.

(73) "Standard conditions" means a temperature of 20° (68° F) and a pressure of 760 mm (29.92 inches) of mercury.

(74) "Stationary source" means any building, structure, facility, or installation which emits or may emit any contaminant. This term does not include emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in Section 216 of the FCAA.

(75) "Sulfuric acid plant" means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, or acid sludge.

(76) "Total reduced sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, mercaptans, dimethyl sulfide, dimethyl disulfide, and any other organic sulfides emitted and measured by EPA method 16 or an approved equivalent method and expressed as hydrogen sulfide.

(77) "Total suspended particulate" means particulate matter as measured by the method described in 40 CFR Part 50 Appendix B as in effect on July 1, 1988.

(78) "United States Environmental Protection Agency (USEPA)" shall be referred to as EPA.

(79) "Visibility impairment" means any perceptible degradation in visibility (visual range, contrast, coloration) not caused by natural conditions.

(80) "Visibility impairment of Class I areas" means visibility impairment within the area and visibility impairment of any formally designated integral vista associated with the area.

(81) "Volatile organic compound (VOC)" means:

- (a) Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. This includes any organic compound other than the following, which have negligible photochemical reactivity: Methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); 1,1,1-trichloro 2,2,2-trifluoroethane (CFC-113); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (CFC-22); trifluoromethane (FC-23); 1,1,2,2-tetrafluoroethane

(CFC-114); chloropentafluoroethane (CFC-115); 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123); 1,1,1,2-tetrafluoroethane (HFC-134a); 1,1-dichloro 1-fluoroethane (HCFC-141b); 1-chloro 1,1-difluoroethane (HCFC-142b); 2-chloro 1,1,1,2-tetrafluoroethane (HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); and perfluorocarbon compounds which fall into these classes:

- (i) Cyclic, branched, or linear completely fluorinated alkanes;
- (ii) Cyclic, branched, or linear completely fluorinated ethers with no unsaturations; and
- (iii) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

(b) For the purpose of determining compliance with emission limits, VOC will be measured by the appropriate methods in 40 CFR Part 60 Appendix A. Where such a method also measures compounds with negligible photochemical reactivity, these negligibly-reactive compounds may be excluded as VOC if the amount of such compounds is accurately quantified, and such exclusion is approved by ecology or the authority.

(c) As a precondition to excluding these negligibly-reactive compounds as VOC or at any time thereafter, ecology or the authority may require an owner or operator to provide monitoring or testing methods and results demonstrating, to the satisfaction of ecology or the authority, the amount of negligibly-reactive compounds in the source's emissions.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-040 GENERAL STANDARDS FOR MAXIMUM EMISSIONS.**

All sources and emissions units are required to meet the emission standards of this chapter. Where an emission standard listed in another chapter is applicable to a specific emissions unit, such standard will take precedent over a general emission standard listed in this chapter. When two or more emissions units are connected to a common stack and the operator elects not to provide the means or facilities to sample emissions from the individual emissions units, and the relative contributions of the individual emissions units to the common discharge are not readily distinguishable, then the emissions of the common stack must meet the most restrictive standard of any of the connected emissions units. Further, all emissions units are required to use reasonably available control technology (RACT) which may be determined for some sources or source categories to be more stringent than the applicable emission limitations of any chapter of Title 173 WAC. Where current controls are determined to be less than RACT, ecology or the authority shall, as provided in section 8, chapter 252, Laws of 1993, define RACT for each source or source category and issue a rule or regulatory order requiring the installation of RACT.

**(1)** Visible emissions. No person shall cause or permit the emission for more than three minutes, in any one hour, of an air contaminant from any emissions unit which at the emission point, or within a reasonable distance of the emission point, exceeds twenty percent opacity except:

**(a)** When the emissions occur due to soot blowing/grate cleaning and the operator can demonstrate that the emissions will not exceed twenty percent opacity for more than fifteen minutes in any eight consecutive hours. The intent of this provision is to permit the soot blowing and grate cleaning necessary to the operation of boiler facilities. This practice, except for testing and trouble shooting, is to be scheduled for the same approximate times each day and ecology or the authority be advised of the schedule.

**(b)** When the owner or operator of a source supplies valid data to show that the presence of uncombined water is the only reason for the opacity to exceed twenty percent.

~~**(c)** When two or more sources are connected to a common stack, ecology or the authority may allow or require the use of an alternate time period if it is more representative of normal operations:~~

~~**(d)** When an alternate opacity limit has been established per RCW 70.94.331 (2)(c):~~

~~**(2)** Fallout. No person shall cause or permit the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner(s) or operator(s) of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited.~~

**(3)** Fugitive emissions. The owner or operator of any emissions unit engaging in materials handling, construction, demolition or any other operation which is a source of fugitive emission:

**(a)** If located in an attainment area and not impacting any nonattainment area, shall take reasonable precautions to prevent the release of air contaminants from the operation.

**(b)** If the emissions unit has been identified as a significant contributor to the nonattainment status of a designated nonattainment area, shall be required to use reasonable and available control methods, which shall include any necessary changes in technology, process, or other control strategies to control emissions of the contaminants for which nonattainment has been designated.

~~**(4)** Odors. Any person who shall cause or allow the generation of any odor from any source which may unreasonably interfere with any other property owner's use and enjoyment of his property must use recognized good practice and procedures to reduce these odors to a reasonable minimum.~~

(5) Emissions detrimental to persons or property. No person shall cause or permit the emission of any air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.

(6) Sulfur dioxide.

No person shall cause or permit the emission of a gas containing sulfur dioxide from any emissions unit in excess of one thousand ppm of sulfur dioxide on a dry basis, corrected to seven percent oxygen for combustion sources, and based on the average of any period of sixty consecutive minutes, except:

~~When the owner or operator of an emissions unit supplies emission data and can demonstrate to ecology or the authority that there is no feasible method of reducing the concentration to less than one thousand ppm (on a dry basis, corrected to seven percent oxygen for combustion sources) and that the state and federal ambient air quality standards for sulfur dioxide will not be exceeded. In such cases, ecology or the authority may require specific ambient air monitoring stations be established, operated, and maintained by the owner or operator at mutually approved locations. All sampling results will be made available upon request and a monthly summary will be submitted to ecology or the authority.~~

(7) Concealment and masking. No person shall cause or permit the installation or use of any means which conceals or masks an emission of an air contaminant which would otherwise violate any provisions of this chapter.

(8) Fugitive dust sources.

(a) The owner or operator of a source of fugitive dust shall take reasonable precautions to prevent fugitive dust from becoming airborne and shall maintain and operate the source to minimize emissions.

(b) The owner(s) or operator(s) of any existing source(s) of fugitive dust that has been identified as a significant contributor to a PM-10 nonattainment area shall be required to use reasonably available control technology to control emissions. Significance will be determined by the criteria found in WAC 173-400-113(3).

*State adopted: 9/20/93; EPA effective: 6/2/95*

## **173-400-050 EMISSION STANDARDS FOR COMBUSTION AND INCINERATION UNITS.**

(1) Combustion and incineration emissions units must meet all requirements of WAC 173-400-040 and, in addition, no person shall cause or permit emissions of particulate matter in excess of 0.23 gram per dry cubic meter at standard conditions (0.1 grain/dscf), except, for an emissions unit combusting wood derived fuels for the production of steam. No person shall allow or permit the emission of particulate matter in excess of 0.46 gram per dry cubic meter at standard conditions (0.2 grain/dscf), as

measured by EPA method 5 or approved procedures contained in *"Source Test Manual - Procedures For Compliance Testing,"* state of Washington, department of ecology, as of July 12, 1990, on file at ecology.

(2) For any incinerator, no person shall cause or permit emissions in excess of one hundred ppm of total carbonyls as measured by applicable EPA methods or acceptable procedures contained in *"Source Test Manual - Procedures for Compliance Testing,"* state of Washington, department of ecology, on file at ecology. Incinerators shall be operated only during daylight hours unless written permission to operate at other times is received from ecology or the authority.

(3) Measured concentrations for combustion and incineration sources shall be adjusted for volumes corrected to seven percent oxygen, ~~except when ecology or the authority determines that an alternate oxygen correction factor is more representative of normal operations.~~

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-400-060 EMISSION STANDARDS FOR GENERAL PROCESS UNITS.**

General process units are required to meet all applicable provisions of WAC 173-400-040 and, no person shall cause or permit the emission of particulate material from any general process operation in excess of 0.23 grams per dry cubic meter at standard conditions (0.1 grain/dscf) of exhaust gas. EPA test methods from 40 CFR Appendix A which are adopted by reference and any other approved test procedures which are contained in ecology's *"Source Test Manual - Procedures For Compliance Testing"* as of July 12, 1990, will be used to determine compliance.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-400-070 EMISSION STANDARDS FOR CERTAIN SOURCE CATEGORIES.**

Ecology finds that the reasonable regulation of sources within certain categories requires separate standards applicable to such categories. The standards set forth in this section shall be the maximum allowable standards for emissions units within the categories listed. Except as specifically provided in this section, such emissions units shall not be required to meet the provisions of WAC 173-400-040, 173-400-050 and 173-400-060.

(1) Wigwam burners.

