

TABLE 1 -- REGULATIONS APPROVED STATEWIDE

[Not applicable in Indian reservations (excluding non-trust land within the exterior boundaries of the Puyallup Indian Reservation) and any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction]

WAC 173-405 KRAFT PULPING MILLS

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 effective: 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 effective: 3/22/91; EPA effective: 9/10/93

173-405-040 Emissions 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) SO₂.

(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 effective: 3/22/91; EPA effective: 9/10/93

173-405-045 Creditable Stack Height & Dispersion Techniques.

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

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

WAC 173-410 SULFITE PULPING MILLS

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.

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

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."

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

WAC 173-410-040 Emissions 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 effective: 3/22/91; EPA effective: 9/10/93

WAC 173-410-045 Creditable Stack Height & Dispersion Techniques.

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

State effective: 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 SO₂ per kilogram of air dried, unbleached pulp produced and the kilograms of SO₂ 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 effective: 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 effective: 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 effective: 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 effective: 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 effective: 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 effective: 3/22/91; EPA effective: 9/10/93

WAC 173-415 PRIMARY ALUMINUM PLANTS

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 effective: 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 effective: 3/22/91; EPA effective: 9/10/93

173-415-030 Emissions 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 effective: 3/22/91; EPA effective: 9/10/93

173-415-045 Creditable Stack Height & Dispersion Techniques.

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

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

WAC 173-422 MOTOR VEHICLE EMISSION INSPECTION

173-422-010 Purpose.

This chapter implements the Washington Clean Air Act, chapter 70.94 RCW, as supplemented by the motor vehicle emission inspection provisions codified as chapter 70.120 RCW.

Gasoline motor vehicles are the primary emitters of carbon monoxide and emit significant quantities of hydrocarbons and oxides of nitrogen. Diesel motor vehicles are emitters primarily of particulates, hydrocarbons, and oxides of nitrogen. Emission controls required by the federal government are designed to reduce motor vehicle related air pollution. However, the effectiveness of these controls is substantially reduced through deterioration, maladjustment and tampering. Motor vehicle emission inspection serves to identify high polluting vehicles and vehicles with tampered or missing emission controls and to reduce their emissions, when such reduction can be accomplished at reasonable cost. These rules establish the emission standards, testing procedures, and associated activities necessary to implement a program of air pollution prevention and control resulting from motor vehicle emission inspections.

State effective: 6/3/93; EPA effective: 9/25/96

173-422-020 Definitions.

Unless a different meaning is clearly indicated by context, the following definitions will apply:

- (1) "Appropriate repair" means the diagnosis of the cause(s) of an emission test failure and/or the repair of one or more of these causes. An appropriate repair should reduce at least one emission test reading or diagnose and/or repair an emission problem identified by the on-board diagnostic (OBD) system.
- (2) "Certificate of acceptance" means an official form, issued by someone authorized by the department, which certifies that the following conditions have been met:
 - (a) The vehicle failed an emission inspection; and
 - (b) The vehicle failed a reinspection; and
 - (c) All primary emission control components installed by the vehicle manufacturer, or its appropriate replacement, are installed and operative; and

(d) The recipient has provided original receipts listing and providing the cost of each appropriate repair performed by an authorized emission specialist between the initial and last inspection; and

(e) The total cost of the appropriate repairs must equal or exceed:

Pre-1981 vehicles \$100

1981 and newer \$150

(3) "Certificate of compliance" means an official form, issued by someone authorized by the department, which certifies that the recipient's vehicle on inspection complied with applicable emission inspection standards.

(4) "Authorized emission specialist" means an individual who has been issued a certificate of instruction by the department as authorized in RCW 70.120.020 (2)(a) and has maintained the certification by meeting requirements of WAC 173- 422-190(2).

(5) "Dealer" means a motor vehicle dealer, as defined in chapter 46.70 RCW as amended, that is licensed pursuant to chapter 46.70 RCW.

(6) "Department" means the department of ecology.

(7) "Emission contributing area" means a land area within whose boundaries are registered motor vehicles that contribute significantly to the violation of motor vehicle related air quality standards in a noncompliance area.

(8) "Fleet" means a group of fifteen or more motor vehicles owned or leased concurrently by one owner assigned a fleet identifier code by the department of licensing.

(9) "Gross vehicle weight rating (GVWR)" means the manufacturer stated gross vehicle weight rating.

(10) "Motor vehicle" means any self-propelled vehicle required to be licensed pursuant to chapter 46.16 RCW.

(11) "Noncompliance area" means a land area within whose boundaries any air quality standard for any air contaminant from the emissions of motor vehicles will probably be exceeded.

(12) "PPM" means parts per million by volume.

(13) "Primary emission control components" means the components of the vehicle installed by the manufacturer for the purpose of reducing emissions or its replacement or modification which is acceptable to the United States Environmental Protection Agency. These components are, but are not limited to, the catalytic converter or thermal reactor, the air injection system components, the thermostatic air cleaner, the exhaust gas recirculation system components, the evaporative emission system components including the gas cap, the positive crankcase ventilation system

components and the electronic control unit components that control the air/fuel mixture and/or ignition timing including all related sensors.

The primary emission control components of a vehicle with a different engine than the engine originally installed shall be an Environmental Protection Agency certified engine/emission control combination for that vehicle or its newer model.

State effective: 7/4/02; EPA effective: 9/10/15

173-422-030 Vehicle Emission Inspection Requirement.

All motor vehicles, not specifically exempted by WAC 173-422-170, which are registered or reregistered within the boundaries of an emission contributing area, as specified in WAC 173-422-050, are subject to the vehicle emission inspection requirements of this chapter. In addition, the department may require an emission inspection of a motor vehicle, except military tactical vehicles, operated for more than sixty days a year on a federal installation located within an emission contributing area, or a vehicle garaged at a location within an emission contributing area, or a vehicle which has previously passed an emission inspection but has been identified using on road testing as likely to no longer comply with the inspection standards. Neither the department of licensing, county auditors nor subagents appointed under RCW 46.01.140 may change the registered owner or may issue or renew a motor vehicle license for any vehicle registered in an emission contributing area, as that area is established under RCW 70.120.150, unless the application for issuance or renewal is: (1) Accompanied by a valid certificate of compliance issued pursuant to RCW 70.120.080 or 70.120.170 or a valid certificate of acceptance issued pursuant to RCW 70.120.070; or (2) exempted from this requirement pursuant to RCW 46.16.015(2). Certificates must have a date of validation which is within twelve months of the assigned license renewal date.

State effective: 7/4/02; EPA effective: 9/10/15

173-422-031 Vehicle Emission Inspection Schedules.

(1) Vehicles defined in RCW 46.16.015(2) or WAC 173-422-170 are exempt from emission inspections. Vehicles five through twenty- five years old, other than state and local government vehicles, shall be inspected every other year as described in the table below. This inspection schedule does not apply to vehicles that have already been issued a certificate of compliance or a certificate of acceptance within twelve months of the assigned license renewal date.

Year Model Year of Vehicles Needing Inspection

2002	1978, 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1997
2003	1979, 1981, 1983, 1985, 1987, 1989, 1991, 1993, 1995, 1996, 1998
2004	1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1997, 1999

2005	1981, 1983, 1985, 1987, 1989, 1991, 1993, 1995, 1996, 1998, 2000
2006	1982, 1984, 1986, 1988, 1990, 1992, 1994, 1997, 1999, 2001
2007	1983, 1985, 1987, 1989, 1991, 1993, 1995, 1996, 1998, 2000, 2002
2008	1984, 1986, 1988, 1990, 1992, 1994, 1997, 1999, 2001, 2003
2009	1985, 1987, 1989, 1991, 1993, 1995, 1996, 1998, 2000, 2002, 2004
2010	1986, 1988, 1990, 1992, 1994, 1997, 1999, 2001, 2003, 2005
2011	1987, 1989, 1991, 1993, 1995, 1996, 1998, 2000, 2002, 2004, 2006
2012	1988, 1990, 1992, 1994, 1997, 1999, 2001, 2003, 2005, 2007

(2) State and local government vehicles five through twenty-five years old shall be inspected yearly as described in the table below.

Year Model Year of Vehicles Needing Inspection

2002	1977 through 1997
2003	1978 through 1998
2004	1979 through 1999
2005	1980 through 2000
2006	1981 through 2001
2007	1982 through 2002
2008	1983 through 2003
2009	1984 through 2004
2010	1985 through 2005
2011	1986 through 2006
2012	1987 through 2007

State effective: 7/4/02; EPA effective: 9/10/15

173-422-040 Noncompliance areas.

The Following Areas Are Designated Noncompliance Areas For The Air Contaminants Specified: Carbon Monoxide

- (1) The City of Seattle.
- (2) The City of Bellevue.
- (3) The City of Spokane.
- (4) The City of Tacoma.
- (5) The City of Vancouver.
- (6) The City of Everett.

State effective: 6/3/93; EPA effective: 9/25/96

173-422-050 Emission Contributing Areas.

Emission contributing areas within which the motor vehicle emission inspection program applies are designated by the following United States Postal Service ZIP codes as of September 1, 1994, set forth below:

I. PUGET SOUND REGION

98001	98036	98083
98002	98037	98092
98003	98038	98093
98004	98039	98101 thru 98199 inclusive except 98110
98005	98040	98201 thru 98208
98006	98041	98258
98007	98042	98270
98008	98043	98271
98009	98046	98275
98011	98047	98290
98012	98052	98291
98015	98053	98327
98020	98054	98332
98021	98055	98335
98023	98056	98338
98025	98057	98344
98026	98058	98352
98027	98059	98354
98028	98062	98371 thru 98374

98031	98063	98387
98032	98064	98388
98033	98071	98390
98034	98072	98401 thru 98499
98035	98073	

II. SPOKANE REGION

- 99001
- 99005
- 99014
- 99016
- 99019
- 99021
- 99025
- 99027
- 99037
- 99201 thru 99299

III. VANCOUVER REGION

- 98604 except north of N.E. 279th Street
- 98606
- 98607
- 98629 except east of N.E. 50th Avenue
- 98642
- 98660 thru 98668
- 98761 except Skamania County
- 98682 - 86

State effective: 11/9/96; EPA effective: 6/18/97

173-422-060 Gasoline Vehicle Emission Standards.

Gasoline motor vehicles subject to this chapter shall:

(1) When tested using the exhaust emission testing procedures described in (II) Two Speed Idle Test of Appendix B Test Procedures of Subpart S-Inspection/Maintenance Program Requirements of Part 51 of Chapter 1, Title 40 of the Code of Federal Regulations adopted November 1, 1992, meet the applicable exhaust emission standards from the following table during both the idle and higher speed mode.

Two Speed Idle Test Exhaust Emission Standards

Model Year	CO(%) *	HC (ppm) *
80 and earlier	3.0	600
81 and newer (0-8500 GVWR)	1.2	220
81 and newer (Greater than 8500 GVWR)	3.0	400

*Carbon monoxide (CO) and hydrocarbons (HC), measured as a percentage (%) or parts per million (ppm) of the exhaust volume.

(2) When tested using the acceleration simulation mode (ASM) procedure specified in WAC 173-422-070 meet the following standards during that mode and the applicable standard from WAC-173-422-060(1) during the idle mode.

ASM Mode Exhaust Emission Standards

Model Year Weight (lbs.)	CO(%) *	HC (ppm) *
1980 and earlier model year cars and trucks (0-8500 lbs. GVWR)		
1750	4.2	400
1875	4.0	380
2000	3.8	350
2125	3.6	340
2250	3.4	320
2375	3.2	300
2500	3.0	290
2625	2.9	270
2750	2.8	260
2875	2.7	250
3000	2.6	240
3125	2.5	230
3250	2.4	220
3375	2.3	220
3500	2.2	210

3625	2.1	200
cars 3750 & greater	2.1	200
trucks 3750 & greater	2.5	300
1981 & later model year cars and trucks (0-8500 lbs. GVWR)		
1750	1.8	250
1875	1.7	240
2000	1.6	220
2125	1.5	210
2250	1.5	200
2375	1.4	190
2500	1.3	180
2625	1.3	180
2750	1.2	170
2875	1.2	160
3000	1.1	160
3125	1.1	150
3250	1.0	150
3375	1.0	150
3500	1.0	150
3625	1.0	150
cars 3750 & greater	1.0	150
trucks 3750 & greater	1.5	200

*Carbon monoxide (CO) and hydrocarbons (HC), measured as a percentage (%) or parts per million (ppm) of the exhaust volume.

(3) The gasoline filler cap must not leak more than 60 cubic centimeters per minute at a pressure of 30 inches of water.

(4) Standardized on-board diagnostic (OBD) systems (also known as OBDII) were required by Environmental Protection Agency starting with 1996 model gasoline vehicle cars and light trucks. If a 1996 or newer model vehicle is equipped with an Environmental Protection Agency certified on-board diagnostic (OBD) system, the information stored in the on-board computer must indicate that all emission-related functional checks have been completed except for 1996 to 2000 model year vehicles that can have up to two readiness monitors not set to ready, or 2001 or newer model year vehicles that have one readiness monitor not set to ready, and no malfunctions detected that would command the malfunction indicator light to be illuminated.

State effective: 7/4/02; EPA effective: 9/10/15

173-422-065 Diesel Vehicle Exhaust Emission Standards.

(1) Diesel motor vehicles subject to this chapter shall meet the following opacity standards when using the snap-acceleration test procedures specified in WAC 173-422-075.

Model Year	Opacity (%)
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1991 and earlier	55
1992 and later	40

(2) When using the Acceleration Simulation Mode (ASM) test procedures specified in WAC 173-422-070 adapted for the testing of diesel cars or light trucks (0-8500 pounds gross vehicle weight rating), these vehicles shall meet a 20% opacity standard.

State effective: 7/4/02; EPA effective: 9/10/15

173-422-070 Gasoline Vehicle Exhaust Emission Testing Procedures.

All persons certified by, or under contract to, the department to conduct motor vehicle emission inspections shall use the exhaust emission testing procedures described in (II) Two Speed Idle Test of Appendix B-Test Procedures of Subpart S-Inspection/Maintenance Program Requirements of Part 51 of chapter 1, Title 40 of the Code of Federal Regulations adopted November 1, 1992, except that the department may require that the following Acceleration Simulation Mode (ASM) test procedure replace the 2500 rpm mode of the Two Speed Idle Test. Equivalent procedures may be approved by the department.

Variations to the procedures specified may be established by the department for all or certain vehicles. Vehicles, not repaired as required by an emission recall for which owner notification was attempted after January 1, 1995, shall not be inspected until compliance with the recall is established.

Acceleration Simulation Mode (ASM)

1. Dynamometer Load: Set dynamometer horsepower load equal to [Vehicle Weight (lbs.) + 300]/300. An Environmental Protection Agency specified loading may also be used.
2. Vehicle Gear Selection: Vehicles with automatic transmissions use Drive (not Overdrive), vehicles with manual transmissions use second gear. Shift to the next higher gear if the engine speed exceeds 2500 revolutions per minute.
3. Vehicle Speed: Set vehicle speed at 25 miles per hour (mph) $1.5 \pm$ mph.
4. Pass or Fail Determinations: Once the vehicle has been operating at 25 mph for 15 seconds, begin measuring exhaust HC, CO, and CO₂, each second. The reading for pass or fail determinations is the running average of five measurements. When a final pass or fail determination is made, this mode will be stopped and the final readings recorded.
5. Fast Pass: Once HC and CO readings are equal to or less than the HC and CO standards and are within 20 ppm HC and 0.20% CO of each other.

6. Fast Fail: The vehicle will fail after 15 or more seconds of measurements when the HC reading exceeds 1800 ppm, or the CO reading exceeds 9.0 percent.

7. Full Term Pass/Fail: The vehicle will pass or fail the ASM mode after 90 seconds of measurements unless emission readings are declining at a rate that indicates that a failing vehicle will pass within the next 30 seconds. Then the failing vehicle will receive up to an additional 30 seconds of measurements before the final pass/fail determination is made.

State effective: 7/4/02; EPA effective: 9/10/15

173-422-075 Diesel Vehicle Inspection Procedure.

Diesel vehicles shall be tested using the following snap- acceleration test procedure unless the department requires the Acceleration Simulation Mode (ASM) test procedure specified in WAC 173-422-070 adapted for the testing of diesel cars or light trucks (0-8500 pounds gross vehicle weight rating) be used in lieu of the snap-acceleration test procedure.

Prior to beginning the test verify the engine is within its normal operating temperature range, all vehicle accessories including air conditioning are off, the parking brake and an engine brake or retarder is off, the transmission is in neutral (and clutch released if manual transmission).

(1) The vehicle shall receive at least three preliminary snap-acceleration test cycles until consistent engine operation is achieved. The snap-acceleration test cycle consists of moving the accelerator pedal from normal idle as rapidly as possible to the full power position, then fully releasing the throttle so the engine returns to idle.

(2) Then perform additional snap-acceleration test cycles while measuring the smoke opacity with an opacity meter which meets the requirements specified in WAC 173-422-095. The engine must be allowed to remain at idle for at least ten seconds between snap-acceleration test cycles. If a subsequent snap- acceleration cycle is not begun within 45 seconds, the entire sequence of snap-acceleration test cycles must be restarted. The three preliminary snap-acceleration test cycles described in (1) need not be repeated.

(3) Record peak opacity readings from each snap-acceleration test cycle up to nine times if necessary to obtain a peak opacity reading and two consecutive peak readings that are equal to or less than the standard established in WAC 173-422-065.

If a peak opacity reading and two consecutive peak readings that are equal to or less than the standard established in WAC 173-422-065 are not obtained, the vehicle fails the test.

(4) Steps 2 and 3 are repeated for any additional exhaust pipes.

State effective: 7/4/02; EPA effective: 9/10/15

173-422-090 Exhaust Gas Analyzer Specifications.

Only exhaust gas analyzers meeting the specifications contained in (I) Steady-State Exhaust Analysis System of Appendix D-Steady-State Short Test Equipment of Subpart S-Inspection/Maintenance Program Requirements of Part 51 of chapter 1, Title 40 of the Code of Federal Regulations adopted November 1, 1992, at the time of certification testing may be used for certification testing, unless equivalent specifications have been approved by the department.

State effective: 3/31/95; EPA effective: 9/25/96

WAC 173-422-095 Exhaust Opacity Testing Equipment.

The exhaust opacity measurement shall be conducted using an opacity meter approved by the department. The opacity meter shall:

- (1) Automatically calibrates itself before each test.
- (2) Provide for continuous measurement of exhaust opacity unaffected by rain or wind.

State effective: 3/11/94; EPA effective: 9/25/96

173-422-100 Testing Equipment Maintenance and Calibration.

(1) Unless alternative procedures have been approved or required by the department all equipment used in the inspection shall be calibrated and maintained according to the manufacturer's specifications and recommendations. Complete logs as approved by the department shall be kept for maintenance, repair, and calibration.

(2) The procedures for equipment maintenance and calibration procedures described in (I) Steady-State Test Equipment of Appendix A-Calibrations, Adjustments and Quality Control of Subpart S-Inspection/Maintenance Program Requirements of Part 51 of chapter 1, Title 40 of the Code of Federal Regulations adopted November 1, 1992, shall be followed by all testing facilities unless equivalent procedures have been approved by the department.

State effective: 3/31/95; EPA effective: 9/25/96

173-422-120 Quality Assurance.

The department, or its designee, may monitor the operation of each authorized emission inspection/certification facility with unidentified or unannounced and unscheduled inspections to check the calibration and maintenance of the exhaust analyzers, test procedures, and records.

The department (or its designee) may immediately require the suspension of vehicle inspections/certifications in all or part by the inspection/certification facility if violations of this chapter are found during an audit of the inspection facility.

