Electric Generating Unit Rule, Chapter 173-406 WAC

[Formerly the Acid Rain Rule]

Table of Contents

WAC
173-406-010 Purpose of chapter.

Part A: Adoption by reference
173-406-020 Adoption by reference.

Part B: Control of Mercury Emissions from Coal-fired Electric Generating Units
173-406-030 Purpose of part B.
173-406-040 Applicability.
173-406-050 Definitions.
173-406-060 Washington mercury allowance allocation for calendar years 2010, 2011, and 2012.
173-406-070 Requesting a mercury allowance during 2010, 2011, and 2012.
173-406-080 Allocating a mercury allowance during 2010, 2011 and 2012.
173-406-090 Washington mercury emission budget for calendar year 2013 and beyond.
173-406-110 Allocating and recording tradable units for calendar year 2013 and beyond.
173-406-120 Emission standards for a mercury budget unit.
173-406-130 Temporary alternate emission standard for calendar years 2013 through 2016.
173-406-140 Compliance with the Washington State mercury emissions budget beginning January 1, 2013.
173-406-150 In-state trading of tradable units.

WAC 173-406-010 Purpose of chapter.

This rule addresses the following air pollutants from electric generating units:

(1) The rule implements the federal Acid Rain Program covering emissions of sulfur dioxide and nitrogen oxides. Washington State is implementing the federal Acid Rain Program by adopting the federal rules by reference.

(2) The rule establishes requirements for coal-burning electric generating units with mercury emissions. This rule and the complementary rule at Chapter 463-80 WAC adopted by the Energy Facility Site Evaluation Council (EFSEC) implement the statewide program. These rules fulfill the requirements under 40 CFR 60.24(h) that the state adopt emission standards and compliance schedules to attain and maintain Washington's annual mercury emission budget from electric generating units.

Part A: Adoption by reference

WAC 173-406-020 Adoption by reference.

The following provisions of the code of federal regulations, as they exist on July 1, 2007 and amended by 1) the proposed rules and revisions in the December 22, 2006 Federal Register,

pages 77121-77147, and the 2) the proposed revisions in the April 25, 2007 Federal Register, pages 20478-20479, are adopted by reference:

(1) 40 CFR Part 60, subpart HHHH (emission guidelines and compliance times for coal-fired electric steam generating units) with the following exceptions:

(a) The following sections are adopted by reference until midnight, December 31, 2012:
- (i) 40 CFR 60.4101;
- (ii) 40 CFR 60.4106 (c) and (d);
- (iii) 40 CFR 60.4107 – 60.4108;
- (iv) 40 CFR 60.4151 – 60.4152;
- (v) 40 CFR 60.4154 – 40 CFR 60.4156; and
- (vi) 40 CFR 60.4175 – 60.4176.

(b) The following sections are not adopted by reference:
- (i) 40 CFR 60.4104;
- (ii) 40 CFR 60.4105;
- (iii) 40 CFR 60.4140;
- (iv) 40 CFR 60.4141;
- (v) 40 CFR 60.4142;
- (vi) 40 CFR 60.4153;
- (vii) 40 CFR 60.4161; and
- (viii) 40 CFR 60.4162.

(2) 40 CFR Part 72 Permits Regulation
(3) 40 CFR Part 73 Sulfur Dioxide Allowance System
(4) 40 CFR Part 74 Sulfur Dioxide Opt-Ins
(5) 40 CFR Part 75 Continuous Emission Monitoring
(6) 40 CFR Part 76 Acid Rain Nitrogen Oxides Emission Reduction Program
(7) 40 CFR Part 77 Excess Emissions
(8) 40 CFR Part 78 Appeal Procedures

The federal Acid Rain Program rules are found in 40 CFR parts 72, 73, 74, 75, 76, 77 and 78.

To find these federal rules electronically on the internet, go to the U.S. Government Printing Office website at
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl

- The December 22, 2006 Federal Register notice is found at http://www.epa.gov/fedrgstr/EPA-AIR/2006/December/Day-22/a21573.pdf.

- The April 25, 2007 Federal Register notice is found at http://www.epa.gov/fedrgstr/EPA-AIR/2007/April/Day-25/a7536.pdf.