(a) All wigwam burners shall meet all provisions of WAC 173-400-040 (2), (3), (4), (5), (6), and (7).

(b) All wigwam burners shall use RACT. All emissions units shall be operated and maintained to minimize emissions. These requirements may include a controlled tangential vent overfire air system, an adequate underfire system, elimination of all unnecessary openings, a controlled feed

and other modifications determined necessary by ecology or the authority.

(c) It shall be unlawful to install or increase the existing use of any burner that does not meet all requirements for new sources including those requirements specified in WAC 173-400-040 and 173-400-050, except operating hours.

(d) Ecology may establish additional requirements for wigwam burners located in sensitive areas as defined by chapter 173-440 WAC. These requirements may include but shall not be limited to:

(i) A requirement to meet all provisions of WAC 173-400-040 and 173-400-050. Wigwam burners will be considered to be in compliance if they meet the requirements contained in WAC 173-400-040(1). An exception is made for a startup period not to exceed thirty minutes in any eight consecutive hours.

(ii) A requirement to apply BACT.

(iii) A requirement to reduce or eliminate emissions if ecology establishes that such emissions unreasonably interfere with the use and enjoyment of the property of others or are a cause of violation of ambient air standards.

(2) Hog fuel boilers.

(a) Hog fuel boilers shall meet all provisions of WAC 173-400-040 and 173-400-050(1), except that emissions may exceed twenty percent opacity for up to fifteen consecutive minutes once in any eight hours. The intent of this provision is to permit the soot blowing and grate cleaning necessary to the operation of these units. This practice is to be scheduled for the same specific times each day and ecology or the authority shall be notified of the schedule or any changes.

(b) All hog fuel boilers shall utilize RACT and shall be operated and maintained to minimize emissions.

(3) Orchard heating.

(a) Burning of rubber materials, asphaltic products, crankcase oil or petroleum wastes, plastic, or garbage is prohibited.

(b) It is unlawful to burn any material or operate any orchard-heating device that causes a visible emission exceeding twenty percent opacity, except during the first thirty minutes after such device or material is ignited.

**(4) Grain elevators.**

Any grain elevator which is primarily classified as a materials handling operation shall meet all the provisions of WAC 173-400-040 (2), (3), (4), and (5).

**(5) Catalytic cracking units.**

**(a)** All existing catalytic cracking units shall meet all provisions of WAC 173-400-040 (2), (3), (4), (5), (6), and (7) and:

**(i)** No person shall cause or permit the emission for more than three minutes, in any one hour, of an air contaminant from any catalytic cracking unit which at the emission point, or within a reasonable distance of the emission point, exceeds forty percent opacity.

**(ii)** No person shall cause or permit the emission of particulate material in excess of 0.46 grams per dry cubic meter at standard conditions (0.20 grains/dscf) of exhaust gas.

**(b)** All new catalytic cracking units shall meet all provisions of WAC 173-400-115.

**(6) Other wood waste burners.**

**(a)** Wood waste burners not specifically provided for in this section shall meet all provisions of WAC 173-400-040.

**(b)** Such wood waste burners shall utilize RACT and shall be operated and maintained to minimize emissions.

~~**(7) Sulfuric acid plants.**~~

~~No person shall cause to be discharged into the atmosphere from a sulfuric acid plant, any gases which contain acid mist, expressed as H<sub>2</sub>SO<sub>4</sub>, in excess of 0.15 pounds per ton of acid produced. Sulfuric acid production shall be expressed as one hundred percent H<sub>2</sub>SO<sub>4</sub>.~~

~~State adopted: 3/22/91; EPA effective: 9/10/93~~

**173-400-081 STARTUP AND SHUTDOWN.**

In promulgating technology-based emission standards and making control technology determinations (e.g., BACT, RACT, LAER, BART) ecology and the authorities shall consider any physical constraints on the ability of a source to comply with the applicable standard during startup or shutdown. Where ecology or the authority determines that the source or source category, operated and maintained in accordance with good air pollution control practice, is not capable of achieving continuous compliance with an emission standard during startup or shutdown, ecology or the authority shall include in the

standard appropriate emission limitations, operating parameters, or other criteria to regulate the performance of the source during startup or shutdown conditions. In modeling the emissions of a source for purposes of demonstrating attainment or maintenance of national ambient air quality standards, ecology and the authorities shall take into account any incremental increase in allowable emissions under startup or shutdown conditions authorized by an emission limitation or other operating parameter adopted under this rule. Any emission limitation or other parameter adopted under this rule which increases allowable emissions during startup or shutdown conditions over levels authorized in an approved state implementation plan shall not take effect until approved by EPA as a SIP amendment.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-091 VOLUNTARY LIMITS ON EMISSIONS.**

(1) Upon request by the owner or operator of a source, ecology or the authority with jurisdiction over the source shall issue a regulatory order that limits the source's potential to emit any air contaminant or contaminants to a level agreed to by the owner or operator and ecology or the authority with jurisdiction over the source.

(2) A condition contained in an order issued under this section shall be less than the source's otherwise allowable annual emissions of a particular contaminant under all applicable requirements of the chapter 70.94 RCW and the FCAA, including any standard or other requirement provided for in the Washington state implementation plan. The term "condition" refers to limits on production or other limitations, in addition to emission limitations.

(3) Any order issued under this section shall include monitoring, recordkeeping and reporting requirements sufficient to ensure that the source complies with any condition established under this section. Monitoring requirements shall use terms, test methods, units, averaging periods, and other statistical conventions consistent with the requirements of WAC 173-400-105.

(4) Any order issued under this section shall be subject to the notice and comment procedures under WAC 173-400-171.

(5) The terms and conditions of a regulatory order issued under this section shall be federally enforceable, upon approval of this section as an element of the Washington state implementation plan. Any proposed deviation from a condition contained in an order issued under this section shall require revision or revocation of the order.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-100 REGISTRATION**

(1) Except as provided in subsection (4) of this section, the owner or operator of each source within the following source categories shall register the source with ecology or the authority.

- (a) Agricultural drying and dehydrating operations;
- (b) Asphalt plants;
- (c) Beverage can surface coating operations;
- (d) Bulk gasoline terminals;
- (e) Cattle feedlots with facilities for one thousand or more cattle;
- (f) Chemical plants;
- (g) Ferrous foundries;
- (h) Fertilizer plants
- (i) Flexible vinyl and urethane coating and printing operations;
- (j) Grain handling, seed processing, pea and lentil processing facilities;
- (k) Metallic mineral processing plants;
- (l) Mineralogical processing plants
- (m) Nonferrous foundries;
- (n) Other metallurgical processing plants;
- (o) Petroleum refineries;
- (p) Power boilers using coal, hog fuel, oil, or other solid or liquid fuel;
- (q) Pressure sensitive tape and label surface coating operations;
- (r) Rendering plants;
- (s) Scrap metal operations;
- (t) Synthetic organic chemical manufacturing industries;
- (u) Sulfuric acid plants;

- (v) Synthetic fiber production facilities;
- (w) Veneer dryers;
- (x) Wood waste incinerators including wigwam burners;
- (y) Other incinerators designed for a capacity of one hundred pounds per hour or more;
- (z) Stationary internal combustion engines rated at five hundred horse power or more;
- (aa) Sawmills, including processing for lumber, plywood, shake, shingle, pulpwood insulating board, or any combination thereof;
- (bb) Any category of stationary sources subject to a federal standard of performance (NSPS) under 40 CFR Part 60, other than Subpart AAA (Standards of Performance for New Residential Wood Heaters);
- (cc) Any source which emits a contaminant subject to a National Emission Standard for Hazardous Air Pollutants (NESHAPS);
- (dd) Any major stationary source.

(2) Registration shall be on forms to be supplied by ecology or the authority within the time specified on the form.

(3) A report of closure shall be filed with ecology or the authority within ninety days after operations producing emissions permanently cease at any source within the above categories.

(4) Permit program sources, as defined in RCW 70.94.030(17), are not required to comply with the registration requirements of this section after the Environmental Protection Agency grants interim or final approval for the state operating permit program.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-105 RECORDS, MONITORING, AND REPORTING.**

The owner or operator of a source shall upon notification by the director of ecology, maintain records on the type and quantity of emissions from the source and other information deemed necessary to determine whether the source is in compliance with applicable emission limitations and control measures.

(1) Emission inventory. The owner(s) or operator(s) of any air contaminant source shall submit an

inventory of emissions from the source each year. The inventory may include stack and fugitive emissions of particulate matter, PM<sub>10</sub>, sulfur dioxide, carbon monoxide, total reduced sulfur compounds (TRS), fluorides, lead, VOCs, and other contaminants, and shall be submitted (when required) no later than one hundred five days after the end of the calendar year. The owner(s) or operator(s) shall maintain records of information necessary to substantiate any reported emissions, consistent with the averaging times for the applicable standards.

**(2) Monitoring.** Ecology shall conduct a continuous surveillance program to monitor the quality of the ambient atmosphere as to concentrations and movements of air contaminants.

As a part of this program, the director of ecology or an authorized representative may require any source under the jurisdiction of ecology to conduct stack and/or ambient air monitoring and to report the results to ecology.