State effective: 3/31/94; EPA effective: 9/25/96

173-422-145 Fraudulent Certificates of Compliance/Acceptance.

- (1) (a) Obtaining or attempting to obtain a certificate of compliance by (i) providing false information or (ii) any fraudulent means; or

(b) Obtaining or attempting to obtain a certificate of acceptance (i) through the use of receipts or other documentation containing false information, or (ii) any fraudulent means shall be construed as a violation of these rules implementing chapter 70.94 RCW as supplemented by chapter 70.120 RCW.
- (2) Any person who commits such violation or who aids or abets another in committing the same shall be subject to a civil penalty not to exceed two hundred fifty dollars for each violation.
- (3) For the purposes of this section the term "expended" refers to the net actual cost to the vehicle owner in the purchase of repairs or parts derived after the amount of any rebate, discount or cash-return has been subtracted.
- (4) Any civil penalty imposed by the department hereunder shall be appealable to the pollution control hearing board as provided for in chapter 43.21B RCW.

State effective: 4/6/90; EPA effective: 9/25/96

173-422-160 Fleet and Diesel Owner Vehicle Testing Requirements.

The department may authorize emission inspections by fleet operators including government agencies and the owners of diesel motor vehicles with a gross vehicle weight rating in excess of 8500 pounds or by an automotive service or testing facility engaged by the vehicle owner for such activity. Authorizations to conduct emission tests and issue certificates of compliance under this section are limited to authorized fleet vehicles or diesel vehicles with a gross vehicle weight rating in excess of 8500 pounds.

- (1) All persons engaged in testing of gasoline fleet or diesel vehicles must comply with all applicable provisions of this chapter except as approved by the department.
- (2) All persons conducting tests for the purpose of issuing certificates for fleet or diesel vehicles shall be ecology authorized emission specialists.

(3) Legibly completed forms will constitute certificates of compliance for licensing purposes. Any person conducting testing under this section shall forward to the department within ten working days after the end of each month, a copy of each certificate of compliance issued during that month. Copies of each certificate of compliance shall be retained by the person issuing the certificate for at least two years from date of issuance. Alternative arrangements for providing and or storing this information using automated data storage devices may be approved or required by the department.

Forms must be purchased from the department in advance of issuance through payment of ~~twelve or less dollars~~ to the department for each certificate requested. Refunds or credit may be given for unused certificates returned to the department.

Payment for fleet forms is waived for state and local government fleets.

Test forms provided under this section are official documents. Persons receiving the forms from the department are accountable for each form provided.

Voided forms must be handled the same as certificates of compliance. One copy shall be sent to the department within ten days after the end of the month in which the form was voided and one copy shall be retained by the person accountable for the forms for at least two years after date of voiding. Refunds will not be made for voided forms.

(4) All persons authorized to conduct fleet or government vehicle inspections under this section shall be subject to performance audits and compliance inspections by the department, during normal business hours.

(5) Fleet vehicles may be inspected any time between their scheduled license renewals.

(6) Certificates of acceptance may not be issued under this section.

State adopted: 03/31/95; EPA effective: 9/10/15

WAC 173-422-170 Exemptions.

The following motor vehicles are exempt from the inspection requirement:

(1) Vehicles proportionally registered pursuant to chapter 46.85 RCW.

(2) New motor vehicles whose equitable or legal title has never been transferred to a person who in good faith purchases the vehicle for purposes other than resale; this does not exempt motor vehicles that are or have been leased.

(3) Motor vehicles that use propulsion units powered exclusively by electricity.

- (4) Motor-driven cycles as defined in chapter 46.04 RCW as amended.
- (5) Farm vehicles as defined in chapter 46.04 RCW as amended.
- (6) Vehicles not required to be licensed.
- (7) Mopeds as defined in chapter 46.04 RCW as amended.
- (8) Vehicles garaged and operated out of the emission contributing area.
- (9) Vehicles registered with the state but not for highway use.
- (10) Used vehicles at the time of sale by a Washington licensed motor vehicle dealer.
- (11) Motor vehicles fueled by propane, compressed natural gas, or liquid petroleum gas and so registered by the department of licensing.
- (12) Motor vehicles whose manufacturer or engine manufacturer provides information that the vehicle cannot meet emission standards because of its design. In lieu of exempting these vehicles, alternative standards and or inspection procedures may be established.
- (13) Motor vehicles whose registered ownership is being transferred between parents, siblings, grandparents, grandchildren, spouse or present co-owners and all transfers to the legal owner or a public agency.
- (14) Vehicles less than five years old.
- (15) Vehicles more than twenty-five years old.

State effective 12/2/00; EPA effective 6/13/2005

173-422-175 Fraudulent Exemptions.

- (1) Obtaining or attempting to obtain an exemption from emission inspection requirements by false statements, or failure to comply with the exemption procedures established to implement WAC 173-422-170, shall be construed as a violation of these rules implementing chapter 70.94 RCW as supplemented by chapter 70.120 RCW.
- (2) Any person who commits such violation or who aids or abets another in committing the same shall be subject to a civil penalty not to exceed two hundred fifty dollars for each violation.
- (3) Any civil penalty imposed by the department hereunder shall be appealable to the pollution control board as provided for in chapter 43.21B RCW.

State effective: 1/2/84; EPA effective: 9/25/96

173-422-190 Emission Specialist Authorization.

(1) To become an authorized emission specialist an individual shall:

- (a) Pass a course of study, approved by the department; and
- (b) Agree in writing to meet the requirements of subsection (2) of this section and all requirements of law or regulation regarding the serving of motor vehicle emission control systems or the motor vehicle emission inspection program.

(2) To maintain certification, an authorized emission specialist shall:

- (a) Successfully complete a department-approved course on emission repair within ninety days of being required to do so by the department unless an extension has been granted in writing by the department; and
- (b) Sign, including the specialist identification number, all receipts and other forms required by the department for emission repairs or adjustments performed. These receipts must be prenumbered, preprinted with the business's name and address and clearly itemize all appropriate repairs performed by the specialist; and
- (c) Record on all receipts:
 - (i) The vehicle's emission readings after appropriate repairs or the diagnosis and/or repair of problem(s) identified by the on-board diagnostic (OBD) during an emission inspection; and
 - (ii) A vehicle description including the license number and vehicle identification number (VIN); and
 - (iii) Any missing or inoperative primary emission control components; and
 - (iv) Any further recommended appropriate repairs; and
- (d) Not tamper with emission control systems, including adjusting an engine outside of the manufacturer's specifications (chapter 173-421 WAC); and
- (e) Not obtain or attempt to obtain a certificate of compliance, a certificate of acceptance (repair waiver) or an exemption from the inspection requirements by providing false information or by any fraudulent means (chapter 173-422 WAC); and

(f) Not aid or abet any individual in committing a violation of chapter 173-421 or 173-422 WAC.

(3) The certification of an authorized emission specialist may be revoked for a first violation of chapter 173-421 WAC or WAC 173-422-145, for a period of no more than one year, and may be permanently revoked for a second violation of chapter 173-421 or 173-422 WAC.

The certification of an authorized emission specialist may be temporarily revoked for violation of subsection (2) of this section and may be permanently revoked for continued willful violation of subsection (2) of this section.

An authorized emission specialist whose certification is revoked permanently or temporarily may appeal to the pollution control hearings board as provided for in RCW 43.21B.310.

(4) An authorized emission specialist whose certification has been temporarily revoked may reapply for certification twelve months after the date of revocation by applying to the department and meeting all requirements of subsection (1) of this section. An application for certification by a permanently revoked authorized emission specialist will be denied.

State effective: 7/4/02; EPA effective: 9/10/15

173-422-195 Listing of Authorized Emission Specialists.

(1) A list of authorized emission specialists will be available to the public. Specialists will be listed under one employer's business name when the business is approved for listing. The list will be updated by the department at least once every six months.

(2) The employer's business name and address will be listed by the department, when the employer agrees in writing to:

(a) Require the use of a properly maintained and correctly calibrated exhaust analyzer and a scan tool capable of communicating with the on-board diagnostic (OBD) systems installed on all U.S. Environmental Protection Agency certified 1996 model year and newer gasoline vehicles to diagnosis emission test failures and as a final check for emission repairs or adjustments;

(b) Have all emission repairs or adjustments performed by an authorized emission specialist;

(c) Require the authorized emission specialist to sign the customer's receipt for emission repairs or adjustments, and to record the vehicle's emission readings or which problem(s) identified by the on-board diagnostic (OBD) system during an emission inspection that have been diagnosed and/or repaired on the receipt after the work is completed;

(d) Require that all employees not aid or abet any person to tamper with emission control systems, including adjusting a vehicle outside of the manufacturer's specifications (chapter 173-421 WAC); and

(e) Require that all employees not aid or abet any person to obtain a fraudulent certificate of compliance, certificate of acceptance or an exemption from the inspection requirement (repair waiver) (chapter 173-422 WAC).

(f) Notify the department when an authorized emission specialist begins or ends employment.

(3) An employer may be removed from the authorized emission specialist list for a first violation of chapter 173-421 or 173-422 WAC for a period of no more than one year and may be permanently removed after a second violation of chapter 173-421 or 173-422 WAC. An employer may be temporarily removed from the authorized emission specialist list when failing to comply with the requirements of subsection (2) of this section and may be permanently revoked for continued and willful violation of subsection (2) of this section.

(4) An employer who has been temporarily removed from the authorized emission specialist list may reapply for listing twelve months after the date of removal from the listing by applying to the department and meeting all requirements of subsection (2) of this section. An application for listing from an employer permanently removed from the authorized emission specialist list will be denied.

(5) An employer who is removed from an authorized emission specialist list or denied listing in an authorized emission specialist list may appeal to the pollution control hearings board as provided for in RCW 43.21B.310.

(6) (a) An employer approved for listing may display the "state authorized emission specialist" sign available from the department. Any employer advertising or providing of information to the public based on the department's certification of an authorized emission specialist must be discontinued immediately when the employer no longer meets the requirements.

(b) An employer violating (a) of this subsection shall be subject to a civil penalty not to exceed two hundred fifty dollars for each violation.

(c) A civil penalty imposed by the department may be appealed to the pollution control hearings board as provided for in RCW 43.21B.310.

State effective: 7/4/02; EPA effective: 9/10/15

WAC 173-425 OPEN BURNING

173-425-010 Purpose.

This chapter promulgated under chapter 70.94 RCW, the Washington Clean Air Act, authorizes the department of ecology (ecology) to implement the provisions of that act. This rule establishes controls for open burning in the state in order to:

- (1) Minimize the impact of emissions from open burning;
- (2) Establish rules and procedures by which open burning may be conducted;
- (3) Encourage the development and specify the use of alternate methods of disposal of combustible waste materials.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-020 Applicability.

This chapter applies to open burning in all of the state, except to:

- (1) Burning of field and turf grasses grown for seed (governed by chapter 173-430 WAC).
- (2) Open burning within the boundaries of any activated air pollution control authority, where that authority is enforcing its own controls for open burning. Those controls shall not be less stringent than the requirements in this chapter.
- (3) Open burning for activities subject to the permit issuing authority of the department of natural resources, as established in RCW 70.94.660.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-030 Definitions.

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

- (1) **“Agricultural open burning”** means open burning conducted as part of any agricultural operation; including field fires over one-half acre but not including non-commercial yard and gardening activities connected with a residence.
- (2) **“Commercial open burning”** means open burning conducted as part of any “nonagricultural” commercial or business operation, including land clearing when the land is

cleared to change the use of the cleared land.

(3) **“Episode”** means a period when a forecast, alert warning, or emergency air pollution stage is declared, as defined in chapter 173-435-WAC.

(4) **“Forced air pit destructor”** means a unit consisting of a combustion pit and air blower designed to establish a curtain of high velocity air above the fire, so that the products of combustion are controlled by the air curtain before being emitted to the atmosphere.

(5) **“Impaired air quality”** means a condition declared by ecology or an authority whenever:

(a) Meteorological conditions are conducive to an accumulation of air contamination concurrent with:

(i) Total suspended particulate at an ambient level of one hundred twenty-five micrograms per cubic meter measured on a twenty-four-hour average; or

(ii) Particulate that is ten micron and smaller in diameter (PM10) at an ambient level of ninety micrograms per cubic meter measured on a twenty-four-hour average; or

(iii) Carbon monoxide at an ambient level of eight parts of contaminant per million parts of air by volume (ppm) measured on an eight-hour average; or

(b) Air quality reaches other limits established by ecology or an authority.

(5) **“Land clearing”** means removing structures, trees, shrubbery, or other natural vegetation from a plot of land.

(6) **No burn area** means an area designated by ecology as an area exceeding or threatening to exceed a state ambient air quality standard.

(7) **Open burning** means the combustion of material in an open fire or in any outdoor device which is not approved as an incinerator. Open burning means the same as open fire or outdoor burning.

(8) **Small fire** means a fire not more than four feet in diameter or more than three feet high.

(9) **Silvicultural operation** means the growing of trees for commercial or recreational use, including preparing the land, planting, growing, and harvesting of trees.

(10) **Treated wood** means wood of any species that has been chemically impregnated, coated, painted, or similarly modified.

(11) **Wood waste residue** means residue of a natural character such as trees, stumps,

shrubbery, or other natural vegetation arising from land clearing projects.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-036 Curtailment During Episodes or Impaired Air Quality.

(1) No open fire shall be ignited:

(a) Whenever ecology has declared an air pollution episode for the geographical area pursuant to chapter 173-435-WAC; or

(b) Whenever ecology or an authority has declared impaired air quality for the geographical area.

(2) A person responsible for an open fire at the time an episode or impaired air quality is declared shall extinguish that fire. Open fires conducted under the auspices of the department of natural resources for the purpose of burning forest slash pursuant to RCW 70.94-660 through 70.94.700 are to be extinguished by withholding new fuel and allowing the fire to burn down.

(3) Smoke visible from a small fire after a time period of three hours has elapsed from the time of declaration of the episode or impaired air quality shall constitute prima facie evidence of unlawful open burning.

(4) Smoke visible from a fire other than a small fire after a time period of ten hours has elapsed from the time of declaration of the episode or impaired air quality shall constitute prima facie evidence of unlawful open burning.

(5) Ecology, air authorities, health departments, fire departments, or local police forces having jurisdiction in the area may enforce compliance with the above open burning curtailment rules.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-045 Prohibited Materials

Except as provided in WAC 173-425-055, the following materials shall not be burned in any open fire:

(1) Garbage;

(2) Dead animals;

(3) Asphaltic products;

- (4) Waste petroleum products;
- (5) Paints;
- (6) Rubber products;
- (7) Plastics;
- (8) Treated Wood;
- (9) Any substance, other than natural vegetation, which normally emits dense smoke or obnoxious odors.

State effective: 1/3/89; EPA effective: 1/15/93

173-425-055 Exceptions.

Exceptions to this chapter shall be made only as follows:

- (1) When ordered by a duly authorized health officer and when authorized by ecology, the carcasses of diseased animals and other infested material may be burned, as required, to keep the infestation from spreading.
- (2) When ordered by a fire protection agency and when authorized by ecology, fires to dispose of materials presenting a danger to life, property, or public welfare may be burned, if no approved practical alternate method of disposal is available.
- (3) When approved by ecology or an authority, fires authorized by a fire protection agency as necessary for training may be burned.
- (4) When approved by ecology or an authority, fires set as part of a defined research project may be burned.
- (5) The following fires may be burned:
 - (a) Fires set for recreational, religious ceremony, food preparation, or social purposes;
 - (b) Small fires set for hand-warming purposes.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-065 Residential Open Burning.

(1) The premises of a residence include the real property immediately adjacent to the residence which is owned by the same person who owns the residence, and which is not devoted to agricultural use, other than yard and gardening activities connected with the residence.

(2) Small fires on the premises of a residence may be allowed to dispose of wood, paper, and natural vegetation, if;

(a) The wood and paper cannot be recycled and no feasible method of disposal is available;

(b) The burning will not violate any regulations of a local fire protection agency authorized to issue burning permits, or any local, county, or city ordinance or resolution; and

(c) Reasonable precautions are taken to prevent particulate emissions when paper is being burned.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-075 Commercial Open Burning.

(1) No commercial open burning shall be conducted without authorization from ecology or the authority. Open burning shall be authorized only if:

(a) The applicant shows that no approved practical alternate method of disposal is reasonably available; and

(b) The applicant shows that burning, as requested, is reasonably necessary to successfully carry out the enterprise the applicant is engaged in; and

(c) The burning will not violate any regulations of a local fire protection agency authorized to issue burning permits or any local, county, or city ordinance or resolution; and

(d) For commercial land clearing projects, refer to WAC 173-425-115.

(2) Considering population concentration and local conditions affecting air quality, ecology or the authority shall condition permits issued under this chapter. Permits shall be conditioned to minimize air pollution but are not limited to restricting the permissible hours of burning, restricting the size of fires, imposing requirements for good combustion practice, restricting burning to specified wind conditions or prohibiting all burning within areas having a general population density of one thousand or more persons per square mile.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-085 Agricultural Open Burning.

(1) Except as provided in subsection (2) of this section, agricultural open burning shall not be conducted without a permit from ecology or the authority. Permits shall be issued only if:

- (a) The applicant shows that burning, as requested, is reasonably necessary to successfully carry out the enterprise the applicant is engaged in;
- (b) The burning will not violate any regulations of a local fire protection agency authorized to issue burning permits or any local, county, or city ordinance or resolution; and,
- (c) The burning is necessary to control disease or insect infestation, and other measures are not available; or
- (d) The burning is necessary to develop physiological conditions conducive to increased crop yield, and other measures are not available.

In making a determination under (c) or (d) of this subsection, ecology will consult the county extension agent.

(2) Agricultural open burning may be conducted without a permit if:

- (a) None of subsection (1) of this section would be violated by the burning;
- (b) The burning will not violate any regulations of a local fire protection agency authorized to issue burning permits or any local, county, or city ordinance or resolution; and
- (c) The fire covers one acre or less and the burning is done to destroy harmful weeds or crop residue along fence rows, ditches, or in cultivated fields.

(3) Considering population concentration and local conditions affecting air quality, ecology or the authority shall condition permits issued under this chapter. Permits shall be conditioned to minimize air pollution. Conditions may include but are not limited to restricting the permissible hours of burning, restricting the size of fires, imposing requirements for good combustion practice, restricting burning to specified wind conditions or prohibiting all burning within areas having a general population density of one thousand or more persons square mile.

State effective: 10/18/90; effective: 1/15/93

173-425-095 No Burn Area Designation.

(1) Ecology shall designate as no burn areas those geographic areas where ambient air quality standards for particulate matter, as set forth in WAC 173-470-100, are being exceeded or are threatened to be exceeded. These designations shall be based on monitoring data gathered with monitoring equipment meeting EPA siting criteria.

(2) Ecology shall not designate “no burn” areas within the boundaries of any activated air pollution control authority, unless data exist to support that designation and the authority, after being notified, refused to make such a designation.

(3) The designation of any area as a “no burn” area by ecology or an authority shall be made by rule-making procedure and only after public hearing.

(4) Open burning shall not be conducted in any designated “no burn” area.

(5) A list of any “no burn” areas will be kept on file at ecology or the authority that has jurisdiction over the area(s).

State effective: 10/18/90; EPA effective: 1/15/93

173-425-100 Delegation of Agricultural Open Burning Program.

(1) When ecology finds that any county, which is outside the jurisdictional boundaries of an activated air pollution control authority, is capable of administering the permit program of WAC 173-425-085 and desires to do so, ecology may delegate the administration and authority of the program to the county.