Part B: Control of Mercury Emissions from Coal-fired Electric Generating Units

WAC 173-406-030 Purpose of part B.

(1) The purpose of this part and Chapter 463-80 WAC is to establish the statewide program to control mercury emissions from coal-fired electric generating units. This part also ensures that mercury emissions will not exceed Washington's annual mercury emissions budget from electric-generating units established by EPA in 40 CFR 60.24(h).

(2) Coal-fired electric generating units are known as "mercury budget units" in this rule. Ecology, local air agencies, and the Energy Facility Site Evaluation Council (EFSEC) regulate mercury budget units in Washington.

(a) Ecology and local air agencies issue the air quality permits for the existing plant and a new plant with a generating capacity of less than 350 megawatts.

(b) EFSEC issues an air quality permit attached to a site certification agreement for a new plant with a generating capacity of 350 megawatts or more. Refer to RCW 80.50.020(14) for the definition of an "energy plant" under EFSEC's jurisdiction.

(c) Ecology will maintain the Washington State Mercury Emissions Program covered by this rule for all permitting authorities, including Ecology, the local air agencies, and EFSEC.

(d) EFSEC and the local air agencies will coordinate with Ecology to ensure that the statewide mercury emissions budget is not exceeded.

(3) Portions of this rule are based on assumptions regarding the pounds per year of mercury emissions from the existing source. By August, 2007, the existing source will be collecting information on actual mercury emissions from a continuous emissions monitor (CEM), which is in advance of the January 2009 date required by the federal rule.

(a) In response to this new mercury emissions data, and within 2 years of the effective date of this rule, Ecology must review any available mercury emissions monitoring data.

(b) Based on that data, Ecology will:

(i) Reassess the emission standard and compliance date based on the CEM data; and

(ii) Publish notice in the Washington State Register of its decision to either take no action or begin the rule making process to revise the emission standard and/or compliance date if appropriate to allow for construction of controls to comply with the emission standard.

WAC 173-406-040 Applicability.

(1) This chapter applies to each stationary source that includes one or more mercury budget units. A mercury budget unit means:

(a) (i) A stationary coal-fired boiler or stationary coal-fired combustion turbine serving a generator with a nameplate capacity of more than 25 megawatts electric (MWe) producing electricity for sale; and

(ii) The service has occurred at any time since the later of November 15, 1990 or the date of the start-up of the unit's combustion chamber.

(b) An integrated gasification-combined cycle (IGCC) electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. An IGCC that does not use any coal in production of the synthetic gas is not subject to this rule.

(c) A cogeneration unit, as defined in WAC 173-406-050, that qualifies as a cogeneration unit for at least one calendar year after its initial 12 month operating period but then does not continue to qualify becomes a mercury budget unit starting on the earlier of:

(i) January 1 after the first calendar year during which the unit first no longer qualifies as a cogeneration unit; or

(ii) January 1 after the first calendar year during which the unit meets the requirements of subsection (2) (b) of this section.

(2) A stationary boiler or stationary combustion turbine becomes subject to this rule on the day that it begins to combust coal or coal-derived fuel and serves a generator with a nameplate capacity of more than 25 megawatts electric (MWe) producing electricity for sale.

(3) The following stationary coal-fired boilers and stationary coal-fired combustion turbines are not mercury budget units:

(a) A mercury budget unit that qualifies as a cogeneration unit on the date the unit first produces electricity and continues to qualify as a cogeneration unit; and

(b) A cogeneration unit that since the later of November 15, 1990 or the startup of the unit's combustion chamber:

(i) Serves a generator with a nameplate capacity of 25 megawatts electric (MWe) or less; and

(ii) Supplies in any calendar year equal to or less than one-third of its potential electric output capacity or 219,000 megawatt hours (MWh), whichever is greater, to any utility power distribution system for sale.

(c) A solid waste incineration unit combusting municipal waste that would otherwise be considered a mercury budget unit is not considered a mercury budget unit if the incineration unit is subject to any of the following requirements:

(i) SCAPCA Regulation I, Section 6.17, (standards for municipal solid waste combustors);

(ii) 40 CFR Part 60, subpart Eb (standards of performance for certain large municipal waste combustors);

(iii) 40 CFR Part 60, subpart AAAA (standards of performance for certain small municipal waste combustors); or

(iv) 40 CFR Part 62, subpart JJJ (federal plan requirements for certain small municipal waste combustion units).