**(3) Investigation of conditions.** Upon presentation of appropriate credentials, for the purpose of investigating conditions specific to the control, recovery, or release of air contaminants into the atmosphere, personnel from ecology or an authority shall have the power to enter at reasonable times upon any private or public property, excepting nonmultiple unit private dwellings housing one or two families.

**(4) Source testing.** To demonstrate compliance, ecology or the authority may conduct or require that a test be conducted of the source using approved EPA methods from 40 CFR 60 Appendix A which are adopted by reference, or approved procedures contained in "*Source Test Manual - Procedures for Compliance Testing*," state of Washington, department of ecology, as of July 12, 1990, on file at ecology. The operator of a source may be required to provide the necessary platform and sampling ports for ecology personnel or others to perform a test of an emissions unit. Ecology shall be allowed to obtain a sample from any emissions unit. The operator of the source shall be given an opportunity to observe the sampling and to obtain a sample at the same time.

**(5) Continuous monitoring and recording.** Owners and operators of the following categories of sources shall install, calibrate, maintain and operate equipment for continuously monitoring and recording those emissions specified.

**(a)** Fossil fuel-fired steam generators.

**(i)** Opacity, except where:

**(A)** Steam generator capacity is less than two hundred fifty million BTU per hour heat input; or

**(B)** Only gaseous fuel is burned.

**(ii)** Sulfur dioxide, except where steam generator capacity is less than two hundred fifty million BTU per hour heat input or if sulfur dioxide control equipment is not required.

**(iii)** Percent oxygen or carbon dioxide where such measurements are necessary for the conversion of sulfur dioxide continuous emission monitoring data.

**(iv)** General exception. These requirements do not apply to a fossil fuel-fired steam generator with an annual average capacity factor of less than thirty percent, as reported to the Federal Power Commission for calendar year 1974, or as otherwise demonstrated to ecology or the authority by the owner(s) or operator(s).

**(b)** Sulfuric acid plants.

Sulfur dioxide where production capacity is more than three hundred tons per day, expressed as one hundred percent acid, except for those facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

**(c)** Fluid bed catalytic cracking units catalyst regenerators at petroleum refineries.

Opacity where fresh feed capacity is more than twenty thousand barrels per day.

**(d)** Wood residue fuel-fired steam generators.

**(i)** Opacity, except where steam generator capacity is less than one hundred million BTU per hour heat input.

**(ii)** Continuous monitoring equipment. The requirements of (e) of this subsection do not apply to wood residue fuel-fired steam generators, but continuous monitoring equipment required by (d) of this subsection shall be subject to approval by ecology.

**(e)** Owners and operators of those sources required to install continuous monitoring equipment under this chapter shall demonstrate to ecology or the authority, compliance with the equipment and performance specifications and observe the reporting requirements contained in 40 CFR Part 51, Appendix P, Sections 3, 4 and 5, promulgated October 6, 1975, and amended November 7, 1986, which is adopted by reference.

**(f)** Special considerations. If for reason of physical plant limitations or extreme economic situations, ecology determines that continuous monitoring is not a reasonable requirement, alternative monitoring and reporting procedures will be established on an individual basis. These will generally take the form of stack tests conducted at a frequency sufficient to establish the emission levels over time and to monitor deviations in these levels.

(g) Exemptions. This subsection (5) does not apply to any source which is:

(i) Subject to a new source performance standard. These sources will be governed by WAC 173-400-115.

(ii) Not subject to an applicable emission standard.

(h) Monitoring system malfunctions. A source may be temporarily exempted from the monitoring and reporting requirements of this chapter during periods of monitoring system malfunctions provided that the source owner(s) or operator(s) shows to the satisfaction of ecology or the authority that the malfunction was unavoidable and is being repaired as expeditiously as practicable.

(6) Change in raw materials or fuels for sources not subject to requirements of the operating permit program. Any change or series of changes in raw material or fuel which will result in a cumulative increase in emissions of sulfur dioxide of forty tons per year or more over that stated in the initial inventory required by subsection (1) of this section shall require the submittal of sufficient information to ecology or the authority to determine the effect of the increase upon ambient concentrations of sulfur dioxide. Ecology or the authority may issue regulatory orders requiring controls to reduce the effect of such increases. Cumulative changes in raw material or fuel of less than 0.5 percent increase in average annual sulfur content over the initial inventory shall not require such notice.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-107 EXCESS EMISSIONS.**

(1) The owner or operator of a source shall have the burden of proving to ecology or the authority or the decision-making authority in an enforcement action that excess emissions were unavoidable. This demonstration shall be a condition to obtaining relief under subsections (4), (5) and (6) of this section.

(2) Excess emissions determined to be unavoidable under the procedures and criteria in this section shall be excused and not subject to penalty.

(3) Excess emissions which represent a potential threat to human health or safety or which the owner or operator of the source believes to be unavoidable shall be reported to ecology or the authority as soon as possible. Other excess emissions shall be reported within thirty days after the end of the month during which the event occurred or as part of the routine emission monitoring reports. Upon request by ecology or the authority, the owner(s) or operator(s) of the source(s) shall submit a full written report including the known causes, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence.

(4) Excess emissions due to startup or shutdown conditions shall be considered unavoidable provided

the source reports as required under subsection (3) of this section and adequately demonstrates that the excess emissions could not have been prevented through careful planning and design and if a bypass of control equipment occurs, that such bypass is necessary to prevent loss of life, personal injury, or severe property damage.

**(5) Maintenance.** Excess emissions due to scheduled maintenance shall be considered unavoidable if the source reports as required under subsection (3) of this section and adequately demonstrates that the excess emissions could not have been avoided through reasonable design, better scheduling for maintenance or through better operation and maintenance practices.

**(6)** Excess emissions due to upsets shall be considered unavoidable provided the source reports as required under subsection (3) of this section and adequately demonstrates that:

**(a)** The event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition;

**(b)** The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance; and

**(c)** The operator took immediate and appropriate corrective action in a manner consistent with good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action, including slowing or shutting down the emission unit as necessary to minimize emissions, when the operator knew or should have known that an emission standard or permit condition was being exceeded.

*State adopted: 9/20/93; EPA effective: 6/2/95*

## **173-400-110 NEW SOURCE REVIEW (NSR)**

### **(1) Applicability**

**(a)** A notice of construction application must be filed by the owner or operator and an order of approval issued by ecology or an authority prior to the establishment of any new source or emission unit or modification which is listed in WAC 173-400-100 or required to obtain a permit under RCW 70.94.161.

**(b)** Ecology or the authority may require that a notice of construction application be filed by the owner or operator of a proposed new source or modification and an order of approval issued by ecology or an authority prior to the establishment of any new source or emission unit or modification, other than a single family or a duplex dwelling.

**(c)** New source review of a modification shall be limited to the emission unit or units proposed

to be added to an existing source or modified and the air contaminants whose emissions would increase as a result of the modification.

**(2) Completeness Determination** Within thirty days of receipt of a notice of construction application, ecology or the authority shall either notify the applicant in writing that the application is complete or notify the applicant in writing of all additional information necessary, based upon review of information already supplied, to complete the application. For a project subject to PSD review under WAC 173-400-141 a completeness determination includes a determination that the application provides all information required to conduct PSD review.

**(3) Final Determination**

**(a)** Within sixty days of receipt of a complete application, ecology or the authority shall either issue a final decision on the application or, for those projects subject to public notice, initiate notice and comment procedures under WAC 173-400-171 on a proposed decision, followed as promptly as possible by a final decision. A person seeking approval to construct or modify a source that requires an operating permit may elect to integrate review of the operating permit application or amendment required under RCW 70.94.161 and the notice of construction application required by this section. A notice of construction designated for integrated review shall be processed in accordance with operating permit program procedures and deadlines.

**(b)** Every final determination on a notice of construction application shall be reviewed and signed prior to issuance by a professional engineer or staff under the direct supervision of a professional engineer in the employ of ecology or the authority.

**(c)** If the new source is a major stationary source or the change is a major modification, ecology or the authority shall submit any control technology determination included in a final order of approval to the RACT/BACT/LAER clearinghouse maintained by EPA.

**(4) Appeals** An order of approval, any conditions contained in an order of approval, or the denial of a notice of construction application may be appealed to the pollution control hearings board as provided in chapter 43.21B RCW. Ecology or the authority shall promptly mail copies of each order approving or denying a notice of construction application to the applicant and to any other party who submitted timely comments on the application, along with a notice advising parties of their rights of appeal to the Pollution Control Hearings Board and, where applicable, to the EPA Environmental Appeals Board.

**(5) Portable Sources** For portable sources which located temporarily at particular sites, the owner(s) or operator(s) shall be allowed to operate at the temporary location without filing a notice of construction application, providing that the owner(s) or operator(s) notifies ecology or the authority of intent to operate at the new location at least thirty days prior to starting the operation, and supplies

sufficient information to enable ecology or the authority to determine that the operation will comply with the emission standards for a new source, and will not cause a violation of applicable ambient air quality standards and, if in a nonattainment area, will not interfere with scheduled attainment of ambient standards. The permission to operate shall be for a limited period of time (one year or less) and ecology or the authority may set specific conditions for operation during that period. A temporary source shall be required to comply with all applicable emission standards.