(2) This delegation may be withdrawn if ecology finds that the county is not effectively administering and enforcing the permit program. Before withdrawing delegation, ecology shall give the county a chance to correct permit program deficiencies.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-115 Land Clearing Projects.

(1) To further the policies of this chapter and policies expressed in RCW 70.94.745, ecology has determined that alternate technology and methods exist for disposing of wood waste residue resulting from highway right of way land clearing projects or commercial land clearing projects which generate five hundred or more tons of wood waste residue (two thousand or more cubic yards). Further, these methods and technology are considered less harmful to the environment than open burning. These alternates are to be considered reasonably economical when the cost of disposal is nine hundred dollars or less per acre.

- (2)** These alternate methods and technology are:
- (a)** Chipping, with chips disposed of commercially or by on-site dispersal, haul to landfill, or other approved methods.
 - (b)** Hauling for disposal elsewhere, such as landfill, commercial use, or other approved methods.
 - (c)** On-site disposal in landfill.
 - (d)** On or off-site disposal by a waste combustion method capable of complying with the emission standards set forth in WAC 173-425-115(3).
 - (e)** Combustion, using a forced air pit destructor capable of complying with the emission standards set forth in WAC 173-425-115(3).
- (3)** As a result of the determination made in WAC 173-425-115(1) for disposing of wood waste residue that results from highway right of way land clearing projects which generate five hundred or more tons of wood waste residue (two thousand or more cubic yards) or from commercial land clearing projects which generate five hundred or more tons of wood waste residue (two thousand or more cubic yards):
- (a)** For on-site disposal no person shall cause or permit the emission, for more than 3 minutes in any one hour, of an air contaminant from any disposal method covered by WAC 173-425-115(2)(d) and (e) which, at the emission point or within a reasonable distance from the emission point, exceeds twenty percent opacity, except as follows:
 - (i)** The emission may exceed twenty percent opacity for the first fifteen minutes after a startup, for not more than two startups every twenty-four hours.
 - (ii)** When the person responsible for the source can show that the emission over twenty-percent opacity will not exceed fifteen minutes in any eight consecutive hours after startup.
 - (b)** No person shall cause or permit the emission of particulate matter from any source, which then becomes deposited beyond the property directly controlled by the owner or operator of the source in sufficient quantity to interfere unreasonably with using and enjoying the property where the material was deposited. (WAC 173-400-040(2))
 - (c)** No person shall cause or permit the emission of any air contaminant or water vapor from any source, including any air contaminant whose emission is not otherwise prohibited by this regulation, if the air contaminant or water vapor harms the health, safety, or welfare of any person or damages property or business. (WAC 173-400-040(5)).

(4) The alternates listed in WAC 173 -425-115(2) are to be considered reasonably economical for the projects described in WAC 173-425-115(3) when the alternates can be provided without undue delay in the project without costing more than nine hundred dollars per acre.

If the requirement to use an alternate will cause a delay of sixty days or more in completing a project, then the alternate will not be required. Any delay shorter than sixty days will be evaluated on a case-by-case basis.

If the cost of disposing of the wood waste residue is greater than nine hundred dollars per acre, then the alternate will not be required. The cost of clearing and grubbing will not be considered as part of the cost of disposal, unless certain additional costs are required to use the alternate, such as the cost of building a road which would not otherwise be required.

(5) Use of an alternate must comply with all other applicable statutes, regulations, ordinances, and/or resolutions of state or local government.

(6) The requirements for owner(s) or operator(s) of the source to comply with opacity standards per WAC 173-425-115(3)(a) may be waived. Open burning may then be authorized by ecology or the authority, as appropriate, if the owner or operator of the source shows that:

(a) A delay will result from using the alternates, causing an economic or other hardship;

(b) Other legal requirements may be violated;

(c) A bid cannot be obtained for disposal using an alternate described in WAC 173-425-115, at a cost of nine hundred dollars per acre or less; or

(d) The wood waste residue to be disposed of from the land clearing project is less than five hundred tons (two thousand cubic yards)

(7) Ecology or the authority may charge a fee to cover administrative costs of processing the waiver request.

(8) When an alternate is to be used at any site for six or more months, the requirements of WAC 173-400-110 (notice of construction) shall be met.

(9) In this chapter, land clearing projects located close to one another and burned near the same time, which appear to be a single project, shall be presumed to be one project.

(10) In this chapter, normal clearing and grubbing do not include any activity or action related to using alternate methods and technology listed WAC 173-425-115(2).

(11) In this chapter, one cubic yard of wood waste residue equals five hundred pounds.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-120 Department of Natural Resources Smoke Management Plan.

The department of natural resources has the responsibility for issuing and regulating burning permits for open fire in areas protected by the department of natural resources, when such fires are for:

- (1) Abating a forest fire hazard;
- (2) Preventing a fire hazard in a forested area;
- (3) Instructing public officials in methods of forest fire fighting;
- (4) Any silvicultural operation to improve the forest lands of the state.

Fires set for these purposes must be conducted according to the provisions of the smoke management plan administered by the department of natural resources in agreement with ecology and other involved agencies.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-130 Notice of Violation.

Ecology or an authority may issue a notice of violation to the person responsible for the fire when:

- (1) Conditions of a permit issued under this chapter are violated;
- (2) Any open fire is ignited or, if ignited, is not extinguished, when a condition of impaired air quality or any air pollution episode stage has been declared;
- (3) An open fire is ignited where, under this chapter, such fires are prohibited or where a permit is required and no such permit has been obtained;
- (4) Prohibited materials are burned in an open fire.

Procedures for notices of violation shall follow RCW 70.94.332.

State effective: 10/18/90; EPA effective: 1/15/93

173-425-140 Remedies.

Any violation of this chapter may be subject to any penalty or other ecology action stated in chapter 70.94 RCW.

State effective: 10/18/90; EPA effective: 1/15/93

WAC 173-430 BURNING OF FIELD AND FORAGE AND TURF GRASSES GROWN FOR SEED

173-430-010 Purpose.

- (1) This chapter, promulgated under chapter 70.94 RCW, as amended, is to assume state jurisdiction over and to control emissions from the burning of field and forage, and turf grasses grown for seed and for the proper development of the state's natural resources.
- (2) Authority to enforce all provision of this regulation, including establishing permit conditions and issuing permits, is delegated to and shall be carried out by all activated air pollution control authorities or ecology for those areas not under the jurisdiction of an authority.
- (3) The purpose of this chapter is to:
 - (a) Minimize adverse effects on air quality from the open burning of field and forage, and turf grasses grown for seed;
 - (b) Provide for implementation of a research program to explore and identify economical and practical alternative agricultural practices to the open burning of field and forage, and turf grasses grown for seed;
 - (c) Provide for interim regulation of such burning until practical alternatives are found.

State effective: 10/18/90; EPA effective: 1/15/93

173-430-020 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) Field and forage grasses: Canarygrass, bromegrass, oatgrass, timothy, wheatgrass, and orchardgrass, planted to produce seed.

- (2) Straw: All material, other than seed, removed by swathing, combining, or cutting.
- (3) Tear-out: Any operation that destroys the existing crop and prepares the area for next year's planting.
- (4) Turf grasses: All blue grasses, fescues, bentgrass, perennial ryegrass, planted to produce seed.

State effective: 10/18/90; EPA effective: 1/15/93

173-430-030 Permits, Conditions, and Restrictions.

(1) No open burning of field or forage grasses, on turf grasses shall be undertaken unless a permit has been obtained from ecology or an authority, as appropriate. The issuance, denial, or conditioning of permits shall be governed by consideration of air quality conditions in the area affected by the proposed burning, the time of year, meteorological conditions, the size and duration of the proposed burning activity, the amount of straw removal required, the applicant's need to carry out such burning and the public's interest in the environment. Permits will be conditioned to minimize air pollution interest in the environment. Permits will be conditioned to minimize air pollution. Until approved alternatives become available, ecology or the authority may limit the number of acres on a pro rata basis, among those affected for which permits to burn will be issued in order to control emissions.

(2) Burning of acreage not previously under permit may be banned or subject to more restrictive conditions. Burning of field and forage grasses may be restricted and other measures may be required to minimize air pollution.

Permits issued before 1978 will establish a permit history for the applicant. This permit will apply to an applicant and not to specific parcels of land and is established only for the maximum amount of acreage included in any permit issued before 1978. Land transferred to a spouse, son, or daughter, will retain a permit history as established by the original applicant.

Any permit denial or restriction may first be applied to applicants without a permit history and to amounts of acreage not included in an applicant's permit history.

Applicants who received permits before 1978 may be given priority for burning the amount of acreage cited in the permit history.

(3) Open burning of field and forage grasses shall be prohibited. However, a permit using restrictions or conditions, may be issued to burn field and forage grasses for disease, pest, or weed control, if such need is certified by a county agent or other agricultural authority; or if such grasses were planted as part of a soil erosion control plan approved by a conservation district.

(4) Open burning of all grasses scheduled for tear-out shall be prohibited unless a permit specifically allows such burning.

(5) Practical alternative production methods and disease controls which would reduce or eliminate open burning shall be used when reasonably available. These methods and controls shall be used regardless of specific provisions of the compliance program described in this section.

State effective: 10/18/90; EPA effective: 1/15/93

173-430-040 Mobile Field Burners.

Mobile field burners, and other methods of incineration not classified as open burning, shall not be prohibited by the restrictions in WAC 173-430-030: Provided, that emissions do not exceed the following standards:

(1) Visible emissions shall not exceed an opacity of 20 percent for more than three minutes in any one hour;

(2) Particulate emissions shall not exceed 0.1 grains per standard dry cubic foot of exhaust gas, corrected to seven percent oxygen.

State effective: 10/18/90; EPA effective: 1/15/93

173-430-050 Other Approvals.

A person applying for a permit under this chapter is still required to obtain permits, licenses, or approvals required by any other laws, regulations, or ordinances.

State effective: 10/18/90; EPA effective: 1/15/93

173-430-060 Study of Alternatives.

Ecology shall conduct, cause to be conducted, or approve of a study or studies to explore and identify economical and practical alternative practices to open burning of field and forage, and turf grasses. To conduct any such study, ecology may contract with public or private entities. Any approved study shall provide for the identification of such alternatives as soon as possible. Ecology shall annually review the progress of such studies, review provisions of this regulation and available alternatives to open burning and determine if continuing open burning of field and forage, and turf grasses is justified.

State effective: 10/18/90; EPA effective: 1/15/93

173-430-070 Fees.

- (1) To support the study or studies described in WAC 173-430-060, ecology or an authority shall collect a fee of fifty cents per acre of crop to be burned before any permit is issued under WAC 173-430-030. This fee shall be submitted with individual permit applications.
- (2) When a permit is granted to burn fewer acres than requested in the permit application, ecology or the authority shall refund to the permit applicant the unused part of the permit fee.
- (3) No part of the permit fee will be refunded if a grower decides to burn fewer acres than the permit allows.
- (4) After granting any permit and making any refund required under WAC 173-430-070(2), the authority shall transfer the permit fee to ecology.
- (5) Ecology shall deposit all permit fees in a special grass seed burning research account in the general fund.
- (6) Ecology shall allocate moneys annually from this account to support approved studies provided for in WAC 173-430-060, up to the amount appropriated to ecology for such purpose.
- (7) When ecology concludes that enough reasonably available alternative practices to the open burning of field and forage, and turf grasses grown for seed have been developed, and at such time as all costs of any studies have been paid, the grass seed burning research account shall be dissolved. Any money remaining in the account shall revert to the general fund.

State effective: 10/18/90; EPA effective: 1/15/93

173-430-080 Certification of Alternatives.

When enough information on alternative practices to open burning becomes available, ecology shall conduct public hearings to receive testimony from interested parties. If ecology then concludes that any procedure, program, technique, or device is a practical alternative to the open burning of field and forage and turf grasses grown for seed, ecology shall, by order, approve such alternative. After approval, any alternative that is reasonably available shall be used; and open burning of field and forage, and turf grasses grown for seed shall not be allowed.

State effective: 10/18/90; EPA effective: 1/15/93

WAC 173-433 SOLID FUEL BURNING DEVICE STANDARDS

173-433-010 Purpose.

This chapter, promulgated under chapters 43.21A and 70.94 RCW, establishes the following for solid fuel burning devices:

- Emission standards;
- Certification standards and procedures;
- Fuel restrictions;
- Operation restrictions during impaired air quality burn bans; and
- Criteria for prohibiting the use of solid fuel burning devices that are not certified.

State effective: 02/23/14; EPA effective: 6/9/14

173-433-020 Applicability.

The provisions of this chapter apply to solid fuel burning devices in all areas of the state of Washington.

State effective: 12/16/87; EPA effective: 1/15/93

173-433-030 Definitions.

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

(1) "Adequate source of heat" means the ability to maintain seventy degrees Fahrenheit at a point three feet above the floor in all normally inhabited areas of a dwelling.

(2) "Area at risk for nonattainment" means an area where the three-year average of the annual ninety-eighth percentile of twenty-four hour PM-2.5 levels is greater than twenty-nine micrograms per cubic meter based on monitoring data for 2008-2010. Ecology processed all statewide data according to methods defined in 40 C.F.R. Part 50 Appendix N and determined that the following areas are areas at risk for nonattainment:

- Darrington;
- Marysville;
- Tacoma-Pierce County Nonattainment Area as described in 40 C.F.R. 81.348;
- Yakima.

(3) "Certified" means that a woodstove meets emission performance standards when tested by an accredited independent laboratory and labeled according to procedures specified by the EPA in "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990.

(4) "Coal-only heater" means an enclosed, coal burning appliance capable of and intended for residential space heating, domestic water heating, or indoor cooking, which has all of the following characteristics:

- (a) An opening for emptying ash which is located near the bottom or the side of the appliance;
- (b) A system which admits air primarily up and through the fuel bed;
- (c) A grate or other similar device for shaking or disturbing the fuel bed or power driven mechanical stoker; and
- (d) The model is listed by a nationally recognized safety testing laboratory for use of coal only, except for coal ignition purposes.
- (5) "EPA" means United States Environmental Protection Agency.
- (6) "Impaired air quality burn ban" means a condition where both of the following exist:
- Air quality has degraded or will soon degrade as described in WAC 173-433-140;
 - Ecology or the local air authority restricts solid fuel burning device emissions to prevent air quality from worsening, or limit the time with poor air quality.
- Ecology or the local air authority declares impaired air quality burn bans according to the criteria in WAC 173-433-140.
- (7) "Jurisdictional health department" means a city, county, city-county, or district public health department.
- (8) "Local air authority" means an air pollution control authority activated under chapter 70.94 RCW that has jurisdiction over the subject source.
- (9) "Nonaffected pellet stove" means that a pellet stove has an air-to-fuel ratio equal to or greater than 35.0 when tested by an accredited laboratory in accordance with methods and procedures specified by the EPA in "40 C.F.R. 60 Appendix A, REFERENCE METHOD 28A - MEASUREMENT OF AIR TO FUEL RATIO AND MINIMUM ACHIEVABLE BURN RATES FOR WOOD-FIRED APPLIANCES" as amended through July 1, 1990.
- (10) "Prohibit the use" or "prohibition" may include requiring disclosure of an uncertified device, removal of an uncertified device, or rendering an uncertified device inoperable. Except as provided in RCW 64.06.020, such prohibition may not include time of sale obligation on the seller or buyer of real estate as part of a real estate transaction.
- (11) "Retailer" means any person engaged in the sale of solid fuel burning devices directly to the public. A contractor who sells dwellings with solid fuel burning devices installed or a mail order outlet which sells solid fuel burning devices directly to the public is considered to be a solid fuel burning device retailer.
- (12) "Seasoned wood" means wood of any species that has been sufficiently dried so as to contain twenty percent or less moisture by weight.
- (13) "Solid fuel burning device" (same as solid fuel heating device) means a device that burns wood, coal, or any other nongaseous or nonliquid fuels, and includes any device burning any solid fuel except those prohibited by WAC 173-433-120. This also includes devices used for aesthetic or space-heating purposes in a private residence or commercial establishment, which has a heat input less than one million British thermal units per hour.
- (14) "Treated wood" means wood of any species that has been chemically impregnated, painted, or similarly modified to prevent weathering and deterioration.
- (15) "Woodstove" (same as "wood heater") means an enclosed solid fuel burning device capable of and intended for residential space heating and domestic water heating that meets the following criteria contained in "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990:
- (a) An air-to-fuel ratio in the combustion chamber averaging less than 35.0, as determined by

EPA Reference Method 28A;

- (b) A useable firebox volume of less than twenty cubic feet;
- (c) A minimum burn rate less than 5 kg/hr as determined by EPA Reference Method 28;
- (d) A maximum weight of 800 kg, excluding fixtures and devices that are normally sold separately, such as flue pipe, chimney, and masonry components not integral to the appliance. Any combination of parts, typically consisting of but not limited to: Doors, legs, flue pipe collars, brackets, bolts and other hardware, when manufactured for the purpose of being assembled, with or without additional owner supplied parts, into a woodstove, is considered a woodstove.

State effective: 02/23/14; EPA effective: 6/9/14

WAC 173-433-100 Emission performance standards.

(1) **Woodstoves.** Woodstove sales must comply with the requirements of subsection (3) of this section, Solid fuel burning devices.

(2) **Fireplaces.** A person must not advertise to sell, offer to sell, sell, bargain, exchange, or give away a factory built fireplace unless it meets the 1990 EPA standards for woodstoves or equivalent standard that may be established by the state building code council by rule. Subsection (3) of this section does not apply to fireplaces, including factory built fireplaces, and masonry fireplaces.

(3) **Solid fuel burning devices.** A person must not advertise to sell, offer to sell, sell, bargain, exchange, or give away a solid fuel burning device in Washington unless it has been certified and labeled in accordance with procedures and criteria specified in "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990, and meets the following particulate air contaminant emission standards and the test methodology of the EPA in effect on January 1, 1991, or an equivalent standard under any test methodology adopted by the EPA subsequent to such date:

- (a) Two and one-half grams per hour for catalytic woodstoves; and
- (b) Four and one-half grams per hour for all other solid fuel burning devices.

(c) For purposes of this subsection, "equivalent" means the emissions limits specified in this subsection multiplied by a statistically reliable conversion factor determined by ecology that relates the emission test results from the methodology established by the EPA prior to May 15, 1991, to the test results from the methodology subsequently adopted by that agency.

State effective: 02/23/14; EPA effective: 6/9/14

WAC 173-433-110 Opacity standards.

- (1) **Statewide opacity standard.**

(a) A person must not cause or allow emission of a smoke plume from any solid fuel burning device to exceed an average of twenty percent opacity for six consecutive minutes in any one-hour period.

(b) A local air authority must not adopt or enforce an opacity level for solid fuel burning devices that is more stringent than the statewide standard.

(2) **Test method and procedures.** Methods and procedures specified by the EPA in "40 C.F.R. 60 Appendix A reference method 9 - VISUAL DETERMINATION OF THE OPACITY OF EMISSIONS FROM STATIONARY SOURCES" as amended through July 1, 1990, must be used to determine compliance with subsection (1) of this section.

(3) **Enforcement.** Smoke visible from a chimney, flue or exhaust duct in excess of the opacity standard constitutes prima facie evidence of unlawful operation of an applicable solid fuel burning device. This presumption may be refuted by demonstration that the smoke was not caused by an applicable solid fuel burning device. The provisions of this requirement shall:

(a) Be enforceable on a complaint basis.

(b) Not apply during the starting of a new fire for a period not to exceed twenty minutes in any four-hour period.

(4) **Education.** Any person or retailer providing information on the operation of solid fuel burning devices, such as brochures, demonstrations, and public education programs, should include information that opacity levels of ten percent or less are attainable through proper operation.