WAC 173-406-050 Definitions.

The definitions, abbreviations and acronyms in 40 CFR 60.4102 apply throughout WAC 173-406-030 through 150. The following terms are included here, in addition to state-specific definitions, to assist in understanding this rule.

(1) "Air quality permit" means a notice of construction order of approval written under the authority of chapter 70.94 Revised Code of Washington; or an EFSEC issued prevention of significant deterioration permit or order of approval which is appended to the site certification agreement.

(2) "Allowance" means the same as "mercury allowance."

(3) "Best Available Control Technology," (BACT) means an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70.94 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of the "best available control technology" result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard under 40 CFR Part 60 and Part 61. Emissions from any source utilizing clean fuels, or any other means, to comply with this paragraph must not be

allowed to increase above levels that would have been required under the definition of BACT in the federal Clean Air Act as it existed prior to enactment of the Clean Air Act Amendments of 1990.

(4) "Boiler" means an enclosed fossil- or other-fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

(5) "Bottoming cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.

(6) "Buyer" means a mercury budget source owner or operator that acquires one or more tradable units from either another mercury budget unit owner or a different mercury budget unit.

(7) "Btu" means British thermal unit.

(8) "Coal-derived fuel" means any fuel (in any physical state) produced by the mechanical, thermal, or chemical processing of coal.

(9) "Coal-fired" means combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel, during any year.

(10) "Cogeneration unit" means a stationary coal-fired boiler or stationary coal-fired combustion turbine:

(a) Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating, or cooling purposes through the sequential use of energy; and

(b) Producing during the 12-month period starting on the date the unit first produces electricity and during any calendar year after which the unit first produces electricity:

(i) For a topping-cycle cogeneration unit,

(A) Useful thermal energy not less than 5 percent of total energy output; and

(B) Useful power that, when added to one-half of useful thermal energy produced, is not less then 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output, or not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output.

(ii) For a bottoming-cycle cogeneration unit, useful power not less than 45 percent of total energy input.

(c) Provided that the total energy input under paragraphs (b)(i)(B) and (b)(ii) of this definition must equal the unit's total energy input only from fossil fuel if the unit is a boiler—

(i) For which construction commenced on or before April 25, 2007; and

(ii) Having equipment used to produce electricity and useful thermal energy through sequential use of energy, for which construction commenced on or before April 25, 2007.

(11) "Control period" means the period beginning January 1 of a calendar year and ending on December 31 of the same year, inclusive.

(12) "Combustion turbine" means:
(a) An enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and
(b) If the enclosed device under paragraph (a) of this definition is combined cycle, any associated duct burner, heat recovery steam generator, and steam turbine

(13) "Commence commercial operation" means, with regard to a mercury budget unit:
(a) To have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation, except as provided in 40 CFR 60.4105 (retired unit exemption).
(i) For a unit that is a mercury budget unit under 40 CFR 60.4104 on the later of November 15, 1990 or the date the unit commences commercial operation as defined in paragraph (a) of this definition and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date must remain the date of commencement of commercial operation of the unit, which must continue to be treated as the same unit.
(ii) For a unit that is a mercury budget unit under 40 CFR 60.4104 on the later of November 15, 1990 or the date the unit commences commercial operation as defined in paragraph (a) of this definition and that is subsequently replaced by a unit at the same source (*e.g.*, repowered), such date must remain the replaced unit's date of commencement of commercial operation, and the replacement unit must be treated as a separate unit with a separate date for commencement of commercial operation as defined in paragraph (a) or (b) of this definition as appropriate.
(b) Notwithstanding paragraph (a) of this definition and except as provided in 40 CFR 60.4105, for a unit that is not a mercury budget unit under 40 CFR 60.4104 on the later of November 15, 1990 or the date the unit commences commercial operation as defined in paragraph (a) of this definition, the unit's date for commencement of commercial operation must be the date on which the unit becomes a mercury budget unit under 40 CFR 60.4104.
(i) For a unit with a date for commencement of commercial operation as defined in paragraph (b) of this definition and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date must remain the unit's date of commencement of commercial operation of the unit, which must continue to be treated as the same unit.
(ii) For a unit with a date for commencement of commercial operation as defined in paragraph (b) of this definition and that is subsequently replaced by a unit at the same source (*e.g.*, repowered), such date must remain the replaced

unit's date of commencement of commercial operation, and the replacement unit must be treated as a separate unit with a separate date for commencement of commercial operation as defined in paragraph (a) or (b) of this definition as appropriate.