(6) Approval to construct or modify a stationary source shall become invalid if construction is not commenced within eighteen months after receipt of such approval, if construction is discontinued for a period of eighteen months or more, or if construction is not completed within a reasonable time. Ecology or the authority may extend the eighteen-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within eighteen months of the projected and approved commencement date.

*State adopted: 9/20/93; EPA effective: 6/2/95*

## **WAC 173-400-112 REQUIREMENTS FOR NEW SOURCES IN NONATTAINMENT AREAS.**

Ecology or an authority reviewing an application to establish a new source or modification in a nonattainment area, shall issue an order of approval, which order shall contain such conditions as are reasonably necessary to assure the maintenance of compliance with this chapter, if they determine that the proposed project satisfies each of the following requirements:

(1) The proposed new source or modification will comply with all applicable new source performance standards, national emission standards for hazardous air pollutants, emission standards adopted under chapter 70.94 RCW and, for sources regulated by an authority, the applicable emission standards of that authority.

(2) The proposed new source will employ BACT for all air contaminants, except that if the new source is a major stationary source or the proposed modification is a major modification it will achieve LAER for the contaminants for which the area has been designated nonattainment and for which the proposed new source or modification is major.

(3) The proposed new source will not cause any ambient air quality standard to be exceeded, will not violate the requirements for reasonable further progress established by the state implementation plan and will comply with WAC 173-400-113(3) for all contaminants for which the area has not been designated nonattainment.

(4) If the proposed new source is a major stationary source or the proposed modification is a major modification, ecology or the authority has determined, based on review of an analysis performed by the

source of alternative sites, sizes, production processes, and environmental control techniques, that the benefits of the project significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

**(5)** If the proposed new source or the proposed modification is major for the contaminant for which the area is designated nonattainment, allowable emissions from the proposed new source or modification of that contaminant are offset by reductions in actual emissions from existing sources in the nonattainment area. Emission offsets must be sufficient to ensure that total allowable emissions from existing major stationary sources in the nonattainment area, new or modified sources which are not major stationary sources, and the proposed new or modified source will be less than total actual emissions from existing sources (prior to submittal of the application) so as to represent (when considered together with the nonattainment provisions of section 172 of the FCAA) reasonable further progress. All offsetting emission reductions must satisfy the following requirements:

**(a)** The proposed new level of allowable emissions of the source or emission unit(s) providing the reduction must be less than the current level of actual emissions of that source or emissions unit(s). No emission reduction can be credited for actual emissions which exceed the current allowable emissions of the source or emissions unit(s) providing the reduction. Emission reductions imposed by local, state, or federal regulations, regulatory orders, or permits cannot be credited.

**(b)** The emission reductions must provide for a net air quality benefit. For marginal ozone nonattainment areas, the total emissions of volatile organic compounds or total emissions of nitrogen oxides are reduced by a ratio of 1.1 to 1 for the area in which the new source is located. For any other nonattainment area, the emissions offsets must provide a positive net air quality benefit in the nonattainment area. Determinations on whether emissions offsets provide a positive net air quality benefit will be made in accordance with the guidelines contained in 40 CFR 51 Appendix S.

**(c)** If the offsets are provided by another source, the reductions in emissions from that source must be federally enforceable by the time the new or modified source commences operation. The new source may not commence operation before the date such reductions are actually achieved. An emission reduction credit issued under WAC 173-400-131 may be used to satisfy some or all of the offset requirements of this subsection.

**(6)** If the proposed new source is a major stationary source or the proposed modification is a major modification, the owner or operator has demonstrated that all major stationary sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in Washington are subject to emission limitations and are in compliance, or on a schedule for compliance, with all applicable emission limitations and standards under the Federal Clean Air Act, including all rules contained in an EPA-approved state implementation plan.

(7) If the proposed new source is a major stationary source or the proposed modification is a major modification for the purposes of the PSD program described in WAC 173-400-141, it meets the requirements of that program for all contaminants for which the area has not been designated nonattainment.

~~(8) If the proposed new source or modification will emit any toxic air pollutants regulated under chapter 173-460 WAC, the source meets all applicable requirements of that chapter.~~

(9) If the proposed new source is a major stationary source or the proposed modification is a major modification, ecology or the authority has complied with the visibility protection review requirements of 40 CFR 52.28(c) through (e) except for (c)(4)(i), (g), and (h), as in effect on March 3, 1993, and determined that the project meets the criteria set forth in 40 CFR 52.28(g). For purposes of this subsection, definitions referenced in 40 CFR 52.28(b) are incorporated by reference, except that the term "visibility protection area" means any Class I area, and terms defined in WAC 173-400-030 shall have the meanings defined in that section. References in 40 CFR 52.28 to "the Administrator" shall mean the agency (either ecology or the authority) processing the notice of construction application.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-113 REQUIREMENTS FOR NEW SOURCES IN ATTAINMENT OR UNCLASSIFIABLE AREAS.**

Ecology or an authority reviewing an application to establish a new source or modification in an area that is in attainment or unclassifiable for any air contaminant the new source would emit and that is in attainment or unclassifiable for ozone if the proposed new or modified source would emit VOCs or NO<sub>x</sub>, shall issue an order of approval, which order shall contain such conditions as are reasonably necessary to assure the maintenance of compliance with this chapter, if they determine that the proposed project satisfies all of the following requirements:

(1) The proposed new source or modification will comply with all applicable new source performance standards, national emission standards for hazardous air pollutants, emission standards adopted under chapter 70.94 RCW and, for sources regulated by an authority, the applicable emission standards of that authority.

(2) The proposed new source or modification will employ BACT for all pollutants not previously emitted or whose emissions would increase as a result of the new source or modification.

(3) Allowable emissions from the proposed new source or modification will not delay the attainment date for an area not in attainment nor cause or contribute to a violation of any ambient air quality standard. This requirement will be considered to be met if the projected impact of the allowable emissions from the proposed new source or the projected impact of the increase in allowable emissions from the proposed modification at any location within a nonattainment area does not exceed the

following levels for the pollutant(s) for which the area has been designated nonattainment:

Pollutant	Annual Average	24-Hour Average	8-Hour Average	3-Hour Average	1-Hour Average
CO-	-	0.5 mg/m <sup>3</sup>		2 mg/m <sup>3</sup>	
SO <sub>2</sub>	1.0 ug/m <sup>3</sup>	5 ug/m <sup>3</sup>	-	25 ug/m <sup>3</sup>	30 ug/m <sup>3</sup>
PM <sub>10</sub>	1.0 ug/m <sup>3</sup>	5 ug/m <sup>3</sup>	-	-	-
NO <sub>2</sub>	1.0 ug/m <sup>3</sup>	-	-	-	-

An offsetting emission reduction may be used to satisfy some or all of the requirements of this subsection.

(4) If the proposed new source is a major stationary source or the proposed modification is a major modification for purposes of the PSD program described in WAC 173-400-141, it meets all applicable requirements of that chapter.

~~(5) If the proposed new source or the proposed modification will emit any toxic air pollutants regulated under chapter 173-460 WAC, the source meets all applicable requirements of that program.~~

(6) If, within the meaning of the PSD program described in WAC 173-400-141, the proposed new source is a major stationary source or the proposed modification is a major modification, ecology or the authority has complied with the visibility protection review requirements of 40 CFR 52.27(d) through (f), as in effect on March 3, 1993, and has determined that the source would not cause an adverse impact upon visibility. References in 40 CFR 52.27 to "the Administrator" shall mean the agency (either ecology or the authority) processing the notice of construction application.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-151 RETROFIT REQUIREMENTS FOR VISIBILITY PROTECTION.**

(1) Determination of best available retrofit technology (BART). Ecology shall identify and analyze each source which may reasonably be anticipated to cause or contribute to impairment of visibility in any mandatory Class I area in Washington and any adjacent state and to determine BART for the contaminant of concern and those additional air pollution control technologies that are to be required to reduce impairment from the source.

(2) Initially defined BART. The owner(s) or operator(s) of any source(s) to which significant visibility impairment of a mandatory Class I area is reasonably attributable shall apply BART for each contaminant contributing to visibility impairment that is emitted at more than 250 tons per year. Each source for which BART is required must install and operate BART as expeditiously as possible, but in no case later than five years after the conditions are included in a regulatory order.

(3) Future definitions of BART. The owner(s) or operator(s) of any source(s) to which significant visibility impairment of a mandatory Class I area is reasonably attributable shall apply BART as new technology becomes available for a contaminant if:

- (a) The source emits more than 250 tons per year of the contaminant; and,
- (b) The controls representing BART have not previously been required in this section.

(4) Appeal. Any source owner or operator required by this section to install, operate, and maintain BART, may apply to the EPA administrator for an exception from that requirement pursuant to 40 CFR 51.303.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-161 COMPLIANCE SCHEDULES.**

(1) **Issuance.** Whenever a source is found to be in violation of an emission standard or other provision of this chapter, ecology or the authority may issue a regulatory order requiring that the source be brought into compliance within a specified time. The order shall contain a schedule for installation, with intermediate benchmark dates and a final completion date, and shall constitute a compliance schedule. Requirements for public involvement (WAC 173-400-171) must be met.