State effective: 02/23/14; EPA effective: 6/9/14

WAC 173-433-120 Prohibited fuel types.

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

(1) Garbage;

(2) Treated wood;

(3) Plastic and plastic products;

(4) Rubber products;

(5) Animal carcasses;

(6) Asphaltic products;

(7) Waste petroleum products;

(8) Paints and chemicals; or

(9) Any substance which normally emits dense smoke or obnoxious odors other than paper to start the fire, properly seasoned fuel wood, or coal with sulfur content less than 1.0% by weight burned in a coal-only heater.

State effective: 02/23/14; EPA effective: 6/9/14

WAC 173-433-130 General emission standards.

In addition to the general applicability of chapter 173-400 WAC to all emission sources;

(1) Emissions detrimental to persons or property. No person shall cause or permit the emission of any air contaminant from an identifiable solid fuel burning device, including any air contaminant whose emission is not otherwise prohibited by this chapter, if the air contaminant emission causes detriment to the health, safety, or welfare of a person, plant or animal, or causes damage to property or business.

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

State effective: 10/18/90; EPA effective: 1/15/93

WAC 173-433-140 Criteria for impaired air quality burn bans.

Ecology or a local air authority may call an impaired air quality burn ban as follows:

(1) Stage 1 impaired air quality burn ban:

(a) Ecology or the local air authority may call a stage 1 impaired air quality burn ban when they predict that the twenty-four hour average of PM-2.5 levels will reach or exceed thirty-five micrograms per cubic meter within forty-eight hours.

(b) Pierce, Snohomish, and Yakima counties each contain at least one area at risk for nonattainment. In these counties, the local air authority may call a stage 1 impaired air quality burn ban when they predict that the twenty-four hour average of PM-2.5 levels will reach or exceed thirty micrograms per cubic meter within seventy-two hours.

(2) Stage 2 impaired air quality burn ban:

(a) Ecology or the local air authority may call a stage 2 impaired air quality burn ban when all of the following conditions exist:

(i) A stage 1 impaired air quality burn ban is already in effect and has not reduced the trend of rising PM-2.5 levels adequately.

(ii) The twenty-four hour average of PM-2.5 levels have already reached or exceeded twenty-five micrograms per cubic meter.

(iii) Ecology or the local air authority expects that PM-2.5 levels will remain above twenty-five micrograms per cubic meter for twenty-four hours or more from the time PM-2.5 levels reached the trigger in (a)(ii) of this subsection.

(b) Ecology or the local air authority may call a stage 2 impaired air quality burn ban without calling a stage 1 impaired air quality burn ban when all of the following conditions exist:

(i) The twenty-four hour average of PM-2.5 levels have reached or exceeded twenty-five micrograms per cubic meter.

(ii) PM-2.5 levels have risen rapidly.

(iii) Ecology or the local air authority predicts that the twenty-four hour average of PM-2.5 levels will exceed thirty-five micrograms per cubic meter within twenty-four hours.

(iv) Weather conditions alone are highly unlikely to help decrease PM-2.5 levels sufficiently.

(c) Pierce, Snohomish, and Yakima counties each contain at least one area at risk for nonattainment. In these counties, the local air authority may call a stage 2 impaired air quality burn ban without calling a stage 1 impaired air quality burn ban when all of the following conditions exist:

(i) The twenty-four hour average of PM-2.5 levels have reached or exceeded twenty-five micrograms per cubic meter.

(ii) PM-2.5 levels have risen rapidly.

(iii) The local air authority predicts that the twenty-four hour average of PM-2.5 levels will reach or exceed thirty micrograms per cubic meter within twenty-four hours.

(iv) Weather conditions alone are highly unlikely to help decrease PM-2.5 levels sufficiently.

(3) Ecology or the local air authority may call an impaired air quality burn ban for areas smaller than a county, when and where feasible.

State effective: 02/23/14; EPA effective: 6/9/14

WAC 173-433-150 Restrictions on operation of solid fuel burning devices.

(1) Stage 1 impaired air quality burn ban:

(a) Except as described in (b) of this subsection, a person must not operate any solid fuel burning device during a stage 1 impaired air quality burn ban when all of the following apply:

- The solid fuel burning device is located in a residence or commercial establishment within the geographical area covered by the stage 1 impaired air quality burn ban.

- The residence or commercial establishment has an adequate source of heat other than a solid fuel burning device.

(b) A person meeting all of the conditions in (a) of this subsection must not operate any solid fuel burning device during a stage 1 impaired air quality burn ban unless the solid fuel burning device is one of the following:

(i) A nonaffected pellet stove; or

(ii) A woodstove certified and labeled by the EPA under "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990; or

(iii) A woodstove meeting the "Oregon Department of Environmental Quality Phase 2" emissions standards contained in Subsections (2) and (3) of Section 340-21-115, and certified in accordance with "Oregon Administrative Rules, Chapter 340, Division 21 - Woodstove Certification" dated November 1984.

(c) Except as allowed by (b) of this subsection, a person already operating a solid fuel burning device when a stage 1 impaired air quality burn ban begins must withhold new solid fuel for the duration of the impaired air quality burn ban.

(2) Stage 2 impaired air quality burn ban:

(a) A person must not operate any solid fuel burning device during a stage 2 impaired air quality burn ban when all of the following apply:

- The solid fuel burning device is located in a residence or commercial establishment within the geographical area covered by the stage 2 impaired air quality burn ban.

- The residence or commercial establishment has an adequate source of heat other than a solid fuel burning device.

(b) A person already operating a solid fuel burning device when a stage 2 impaired air quality burn ban begins must withhold any new solid fuel for the duration of the stage 2 impaired air quality burn ban.

(3) **Air pollution episodes.** Ecology may declare air pollution episodes as defined in chapter 173-435 WAC.

(a) A person must not operate any solid fuel burning device during alert, warning, or emergency air pollution episodes when all of the following apply:

- The solid fuel burning device is located in a residence or commercial establishment within the geographical area covered by the air pollution episode.
- The residence or commercial establishment has an adequate source of heat other than a solid fuel burning device.

(b) A person already operating a solid fuel burning device when an alert, warning, or emergency air pollution episode begins must withhold new solid fuel for the duration of the alert, warning, or emergency air pollution episode.

(4) The following matrix graphically illustrates the applicability of different types of solid fuel burning devices to the provisions of subsections (1) through (3) of this section:

Type of Device	Impaired Air Quality Burn Ban		Episode			
	First Stage	Second Stage	Forecast	Alert	Warning	Emergency
Pellet Stove (nonaffected)	OK	NO	OK	NO	NO	NO
EPA Certified Woodstove	OK	NO	OK	NO	NO	NO
DEQ Phase 2 Woodstove	OK	NO	OK	NO	NO	NO
EPA Exempted Device	NO	NO	OK	NO	NO	NO
All Other Devices	NO	NO	OK	NO	NO	NO

NOTES: "OK" indicates that a person may operate the device

"NO" indicates that a person must withhold new fuel from the device

(5) Smoke visible from a chimney, flue or exhaust duct after three hours has elapsed from the declaration of the episode or impaired air quality burn ban constitutes prima facie evidence of unlawful operation of an applicable solid fuel burning device. A person may refute this presumption with a demonstration that the smoke was not caused by a solid fuel burning device.

(6) Ecology, local air authorities, health departments, fire departments, or local police forces

having jurisdiction in the area may enforce compliance with the air pollution episode or impaired air quality burn ban after three hours has elapsed from the declaration of the air pollution episode or impaired air quality burn ban.

State effective: 02/23/14; EPA effective: 6/9/14

WAC 173-433-155 Criteria for prohibiting solid fuel burning devices that are not certified.

(1) After January 1, 2015, and after meeting the requirements in subsection (3) of this section, ecology or the local air authority may prohibit the use of solid fuel burning devices in a nonattainment area or an area with an approved PM-2.5 maintenance plan.

(2) Except as provided in subsection (3) of this section, the prohibition will prohibit the use of solid fuel burning devices that are not certified, even in the absence of an air quality episode or impaired air quality burn ban.

(3) Before prohibiting the use of solid fuel burning devices as allowed in subsections (1) and (2) of this section, ecology or a local air authority must:

(a) Allow exemptions from this subsection as described in RCW 70.94.477(2) and 70.94.477(6).

(b) Seek input from any city, county, or jurisdictional health department affected by the proposal to prohibit the use of solid fuel burning devices.

(c) Make the following written findings:

(i) The EPA has designated the area nonattainment for PM-2.5 or has approved a PM-2.5 maintenance plan for the area.

(ii) Emissions from solid fuel burning devices in the area are a major contributing factor for violating the national ambient air quality standard for PM-2.5.

(iii) The area has an adequately funded program to assist low-income households to secure an adequate source of heat.

(4) When both of the following are true:

- The area is in ecology's jurisdiction.

- The legislative authority of a city or county for the area formally expresses concerns with the written findings required in subsection (3)(c) of this section.

Ecology will publish all of the following on the agency web site:

(a) The reasons for prohibiting the use of solid fuel burning devices.

(b) The agency's responses to the concerns expressed by the city or county legislative authority.

(5) The responsibility for enforcement of the prohibition of the use of solid fuel burning devices resides solely with ecology or the local air authority.

(6) A city, county, or jurisdictional health department serving the area may agree to assist with enforcement activities.

(7) On or after June 7, 2012, and before January 1, 2015, ecology or the local air authority must provide assistance to households using solid fuel burning devices to reduce the emissions from those devices or change out to a lower emission device.

(8) Before the effective date of any prohibition, ecology or the local air authority must provide public education in the area regarding all of the following:

- (a) How households can reduce their emissions through cleaner burning practices.
- (b) The importance of respecting impaired air quality burn bans.
- (c) Opportunities for assistance in obtaining a cleaner device.
- (9) In an area where the EPA has approved a PM-10 maintenance plan, ecology or the local air authority may prohibit the use of solid fuel burning devices when all of the following are true:
 - (a) The PM-10 maintenance plan contained a prohibition on the use of solid fuel burning devices as a contingency measure.
 - (b) The area has violated the PM-10 national ambient air quality standard.
 - (c) The emissions from solid fuel burning devices are a major contributing factor to the violation of the PM-10 national ambient air quality standard.

State effective: 02/23/14; EPA effective: 6/9/14

WAC 173-434 SOLID WASTE INCINERATOR FACILITIES

WAC 173-434-010 Purpose.

This chapter, promulgated under chapter 70.94 RCW, establishes emissions standards, design requirements, and performance standards for solid waste incinerator facilities.

State effective: 10/18/90; EPA effective: 1/15/93

WAC 173-434-020 Applicability and compliance.

(1) The provisions of this chapter shall apply statewide to all incinerator facilities that:

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

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

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-030 Definitions.

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

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

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

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

(a) Creosote treated wood at facilities with an order of approval or Prevention of Significant Deterioration (PSD) permit issued on or after December 1, 2003, for burning such wood, provided that such wood has not been in or repeatedly splashed by marine or brackish water;

(b) At a Portland cement plant kiln;

(i) Tires; and

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

(c) Wood waste; or

(d) Sludge from waste water treatment plants.

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-090 Operation and Maintenance Plan.

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

State effective: 10/18/90; EPA effective: 1/15/93

WAC 173-434-110 Standards of performance.

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

— ~~(a) 40 CFR part 60, subpart Eb, subsections 60.52b (a)(3), (a)(5), (b)(2), (c)(1), and (c)(2);~~

(b) All the rest of 40 CFR part 60, subpart Eb.

(2) Exceptions.

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

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

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

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

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

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

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

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-130 Emission standards.

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

(1) Particulate.

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

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

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

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

(4) Opacity.

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

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

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

(5) Fugitive emissions. Each operator or owner shall take reasonable precautions to prevent fugitive emissions which includes the paving of all normally traveled roadways within the plant boundary and enclosing or hooding material transfer points.

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-160 Design and operation.

(1) Combustion.

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

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

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

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

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

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

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-170 Monitoring and reporting.

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

(1) Monitoring.

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

(i) Opacity;

(ii) Combustion zone temperature;

(iii) Particulate control device temperature;

(iv) Hydrogen chloride and/or sulfur dioxide;

(v) Oxygen;

(vi) Carbon monoxide;

(vii) Combustion air distribution.

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

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

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

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

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

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

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

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-190 Changes in operation.

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

(a) For a planned condition, such as a startup or shutdown, the condition shall be reported to ecology or the authority not less than twenty-four hours in advance of its occurrence. For incinerator facilities that normally operate for less than twenty-four hours per day, this provision may be waived provided that daily startup and shutdown procedures are developed that are acceptable to ecology or the authority.

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

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

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

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-200 Emission inventory.

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

State effective: 1/22/04; EPA effective: 9/6/05

WAC 173-434-210 Special studies.

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

State effective: 10/18/90; EPA effective: 1/15/93

WAC 173-435 EMERGENCY EPISODE PLAN

173-435-010 Purpose.

These rules implement chapter 70.94 RCW, the Washington State Clean Air Act.

Air pollution episodes occur under meteorological conditions that reduce the effective volume of air into which air contaminants are introduced. When these conditions occur, there is a possible danger that normal operations at air contaminant sources will be detrimental to public health and safety. The avoidance of high contaminant concentrations reaching significant harm levels during an episode requires a plan which will provide for rapid short-term emission reduction. This chapter sets up such an episode avoidance plan.

State effective: 1/3/89; EPA effective: 1/15/93

173-435-015 Significant Harm Levels

Significant harm levels are reached when any one of the following pollutant concentrations are measured:

- (1) Sulfur dioxide - 2,620 $\mu\text{g}/\text{m}^3$ (1.0 ppm), 24-hour average.
- (2) PM-10 - 600 micrograms/cubic meter, 24-hour average.
- (3) Carbon monoxide - 57.5 mg/m^3 (50 ppm), 8-hour average, 86.3 mg/m^3 (75 ppm) 4-hour average, 144 mg/m^3 (125 ppm) 1-hour average.
- (4) Ozone - 1,200 $\mu\text{g}/\text{m}^3$ (0.6 ppm) - 2-hour average.
- (5) Nitrogen dioxide - 3,750 $\mu\text{g}/\text{m}^3$ (2.0 ppm) 1-hour average, 938 $\mu\text{g}/\text{m}^3$ (0.5 ppm) 24-hour average.

State effective: 1/3/89; EPA effective: 1/15/93

173-435-020 Definitions.

Unless a different meaning is clearly required by context, words and phrases used in this chapter shall have the following meanings, general terms common with other chapters as defined in chapter 173-403 WAC, and terms specific to the emergency episode plan as defined below.

- (1) **"Air quality control region"** means an area designated as an air quality control region by the federal environmental protection agency.
- (2) **"Episode stage"** means a prescribed level of air contaminants or meteorological conditions where certain control actions are required to prevent ambient pollutant concentrations from reaching levels which could cause significant harm to the health of persons.
- (3) **"Emergency action center"** means the headquarters for all department actions during an episode stage.
- (4) **"Hour"** means a 60 minute period, beginning and ending on a clock hour.
- (5) **"8 hours"** means any consecutive 8 hours, starting at any clock hour.
- (6) **"Major source"** means any source which is estimated to emit at an annual rate of twenty-five tons per year or more of SO₂, particulates, or carbon monoxide.
- (7) **"Source emission reduction plan (SERP)"** means a plan developed for an individual air pollution source and approved by the director, which sets forth the actions to be taken at that source upon the declaration of various stages of an episode.
- (8) **"24 hours"** means any consecutive 24 hours, starting at any clock hour.

State effective: 1/3/89; EPA effective: 1/15/93

173-435-030 Episode Stage Criteria.

The declaration of episode stages shall be in accordance with the following criteria:

- (1) **Stage: "First or forecast"** - the forecast stage indicates the presence of meteorological conditions conducive to the accumulation of air contaminants. A forecast stage may be declared when an air stagnation advisory is issued by the national weather service or there is equivalent indication of stagnant atmospheric conditions and conditions are forecast to persist for 24 hours. Declaration of this stage will activate increased air quality surveillance.
- (2) **Stage: "Second or alert"** - the alert stage is that concentration of pollutants at which control actions are to begin. An alert will be declared when any one of the following levels is reached:
 - (a) SO₂ - 800 µg/m³ (0.3 ppm), 24-hour average.
 - (b) PM-10 - 350 µg/m³, 24-hour average.
 - (c) CO - 17 mg/m³ (15 ppm), 8-hour average.

(d) Oxidant (O₃) - 400 µg/m³ (0.2 ppm) - 1-hour average.

(e) NO₂ - 1130 µg/m³ (0.6 ppm) 1-hour average, 282 µg/m³ (0.15 ppm) 24-hour average; and meteorological conditions are such that the pollutant concentrations can be expected to remain at or above the alert levels for 12 or more hours or can be expected to recur within 24 hours unless control actions are taken.

(3) Stage: "Third or warning" - the warning stage indicates that air quality is continuing to degrade and that additional control actions are necessary. A warning will be declared when any one of the following levels is reached:

(a) SO₂ - 1,600 µg/m³ (0.6 ppm), 24-hour average.

(b) PM-10 - 420 µg/m³, 24-hour average.

(c) CO - 34 mg/m³ (30 ppm), 8-hour average.

(d) Oxidant (O₃) - 800 µg/m³ (0.4 ppm), 1-hour average.

(e) NO₂ - 2,260 µg/m³ (1.2 ppm), 1-hour average; 565 µg/m³ (0.3 ppm), 24-hour average; and meteorological conditions are such that pollutant concentrations can be expected to remain at or above the warning levels for 12 or more hours or can be expected to recur within 24 hours unless control actions are taken.

(4) Stage: "Fourth or emergency" - the emergency stage indicates that air quality is continuing to degrade toward a level of significant harm to the health of persons and that the most stringent control actions are necessary. An emergency will be declared when any one of the following levels is reached at any monitoring site:

(a) SO₂ - 2,100 µg/m³ (0.8 ppm), 24-hour average.

(b) PM-10 - 500 µg/m³, 24-hour average.

(c) CO - 46 mg/m³ (40 ppm), 8-hour average.

(d) Oxidant (O₃) - 1,200 µg/m³, (0.6 ppm), 1-hour average.

(e) NO₂ - 3,000 µg/m³ (1.6 ppm), 1-hour average; 750 µg/m³ (0.4 ppm), 24-hour average; and meteorological conditions are such that this condition can be expected to remain at or above emergency levels for 12 or more hours, or can be expected to recur within 24 hours.

(5) Stage: "Termination" - once declared, any stage reached by applying these criteria will remain in effect until the criteria for that level are no longer met. At that time, the next lower

stage will be declared. When conditions improve to where the criteria are no longer met for any episode stage, the episode will be terminated.

State effective: 1/3/89; EPA effective: 1/15/93

173-435-040 Source Emission Reduction Plans.

- (1) Any person responsible for the operation of a major source, when requested in writing by the director, shall prepare, in consultation with the department, a source emission reduction plan (SERP). This SERP shall be consistent with good industrial practice and safe operating procedures for reducing the emissions of air contaminants into the ambient air during periods of air pollution alert, warning, and emergency.
- (2) SERPs shall be in writing and shall show the source of air contamination, describe the manner in which the reduction of air contaminant emissions will be achieved during periods of air pollution alert, warning, and emergency, and give the amount of reduction for each stage.
- (3) During periods of air pollution alert, warning, or emergency, SERPs shall be made available, on the premises of sources required under this section to have them, to any person authorized to enforce the provisions of this episode avoidance plan.
- (4) SERPs shall be submitted to the director within 30 days after receipt of a request thereof.
- (5) SERPs shall be reviewed and approved by the director. If, in the opinion of the director, and SERP does not, in whole or in part, provide for satisfactory emission reduction during an episode, the director may disapprove such SERP, give the reason for disapproval, and require the resubmittal of same within a specified time period.