(14) "Compliance account" means a mercury allowance tracking system account, established by EPA for a mercury budget source under 40 CFR 60.4150 through 60.4157, in which any mercury allowance allocations for the mercury budget source are recorded and in which are held any mercury allowances available for use for a control period in order to ensure compliance with the source's mercury budget emissions limitation, as this term is defined in the federal rule.

(15) "Ecology" in Chapter 173-406 WAC means the Washington State Department of Ecology.

(16) "Electric generating unit" means a unit that meets the applicability criteria in WAC 173-406-040.

(17) "Excess emissions" means any ounce of mercury emitted by the mercury budget unit at a mercury budget source during a control period that exceeds the mercury budget emissions limitation allocated to the source.

(18) "Existing mercury budget unit or source" means a unit or source subject to this rule that commenced operation on or before January 1, 2001.

(19) "Generator" means a device that produces electricity.

(20) "General account" means a mercury allowance tracking system account established under 40 CFR 60.4151.

(21) "Gross electrical output" means the electricity made available for use, including any electricity used in the process of producing electricity. The power production process includes, but is not limited to, any onsite processing or treatment of fuel combusted at the unit and any on-site emission controls.

(22) "Heat input" means, with regard to a specified period of time, the product of the gross caloric value of the fuel (in Btu/pound) divided by 1 million Btu/MMBtu and multiplied by the fuel feed rate into the combustion device (in pound of fuel/time). Heat input will be measured, recorded and reported by the mercury designated representative according to 40 CFR 60. 4170 – 4175 and excluding the heat derived from preheated combustion air, recirculated flue gases or exhaust from other sources.

(23) "Integrated gasification-combined cycle electric utility steam generating unit" or "IGCC" means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No coal is directly burned in the unit during operation.

(24) “kWh” means kilowatt hour.

(25) “Mercury allowance” means one ounce of mercury emissions for a control period of a specified calendar year. Fractional ounces are rounded to the nearest whole ounce.

(26) “Mercury budget emissions limitation,” means, the equivalent in ounces of mercury emissions in a control period beginning in 2013, of the tradable units available for deduction for the source for compliance with WAC 173-406-140 and 150.

(27) “Mercury Emission Tradable Unit Transfer Form” means the form specified by Ecology for recording the transfer of tradable units under the in-state trading program.

(28) “Mercury budget source” means a source that includes one or more mercury budget units.

(29) “Mercury budget unit” means a unit that is subject to this rule under WAC 173-406-040.

(30) “MMBtu” means million British thermal units (Btu).

(31) “MWe” means megawatt-electric.

(32) “MWh” means megawatt-hour.

(33) “Nameplate capacity” means, starting from the initial installation of a generator, the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings) as of such installation as specified by the manufacturer of the generator or, starting from the completion of any subsequent physical change in the generator resulting in an increase in the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings), such increased maximum amount as of such completion as specified by the person conducting the physical change.

(34) “New mercury budget unit or source” means a unit or source subject to this rule that commences operation after January 1, 2001.

(35) “Permitting authority” means Ecology, the established air pollution control agency, or the Energy Facility Site Evaluation Council with jurisdiction over the source.

(36) “Potential electrical output capacity” means 33 percent of a unit’s maximum design heat input, divided by 3,413 Btu/kWh, divided by 1000 kWh/MWh, and multiplied by 8760 hour/year.

(37) "Repowered" means with regard to a unit, replacement of a coal-fired boiler with one of the following coal-fired technologies at the same source as the coal-fired boiler:
- (a) Atmospheric or pressurized fluidized bed combustion;
- (b) Integrated gasification combined cycle;
- (c) Magnetohydrodynamics;
- (d) Direct and indirect coal-fired turbines; integrated gasification fuel cells; or
- (e) As determined by the EPA administrator in consultation with the Secretary of Energy, a derivative on one or more of the technologies listed above and any other coal-fired technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of January 1, 2005.