(2) **Federal action.** A source shall be considered to be in compliance with this chapter if all the provisions of its individual compliance schedule included with a regulatory order are being met. Such compliance does not preclude federal enforcement action by the EPA until and unless the schedule is submitted and adopted as an amendment to the state implementation plan.

(3) **Penalties for delayed compliance.** Sources on a compliance schedule but not meeting emissions standards may be subject to penalties as provided in the Federal Clean Air Act.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-171 PUBLIC INVOLVEMENT.**

#### **(1) Applicability.**

Ecology or the authority shall provide public notice prior to the approval or denial of any of the following types of applications or other actions:

- (a) Notice of construction application for any new or modified source or emissions unit, if a significant net increase in emissions of any pollutant regulated by state or federal law would result; or

(b) Any application or other proposed action for which a public hearing is required by PSD rules; or

(c) Any order to determine RACT; or

(d) An order to establish a compliance schedule or a variance; or

(e) The establishment or disestablishment of a nonattainment area, or the changing of the boundaries thereof; or

(f) An order to demonstrate the creditable height of a stack which exceeds the GEP formula height and sixty-five meters, by means of a fluid model or a field study, for the purposes of establishing an emission limitation; or

(g) An order to authorize a bubble; or

(h) Notice of construction application or regulatory order used to establish a creditable emission reduction;

(i) An order issued under WAC 173-400-090 which establishes limitations on a source's potential to emit; or

(j) Any application or other proposed action made pursuant to this chapter in which there is a substantial public interest according to the discretion of ecology or the authority.

**(2) Public notice.** Public notice shall be made only after all information required by ecology or the authority has been submitted and after applicable preliminary determinations, if any, have been made. The cost of providing public notice shall be borne by the applicant or other initiator of the action. Public notice shall include:

(a) Availability for public inspection in at least one location near the proposed project, of the nonproprietary information submitted by the applicant and of any applicable preliminary determinations, including analyses of the effect(s) on air quality.

(b) Publication in a newspaper of general circulation in the area of the proposed project of notice:

(i) Giving a brief description of the proposal;

(ii) Advising of the location of the documents made available for public inspection;

(iii) Advising of a thirty-day period for submitting written comment to ecology or the authority;

(iv) Advising that a public hearing may be held if ecology or the authority determines within a thirty-day period that significant public interest exists.

(c) A copy of the notice will be sent to the EPA regional administrator.

Public participation procedures for notice of construction applications that are processed in coordination with an application to issue or modify an operating permit shall be conducted as provided in the state operating permit rule.

**(3) Public comment.** No final decision on any application or action of any of the types described in subsection (1) of this section, shall be made until the public comment period has ended and any comments received have been considered. Unless a public hearing is held, the public comment period shall be the thirty-day period for written comment published as provided above. If a public hearing is held the public comment period shall extend through the hearing date and thereafter for such period, if any, as the notice of public hearing may specify.

**(4) Public hearings.** The applicant, any interested governmental entity, any group or any person may request a public hearing within the thirty-day period published as above. Any such request shall indicate the interest of the entity filing it and why a hearing is warranted. Ecology or the authority may, in its discretion, hold a public hearing if it determines significant public interest exists. Any such hearing shall be held upon such notice and at a time(s) and place(s) as ecology or the authority deems reasonable.

**(5) Other requirements of law.** Whenever procedures permitted or mandated by law will accomplish the objectives of public notice and opportunity for comment, such procedures may be used in lieu of the provisions of this section.

**(6) Public information.** Copies of notices of construction, orders, and modifications thereof which are issued hereunder shall be available for public inspection on request at ecology or the authority.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-190 REQUIREMENTS FOR NONATTAINMENT AREAS.**

The development of specific requirements for nonattainment areas shall include consultation with local government in the area and shall include public involvement per WAC 173-400-171.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-200 CREDITABLE STACK HEIGHT AND DISPERSION TECHNIQUES.**

**(1) Applicability.** These provisions shall apply to all sources except:

(a) Stacks for which construction had commenced on or before December 31, 1970, except where pollutants are being emitted from such stacks used by sources which were constructed, or reconstructed, or for which major modifications were carried out after December 31, 1970;

(b) Coal-fired steam electric generating units subject to the provisions of Section 118 of the Federal Clean Air Act, which commenced operation before July 1, 1957, and for whose stacks construction commenced before February 8, 1974;

(c) Flares;

(d) Open burning for agricultural or silvicultural purposes as covered under the smoke management plan;

(e) Residential wood combustion and open burning for which episodic restrictions apply.

These provisions shall not be construed to limit the actual stack height.

(2) Prohibitions. No source may use dispersion techniques or excess stack height to meet ambient air quality standards or PSD increment limitations.

(a) Excess stack height. Excess stack height is that portion of a stack which exceeds the greater of:

(i) Sixty-five meters, measured from the ground level elevation at the base of the stack;  
or

(ii)  $H_s = H + 1.5L$

where:  $H_s$  = "good engineering practice" (GEP) stack height, measured from the ground level elevation at the base of the stack,

H = height of nearby structure(s) measured from the ground level elevation at the base of the stack,

L = lesser dimension, height or projected width, of nearby structure(s), subject to the proviso below.

"Nearby," as used in this subsection for purposes of applying the GEP formula means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 kilometer (1/2 mile).

**(b)** Dispersion techniques. Increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise. This does not include:

**(i)** The reheating of a gas stream, following the use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

**(ii)** The merging of gas streams where:

**(A)** The source was originally designed and constructed with such merged gas streams, as demonstrated by the source owner(s) or operator(s).

**(B)** Such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion shall apply only to the emission limitation for the pollutant affected by such change in operation.

**(C)** Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons, and not primarily motivated by an intent to gain emissions credit for greater dispersion.

**(3)** Exception. EPA, ecology, or an authority may require the use of a field study or fluid model to verify the creditable stack height for the source. This also applies to a source seeking credit after the effective date of this rule for an increase in existing stack height up to that established by the GEP formula. A fluid model or field study shall be performed according to the procedures described in the EPA Guideline for Determination of Good Engineering Practice Height (Technical Support Document of the Stack Height Regulations). The creditable height demonstrated by a fluid model or field study shall ensure that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, nearby structures or nearby terrain features.

**(a)** "Nearby," as used in this subsection for conducting a field study or fluid model, means not greater than 0.8 km, except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to ten times the maximum height of the feature, not to exceed two miles if such feature achieves a height 0.8 km from the stack that is at least forty percent of the GEP stack height or twenty-six meters, whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.

(b) "Excessive concentration" is defined for the purpose of determining creditable stack height under this subsection and means a maximum ground-level concentration owing to a significant downwash effect which contributes to excursion over an ambient air quality standard. For sources subject to PSD review (WAC 173-400-141 and 40 CFR 52.21) an excessive concentration alternatively means a maximum ground-level concentration owing to a significant downwash effect which contributes to excursion over a PSD increment. The emission rate used in this demonstration shall be the emission rate specified in the state implementation plan, or in the absence of such, the actual emission rate of the source. "Significant downwash effect" means a maximum ground-level concentration due to emissions from a stack due in whole or in part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least forty percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-205 ADJUSTMENT FOR ATMOSPHERIC CONDITIONS.**

Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant is prohibited, except as directed according to air pollution episode regulations.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-210 EMISSION REQUIREMENTS OF PRIOR JURISDICTIONS.**

Any emissions unit that was under the jurisdiction of an authority and now is under the jurisdiction of ecology, shall meet all emission requirements that were applicable prior to transfer of jurisdiction if those standards are more stringent than the standards of this chapter or the specific chapter relating to that source.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-220 REQUIREMENTS FOR BOARD MEMBERS.**

**(1) Public Interest.** A majority of the members of any ecology or authority board shall represent the public interest. A majority of the members of such boards, shall not derive any significant portion of their income from persons subject to enforcement orders pursuant to the state and federal clean air acts. An elected public official and the board shall be presumed to represent the public interest. In the event that a member derives a significant portion of his/her income from persons subject to enforcement orders, he/she shall delegate sole responsibility for administration of any part of the program which involves these persons to an assistant.

**(2) Disclosure.** Each member of any ecology or authority board shall adequately disclose any potential conflict of interest in any matter prior to any action or consideration thereon, and the member shall remove themselves from participation as a board member in any action or voting on such matter.

**(3) Define Significant Income.** For the purposes of this section, "significant portion of income" shall mean twenty percent of gross personal income for a calendar year. In the case of a retired person, "significant portion of income" shall mean fifty percent of income in the form of pension or retirement benefits from a single source other than Social Security. Income derived from employment with local or state government shall not be considered in the determination of "significant portion of income."

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-230 REGULATORY ACTIONS.**

Ecology may take any of the following regulatory actions to enforce this chapter to meet the provisions of RCW 43.21B.300 which is incorporated by reference.

**(1) Enforcement Actions by Ecology--Notice to Violators.** At least thirty days prior to the commencement of any formal enforcement action under RCW 70.94.430 and 70.94.431, the department of ecology shall cause written notice to be served upon the alleged violator or violators. The notice shall specify the provision of this chapter or the rule or regulation alleged to be violated, and the facts alleged to constitute a violation thereof, and may include an order that necessary corrective action be taken within a reasonable time. In lieu of an order, ecology may require that the alleged violator or violators appear before it for the purpose of providing ecology information pertaining to the violation or the charges complained of. Every notice of violation shall offer to the alleged violator an opportunity to meet with ecology prior to the commencement of enforcement action.