If within the time period specified, the person responsible fails to submit a SERP satisfactory to the director, the director may revise the SERP to cause it to meet episode avoidance objectives. This revised plan will then be the SERP for the source to which it applies.

- (6) SERPs may be amended after submission to the director of a revised SERP. This revised SERP will be processed in the same manner as the originally submitted SERP.
- (7) An emission reduction plan for the purpose of reducing motor vehicle emissions during episode stages, will be developed or approved by the department. These plans may include actions to be taken by other governmental units, citizens, and businesses.

State effective: 1/3/89; EPA effective: 1/15/93

173-435-050 Action Procedures.

- (1) Whenever applicable criteria are met, the director may declare and terminate the forecast, alert, and warning stages of an episode. This declaration shall constitute an order for action in accordance with applicable SERPs.
- (2) No open fires shall be ignited during any stage of an episode. Any person responsible for an open fire already ignited shall extinguish that fire when informed that an episode has been declared. Open fires conducted under the auspices of the department of natural resources for the purpose of burning forest slash pursuant to RCW 70.94.660 through 70.94.700 are to be extinguished by withholding new fuel and allowing the fire to burn down.
- (3) Whenever applicable criteria are met, the governor may declare and terminate the emergency stage of an episode. This declaration shall constitute an order for action in accordance with applicable SERPs.
- (4) Adverse air quality need not be region-wide for any episode stage to be declared. Action procedures may be taken for any area affected or likely to be affected by episode conditions. The declaration of any episode stage shall specify the area to which it applies.
- (5) The broadest publicity practicable shall be given to the declaration of any episode stage. Such declaration shall, as soon as possible, be directly communicated to all persons responsible for the carrying out of SERPs within the affected area.
- (6) Regardless of whether any episode stages have previously been declared, whenever the governor finds that emissions are causing imminent danger to public health or safety, the governor may declare an air pollution emergency and order the persons responsible for the operation of sources causing the danger, to reduce or discontinue emissions consistent with good operating practice, safe operating procedures, and SERPs, if any.
- (7) Whenever an episode stage is declared on the basis of contaminant levels of carbon monoxide, oxidant, or nitrogen dioxide, the director shall take such action as may be required to reduce emissions from motor vehicles. These actions may include, but are not limited to, the rerouting or detouring of traffic. Actions to be taken by cities and businesses will be established and implemented according to plans developed by them and approved by the department. These plans must meet criteria for emission reduction established by the department.

State effective: 1/3/89; EPA effective: 1/15/93

173-435-060 Enforcement.

- (1) Whenever any episode stage has been declared, the department shall establish an emergency action center, which shall be the headquarters for all department actions during the episode.
- (2) The department shall develop an operations manual, which shall set forth a plan for the receipt, processing, and dissemination of information and data during an episode.

(3) Enforcement with respect to any episode shall be directed from the emergency action center by the director in consultation with the governor's office.

(4) Authorized personnel of the department, the department of social and health services, and the state police shall have the authority to enforce orders of the director or the governor, issued under this chapter, as directed from the emergency action center. In addition, authorized personnel of any local air pollution control agency or local police force shall have the authority to enforce such orders against sources within the area over which that agency or police force has jurisdiction, as directed from the emergency action center.

(5) To determine compliance with any SERP, those persons authorized to enforce orders, hereunder, shall have the authority to enter upon any private or public property, excepting nonmultiple unit private dwellings, housing two families or less. No person shall refuse entry or access to enforcement personnel who request entry and present appropriate credentials.

(6) Whenever it appears that action being taken in compliance with SERPs will not avert imminent danger to public health and safety, the governor may order the following additional measures:

(a) Stopping and prohibiting motor vehicle travel and traffic;

(b) Closing down or restricting the use of any business, commercial, industrial or other establishment or activity which contributes to the emission of contaminants to the air.

(7) Any declaration or order issued in accordance with WAC 173-435-050 shall be effective immediately and shall not be stayed, pending completion of review.

(8) Whenever any order has been issued hereunder, the attorney general, upon the request of the governor or authorized representative, or the director shall petition the superior court of the county in which a source is located for a temporary restraining order for the immediate reduction or discontinuance of emissions from that source.

State effective: 1/3/89; EPA effective: 1/15/93

173-435-070 Sampling Sites, Equipment and Methods.

~~(1) Data from all stations shall be considered when determining episode conditions. The department shall specify PM-10 monitoring stations to be operated continuously during any episode stage for episode management purposes. Stations from which episode declarations are based must be located in such a manner that the area represented by that station and the sources contributing to the episode condition can reasonably be determined and corrective actions taken.~~

(2) Sampling and analysis will be done by federal reference or federal equivalent methods;

except the department may approve other sampling and analysis methods for PM-10 if reasonable site specific equivalency with the federal reference method has been demonstrated. This equivalency must be reestablished biennially.

State effective: 1/3/89; EPA effective: 1/15/93

Chapter 173-476 WAC AMBIENT AIR QUALITY STANDARDS

WAC 173-476-010 Purpose.

This chapter establishes maximum acceptable levels in the ambient air for particulate matter, lead, sulfur dioxide, nitrogen oxides, ozone, and carbon monoxide.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-020 Applicability.

- (1) The provisions of this chapter apply to all areas of the state of Washington.
- (2) All federal regulations referenced in this regulation are adopted as they exist on January 1, 2016.

State effective: 07/01/16; EPA effective: 11/07/16 (81 FR 69385, October 6, 2016)

WAC 173-476-030 Definitions.

Definitions in chapter 173-400 WAC apply to this chapter. Definitions specific to this chapter include:

"FEM" or **"Federal Equivalent Method"** means an EPA designated ambient air quality sampling and analysis method that has been designated as an equivalent method according to 40 C.F.R. Part 53. It does not include a method for which an equivalent method designation has been canceled according to 40 C.F.R. 53.11 or 53.16.

"FRM" or **"Federal Reference Method"** means an EPA designated ambient air quality sampling and analysis method specified in an appendix to 40 C.F.R. Part 50, or a method that has been designated as a reference method according to 40 C.F.R. Part 53. It does not include a method for which a reference method designation has been canceled according to 40 C.F.R. 53.11 or 53.16.

"mg/m³" means milligrams per cubic meter.

"Period" means any interval of the specified time.

"PM" means particulate matter.

"ppbv" means parts per billion by volume.

"ppmv" means parts per million by volume.

"µg/m³" means micrograms per cubic meter.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-100 Ambient air quality standard for PM-10.

- (1) **Standard for PM-10.** The twenty-four-hour average concentration of PM-10 in the ambient air must not exceed 150 $\mu\text{g}/\text{m}^3$ more than one time per year, on a three-year average.
- (2) **Measurement method.** The levels of PM-10 in the ambient air must be measured by:
 - (a) A FRM based on 40 C.F.R. Part 50, Appendix J and designated according to 40 C.F.R. Part 53; or
 - (b) A FEM designated according to 40 C.F.R. Part 53.
- (3) **Interpretation method.** The interpretation method found in 40 C.F.R. Part 50, Appendix K must be used.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-110 Ambient air quality standards for PM-2.5.

- (1) **Standards for PM-2.5.**
 - (a) The three-year average of the annual arithmetic mean concentration of PM-2.5 must not exceed 12.0 $\mu\text{g}/\text{m}^3$.
 - (b) The three-year average of the ninety-eighth percentile twenty-four-hour average concentration of PM-2.5 must not exceed 35 $\mu\text{g}/\text{m}^3$.
- (2) **Measurement method.** The levels of PM-2.5 in the ambient air must be measured by:
 - (a) A FRM based on 40 C.F.R. Part 50, Appendix L and designated according to 40 C.F.R. Part 53; or
 - (b) A FEM designated according to 40 C.F.R. Part 53.
- (3) **Interpretation method.** The interpretation method found in 40 C.F.R. Part 50, Appendix N must be used.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-120 Ambient air quality standard for lead (Pb).

- (1) **Standard for lead.** The three-month rolling average concentration of lead and its compounds in the ambient air must not exceed 0.15 $\mu\text{g}/\text{m}^3$.
- (2) **Measurement method.** The levels of lead in the ambient air must be measured by:

- (a) A FRM based on 40 C.F.R. Part 50, Appendix G and designated according to 40 C.F.R. Part 53; or
- (b) A FEM designated according to 40 C.F.R. Part 53.
- (3) **Interpretation method.** The interpretation method found in 40 C.F.R. Part 50, Appendix R must be used.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-130 Ambient air quality standards for sulfur oxides (sulfur dioxide).

(1) Standard for sulfur oxides (measured as sulfur dioxide).

- (a) Annual. The annual average concentration for sulfur oxides in the ambient air must not exceed 0.02 ppmv in a calendar year.
- (b) Twenty-four-hour. The twenty-four-hour average concentration for sulfur oxides in the ambient air must not exceed 0.14 ppmv more than once per calendar year. The twenty-four-hour averages must be determined from successive nonoverlapping twenty-four-hour blocks starting at midnight each calendar day.
- (c) Three-hour. The three-hour average concentration for sulfur oxides in the ambient air must not exceed 0.5 ppmv more than once per calendar year. The three-hour averages must be determined from successive nonoverlapping three-hour blocks starting at midnight each calendar day.
- (d) One-hour. The three-year average of the annual ninety-ninth percentile of the daily maximum one-hour average concentrations for sulfur oxides in the ambient air must not exceed 75 ppbv.

(2) **Measurement method.** The levels of sulfur oxides must be measured as sulfur dioxide by:

- (a) A FRM based on 40 C.F.R. Part 50, Appendix A-1 or A-2; or
- (b) A FEM designated according to 40 C.F.R. Part 53.

(3) Interpretation methods.

- (a) The annual arithmetic mean is based on the average of hourly data. To be used in calculating the annual average, the hourly data must be at least seventy-five percent complete in each calendar quarter of the year.
- (b) The interpretation method for the twenty-four-hour average found in 40 C.F.R. Part 50.4(d) must be followed.
- (c) The interpretation method for the three-hour average found in 40 C.F.R. Part 50.5(c) must be followed.
- (d) The interpretation method for the one-hour average found in 40 C.F.R. Part 50, Appendix T must be followed.

(4) Rounding of values.

- (a) The annual arithmetic mean and twenty-four-hour averages must be rounded to two decimal places. Fractional parts equal to or greater than 0.005 ppmv must be rounded up.
- (b) The three-hour standard averages must be rounded to one decimal place. Fractional parts equal to or greater than 0.05 ppmv must be rounded up.

(5) **Sunset provision.** The ambient standards in WAC 173-476-130 (1)(a) and (b) are no longer applicable in a specific area one year after the effective date of the EPA's designation of attainment status of that area for the standard in WAC 173-476-130 (1)(d) and 40 C.F.R. 50.17.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-140 Ambient air quality standards for nitrogen oxides (nitrogen dioxide).

(1) **Standards for nitrogen oxides (measured as nitrogen dioxide).**

(a) The annual average concentration for nitrogen oxides in ambient air must not exceed 53 ppbv (100 $\mu\text{g}/\text{m}^3$) measured in the ambient air as nitrogen dioxide.

(b) The three-year average of the ninety-eighth percentile of the daily maximum one-hour average concentration of nitrogen oxides must not exceed 100 ppbv, as measured in the ambient air as nitrogen dioxide.

(2) **Measurement method.** The levels of nitrogen oxides must be measured as nitrogen dioxide by:

(a) A FRM based on 40 C.F.R. Part 50, Appendix F; or

(b) A FEM designated according to 40 C.F.R. Part 53.

(3) **Interpretation method.** The interpretation method found in 40 C.F.R. Part 50, Appendix S must be followed.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-150 Ambient air quality standard for ozone.

(1) **Standard for ozone.** The three-year average of the annual fourth highest daily maximum eight-hour average concentration of ozone in the ambient air must not exceed 0.070 ppmv.

(2) **Measurement method.** The levels of ozone in the ambient air must be measured by:

(a) A FRM based on 40 C.F.R. Part 50, Appendix D and designated according to 40 C.F.R. Part 53; or

(b) A FEM designated according to 40 C.F.R. Part 53.

(3) **Interpretation method.** The interpretation method found in 40 C.F.R. Part 50, Appendix U must be followed.

State effective: 07/01/16; EPA effective: 11/07/16 (81 FR 69385, October 6, 2016)

WAC 173-476-160 Ambient air quality standards for carbon monoxide.

(1) **Standards for carbon monoxide.**

(a) The eight-hour average concentration of carbon monoxide in the ambient air must not exceed 9 ppmv (10 milligrams per cubic meter) more than once per year.

(b) The one-hour average concentration of carbon monoxide in the ambient air must not exceed 35 ppmv (40 milligrams per cubic meter) more than once per year.

(2) **Measurement method.** The levels of carbon monoxide in the ambient air must be measured by:

(a) A FRM based on 40 C.F.R. Part 50, Appendix C and designated according to 40 C.F.R. Part 53; or

(b) A FEM designated according to 40 C.F.R. Part 53.

(3) **Interpretation method.** An eight-hour average must be considered valid if at least seventy-five percent of the hourly averages for the eight-hour period are available. In the event that only six (or seven) hourly averages are available, the eight-hour average must be computed on the basis of the hours available using six (or seven) as the divisor.

(4) **Rounding of values.** When summarizing data for comparison with the standards, averages must be stated to one decimal place. Comparison of the data with the levels of the standards in ppmv must be made in terms of integers with fractional parts of 0.5 or greater rounding up.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-170 Monitor siting criteria.

Ambient monitors must be sited as required in 40 C.F.R. Part 58.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-180 Reference conditions.

(1) All measurements of air quality that are expressed as mass per unit volume $\mu\text{g}/\text{m}^3$ must be corrected to:

(a) A reference temperature of 25°C; and

(b) A reference pressure of 760 millimeters of mercury (1,013.2 millibars (hectopascals)).

(2) **Exception for measurements of PM-2.5 and lead.** Measurements of PM-2.5 and lead must be reported based on the actual ambient air volume measured at the actual ambient temperature and pressure at the monitoring site during the measurement period.

State effective: 12/22/13; EPA effective: 4/3/14

WAC 173-476-900 Table of standards.

Disclaimer: This table is provided as an overview. See complete rule for more detail.

Pollutant		Averaging Time	Level	Remarks	Measurement Method	Interpretation Method
Particle Pollution	PM-10	24-hour	150 $\mu\text{g}/\text{m}^3$	Not to be exceeded more than once per year averaged over 3 years	40 C.F.R. Part 50, Appendix J	40 C.F.R. Part 50, Appendix K
	PM-2.5	Annual	12.0 $\mu\text{g}/\text{m}^3$	Annual mean, averaged over 3 years	40 C.F.R. Part 50, Appendix L	40 C.F.R. Part 50, Appendix N
		24-hour	35 $\mu\text{g}/\text{m}^3$	98th percentile, averaged over 3 years		
Lead		Rolling 3-month average	0.15 $\mu\text{g}/\text{m}^3$	Not to be exceeded	40 C.F.R. Part 50, Appendix G	40 C.F.R. Part 50, Appendix R
Sulfur Dioxide		Annual	0.02 ppmv	Not to be exceeded in a calendar year	40 C.F.R. Part 50, Appendix A or A-1	WAC 173-476-130(3)
		24-hour	0.14 ppmv	Not to be exceeded more than once per year		
		3-hour	0.5 ppmv	Not to be exceeded more than once per year		
		1-hour	75 ppbv	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years		

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Pollutant	Averaging Time	Level	Remarks	Measurement Method	Interpretation Method
Nitrogen Dioxide	Annual	53 ppbv	Annual Mean	40 C.F.R. Part 50, Appendix F	40 C.F.R. Part 50, Appendix S
	1-hour	100 ppbv	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years		
Ozone	8-hour	0.070 ppmv	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years	40 C.F.R. Part 50, Appendix D	40 C.F.R. Part 50, Appendix U
Carbon Monoxide	8-hour	9 ppmv	Not to be exceeded more than once per year	40 C.F.R. Part 50, Appendix C	WAC 173-476-160(3)
	1-hour	35 ppmv			

State effective: 07/01/16; EPA effective: 11/07/16 (81 FR 69385, October 6, 2016)

WAC 173-490 EMISSION STANDARDS AND CONTROLS FOR SOURCES EMITTING VOLATILE ORGANIC COMPOUNDS

173-490-010 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 for sources emitting volatile organic compounds (VOCs) and revise such standards as new information and better technology are developed and become available.

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

173-490-020 Definitions.

The definitions of terms contained in chapter 173-400 WAC are by this reference incorporated into this chapter. 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) "**Bottom loading**" means the filling of a tank through a line entering the bottom of the tank.
- (2) "**Bulk gasoline plant**" means a gasoline storage and transfer facility that receives more than ninety percent of its annual gasoline throughput by transport tank, and reloads gasoline into transport tanks.
- (3) "**Class II hardboard paneling finish**" means finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.
- (4) "**Closed refinery system**" means a system that will process or dispose of those VOCs collected from another system. The mass quantity of collected VOCs emitted to the ambient air from the closed refinery system shall not exceed that required for a disposal system.
- (5) "**Condensate**" means hydrocarbon liquid separated from a gas stream which condenses due to changes in the temperature or pressure and remains liquid at standard conditions.
- (6) "**Condenser**" means a device for cooling a gas stream to a temperature where specific VOCs become liquid and are removed.
- (7) "**Control system**" means one or more control devices, including condensers, that are designed and operated to reduce the quantity of VOCs emitted to the atmosphere.
- (8) "**Crude oil**" means a naturally occurring mixture which consists of hydrocarbons and sulfur, nitrogen or oxygen derivatives of hydrocarbons which is a liquid at standard conditions.
- (9) "**Cutback asphalt**" means an asphalt that has been blended with petroleum distillates to reduce the viscosity for ease of handling and lower application temperature. An inverted emulsified asphalt shall be considered a cutback asphalt when the continuous phase of the emulsion is a cutback asphalt.
- (10) "**Disposal system**" means a process or device that reduces the mass quantity of the VOC that would have been emitted to the ambient air by at least ninety percent prior to their actual emission.
- (11) "**Dry cleaning facility**" means a facility engaged in the cleaning of fabrics in an essentially nonaqueous solvent by means of one or more washes in solvent, extraction of excess

solvent by spinning, and drying by tumbling in an airstream. The facility includes, but is not limited to, any washer, dryer, filter and purification system(s), waste disposal system(s), holding tank(s), pump(s) and attendant piping and valve(s).

(12) "**External floating roof**" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.

(13) "**Flexographic printing**" means the application of words, designs and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

(14) "**Gasoline**" means a petroleum distillate which is a liquid at standard conditions and has a true vapor pressure greater than 200 mm of Hg (4 psia) at 20°C, and is used as a fuel for internal combustion engines.

(15) "**Gasoline dispensing facility**" means any site dispensing gasoline into motor vehicle fuel tanks from stationary storage tanks.

(16) "**Gasoline loading terminal**" means a gasoline transfer facility that receives more than ten percent of its annual gasoline throughput solely or in combination by pipeline, ship or barge, and loads gasoline into transport tanks.

(17) "**Hardboard**" means a panel manufactured primarily from interfelted lignocellulosic fibers which are consolidated under heat and pressure in a hot press.

(18) "**Hardwood plywood**" means plywood whose surface layer is a veneer of hardwood.

(19) "**Lease custody transfer**" means the transfer of produced crude oil or condensate, after processing or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(20) "**Liquid-mounted seal**" means a primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof.

(21) "**Liquid service**" means equipment that processes, transfers or contains a VOC or VOCs in the liquid phase.