(38) "Sequential use of energy" means:
- (a) For a topping-cycle cogeneration unit, the use of reject heat from electricity production in a useful thermal energy application or process; or
- (b) For a bottoming-cycle cogeneration unit, the use of reject heat from useful thermal energy application or process in electricity production.

(39) "Seller" means a mercury budget source owner or operator that transfers one or more tradable units to either another mercury budget unit owner or a different mercury budget unit.

(40) "Topping-cycle cogeneration" means a cogeneration unit in which the energy input to the unit is first used to produce useful power, including electricity, and at least some of the reject heat from the electricity production is then used to provide useful thermal energy.

(41) "Total energy input" means, with regard to a cogeneration unit, total energy of all forms supplied to the cogeneration unit, excluding energy produced by the cogeneration unit itself.

(42) "Total energy output" means, with regard to a cogeneration unit, the sum of useful power and useful thermal energy produced by the cogeneration unit.

(43) "Tradable unit," according to the in-state trading program, means a limited authorization to emit one ounce of mercury during a specified calendar year. Fractional ounces are rounded to the nearest whole ounce.

(44) "Tradable unit bank" means the bank established by Ecology for recording mercury allocations, deductions, and transfers of tradable units.

(45) "Tradable unit transfer deadline" for the in-state trading program means midnight of March 1 (if it is a business day), or midnight of the first business day thereafter (if March 1st is not a business day) immediately following the control period. This is the

deadline by which a tradable unit transfer must be submitted for recording in a mercury budget source's tradable unit account in order to be used to meet the source's mercury budget emissions limitation for the control period.

(46) "Useful power" means, with regard to a cogeneration unit, electricity or mechanical energy made available for use, excluding any such energy used in the power production process (which process includes, but is not limited to any on-site process or treatment of fuel combusted at the unit and any on-site emission controls).

(47) "Useful thermal energy" means, with regard to a cogeneration unit, thermal energy that is:
- (a) Made available to an industrial or commercial process (not a power production process), excluding any heat contained in condensate return or makeup water;
- (b) Used in a heating application (e.g., space heating or domestic hot water heating); or
- (c) Used in a space cooling application (i.e., thermal energy used by an absorption chiller).

Program for 2010, 2011, and 2012

WAC 173-406-060 Washington mercury allowance allocation for calendar years 2010, 2011, and 2012.

(1) For the years 2010, 2011, and 2012, mercury budget sources in Washington State will participate in the national mercury allowance market operated by the EPA Clean Air Market Division.

(2) For the years 2010, 2011, and 2012, the Washington State mercury emission budget is 6336 allowances per year (396 pounds).

(3) For calendar year 2010, the federal rules adopted in 40 CFR part 62, subpart LLL, will apply in Washington state so 40 CFR 62.15942 will allocate the mercury allowance.

(4) Though these rules are not final, EPA's proposed rules are available for review in the Federal Register:

(a) December 22, 2006, 71 Federal Register 77127 – 77146. [http://www.epa.gov/fedrgstr/EPA-AIR/2006/December/Day-22/a21573.pdf]

(b) April 25, 2007, 72 Federal Register 20478 – 20479. [http://www.epa.gov/fedrgstr/EPA-AIR/2007/April/Day-25/a7536.pdf]

(5) For calendar years 2011 and 2012, the mercury emission budget is allocated as follows:

70% of state budget

(a) The compliance account held by the existing mercury budget source [TransAlta Centralia Generation LLC for units BW21 and BW22]: 4435 mercury allowances per year (277.2 pounds).

(b) The general account held by Ecology: 1901 mercury allowances per year (118.8 pounds). The general account contains the following sub-accounts:

5% of state budget

(i) New source account: 317 mercury allowances per year (19.8 pounds) are designated for use by new mercury budget sources.

(A) Any mercury allowances remaining in this account after Ecology has distributed them according to WAC 173-407-080(3) will be moved to the supplemental account in subsection (3)(b)(ii) of this section for redistribution during the same period.

(B) If there are no requests for use of the new source account by the deadline in WAC 173-406-070(4)(e), the entire new source account will be transferred to the supplemental account.