#### **(2) Civil Penalties.**

**(a)** In addition to or as an alternate to any other penalty provided by law, any person who violates any of the provisions of chapter 70.94 or 70.120 RCW, or any of the rules in force under such chapters may incur a civil penalty in an amount as set forth in RCW 70.94.431. Each such violation shall be a separate and distinct offense, and in case of a continuing violation, each day's continuance shall be a separate and distinct violation.

Any person who fails to take action as specified by an order issued pursuant to this chapter shall be liable for a civil penalty as set forth by RCW 70.94.431 for each day of continued noncompliance.

**(b)** Penalties incurred but not paid shall accrue interest, beginning on the ninety-first day following the date that the penalty becomes due and payable, at the highest rate allowed by RCW 19.52.020 on the date that the penalty becomes due and payable. If violations or penalties are appealed, interest shall not begin to accrue until the thirty-first day following final resolution of the appeal.

The maximum penalty amounts established in RCW 70.94.431 may be increased annually to

account for inflation as determined by the state office of the economic and revenue forecast council.

(c) Each act of commission or omission which procures, aids, or abets in the violation shall be considered a violation under the provisions of this section and subject to the same penalty. The penalties provided in this section shall be imposed pursuant to RCW 43.21B.300.

(d) All penalties recovered under this section by ecology shall be paid into the state treasury and credited to the air pollution control account established in RCW 70.94.015 or, if recovered by the authority, shall be paid into the treasury of the authority and credited to its funds. If a prior penalty for the same violation has been paid to a local authority, the penalty imposed by ecology under subsection (a) of this section shall be reduced by the amount of the payment.

(e) To secure the penalty incurred under this section, the state or the authority shall have a lien on any vessel used or operated in violation of this chapter which shall be enforced as provided in RCW 60.36.050.

(f) Public or private entities that are recipients or potential recipients of ecology grants, whether for air quality related activities or not, may have such grants rescinded or withheld by ecology for failure to comply with provisions of this chapter.

(g) In addition to other penalties provided by this chapter, persons knowingly under-reporting emissions or other information used to set fees, or persons required to pay emission or permit fees who are more than ninety days late with such payments may be subject to a penalty equal to three times the amount of the original fee owed.

**(3) Assurance of discontinuance.** Personnel of ecology or an authority may accept an assurance of discontinuance of any act or practice deemed in violation of this chapter. Any such assurance shall specify a time limit during which discontinuance is to be accomplished. Failure to perform the terms of any such assurance shall constitute prima facie proof of a violation of this chapter or any order issued thereunder which make the alleged act or practice unlawful for the purpose of securing an injunction or other relief from the superior court.

**(4) Restraining orders, injunctions.** Whenever any person has engaged in, or is about to engage in, any acts or practices which constitute or will constitute a violation of any provision of this chapter, the director, after notice to such person and an opportunity to comply, may petition the superior court of the county wherein the violation is alleged to be occurring or to have occurred for a restraining order or a temporary or permanent injunction or another appropriate order.

**(5) Emergency episodes.** Ecology may issue such orders as authorized by chapter 173-435 WAC via chapter 70.94 RCW, whenever an air pollution episode forecast is declared.

**(6) Compliance orders.** Ecology may issue a compliance order in conjunction with a notice of violation. The order shall require the recipient of the notice of violation either to take necessary corrective action or to submit a plan for corrective action and a date when such action will be initiated.

*State adopted: 3/20/93; EPA effective: 6/2/95*

### **173-400-240 CRIMINAL PENALTIES.**

Persons in violation of Title 173 WAC may be subject to the provisions of RCW 70.94.430.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-400-250 APPEALS.**

Decisions and orders of ecology or an authority may be appealed to the pollution control hearings board pursuant to chapter 43.21B RCW and chapter 371-08 WAC.

*State adopted: 9/20/93; EPA effective: 6/2/95*

### **173-400-260 CONFLICT OF INTEREST**

All board members and officials acting or voting on decisions affecting air pollution sources, must comply with the Federal Clean Air Act, as it pertains to conflict of interest, and 40 CFR 103(d) which is incorporated by reference.

*State adopted: 3/22/91; EPA effective: 6/2/95*

### **173-405-012 STATEMENT OF PURPOSE.**

These rules are enacted under the provisions of the Washington Clean Air Act as amended (RCW 70.94.395) to:

(1) Assume state jurisdiction over emissions from kraft pulping mills to provide for the systematic control of air pollution in this industry and for the proper development of the state's natural resources; and

(2) Establish technically feasible and reasonably attainable standards and revise such standards as new information and better technology are developed and become available.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-021 DEFINITIONS**

The definitions of terms contained in chapter 173-400 WAC are incorporated into this chapter 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) "Kraft mill" means any manufacturing facility which uses an alkaline solution containing sodium

hydroxide and/or sodium sulfide, and any other chemical pulping facility, except those covered by chapter 173-410 WAC, to produce pulp and/or paper products from wood fibers. For the purposes of this regulation "kraft mill" is equivalent to "source."

(2) "Noncondensibles" means gases and vapors from the digestion and evaporation processes of a mill that are not condensed with the equipment used in those processes.

(3) "Recovery furnace stack" means the stack from which the products of combustion from the recovery furnace are emitted to the ambient air.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-040 EMISSION STANDARDS**

In addition to the general applicability of chapters 173-400 and 173-490 WAC to all emission sources; no kraft pulp mill 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) Recovery furnaces.

(a) The particulate emissions from each recovery furnace stack shall not exceed 0.23 grams of particulate per dry cubic meter at standard conditions (0.10 grains/dscf) corrected to eight percent oxygen averaged over three one hour tests.

~~(b) The TRS emissions from each recovery furnace stack constructed before January 1, 1970, and for recovery furnaces that have direct contact evaporators, shall not exceed 17.5 ppm corrected to eight percent oxygen for a daily average.~~

~~(c) The TRS emissions from each recovery furnace constructed after January 1, 1970, which does not have a contact evaporator, shall not exceed 5.0 ppm corrected to eight percent oxygen for a daily average.~~

(2) Smelt dissolver tank vent. The particulate emissions from smelt dissolver tank vents shall not exceed 0.15 grams per kilogram (0.30 pounds per ton) of solids fired at the associated recovery furnace.

(3) Lime kilns.

(a) The particulate emission from each lime kiln stack shall not exceed 0.30 grams of particulate per dry cubic meter (0.13 grains/dscf) at standard conditions corrected to ten percent oxygen.

~~(b) The TRS emissions from any lime kiln stack shall not exceed eighty ppm expressed as hydrogen sulfide for more than two consecutive hours in any one day.~~

~~————(c) The average daily emission of TRS from any lime kiln stack shall not exceed fifty ppm. After January 1, 1985, TRS emissions from each lime kiln stack shall not exceed twenty ppm corrected to ten percent oxygen for a daily average.~~

~~(4) Other TRS emissions units. Noncondensibles from digesters, multiple-effect evaporators and condensate stripper system shall at all times be treated to reduce the emissions of TRS equal to the reduction achieved by thermal oxidation in a lime kiln. A backup treatment system or equivalent approved by ecology must be installed to assure continual treatment.~~

(5) Other particulate emissions units. The emission of particulates from emissions units other than kraft recovery furnaces, lime kilns, or smelt dissolving tank vents, shall not exceed the following maximums:

(a) 0.46 grams per dry cubic meter at standard conditions (0.2 grains/dscf) corrected to seven percent oxygen, for units which combust wood and wood residue to produce steam and which commenced construction prior to January 1, 1983.

(b) 0.12 grams per dry cubic meter at standard conditions (0.05 grains/dscf) corrected to seven percent oxygen, for units which combust fuel other than wood and wood residue to produce steam, and which commenced construction after January 1, 1983.

(c) 0.23 grams per dry cubic meter at standard conditions (0.1 grains/dscf) corrected to seven percent oxygen in the case of combustion units, for units not classified under (a) or (b) of this subsection.

(6) Opacity. No person shall cause or allow the emission of a plume from any kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than thirty-five percent for more than six consecutive minutes in any sixty minute period, except as described in WAC 173-405-040(7).

No person shall cause or allow the emission of a plume, from any emissions unit other than a kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than twenty percent for more than six consecutive minutes in any sixty minute period, except that these provisions do not apply when the emissions occur due to soot blowing/grate cleaning and the operator can demonstrate that the emissions will not exceed twenty percent opacity for more than fifteen minutes in any eight consecutive hours. The intent of this provision is to permit soot blowing and grate cleaning necessary to the operation of the boiler facility. This practice, except for testing and trouble shooting, is to be scheduled for the same approximate times each day and ecology shall be advised of the schedule.

There shall be no more than one violation notice issued in any sixty minute period.

These provisions (of WAC 173-405-040(6)) shall not apply when the presence of uncombined water is the only reason for the opacity of the plume to exceed the applicable maximum.