(22) "**Low organic solvent coating**" refers to coatings which contain less organic solvent than the conventional coatings used by the industry. Low organic solvent coatings include water-borne, higher solids, electrodeposition and powder coatings.

(23) "**Natural finish hardwood plywood panels**" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

- (24) **"Packaging rotogravure printing"** means rotogravure printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packaging products and labels for articles to be sold.
- (25) **"Petroleum liquids"** means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.
- (26) **"Petroleum refinery"** means a facility engaged in producing gasoline, aromatics, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt, or other products by distilling crude oils or redistilling, cracking, extracting or reforming unfinished petroleum derivatives. Not included are facilities re-refining used motor oils or waste chemicals, processing finished petroleum products, separating blended products, or air blowing asphalt.
- (27) **"Prime coat"** means the first of two or more films of coating applied in an operation.
- (28) **"Printed interior panels"** means panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.
- (29) **"Proper attachment fittings"** means hardware for the attachment of gasoline transfer or vapor collection lines that meet or exceed industrial standards or specifications and the standards of other agencies or institutions responsible for safety and health.
- (30) **"Publication rotogravure printing"** means rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.
- (31) **"Refinery unit"** means a set of components that are a part of a basic process operation, such as distillation, hydrotreating, cracking or reforming of hydrocarbons.
- (32) **"Roll printing"** means the application of words, designs, and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.
- (33) **"Rotogravure printing"** means the application of words, designs, and pictures to a substrate by means of a roll printing technique which involves intaglio or recessed image areas in the form of cells.
- (34) **"Single coat"** means only one film of coating is applied to the metal substrate.
- (35) **"Submerged fill line"** means a pipe, tube, fitting or other hardware for loading liquids into a tank with either a discharge opening flush with the tank bottom; or with a discharge opening below the lowest normal operating drawoff level or that level determined by a liquid depth two and one half times the fill line diameter when measured in the main portion of the tank, but not in sumps or similar protrusions.

- (36) "**Submerged loading**" means the filling of a tank with a submerged fill line descending nearly to the bottom.
- (37) "**Suitable closure or cover**" means a door, hatch, cover, lid, pipe cap, pipe blind, valve or similar device that prevents the accidental spilling or emitting of VOC. Pressure relief valves, aspirator vents or other devices specifically required for safety and fire protection are not included.
- (38) "**Thin particle board**" means a manufactured board one-quarter inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.
- (39) "**Tileboard**" means paneling that has a colored waterproof surface coating.
- (40) "**Topcoat**" means the final film or series of films of coating applied in a two-coat (or more) operation.
- (41) "**Transport tank**" means a container used for shipping gasoline on land.
- (42) "**True vapor pressure**" means the equilibrium partial pressure of a petroleum liquid as determined with methods described in American Petroleum Institute Bulletin 2517, 1980.
- (43) "**Unit turnaround**" means the procedure of shutting down, repairing, inspecting, and restarting a unit.
- (44) "**Valves not externally regulated**" means valves that have no external controls, such as in-line check valves.
- (45) "**Vapor collection system**" means a closed system to conduct vapors displaced from a tank being filled into the tank being emptied, a vapor holding tank, or a vapor control system.
- (46) "**Vapor control system**" means a system designed and operated to reduce or limit the emission of VOCs, or to recover the VOCs to prevent their emission into the ambient air.
- (47) "**Vapor-mounted seal**" means a primary seal mounted so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.
- (48) "**Volatile organic compound (VOC)**" means any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator designates as having negligible photochemical reactivity. VOC may be measured by a reference method, an equivalent method, an alternative method or by procedures specified under 40 CFR Part 60. A reference method, an equivalent method, or an alternative method, however, may also measure nonreactive organic compounds. In such cases, an owner or operator may exclude the nonreactive organic compounds when determining compliance with

a standard.

(49) "Waxy, heavy pour crude oil" means a crude oil with a pour point of 50°F or higher as determined by the American Society for Testing and Materials Standard D97-66, "Test for Pour Point of Petroleum Oils."

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

173-490-025 General Applicability.

In addition to the general applicability of chapter 173-400 WAC to all emission sources, specific emission standards listed in this chapter will take precedence over the general emission standards of chapter 173-400 WAC.

- (1)** This chapter shall apply to the specified emission sources of VOCs located in or operating within designated ozone nonattainment areas of the state of Washington.
- (2)** This chapter does not apply to those sources under the jurisdiction of the energy facility site evaluation council (EFSEC).
- (3)** A source of VOC emissions not belonging to any of the categories listed in WAC 173-490-030 nor specifically identified in any section, but which is located on the same or adjacent property and owned or operated by the same person as a regulated emission source, shall not be required to comply with the regulations of this chapter.
- (4)** Sources of VOC emissions may be exempted, by the director, from any or all requirements to control or reduce the emissions of VOCs when:
 - (a)** The source is a development operation and the equipment is used exclusively for research, laboratory analysis or determination of product quality and commercial acceptance, provided emissions of VOCs from such operations do not exceed 300 kg (660 lbs) per month; or
 - (b)** The source has emissions of VOCs which do not exceed 18 kg (40 lbs) per month and registration is not required under WAC 173-490-030; or
 - (c)** The source is a spray booth which is used solely for maintenance and utility activities and whose emissions do not exceed 18 kg (40 lbs) per month.
- (5)** Sources of VOCs may be granted exemptions from emissions standards for a period not to exceed thirty days if the source is a newly permitted source which is to replace a similar permitted source and the new source is intended to utilize the existing emission control system. This provision is intended to apply to a break-in period prior to the shutdown and removal of the existing source.

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

173-490-030 Registration and Reporting.

(1) The owner or operator of a stationary emission source of VOCs in the following source categories and located in a designated ozone nonattainment area shall register the source with ecology unless registration is required by an authority or the energy facility site evaluation council (EFSEC).

- (a) Petroleum refineries.
- (b) Petroleum liquid storage tanks.
- (c) Gasoline loading terminals.
- (d) Bulk gasoline plants.
- (e) Gasoline dispensing facilities.
- (f) Surface coaters.
- (g) Open top vapor degreasers.
- (h) ConveyORIZED degreasers.
- (i) Gasoline transport tanks.
- (j) Vapor collection systems.
- (k) Perchloroethylene dry cleaning systems.
- (l) Graphic arts systems.
- (m) Surface coaters of miscellaneous metal parts and products.
- (n) Synthesized pharmaceutical manufacturing facilities.
- (o) Flatwood panel manufacturers and surface finishing facilities.

(2) A new emission source of VOCs that must comply with any requirements in WAC 173-490-040, 173-490-200, 173-490-201, 173-490-202, 173-490-203, 173-490-204, 173-490-205, 173-490-206 and 173-490-207, shall comply with the requirements of WAC 173-400-100 and shall register with ecology or an authority prior to operation of the new source, and shall submit

sufficient information to demonstrate that the new source is capable of complying with the requirements in this chapter. An opportunity shall be provided for an inspection of the new source by ecology or local authority inspectors prior to its operation.

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

173-490-040 Requirements.

To demonstrate compliance with this chapter, refer to WAC 173-400-105.

(1) Petroleum refineries.

This chapter shall apply to all petroleum refineries with a crude oil or feed stock capacity greater than one million four hundred thirty thousand liters (9,000 bbl) per day

(a) Vacuum producing system.

(i) Noncondensable VOC from vacuum producing systems shall be piped to an appropriate firebox, incinerator or to a closed refinery system.

(ii) Hot wells associated with contact condensers shall be tightly covered and the collected VOC introduced into a closed refinery system.

(b) Wastewater separator.

(i) Wastewater separator forebays shall incorporate a floating pontoon or fixed solid cover with all openings sealed, totally enclosing the compartmented liquid contents, or a floating pontoon or a double deck-type cover equipped with closure seals between the cover edge and compartment wall.

(ii) Accesses for gauging and sampling shall be designed to minimize VOC emissions during actual use. All access points shall be closed with suitable covers when not in use.

(c) Process unit turnaround.

(i) The VOC contained in a process unit to be depressurized for turnaround shall be introduced to a closed refinery system, combusted by a flare, or vented to a disposal system.

(ii) The pressure in a process unit following depressurization for turnaround shall be less than five psig before venting to the ambient air.

(iii) Venting or depressurization to the ambient air of a process unit for turnaround at a pressure greater than five psig shall be allowed if the owner

demonstrates the actual emission of VOC to the ambient air is less than permitted by WAC 173-490-040 (1)(c)(ii).

(d) Maintenance and operation of emission control equipment. Equipment for the reduction, collection or disposal of VOC shall be maintained and operated in a manner consistent with the level of maintenance and housekeeping of the overall plant.

(2) Petroleum liquid storage tanks.

(a) All fixed-roof tanks (except as noted in subparagraph (d) of this subsection) storing volatile organic petroleum liquids with a true vapor pressure as stored greater than 78 mm of Hg (1.5 psi) at actual monthly average storage temperatures and having a capacity greater than one hundred fifty thousand liters (40,000 gallons) shall comply with one of the following:

(i) Meet the equipment specifications and maintenance requirements of the federal standards of performance for new stationary sources - Storage Vessels for Petroleum Liquids (40 CFR 60, subpart K); or

(ii) Be retrofitted with a floating roof or internal floating cover using a metallic seal or a nonmetallic resilient seal at least meeting the equipment specifications of the federal standards referred to in WAC 173-490-040 (2)(a)(i) or its equivalent; or

(iii) Be fitted with a floating roof or internal floating cover meeting the manufacturer's specifications in effect when installed.

(b) All seals used in WAC 173-490-040 (2)(a)(ii) and (iii) are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears or other openings.

(c) All openings not related to safety are to be sealed with suitable closures.

(d) Tanks used for the storage of gasoline in bulk gasoline plants and equipped with vapor balance systems as required in WAC 173-490-040 (4)(b) shall be exempt from the requirements of WAC 173-490-040(2).

(3) Gasoline loading terminals.

(a) This chapter shall apply to all gasoline loading terminals with an average annual daily gasoline throughput greater than seventy-five thousand liters (20,000 gallons).

(b) Loading facilities. Facilities for the purpose of loading gasoline into any transport tank shall be equipped with a vapor recovery system (VRS) as described in WAC 173-490-040 (3)(c) and comply with the following conditions:

(i) The loading facility shall employ submerged or bottom loading for all transport tanks.

(ii) The VRS shall be connected to the transport tank being loaded and shall operate during the entire loading of every transport tank loaded at the facility.

(iii) The loading of all transport tanks shall be performed such that ninety percent by weight of the gasoline vapors displaced during filling are prevented from being released to the ambient air. Emissions from pressure relief valves shall not be included in the controlled emissions when the back pressure in the VRS collection lines is lower than the relief pressure setting of the transport tank's relief valves.

(iv) All loading lines and vapor lines shall be equipped to close automatically upon disconnect. The point of closure shall be on the tank side of any hose or intermediate connecting line.

(c) Vapor recovery system (VRS). The VRS shall be designed and built according to accepted industrial practices and meet the following conditions:

(i) The VRS shall prevent at least ninety percent by weight of the gasoline vapors displaced during loading of each transport tank from entering the ambient air and in no case shall the gasoline vapors emitted to the ambient air exceed eighty milligrams per liter of gasoline loaded.

(ii) The VRS shall be equipped with a signal device to alert personnel when the system is not operating or unintentionally shuts down.

(iii) The back pressure in the VRS collection lines shall not exceed the transport tank's pressure relief settings.

(d) Alternative loading facility. The loading of transport tanks by other means and using other vapor control systems shall require the facility owner to demonstrate that the emission of gasoline vapors to the ambient air is less than eighty milligrams per liter of gasoline loaded.

(4) Bulk gasoline plants.

(a) This chapter shall apply to all bulk gasoline plants with an annual average daily gasoline throughput greater than fifteen thousand liters (4,000 gallons).

(b) Storage tanks. All storage tanks with a capacity greater than two thousand one hundred liters (550 gallons) and used for the storage of gasoline shall comply with the following conditions:

- (i) Each storage tank shall be equipped with a submerged fill line.
 - (ii) Each storage tank shall be equipped for vapor balancing of gasoline vapors with transport tanks during gasoline transfer operations.
 - (iii) The vapor line fittings on the storage tank side of break points with the transport tank vapor connection pipe or hose shall be equipped to close automatically upon planned or unintentional disconnect.
 - (iv) The pressure relief valves on storage tanks shall be set at the highest possible pressure consistent with local and state codes for fire and safety.
- (c) Transport tanks. All transport tanks, except those meeting the conditions in WAC 173-490-040 (4)(d), transferring gasoline with storage tanks in a bulk gasoline plant shall comply with the following conditions:
- (i) The transport tank shall be equipped with the proper attachment fittings to make vapor tight connections for vapor balancing with storage tanks.
 - (ii) The vapor line fittings on the transport tank side of break points with the storage tank connection pipe or hose shall be equipped to close automatically upon planned or unintentional disconnect.
 - (iii) The pressure relief valves on transport tanks shall be set at the highest possible pressure consistent with local and state codes for fire and safety.
- (d) Transport tanks used for gasoline and meeting all of the following conditions shall be exempt from the requirement to be equipped with any attachment fitting for vapor balance lines:
- (i) The transport tank is used exclusively for the delivery of gasoline into storage tanks of a facility exempt from the vapor balance requirements of WAC 173-490-040(5); and
 - (ii) The transport tank has a total capacity less than fifteen thousand liters (4,000 gallons) and is of a compartmented design and construction requiring the installation of four or more separate vapor balance fittings.
- (e) Gasoline transfer operations. No owner or operator of a bulk gasoline plant or transport tank shall allow the transfer of gasoline between a transport tank and a storage tank except under the following conditions:
- (i) All tanks shall be submerged filled or bottom loaded.

(ii) The loading of all tanks, except those exempted under WAC 173-490-040 (4)(d) shall be performed such that ninety percent by weight of the gasoline vapors displaced during filling are prevented from being released into the ambient air. Emissions from pressure relief valves shall not be included in the controlled emissions.

(f) Equipment or system failures. Failures or leaks in the vapor balance system shall be limited by the following conditions:

(i) During the months of April, May, June, July, August, September and October, failures of the vapor balance system to comply with this chapter shall require that gasoline transfer operations stop for the failed part of the system. Other transfer points that can operate in compliance may be used.

(ii) Loading or unloading of the transport tank connected to the failed part of the vapor balance system may be completed.

(iii) Breakdowns and upset conditions during all months of the year shall also comply with the provisions of WAC 173-400-105(5).

(g) The owner or operator of a bulk gasoline plant or transport tank shall take all reasonable necessary measures to prevent the spilling, discarding in sewers, storing in open containers or handling of gasoline in a manner on the plant site that will result in evaporation to the ambient air.

(5) Gasoline dispensing facilities (Stage I).

(a) This chapter shall apply to all gasoline dispensing facilities with a total annual gasoline output greater than seven hundred fifty-seven thousand liters (200,000 gallons) or sixty-three thousand one hundred liters (16,670 gallons) per month and total gasoline storage capacity greater than thirty-eight thousand liters (10,000 gallons).

(b) All gasoline storage tanks of the facilities defined in WAC 173-490-040 (5)(a) shall be equipped with submerged or bottom fill lines and fittings for vapor balancing gasoline vapors with the delivery transport tank.

(c) Gasoline storage tanks with offset fill lines shall be exempt from the requirement of WAC 173-490-040 (5)(b) if installed prior to January 1, 1979.

(d) The vapor balance system (for the purpose of measuring compliance with the emission control efficiency) shall consist of the transport tank, gasoline vapor transfer lines, storage tank and all tank vents. The vapor balance system shall prevent at least ninety percent of the displaced gasoline vapors from entering the ambient air. A vapor balance system that is designed, built and operated according to accepted industrial practices will satisfy this requirement.

(e) The owner or operator of a gasoline dispensing facility shall not permit the loading of gasoline into a storage tank equipped with vapor balance fittings unless the vapor balance system is attached to the transport tank and operated satisfactorily.

(6) Surface coaters.

The operation of a coater and dryer, that may serve one or more process lines, shall comply with the following emission limits if the potential uncontrolled emissions of VOC from the coater, flash off areas, and dryer would be greater than 18 kg (40 pounds) in any given twenty-four hour period. The emission limits and uncontrolled emission quantity shall include the additional quantity of emissions from the dryer during the twelve hour period after application of the coating.

Process Can Coating	Limitation Grams/Liter of Coating (Excluding Water)	lb/Gal. of Coating (Excluding Water)
Sheet basecoat and overvarnish: 2-piece can exterior	340	2.8
Two and three piece can interior body spray, two piece can exterior end	510	4.2
Side-seam spray	660	5.5
End sealing compound	440	3.7
Coil Coating	310	2.6
Fabric Coating	350	2.9
Vinyl Coating	450	3.8
Paper Coating	350	2.9
Auto and light duty truck coating		
Prime	230	1.9
Topcoat	340	2.8
Repair	580	4.8
Metal Furniture Coating	360	3.0
Magnet Wire Coating	200	1.7
Large Appliance Coating	340	2.8

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(7) Open top vapor degreasers.

(a) All open top vapor degreasers shall:

(i) Have a cover that may be readily opened and closed. When a degreaser is equipped with a lip exhaust, the cover shall be located below the lip exhaust. When a degreaser has a freeboard ratio equal to or greater than 0.75 and the opening is greater than one square meter (10 square feet) the cover shall be power operated.

(ii) Have one of the following:

(A) A freeboard ratio equal to or greater than 0.75; or

(B) A freeboard chiller; or

(C) A closed design such that the cover opens only when the part enters or exits the degreaser.

(iii) Be equipped with at least the following three safety switches:

(A) Condenser-flow switch and thermostat (shuts off sump heat if coolant is either not circulating or too warm); and

(B) Spray safety switch (shuts off spray pump if the vapor level drops excessively; and

(C) Vapor level control thermostat (shuts off sump heat when vapor level rises too high).

(iv) Post a permanent and conspicuous pictograph or instructions clearly explaining the following work practices:

(A) Do not degrease porous or absorbent materials such as cloth, leather, wood or rope.

(B) The cover of the degreaser should be closed at all times except when processing workloads.

(C) When the cover is open the lip of the degreaser should not be exposed to steady drafts greater than 15.3 meters per minute (50 feet per minute).

(D) Rack parts so as to facilitate solvent drainage from the parts.

- (E)** Workloads should not occupy more than one-half of the vapor-air interface area.
- (F)** When using a powered hoist, the vertical speed of parts in and out of the vapor zone should be less than 3.35 meters per minute (11 feet per minute).
- (G)** Degrease the workload in the vapor zone until condensation ceases.
- (H)** Spraying operations should be done within the vapor layer.
- (I)** Hold parts in the degreaser until visually dry.
- (J)** When equipped with a lip exhaust, the fan should be turned off when the cover is closed.
- (K)** The condenser water shall be turned on before the sump heater when starting up a cold vapor degreaser. The sump heater shall be turned off and the solvent vapor layer allowed to collapse before closing the condenser water when shutting down a hot vapor degreaser.
- (L)** Water shall not be visible in the solvent stream from the water separator.

(b) A routine inspection and maintenance program shall be implemented for the purpose of preventing and correcting solvent losses. For example, leaks from drain taps, cracked gaskets, and malfunctioning equipment must be repaired immediately.

(c) Sump drainage and transfer of hot or warm solvent shall be carried out using threaded or other leakproof couplings.

(d) Still and sump bottoms shall be kept in closed containers.

(e) Waste solvent shall be stored in covered containers and returned to the supplier or to a firm which processes solvents for disposal.

(8) ConveyORIZED degreasers.

(a) The owner or operator of conveyORIZED cold cleaners and conveyORIZED vapor degreasers shall comply with the following operating requirements:

(i) Exhaust ventilation shall not exceed twenty cubic meters per minute per square meter (65 cfm per ft.²) of degreaser opening, unless necessary to meet OSHA requirements.

(ii) Post in the immediate work area a permanent and conspicuous pictograph or instructions clearly explaining the following work practices:

(A) Rack parts for best drainage.

(B) Maintain vertical speed of conveyed parts to less than 3.35 meters per minute (11 feet per minute).

(C) The condenser water shall be turned on before the sump heater when starting up a cold vapor degreaser. The sump heater shall be turned off and the solvent vapor layer allowed to collapse before closing the condenser water when shutting down a hot vapor degreaser.

(D) Water shall not be visible in the solvent stream from the water separator.

(iii) Vapor degreasers shall be equipped with at least the following three safety switches:

(A) Condenser flow switch and thermostat (shuts off sump heat if coolant is either not circulating or too warm); and

(B) Spray safety switch (shuts off spray pump if the vapor level drops excessively); and

(C) Vapor level control thermostat (shuts off sump heat when vapor level rises too high).

(b) A routine inspection and maintenance program shall be implemented for the purpose of preventing and correcting solvent losses. For example, leaks from drain taps, cracked gaskets, and malfunctioning equipment must be repaired immediately.

(c) Sump drainage and transfer of hot or warm solvent shall be carried out using threaded or other leakproof couplings.

(d) Still and sump bottoms shall be kept in closed containers.

(e) Waste solvent shall be stored in covered containers and returned to the supplier or to a firm which processes solvents for disposal.

(f) All conveyORIZED cold cleaners and conveyORIZED vapor degreasers with air/vapor interfaces of 2.0 m² or greater shall have a carbon adsorption system, exhausting less than 25 ppm of solvent averaged over a complete adsorption cycle (based on exhaust ventilation of 15 m³ per min per m² of air/vapor area, when downtime covers are open), or a system with control effectiveness equal to or better than a carbon adsorption system.

(9) Cutback asphalt paving.

(a) All paving applications of cutback asphalts are prohibited during the months of April, May, June, July, August, September and October, except as provided for in WAC 173-490-040 (9)(b).

(b) The following paving uses and applications of cutback asphalts are permitted during all months of the year.

(i) As a penetrating prime coat on aggregate bases prior to paving.

(ii) The manufacture of patching mixes used exclusively for pavement maintenance and needed to be stockpiled for times longer than one month.

(iii) All paving uses when the temperature during application is below 10°C (50°F). Any person using cutback asphalt for paving shall demonstrate that the ambient air temperature at 8 a.m. (PST) is below 50°F. The paving application of cutback asphalt when the ambient air temperature is 50°F or higher is in violation of this chapter.

(10) Cold cleaners.

(a) The owners or operators of all cold cleaners shall comply with the following equipment specifications:

(i) Be equipped with a cover that is readily opened and closed.

(ii) Be equipped with a drain rack that returns the drained solvent to the solvent bath.

(iii) Have a freeboard ratio of at least 0.5.

(iv) Have a visible fill line.

(b) An owner or operator of a cold cleaner shall be responsible for following the required operating parameters and work practices. The owner shall post and maintain in the work area of each cold cleaner a pictograph or instructions clearly explaining the following work practices:

(i) The solvent level shall not be above the fill line.

(ii) The spraying of parts to be cleaned shall be performed only within the confines of the cold cleaner.

(iii) The cover of the cold cleaner shall be closed when not in use or when parts

are being soaked or cleaned by solvent agitation.

(iv) Solvent-cleaned parts shall be rotated to drain cavities or blind holes and then set to drain until dripping has stopped.

(v) Waste solvent shall be stored in covered containers and returned to the supplier or to a firm which processes solvents for disposal.

(c) The owner or operator shall maintain cold cleaners in good working condition and free of solvent leaks.

(d) If the solvent has a vapor pressure greater than 2.0 kPa (0.3 psi) measured at 38°C (100°F), or if the solvent is agitated or heated, then the cover must be designed so that it can be easily operated with one hand.

(e) If the solvent has a vapor pressure greater than 4.3 kPa (0.6 psi) measured at 38°C (100°F), then the drainage facility must be internal, so that parts are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(f) If the solvent has a vapor pressure greater than 4.3 kPa (0.6 psi) measured at 38°C (100°F), or if the solvent is heated above 50°C (120°F), one of the following solvent vapor control systems must be used:

(i) The freeboard ratio must be equal to or greater than 0.70; or

(ii) Water must be kept over the solvent. The solvent must be more dense and insoluble in water.

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

173-490-080 Exceptions and Alternative Methods.

(1) Other emission reduction methods may be used if the source operator demonstrates to ecology that they are at least as effective as the required methods; and

(2) The operation of a natural gas-fired incinerator and associated capture system installed for the purpose of complying with this chapter shall be required only during the months of April, May, June, July, August, September and October, unless the operation of such devices is required for purposes of occupational health or safety, or for the control of toxic substances, malodors, or other regulated pollutants.

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

173-490-090 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 effective: 3/22/91; EPA effective: 9/10/93

173-490-200 Petroleum Refinery Equipment Leaks.

(1) Specific applicability. This section shall apply to all petroleum refineries as qualified in WAC 173-490-025.

(2) Provisions for specific processes.

(a) The owner(s) or operator(s) of a petroleum refinery shall:

(i) Develop and conduct a monitoring program consistent with the provisions in WAC 173-490-200(3), 173-490-200(4), 173-490-200(5), and 173-400-105;

(ii) Record all leaking components which have a VOC concentration greater than 10,000 ppm when tested according to the provisions in WAC 173-490-200(3) and place an identification tag on each component consistent with the provisions of WAC 173-490-200 (4)(c);

(iii) Correct and retest the leaking component, as defined in WAC 173-490-200 (2)(a)(ii), as soon as practicable, but not later than fifteen days after the leak is recorded. If a leak continues after all reasonable corrective actions have been taken, then the component shall be repaired or replaced on the next scheduled turnaround.

(iv) Identify all leaking components, as defined in WAC 173-490-200 (2)(a)(ii), that cannot be corrected until the refinery unit is shut down for turnaround.

(b) The owner or operator of a petroleum refinery shall not install or operate a valve at the end of a pipe or line containing VOC unless the pipe or line is sealed with a second suitable closure. Exceptions to this requirement are the ends of a pipe or line connected to pressure relief valves, aspirator vents or other devices specifically required to be open for safety protection. The sealing device may be removed only when a sample is being taken or during maintenance operations.

(3) Testing procedures. To demonstrate compliance with this chapter, refer to WAC 173-400-105(5).

(4) Monitoring.

(a) The owner or operator of a petroleum refinery shall conduct a monitoring program consistent with the following provisions:

(i) Monitor yearly by the methods referenced in WAC 173-490-200(3) all pump seals, pipeline valves in liquid service and process drains;

(ii) Monitor quarterly by the methods referenced in WAC 173-490-200(3) all compressor seals, pipeline valves in gaseous service and pressure relief valves in gaseous service;

(iii) Monitor weekly by visual methods all pump seals;

(iv) Monitor immediately any pump seal from which liquids are observed leaking;

(v) Monitor any relief valve within twenty-four hours after it has vented to the atmosphere; and

(vi) After a leaking component is repaired, monitor for leaks prior to return to service.

(b) Pressure relief devices that are connected to an operating flare header, vapor recovery device, inaccessible valves, storage tank valves, and valves that are not externally regulated are exempt from the monitoring requirements in WAC 173-490-200 (4)(a).

(c) The owner or operator of a petroleum refinery, upon the detection of a leaking component, as defined in WAC 173-490-200 (2)(a)(ii), shall affix a weatherproof and readily visible tag, bearing an identification number and the date the leak is located, to the leaking component. This tag shall remain in place until the leak is corrected.

(5) Recordkeeping.

(a) The owner or operator of a petroleum refinery shall maintain a leaking component's monitoring log as specified in WAC 173-490-200 (2)(a)(ii) that shall contain, at a minimum, the following data:

(i) The name of the process unit where the component is located.

(ii) The type of component (e.g., valve, seal).

(iii) The tag number of the component.

(iv) The date on which a leaking component is discovered.

- (v) The date on which a leaking component is repaired.
- (vi) The date and instrument reading of the recheck procedure after a leaking component is repaired.
- (vii) A record of the calibration of the monitoring instrument.
- (viii) Those leaks that cannot be repaired until turnaround.
- (ix) The total number of components checked and the total number of components found leaking.

(b) Copies of the monitoring log shall be retained by the owner or operator for a minimum of two years after the date on which the record was made or the report prepared.

(c) Copies of the monitoring log shall immediately be made available to ecology, upon verbal or written request, at any reasonable time.

(6) Reporting. The owner or operator of a petroleum refinery shall notify ecology in writing within forty-five days following each quarterly or annual inspection for component leaks when:

(a) The number of discovered leaks has increased by more than ten percent above the number recorded during the last inspection of the same components;

(b) The number of leaking components has increased for two consecutive quarterly or annual inspections;

(c) The number of leaks not corrected within fifteen days exceeds five percent of the leaks detected;

(d) The next scheduled process unit turnaround needed to repair an uncorrectable leak is more than twelve months away.

(7) Petition for alternative monitoring.

(a) After two complete liquid service inspections and five complete gaseous service inspections, the owner or operator of a petroleum refinery may petition the director for alternative monitoring procedures or a reduction in monitoring frequency.

(b) A petition for alternative monitoring procedures shall contain:

(i) The name and address of the company and the name and telephone number of the responsible person over whose signature the petition is submitted;

(ii) A detailed description of the problems encountered under WAC 173-490-200(4); and

(iii) A detailed description of the alternative monitoring procedures and how this alternative procedure will solve or reduce the problems encountered under WAC 173-490-200(4).

(c) A petition for a reduction in monitoring frequency shall contain:

(i) The information requested in WAC 173-490-200 (7)(b)(i);

(ii) A detailed description of the proposed component-monitoring schedule;

(iii) A demonstration by the owner or operator that the facility is currently operating with a low level of component leaks and is committed to a maintenance program that will assure a frequency and severity of component leaks as good as that attainable under WAC 173-490-200(2).

(d) An approved petition for a reduction in monitoring frequency shall begin with the next quarterly inspection and shall be valid for a period of twelve quarters (three years). At the time of the last inspection in the twelve quarters, a new submittal of the information required in WAC 173-490-200 (7)(c) shall be made if the reduced frequency of monitoring is to continue.

(e) Ecology may approve a part or all of a petition for alternative monitoring requested under WAC 173-490-200 (7)(b) or (c). Approval or disapproval will be in writing and within forty-five calendar days of receipt of the petition by ecology. A failure to approve or disapprove a new petition or petition for renewal within the stated time limit shall be taken as an approval.

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

173-490-201 Petroleum Liquid Storage in External Floating Roof Tanks.

(1) Specific applicability.

(a) This section shall apply to all petroleum liquid storage vessels equipped with external floating roofs, having capacities greater than 150,000 liters (40,000 gallons), and as qualified in WAC 173-490-025.

(b) This section does not apply to petroleum liquid storage vessels that:

(i) Are used to store waxy, heavy pour crude oil; or

- (ii) Have capacities less than 1,600,000 liters (420,000 gallons) and are used to store produced crude oil and condensate prior to lease custody transfer; or
- (iii) Contain a petroleum liquid with a true vapor pressure of less than 10.5 kPa (1.5 psia); or
- (iv) Contain a petroleum liquid with a true vapor pressure less than 27.6 kPa (4.0 psia); are of welded construction; and presently possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by ecology; or
- (v) Are of welded construction, equipped with a metallic-type shoe primary seal and have secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).

(2) Provisions for specific processes.

(a) No owner(s) or operator(s) of a petroleum liquid storage vessel shall store a petroleum liquid in that vessel unless:

(i) The vessel has been fitted with:

(A) A continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or

(B) A closure or other device which controls VOC emissions with an effectiveness equal to or greater than a seal required under WAC 173-490-201 (2)(a)(i)(A) and approved by ecology.

(ii) All seal closure devices meet the following requirements:

(A) There are no visible holes, tears, or other openings in the seal or seal fabric;

(B) The seal is intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and

(C) For vapor mounted primary seals, the accumulated area of gaps exceeding 0.32 cm (1/8 inch) in width between the secondary seal and the tank wall shall not exceed 21.2 cm² per meter of tank diameter (1.0 in.² per foot of tank diameter), as determined by the method in WAC 173-490-201(3).

(iii) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:

(A) Equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and

(B) Equipped with projections into the tank which remain below the liquid surface at all times.

(iv) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;

(v) Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and

(vi) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent of the area of the opening.

(b) The owner(s) or operator(s) of a petroleum liquid storage vessel with an external floating roof subject to this chapter shall:

(i) Perform routine inspections annually in order to insure compliance with WAC 173-490-201 (2)(a) and the inspection shall include a visual inspection of the secondary seal gap;

(ii) Measure the secondary seal gap annually in accordance with WAC 173-490-201(3) when the floating roof is equipped with a vapor-mounted primary seal; and

(iii) Maintain records of the types of volatile petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of the inspections performed in WAC 173-490-201 (2)(b)(i) and (ii).

(c) The owner(s) or operator(s) of a petroleum liquid storage vessel with an external floating roof exempted from this chapter by WAC 173-490-201 (1)(b)(iii), but containing a petroleum liquid with a true vapor pressure greater than 7.0 kPa (1.0 psi), shall maintain records of the average monthly storage temperature, the type of liquid, and the maximum true vapor pressure for all petroleum liquids with a true vapor pressure greater than 7.0 kPa.

(d) Copies of all records under WAC 173-490-201 (2)(b) and (c) shall be retained by the owner(s) or operator(s) for a minimum of two years after the date on which the record was made.

(e) Copies of all records required under WAC 173-490-201 shall immediately be made available to the director, upon verbal or written request, at any reasonable time.

(3) Testing and monitoring.

(a) The owner or operator of a storage vessel covered under WAC 173-490-201 shall demonstrate compliance by the methods of this subsection or an alternative method approved by ecology.

(b) A person proposing to measure the seal fit of a storage vessel in order to comply with this section shall notify ecology of the intent to measure not less than five working days before the measurement so the director or a representative may observe the measurement if desired.

(c) Compliance with WAC 173-490-201 (2)(a)(ii)(C) shall be determined by physically measuring the length and width of all gaps around the circumference of the secondary seal in each place where a 0.32 cm (1/8 in.) diameter probe passes freely (without forcing or binding against the seal) between the seal and the tank wall and summing the area of the individual gaps.

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

173-490-202 Leaks from Gasoline Transport Tanks and Vapor Collection System.

(1) Specific applicability.

This section shall apply to all gasoline transport tanks equipped for gasoline vapor collection and all vapor collection systems at gasoline loading terminals, bulk gasoline plants and gasoline dispensing facilities as qualified in WAC 173-490-025 and 173-490-040.

(2) Provisions for specific processes.

(a) The owner(s) or operator(s) of a gasoline loading or unloading facility shall only allow the transfer of gasoline between the facility and a transport tank when a current leak test certification for the transport tank is on file with the facility or a valid inspection sticker is displayed on the vehicle.

(b) The owner(s) or operator(s) of a transport tank shall not make any connection to the tank for the purpose of loading or unloading gasoline, except in the case of an emergency, unless the gasoline transport tank:

(i) Is tested annually according to the test procedure referenced in WAC 173-490-202 (3)(c);

(ii) Sustains a pressure change of no more than 0.75 kilopascals (3 inches of water) in five minutes when pressurized to a gauge pressure of 4.5 kilopascals (18 inches of water) or evacuated to a gauge pressure of 1.5 kilopascals (6 inches of water) during the testing required in WAC 173-490-202 (2)(b)(i);

(iii) Is repaired by the owner(s) or operator(s) and retested within fifteen days of

testing if it does not meet the criteria of WAC 173-490-202 (2)(b)(ii);

(c) The owner(s) or operator(s) of a transport tank shall:

(i) Have a current leak test certification for the transport tank on file with each gasoline loading or unloading facility where gasoline is transferred; or

(ii) Display a sticker near the department of transportation certification plate required by 49 CFR 178.340-10b which:

(A) Shows the date that the gasoline tank truck last passed the test required in WAC 173-490-202 (2)(b)(i) and (ii);

(B) Shows the identification number of the gasoline tank truck tank; and

(C) Expires not more than one year from the date of the leak tight test.

(d) The owner(s) or operator(s) of a vapor collection system shall:

(i) Operate the vapor collection system and the gasoline loading equipment during all loadings and unloadings of transport tanks equipped for emission control such that:

(A) A gauge reading of tank pressure will not exceed 4.5 kilopascals (18 inches of water) or vacuum 1.5 kilopascals (6 inches of water);

(B) The concentration of gasoline vapors is below the lower explosive limit (LEL, measured as propane) at all points a distance of 2.5 cm (1 inch) from potential leak sources when measured by the method in WAC 173-490-202(3); and

(C) There are no visible liquid leaks.

(ii) Repair and retest a vapor collection system that exceeds the limits of WAC 173-490-202 (2)(d)(i) within fifteen days.

(e) Ecology may, at any time, monitor a gasoline transport tank and vapor collection system during loading or unloading operations by the procedure in WAC 173-490-202 (3)(d) to confirm continuing compliance with WAC 173-490-202 (2)(b) or (d).

(3) Testing and monitoring.

(a) The owner(s) or operator(s) of a gasoline transport tank or vapor collection system shall, at his own expense, demonstrate compliance with WAC 173-490-202 (2)(a) and (b), respectively. All tests shall be made by, or under the direction of, a person qualified

to perform the tests.

(b) The owner(s) or operator(s) of a gasoline transport tank shall notify ecology in writing of the date and location of a certification test at least ten calendar days before the anticipated test date.

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

(d) Monitoring to confirm the continuing existence of leak tight conditions shall be consistent with the procedures on file with and approved by ecology.

(4) Recordkeeping.

(a) The owner(s) or operator(s) of a gasoline transport tank or vapor collection system shall maintain records of all certification tests and repairs for at least two years after the test or repair is completed.

(b) The records of certification tests required by WAC 173-490-202 (4)(a) shall, as a minimum, contain:

(i) The transport tank identification number;

(ii) The initial test pressure and the time of the reading;

(iii) The final test pressure and the time of the reading;

(iv) The initial test vacuum and the time of the reading;

(v) The final test vacuum and the time of the reading;

(vi) At the top of each report page, the company name, date and location of the tests on that page; and

(vii) Name and title of the person conducting the test.

(c) The owner(s) or operator(s) of a gasoline transport tank shall annually certify that the transport tank passed the required tests.

(d) Copies of all records required under WAC 173-490-202 shall immediately be made available to ecology, upon written request, at any reasonable time.

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

173-490-203 Perchloroethylene Dry Cleaning Systems.

(1) Specific applicability. This section shall apply to all dry cleaning systems using perchloroethylene cleaning solvent and as qualified in WAC 173-490-203 (1)(a) and (b) and 173-490-025.

(a) The following dry cleaning systems are exempt from the requirements of WAC 173-490-203 (2)(a)(i) and (ii):

(i) Coin-operated systems;

(ii) Systems located in a facility with inadequate space to accommodate an adsorber;

(iii) Systems with insufficient steam capacity to desorb adsorbers .

(b) An exemption for the conditions stated in WAC 173-490-203 (2)(a)(i) and (ii) may be granted by ecology when sufficient evidence is submitted by the owner(s) or operator(s) of the dry cleaning system to justify the exemption.

(c) A material balance will be used to determine VOC losses.

(2) Provisions for specific processes.