~~(7) Each mill may petition for, and ecology may establish by regulatory order, alternate opacity limits for a specific kraft recovery furnace or lime kiln, providing:~~

~~—— (a) The mill can demonstrate compliance, with all other applicable emission limits; and~~

~~—— (b) Best practicable operation and maintenance procedures, as approved by ecology, are continuously employed.~~

~~(8) Any person electing to apply for exceptions per the provisions of WAC 173-405-040(7) shall submit a program acceptable to ecology. The program shall include the following information: The amount and concentration of suspended particulate material emitted during best practicable operating procedures, opacity recorded at such emission level, the type of equipment and procedures which will be used to demonstrate compliance and the time required for installation of the equipment.~~

~~(9) The opacity provisions of this chapter shall apply until an application is received by ecology, petitioning for a revised limit as allowed by WAC 173-405-040(7). After a petition is received, enforcement of the opacity provisions will be stayed until the application is rejected or a new limit is established.~~

**(10) Operation and maintenance.** At all times, including periods of abnormal operation and upset conditions, owners and operators shall, to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practice. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to ecology which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

**(11) SO<sub>2</sub>.**

**(a)** The emission of sulfur dioxide from any recovery furnace or lime kiln shall not exceed five hundred ppm for an hourly average, corrected to eight percent oxygen for a recovery furnace or to ten percent oxygen for a lime kiln.

**(b)** The emission of sulfur dioxide from any emissions unit other than a recovery furnace or lime kiln shall not exceed one thousand ppm for an hourly average, corrected to seven percent oxygen for combustion units.

**(12) Source testing.** To demonstrate compliance with this chapter, the provisions of WAC 173-400-

105 shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-045 CREDITABLE STACK HEIGHT AND DISPERSION TECHNIQUES.**

The provisions of WAC 173-400-200 shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-061 MORE RESTRICTIVE EMISSION STANDARDS.**

Ecology may establish more restrictive emission standards for new mills or for mills expanding existing facilities pursuant to WAC 173-400-110.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-072 MONITORING REQUIREMENTS.**

Each mill shall conduct routine monitoring of emissions in accordance with a program that has been approved by ecology. Results of the monitoring shall be reported within fifteen days of the end of each calendar month and shall include data as follows:

(1) Particulate: The results of particulate measurements made on each source during the month.

~~(2) TRS:~~

~~—— (a) The average TRS concentration expressed in units of the standard for each recovery furnace and lime kiln stack.~~

~~—— (b) The date, time and concentration of TRS for each TRS emissions violation and the total numbers of hours that exceed the standard.~~

(3) Opacity or other continuous monitor:

(a) The date and time of opacity in excess of the standard.

(b) If equipment for continuous monitoring of opacity is not available, continuous monitoring of operating parameters may be required by a regulatory order as an alternate. If an alternate is approved, the date and time of each occurrence in excess of the regulatory order must be reported.

(4) Production: The average daily production of air-dried unbleached pulp.

(5) Other data: Each kraft mill shall furnish, upon request of ecology, such other pertinent data

required to evaluate the mill's emissions or emission control program.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-077 REPORT OF STARTUP, SHUTDOWN, BREAKDOWN OR UPSET CONDITIONS.**

The provisions of WAC 173-400-105(5) shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-078 EMISSION INVENTORY.**

The provisions of WAC 173-400-105(1) shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-086 NEW SOURCE REVIEW (NSR).**

The provisions of WAC 173-400-110 shall apply to all new sources and emissions units to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-087 PREVENTION OF SIGNIFICANT DETERIORATION (PSD).**

The provisions of WAC 173-400-141 shall apply to all new major sources and major modifications to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-405-091 SPECIAL STUDIES.**

Ecology may require such additional special studies relevant to process emissions and establish completion dates as it determines necessary.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **WAC 173-410-012 STATEMENT OF PURPOSE.**

These rules are enacted under the provisions of the Washington Clean Air Act as amended (RCW 70.94.395) to:

(1) Assume state jurisdiction over emissions from sulfite pulping mills to provide for the systematic control of air pollution in this industry and for the proper development of the state's natural resources; and

(2) Establish technically feasible and reasonably attainable standards and revise such standards as new information and better technology are developed and become available.

## **WAC 173-410-021 DEFINITIONS.**

The definitions of terms contained in chapter 173-400 WAC are incorporated into this chapter 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) "Acid plant" means the facility in which the cooking liquor is either manufactured or fortified when not associated with a recovery system.
- (2) "Average daily emission" means total weight of an air contaminant emitted in each month, divided by the number of days of production that month.
- (3) "Average daily production" means air dried tons of unbleached pulp produced in a month, divided by the number of days of production in that month.
- (4) "Blow system" includes the storage chest, tank or pit to which the digester pulp is discharged following the cook.
- (5) "Recovery system" means the process by which all or part of the cooking chemicals may be recovered, and cooking liquor regenerated from spent cooking liquor, including evaporation, combustion, dissolving, fortification, storage facilities, and emission control equipment associated with the recovery cycle.
- (6) "Sulfite pulping mill" means any manufacturing facility which uses a cooking liquor consisting of sulfurous acid, a sulfite or bisulfite salt alone or in any combination, with or without additional mechanical refining or delignification to produce pulp, pulp products or cellulose from wood fibers. For the purposes of this regulation "sulfite pulping mill" is equivalent to "source."

## **WAC 173-410-040 EMISSION STANDARDS.**

In addition to the general applicability of chapters 173-400 and 173-490 WAC to all emission sources; no sulfite pulping mill 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) Sulfur dioxide.
  - (a) The total average daily emissions from a sulfite pulping mill, or a portion of a sulfite pulping mill which practices incineration of the spent sulfite liquor, shall not exceed ten grams of sulfur

dioxide per kilogram (twenty pounds per ton) of air dried, unbleached pulp produced.

**(b)** The total average daily emissions from a sulfite pulping mill, or a portion of a sulfite pulping mill that does not incinerate the spent sulfite liquor, shall not exceed two grams of sulfur dioxide per kilogram (four pounds per ton) of air dried, unbleached pulp produced.

**(c)** The blow system emissions shall not exceed 0.1 grams of sulfur dioxide per minute, on a fifteen minute average, per kilogram (0.2 pounds per ton) of air dried, unbleached pulp discharged from the digester.

**(d)** Emissions from the recovery system and acid plant shall not exceed 800 ppm of sulfur dioxide for any hourly average.

**(e)** Emissions from recovery systems constructed after January 24, 1972, shall not exceed 300 ppm of sulfur dioxide for any hourly average.

**(f)** Emissions from any emissions unit, other than a recovery system, a blow system or an acid plant, shall not exceed 1000 ppm of sulfur dioxide, corrected to seven percent oxygen in the case of combustion unit, for any hourly average.

**(2)** Particulate.

**(a)** Emissions of particulate from recovery systems constructed before January 24, 1972, shall not exceed 0.23 grams per dry cubic meter of exhaust at standard conditions (0.10 grains/dscf) corrected to eight percent oxygen.

**(b)** Emissions of particulate matter from recovery systems constructed after January 24, 1972, shall not exceed 0.14 grams per dry cubic meter of exhaust at standard conditions (0.06 grains/dscf) corrected to eight percent oxygen.

**(c)** The emission of particulates from emissions units other than acid plants or recovery systems shall not exceed the following maximums:

**(i)** 0.46 grams per dry cubic meter at standard conditions (0.2 grains/dscf) corrected to seven percent oxygen, for units which combust wood and wood residue to produce steam and which commenced construction prior to January 1, 1983.

**(ii)** 0.12 grams per dry cubic meter at standard conditions (0.05 grains/dscf) corrected to seven percent oxygen, for units which combust fuel other than wood and wood residue to produce steam, and which commenced construction after January 1, 1983.

(iii) 0.23 grams per dry cubic meter at standard conditions (0.1 grains/dscf) corrected to seven percent oxygen in the case of combustion units, for units not classified under (c) (i) or (ii) of this subsection.

(3) Opacity. No person shall cause or allow the emission of a plume from a recovery system or acid plant which has an average opacity greater than thirty-five percent, for more than six consecutive minutes in any sixty minute period, ~~except as allowed per RCW 70.94.331 (2)(c).~~

(4) Operation and maintenance. At all times, including periods of abnormal operations and upset conditions, owners and operators shall, to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practice. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to ecology which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

~~(5) No recovery system shall emit total reduced sulfur (TRS) gases in excess of 17.5 ppm for a daily average.~~

(6) More restrictive limits. Ecology may set more restrictive emissions limits than the specific limits set in this chapter (after public involvement and hearing), if there is reason to believe that the emission(s) from a source is a cause of public nuisance or a cause of violation of ambient air quality standards. The source shall, within ninety days from notification of the more restrictive limits, achieve operation that will prevent further recurrence of the nuisance or violation.