(a) The owner(s) or operator(s) of a perchloroethylene dry cleaning facility subject to this chapter shall:

(i) Vent the entire dryer exhaust through a properly functioning carbon adsorption system or equally effective control device;

(ii) Emit no more than 100 ppmv when demonstrated in accordance with WAC 173-490-203(3)(c)(i), of VOC's from the dryer control device before dilution;

(iii) Immediately repair all components found to be leaking liquid VOCs;

(iv) Cook or treat all diatomaceous earth filters so that the residue contains 25 kg or less of VOCs per 100 kg of wet waste material;

(v) Reduce the VOCs from all solvent stills to 60 kg or less per 100kg of wet waste material;

(vi) Drain all filtration cartridges, in the filter housing or other enclosed container, for at least twenty-four hours before discarding the cartridges; and

(vii) When possible, dry all drained cartridges without emitting VOCs to the atmosphere.

(3) Testing and monitoring

(a) Compliance with WAC 173-490-203 (2) (a)(i), (vi), and (vii) shall be determined by means of visual inspection.

(b) Compliance with WAC 173-490-203 (2) (a)(iii) shall be determined by means of visual inspection of the following components:

(i) Hose connections, unions, couplings and valves;

(ii) Machine door gaskets and seatings;

(iii) Filter head gasket and seating;

(iv) Pumps;

(v) Base tanks and storage containers;

(vi) Water separators;

(vii) Filter sludge recovery;

(viii) Distillation unit;

(ix) Diverter valves

(x) Saturated lint from lint basket; and

(xi) Cartridge filters

(c) Compliance with WAC 173-490-203 (2) (a)(ii) shall be demonstrated by:

(i) A test consistent with the procedures on file with and approved by ecology;
or

(ii) The proper installation, operation, and maintenance of equipment that has been demonstrated by the owner(s) or operator(s) to adequately meet the emission limits in WAC 173-490-203(2)(a)(ii).

(d) Compliance with WAC 173-490-203 (2)(a)(iv) and (v) shall be demonstrated by tests consistent with the procedures on file with and approved by ecology.

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

173-490-204 Graphic Arts System.

(1) Specific applicability.

(a) This section shall apply to all packaging rotogravure, publication rotogravure, specialty printing operations, and flexographic printing facilities that use more than 90 megagrams (100 tons) per year of VOCs as a component of ink, for the thinning of ink, cleaning of presses, press components and equipment; and are covered by WAC 173-490-025.

(b) Machines that have both coating units (apply a uniform layer of material across the entire width of a web) and printing units (forming words, designs, and pictures) shall be included under WAC 173-490-204 rather than WAC 173-490-040(6), Surface coaters.

(2) Provisions for specific processes.

(a) No owner(s) or operator(s) of a packaging rotogravure, publication rotogravure or flexographic printing subject to this regulation and employing solvent containing ink may operate, cause, allow or permit the operation of the facility unless:

(i) The volatile fraction of ink, as it is applied to the substrate, contains twenty-five percent by volume or less of organic solvent and seventy-five percent by volume or more of water;

(ii) The ink as it is applied to the substrate, less water, contains sixty percent by volume or more nonvolatile material; or

(iii) The owner(s) or operator(s) installs and operates a system that captures at least ninety percent by weight and;

(A) A carbon adsorption system which reduces the volatile organic emissions from the capture system by at least ninety percent by weight;

(B) An incineration system which oxidizes at least ninety percent of the nonmethane VOCs (VOC measured as total combustible carbon) to carbon dioxide and water; or

(C) An alternative VOC emission reduction system demonstrated to have at least a ninety percent reduction efficiency, measured across the control system, and has been approved by ecology.

(b) A collection system shall be used with the emission controls of WAC 173-490-204 (2)(a)(iii). The design and operation of the collection system shall be consistent with good engineering practice, and shall provide an overall reduction in the emission of VOCs of at least:

- (i) Seventy-five percent where a publication rotogravure process is used; or
- (ii) Sixty-five percent where a packaging rotogravure process is used; or
- (iii) Sixty percent where a flexographic process is used.

(3) Testing and monitoring.

- (a) To demonstrate compliance with this chapter, refer to WAC 173-400-105.
- (b) When add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:
 - (i) Exhaust gas temperature of all incinerators;
 - (ii) Temperature rise across a catalytic incinerator bed;
 - (iii) Breakthrough of VOC on a carbon adsorption unit; and
 - (iv) Any other continuous monitoring or recording device required by ecology.
- (c) The owner or operator of a facility shall be responsible for all expenses of monitoring required by WAC 173-490-204 (3)(b).

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

173-490-205 Surface Coating of Miscellaneous Metal Parts and Products.

(1) Specific applicability. This section shall apply to surface coating of miscellaneous metal parts and products in the following industries, if the potential uncontrolled emissions of VOC is greater than 10 tons per year and as qualified in WAC 173-490-205(1)(b),(c), and (d), and 173-490-025.

- (a) Miscellaneous metal parts and products shall include:
 - (i) Large farm machinery (harvesting, fertilizing and planting machines, tractors, combines, etc.);
 - (ii) Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);
 - (iii) Small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);

(iv) Commercial machinery (office equipment, computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);

(v) Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);

(vi) Fabricated metal products (metal covered doors, frames, etc.); and

(vii) Any other industrial category which coats metal parts or products under the Standard Industrial Classification Code of Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous instruments), Major Group 39 (miscellaneous manufacturing industries), Major Group 40 (railroad transportation), and Major Group 41 (transit passenger transportation).

(b) This section is not applicable to the surface coating of the following metal parts and products:

(i) Automobiles and light-duty trucks;

(ii) Metal cans;

(iii) Flat metal sheets and strips in the form of rolls or coils;

(iv) Magnet wire for use in electrical machinery;

(v) Metal furniture;

(vi) Large appliances;

(vii) Airplanes;

(viii) Automobile refinishing;

(ix) Customized top coating of automobiles and trucks, if production is less than thirty-five vehicles per day; and

(x) Exterior of marine vessels.

(c) This chapter applies to the application area, flashoff area, air and forced air drier, and oven used in the surface coating of the metal parts and products in WAC 173-490-205 (1)(a). This chapter also applies to prime coat, top coat, and single coat operations.

(d) The application of coatings whose formulations are controlled by federal specifications and the use of which is required by federal agencies shall be exempt from the emission limits in WAC 173-490-205 (2)(a).

(e) A case-by-case determination of the emission controls best representing RACT may be substituted for the requirements of WAC 173-490-205(2). Such a determination shall be approved by ecology.

(2) Provisions for specific processes.

(a) The owner or operator of a coating application system shall not emit a quantity of VOCs greater than those listed by specific coating, excluding water and as delivered to the application system:

(i) Clear coatings	0.52 kg/liter	(4.3 lb/gallon)
(ii) Extreme performance coatings	0.42 kg/liter	(3.5 lb/gallon)
(iii) Air dried coatings	0.42 kg/liter	(3.5 lb/gallon)
(iv) All others	0.36 kg/liter	(3.0 lb/gallon)
(v) Powder coatings	0.05 kg/liter	(0.4 lb/gallon)

(b) When more than one emission limitation listed in WAC 173-490-205 (2)(a) applies to a specific coating, the least stringent will apply.

(c) All VOC emissions from solvent washings shall be considered in the emission limitations in WAC 173-490-205 (2)(a), unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(d) The emission limits set forth in WAC 173-490-205 (2)(a) shall be achieved by:

(i) The application of low solvent coating technology; or

(ii) An incineration system that oxidizes at least ninety percent of the VOCs (VOC measured as total combustible carbon) to carbon dioxide and water; or

(iii) An equivalent means of VOC reduction certified by the owner(s) or operator(s) and approved by ecology.

(e) A collection system shall be used together with the incinerator of WAC 173-490-205 (2)(d)(ii). The design and operation of the collection system shall be consistent with good engineering practice and provide for an overall VOC emission reduction necessary to comply with the emission limits of WAC 173-490-205 (2)(a). The required VOC emission reduction shall be calculated on a unit volume of uncured solids basis.

(3) Testing and monitoring.

- (a)** Ecology may require the owner(s) or operator(s) of a source to demonstrate at his/her own expense, compliance by the methods of WAC 173-490-205 (3)(c).
- (b)** The owner(s) or operator(s) of a source shall notify ecology at least ten days before a proposed emission certification test so the director or a representative may observe the test.
- (c)** To demonstrate compliance with this chapter, refer to WAC 173-400-105.
- (d)** Ecology may require monitoring of the following parameters:
 - (i)** Exhaust gas temperature of all incinerators;
 - (ii)** Temperature rise across a catalytic incinerator bed; and
 - (iii)** Breakthrough of VOC on a carbon adsorption unit.

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

173-490-207 Surface Coating of Flatwood Paneling.

(1) Specific applicability.

- (a)** This section shall apply to all flatwood panel manufacturers and surface finishing facilities as qualified in WAC 173-490-207 (1)(b) and (c) and 173-490-025.
- (b)** These chapters shall apply to all operations and equipment that is used to apply, convey and dry (including flashoff areas) a surface pattern or coating on the following products:
 - (i)** Printed interior panels made of hardwood plywood and thin particleboard;
 - (ii)** Natural finish hardwood plywood panels; or
 - (iii)** Hardboard paneling with Class II finishes.
- (c)** These chapters do not apply to the manufacture of exterior siding, tileboard, or particleboard used as a furniture component.

(2) Provisions for specific processes.

- (a)** The owner(s) or operator(s) of a facility shall not emit VOCs from a coating

application system in excess of:

- (i) 2.9 kg per 100 square meters of coated finished product (6.0 lb/1,000 square feet) from printed interior panels, regardless of the number of coats applied;
- (ii) 5.9 kg per 100 square meters of coated finished product (12.0 lb/1,000 square feet) from natural finish hardwood plywood panels, regardless of the number of coats applied; and
- (iii) 4.9 kg per 100 square meters of coated finished product (10.0 lb/1,000 square feet) from Class II finishes on hardboard panels, regardless of the number of coats applied.

(b) The emission limits in WAC 173-490-207 (2)(a) shall be achieved by:

- (i) The application of low solvent content coating technology; or
- (ii) An incineration system which oxidizes at least ninety percent of the nonmethane VOCs entering the incinerator (VOC measured as total combustible carbon) to carbon dioxide and water; or
- (iii) An equivalent means of VOC removal. The equivalent means must be certified by the owner(s) or operator(s) and approved by ecology.

(c) A capture system shall be used in conjunction with the emission control systems in WAC 173-490-207 (2)(b)(ii) and (iii). The design and operation of the capture system must be consistent with good engineering practice and shall be required to provide for an overall emission reduction sufficient to meet the emission limitation in WAC 173-490-207 (2)(a).

(3) Testing and monitoring.

(a) Ecology may require the owner or operator of a facility to demonstrate at his/her own expense compliance by the methods of WAC 173-490-207 (3)(c).

(b) The owner(s) or operator(s) of a facility shall notify ecology at least ten days before a proposed emission certification test so the director or a representative may observe the test.

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

(d) Ecology may require monitoring of the following parameters:

- (i) Exhaust gas temperature of all incinerators;

- (ii) Temperature rise across a catalytic incinerator bed; and
- (iii) Breakthrough of VOC on a carbon adsorption unit.

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

173-490-208 Aerospace Assembly and Component Coating Operations.

(1) **Specific Applicability.** This section shall apply to all aerospace component coating facilities that emit an annual average of eighteen kilograms (forty pounds) or more of VOCs per operating day and as qualified in WAC 173-490-025.

(2) It shall be unlawful for any person to cause or allow:

(a) The application of any primer or topcoat to aerospace components which contains in excess of:

(i) 650 grams of VOC per liter of primer, less water, as applied.

(ii) 600 grams of VOC per liter of topcoat, less water, as applied.

(b) The application of any temporary protective coating to aerospace components that contains more than 250 grams of VOC per liter of material, less water, as applied.

(c) The use of VOCs of composite vapor pressure of 10.4 kPa (1.5 psia) or greater at a temperature of 21.1°C (70°F) for surface preparation or cleanup, excluding paint removal.

(d) The use of VOCs for the cleanup of spray equipment used in aerospace component coating operations unless 85 percent of the VOCs by weight, are collected and disposed so that they are not emitted to the atmosphere.

(e) The use of a stripper which contains more than 400 grams of VOC per liter or has a composite vapor pressure of VOCs more than 1.3 kPa (0.19 psia) at 21.1°C (70°F).

(3) The emission limits of paragraph (2) shall be achieved by:

(a) The application of reasonably available low solvent coating technology;

(b) A vapor collection and disposal system; or

(c) An equivalent method of VOC reduction certified by the owner(s) or operator(s) and approved by ecology.

(4) The provisions of WAC 173-490-208 (2)(a) and (2)(b) shall not apply to the following materials:

- (a) Coatings for masking in chemical etching operations,
- (b) Adhesive bonding primer,
- (c) Flight test coatings,
- (d) Space vehicle coatings, or
- (e) Fuel tank coatings.

(5) Upon the submission of an alternative coating evaluation, ecology may determine that a reasonably available low solvent coating does exist for a given application and may exempt the coating from requirements of WAC 173-490-208. All alternative coating evaluations shall contain, as a minimum:

- (a) Types of products to be coated,
- (b) Types of coatings evaluated,
- (c) Results of performance tests,
- (d) Status of research into development of low VOC coatings for the application,
- (e) Feasibility of installing control equipment,
- (f) Mitigating measures that could be implemented to reduce VOC emissions.

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

WAC 173-492 MOTOR FUEL SPECIFICATIONS FOR OXYGENATED GASOLINE

173-492-010 Policy and Purpose.

The purpose of this regulation is to reduce carbon monoxide emissions from gasoline powered motor vehicles, through the wintertime use of oxygenated gasolines.

State effective: 10/19/96; EPA effective: 6/30/97

173-492-020 Applicability.

This regulation shall apply to all gasoline offered for sale in the control areas and over the control periods defined in WAC 173-492-070.

State effective: 12/1/92; EPA effective: 6/30/97

173-492-030 Definitions.

The following words and phrases shall have the following meanings:

"Authority" means an air pollution control authority activated pursuant to chapter 70.94 RCW that has jurisdiction over the subject source.

"Blender" means a person who owns oxygenated gasoline which is sold or dispensed from an oxygenate blending facility for use in a control area during a control period.

"Control area" means an area in which only oxygenated gasoline under the oxygenated gasoline program of this chapter may be sold or dispensed. Each control area is a county or group of counties administered by a separate air pollution control authority.

"Control period" means the period during which oxygenated gasoline must be sold or dispensed within the control area.

"Ecology" means the Washington state department of ecology.

"Gasoline" means any fuel sold for use in motor vehicles and motor vehicle engines, and commonly known or sold as gasoline.

"Large volume blender" means blenders that blend and offer for sale or sell one million gallons or more, but less than fifteen million gallons, of oxygenated gasoline per month on average during a control period within a control area.

"Medium volume blender" means blenders that blend and offer for sale or sell one hundred thousand gallons or more, but less than one million gallons, of oxygenated gasoline per month on average during a control period within a control area.

"Oxygenate" means any substance which, when added to gasoline, increases the amount of oxygen in the gasoline blend. Lawful use of any combination of these substances requires that they be "substantially similar" under section 211 (f)(1) of the federal Clean Air Act (CAA), or be permitted under a waiver granted by the Administrator of the Environmental Protection Agency under the authority of section 211 (f)(4) of the CAA.

"Oxygenated gasoline" means gasoline which contains a measurable amount of oxygenate,

generally an alcohol or ether.

"Small volume blender" means blenders that blend and offer for sale or sell less than one hundred thousand gallons of oxygenated gasoline per month on average during a control period within a control area.

"Very large volume blender" means blenders that blend and offer for sale or sell fifteen million gallons or more of oxygenated gasoline per month on average during a control period within a control area.

State effective: 12/1/92; EPA effective: 6/30/97

173-492-040 Compliance Requirements.

(1) Retail sales. No gasoline intended as a final product for fueling of motor vehicles within the control areas and control periods as defined in WAC 173-492-070 shall be offered for sale, sold or dispensed by any person unless the gasoline has at least 2.0% oxygen content by weight.

(2) Average blend requirements. Over each two-month interval during the control period, gasoline intended as a final product for fueling of motor vehicles within the control areas defined in WAC 173-492-070 supplied by blenders to purchasers within the control areas defined in WAC 173-492-070 shall average at least 2.7% oxygen by weight, and in no case be less than 2.0% oxygen content by weight.

(3) Reports. Blenders shall provide periodic reports, as stipulated in the blenders registration, to ecology or the authority summarizing how the requirements of subsection (2) of this section were met. With prior approval from ecology or the authority, a credit trading program may be used to comply with these requirements. Such reports shall be on forms provided by ecology or the authority.

State effective: 12/1/92; EPA effective: 6/30/97

173-492-050 Registration Requirements.

Each blender shall register with ecology or the authority each year, in each control area where a blender offers for sale, sells, or dispenses gasoline. Each request for registration shall be on forms supplied by ecology or the authority and shall be accompanied by a fee to compensate for the cost of administering the registration program, including on-site inspections necessary to verify compliance with these requirements. The location of each blender facility shall be included in the information provided by the blender at registration. The fee may be based on the volume of oxygenated gasoline sold or offered for sale by the blender in that control area to comply with the provisions of WAC 173-492-040, including separate fee categories for small, medium, large and very large volume blenders.

Registration fees shall be set by regulation by ecology or the authority.

State effective: 10/19/96; EPA effective: 6/30/97

173-492-060 Labeling Requirements.

In addition to other labeling requirements, fuel dispensing systems delivering oxygenated gasoline shall be conspicuously labeled during the control periods and in the control areas stated in WAC 173-492-070 as follows:

"The gasoline dispensed from this pump is oxygenated and will reduce carbon monoxide pollution from motor vehicles."

State effective: 12/1/92; EPA effective: 6/30/97

173-492-070 Control Areas and Control Periods.

Beginning in 1992, the oxygenated gasoline requirements of this chapter shall apply to the following control area during the following control period:

Control Period			
Control Area	County	Beginning	Ending
Spokane	Spokane	September 1	February 29
Upon approval by EPA, the control period for Spokane will be from October 1 to February 29.			

State effective: 10/19/96; EPA effective: 6/30/97

173-492-080 Enforcement and Compliance.

(1) Compliance with the requirements of this section shall be monitored and enforced by ecology or the authority. Noncompliance shall be subject to the penalties and other remedies provided in chapter 70.94 RCW.

(2) Ecology or the authority may designate any appropriate agency of the state to assist in the compliance monitoring of this regulation. Ecology shall make every effort to coordinate compliance monitoring of this regulation with the current duties of the department of agriculture division of weights and measures.

(3) Compliance with the standards set forth in this section shall be determined by use of testing methods approved by ecology. The maximum accuracy tolerance of this method shall be limited to $\pm 0.3\%$ oxygen by weight, or an equivalent tolerance when measured by volume.

State effective: 12/1/92; EPA effective: 6/30/97

173-492-090 Unplanned Conditions.

An unplanned condition, such as an unforeseen emergency or "act of God," which may interfere with compliance to this chapter, shall be reported to ecology or the authority as soon as possible. The responsible party shall also submit a full written report within ten days to ecology or the authority, including the known causes, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence. Compliance with the requirements of this section does not relieve the responsible party from the responsibility to maintain continuous compliance with all the requirements of this chapter nor from the resulting liabilities for failure to comply. Ecology or the authority must consider the circumstances of the unplanned condition, and may use the circumstances when determining enforcement.

State effective: 12/1/92; EPA effective: 6/30/97

173-492-100 Severability.

The provisions of this regulation are severable and if any provision is held invalid, the application of such provision to the other circumstances and the remainder of this regulation shall not be affected.

State effective: 12/1/92; EPA effective: 6/30/97