(7) Source testing. To demonstrate compliance with this chapter, the provisions of WAC 173-400-105 shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

#### **WAC 173-410-045 CREDITABLE STACK HEIGHT AND DISPERSION TECHNIQUES.**

The provisions of WAC 173-400-200 shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

#### **WAC 173-410-062 MONITORING REQUIREMENTS.**

Each mill shall conduct routine monitoring of emissions in accordance with a program that has been approved by ecology. Results of monitoring shall be reported within fifteen days of the end of each calendar month and shall include data as follows:

(1) For the recovery system and acid plant:

- (a) The average daily emissions of sulfur dioxide expressed as grams SO<sub>2</sub> per kilogram of air dried, unbleached pulp produced and the kilograms of SO<sub>2</sub> per day.
  - (b) Daily average concentration of sulfur dioxide.
  - (c) The date, time and concentration for each sulfur dioxide emission violation and the total number of hours that exceed the standard.
  - (d) The results of particulate tests conducted during the month.
- (2) For the blow system:
- (a) The grams of sulfur dioxide per minute, on a fifteen minute average, per kilogram of air dried, unbleached pulp discharged from the digester.
  - (b) The average daily production of air dried, unbleached pulp.
- (3) Each mill shall furnish, upon request of ecology, such other pertinent data required to evaluate the mill's emission control program.
- (4) All measurements shall be made in accordance with WAC 173-400-105.
- (5) Each mill shall be required to establish a program approved by ecology for continuous opacity monitoring to demonstrate compliance with WAC 173-410-040(3) and to report the results to ecology in a format and on a schedule set by regulatory order. If equipment for continuous monitoring of opacity is not available, continuous monitoring of operating parameters may be required as an alternate until continuous opacity monitoring equipment is available.

*State adopted: 3/22/91; EPA effective: 9/10/93*

**WAC 173-410-067 REPORT OF STARTUP, SHUTDOWN, BREAKDOWN OR UPSET CONDITIONS.**

The provisions of WAC 173-400-105(5) shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

**173-410-071 EMISSION INVENTORY.**

The provisions of WAC 173-400-105(1) shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

**173-410-086 NEW SOURCE REVIEW (NSR).**

The provisions of WAC 173-400-110 shall apply to all new sources and emissions units to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-410-087 PREVENTION OF SIGNIFICANT DETERIORATION (PSD).**

The provisions of WAC 173-400-141 shall apply to all new major sources and major modifications to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-410-100 SPECIAL STUDIES.**

Ecology may require such additional special studies relevant to process emissions and establish completion dates as it finds necessary.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-415-010 STATEMENT OF PURPOSE.**

These rules are enacted under the provisions of the Washington Clean Air Act as amended (RCW 70.94.395) to:

- (1) Assume state jurisdiction over emissions from primary aluminum reduction plants to provide for the systematic control of air pollution in this industry and for the proper development of the state's natural resources; and
- (2) Establish technically feasible and reasonably attainable standards and revise such standards as new information and better technology are developed and become available.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-415-020 DEFINITIONS.**

The definitions of terms contained in chapter 173-400 WAC are incorporated into this chapter 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) "Fluorides" means compounds of the element fluorine.~~
- ~~(2) "Forage" means grasses, pasture and other vegetation that is normally consumed or is intended to be consumed by livestock.~~
- (3) "Primary aluminum plant" or "primary aluminum reduction plant" or "primary aluminum mill" means a plant which produces aluminum metal from aluminum oxide (alumina). For the purposes of this

regulation "primary aluminum plant" is equivalent to "source."

(4) "Potline primary emission control system" means the equipment and procedures designed to collect and remove contaminants from the exhaust gases which are captured at the pot.

*State adopted: 3/22/91; EPA effective: 9/10/93*

### **173-415-030 EMISSION STANDARDS.**

In addition to the general applicability of chapters 173-400 and 173-490 WAC to all emission sources; all primary aluminum plants are required to meet the emission standards of this chapter. Specific emissions standards listed in this chapter will take precedence over the general emission standards of chapter 173-400 WAC.

~~(1) Fluoride:~~

~~(a) The emission of gaseous and particulate fluorides for all emissions units within a primary aluminum plant shall be restricted so that the plant's emissions will not cause ambient air and forage standards for fluorides established by chapter 173-481 WAC to be exceeded outside the property controlled by the aluminum plant owner(s) or operator(s).~~

~~(b) Each potline primary emission control system shall be designed so that the control of fluoride emissions will be equivalent to a total fluoride collection efficiency of: (i) Eighty percent for vertical stud soderberg and side worked prebake pots, (ii) eighty-five percent for horizontal stud soderberg pots, and (iii) ninety-five percent for center worked prebake pots. A primary emission control system with a design removal efficiency of at least ninety-five percent of the fluoride collected is required.~~

(2) Particulate. The total emission of particulate matter to the atmosphere from the reduction process (potlines) shall be reduced to the lowest level consistent with reasonably available control technology (RACT) for primary aluminum plants. The emission of solid particulate shall not exceed 7.5 grams per kilogram (fifteen pounds per ton) of aluminum produced on a daily basis.

(3) Visible emissions. Visible emissions from any emissions unit in a primary aluminum plant shall not exceed an average twenty percent opacity for more than six consecutive minutes in any sixty minute period. This provision shall not apply:

(a) When the presence of uncombined water is the only reason for the opacity of the plume to exceed twenty percent; or

~~(b) When an alternate opacity limit has been established under RCW 70.94.331 (2)(c).~~

(4) Fugitive emissions. Each primary aluminum plant shall use RACT to prevent fugitive emissions.

(5) Sulfur dioxide.

(a) Total emissions of sulfur dioxide from all emissions units shall not exceed thirty grams of sulfur dioxide per kilogram of aluminum produced on a monthly average (sixty pounds per ton). Those primary aluminum plants which were in excess of the above sulfur dioxide limit on January 1, 1978, will be allowed to emit at the January 1, 1978, level of emissions provided that the owners or operators did demonstrate to ecology by July 1, 1981, by use of modeling and ambient measurements, that the emissions will not cause the ambient standard to be exceeded, and that the limits are placed in a regulatory order(s).

(b) In no case shall any plant cause or permit the emission of a gas containing sulfur dioxide in excess of one thousand parts per million corrected to dry standard conditions for an hourly average.

(6) Operation and maintenance. At all times, including periods of abnormal operation and upset, owners and operators shall, to the extent practicable, maintain an affected facility, and operate and maintain air pollution control equipment associated with such facility in a manner consistent with good air pollution control practice. A plant may elect to establish a program, subject to the approval of ecology, for monitoring each potroom in order to demonstrate good operation and maintenance.

(7) Source testing. To demonstrate compliance with this chapter, the provisions of WAC 173-400-105 shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

#### **173-415-045 CREDITABLE STACK HEIGHT AND DISPERSION TECHNIQUES.**

The provisions of WAC 173-400-200 shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

#### **173-415-050 NEW SOURCE REVIEW (NSR).**

The provisions of WAC 173-400-110 shall apply to all new sources and emissions units to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

#### **173-415-051 PREVENTION OF SIGNIFICANT DETERIORATION (PSD).**

The provisions of WAC 173-400-141 shall apply to all new major sources and major modifications to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

## **173-415-060 MONITORING AND REPORTING.**

(1) Each primary aluminum plant shall conduct routine monitoring of emissions, ambient air, and forage in accordance with a program that has been approved by ecology. Results of monitoring shall be reported within thirty days of the end of each calendar month and shall include data as follows:

~~(a) Ambient air: Twenty-four hour concentrations of gaseous fluoride in the ambient air expressed in micrograms of hydrogen fluoride per cubic meter of ambient air.~~

~~(b) Forage: Concentrations of fluoride in forage expressed in parts per million of fluoride on a dried weight basis.~~

(c) Particulate emissions: Results of all emission sampling conducted during the month for particulates, expressed in grains per standard dry cubic foot, in pounds per day, and in pounds per ton of aluminum produced. The method of calculating pounds per ton shall be as specified in the approved monitoring programs. Particulate data shall be reported as total particulates and percentage of fluoride ion contained therein.

Compliance with WAC 173-415-030(2) shall be determined by measurements of emissions from the potline primary control system plus measurements of emissions from the roof monitor.

~~(d) Fluoride emissions: Results of all sampling conducted during the month for fluoride emissions. All results shall be expressed as hydrogen fluoride in parts per million on a volume basis and pounds per day of hydrogen fluoride.~~

(e) Other emission and ambient air data as specified in the approved monitoring program.

(2) Other data: For ecology to evaluate a plant's emissions or emission control program, each primary aluminum plant shall furnish other data requested by ecology.

(3) Change in raw materials or fuel: Any change or series of changes in raw material or fuel which results in a cumulative increase in emissions of sulfur dioxide of five hundred tons per year or more over that stated in the 1979 inventory required by WAC 173-415-080 shall require the submittal of sufficient information to ecology so that the effect upon ambient concentrations of sulfur dioxide can be determined. Ecology may issue regulatory orders requiring controls to reduce the effect of such increases.

*State adopted: 3/22/91; EPA effective: 9/10/93*

## **173-415-070 REPORT OF STARTUP, SHUTDOWN, BREAKDOWN OR UPSET CONDITIONS.**

The provisions of WAC 173-400-105(5) shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*

**173-415-080 EMISSION INVENTORY.**

The provisions of WAC 173-400-105(1) shall apply to all sources to which this chapter is applicable.

*State adopted: 3/22/91; EPA effective: 9/10/93*