25% of state budget

(ii) Supplemental account: 1584 mercury allowances per year (99 pounds) are designated for use by mercury budget sources whose actual emissions exceed their allowance.

(c) Unallocated allowances each year will not be available for distribution in any future distribution period or in any state or federal allowance market.

WAC 173-406-070 Requesting a mercury allowance during 2010, 2011, and 2012.

(1) A mercury allowance request for calendar year 2010 is governed by 40 CFR 62.15942 and must be submitted to EPA.

(2) Mercury allowances from the general account in WAC 173-406-060(4)(b) are available for distribution to an existing or new mercury budget source.

(3) A request for mercury allowances from the new unit account and the supplement account for calendar years 2011 and 2012 may be combined in one application.

(4) A mercury budget source allowance request for calendar years 2011 and 2012 must meet the following requirements:

(a) The request must include a copy of the electronic quarterly report required to be submitted to EPA under 40 CFR 75.84(f) for the fourth quarter of the year;

(b) The request for a new mercury budget unit must comply with one of the following:

(i) A unit that commences commercial operation before July 1, 2008, may request a mercury allowance for calendar years 2011 and 2012.

(ii) A unit that commences commercial operation on or after July 1, 2008, may request a mercury allowance starting with the calendar year of operation in which the unit becomes subject to the monitoring system requirements in 40 CFR 60.4170(b).

(c) A request for an allowance from the new source account must not exceed the actual mercury emissions reported to EPA in the 4th quarter emissions report or the available allowance in the account, whichever is less;

(d) A request for an allowance from the supplemental account must not exceed the actual annual mercury emissions as reported to EPA in the 4th quarter emissions report (less the allowances requested from another account or received under WAC 173-406-060(4)(a)) or the available allowances in the supplemental account, whichever is less; and

(e) A request for an allowance must be submitted on or before February 1st of the year following the calendar year for which the mercury allowance is requested. If February 1st is not a business day, the deadline becomes the first business day thereafter.

WAC 173-406-080 Allocating a mercury allowance during 2010, 2011, and 2012.

(1) EPA will record the mercury allowance allocations for the existing mercury budget units in their compliance account for year 2010 consistent with 40 CFR 62.15942.

(2) By February 10th of the year following the control year 2011 and 2012, Ecology must:

(a) Review at the same all allowance requests submitted under WAC 173-3406-070(4);

(b) Transfer allowances to the mercury budget source's compliance account consistent with the requirements in this section and 40 CFR 60.4140;

(c) Transfer no more than 1901 ounces per year (118.8 pounds) for all mercury budget sources in each control period; and

(d) Notify each mercury budget source and its permitting authority concurrently with notifying EPA of any decision to transfer allowances.

(3) Distributing allowances from the new source account.

(a) If the sum of all mercury allowance requests is equal to or less than 317 ounces (19.8 pounds), Ecology will transfer the requested allowances from the new source account

to the compliance account for each mercury budget source equal to the number of ounces requested.

(b) If the sum of all mercury allowance requests is greater than 317 ounces (19.8 pounds), Ecology will distribute the allowances to mercury budget units by priority of initial air quality permit issuance date. The resulting allowances will be transferred from the new source account to the compliance account for each mercury budget source.

(4) Distributing allowances from the supplemental account.

(a) If the sum of all requests is equal to or less than 1584 ounces (99 pounds), Ecology will transfer the requested allowances from the new source account to the compliance account for each mercury budget source equal to the number of ounces requested.

(b) If the sum of all mercury allowance requests is greater than 1584 ounces (99 pounds), Ecology will transfer the allowances starting with the air quality permit with the oldest issuance date. Ecology will continue to transfer allowances from the supplemental account to the compliance account for each mercury budget source until there are no allowances remaining in the supplemental account.

(5) Ecology must provide public notice of the following:

(a) A request for a mercury allowance allocation and the accompanying decision;

(b) The number of unused mercury allowances;

(c) Cumulative ounces of mercury emitted in the quarterly emissions monitoring report submitted to EPA; and

(d) Mercury allowances allocated under WAC 173-406-060(4).

(6) Construction extension request. In addition to other applicable requirements, evaluation of a request for extension of an air quality permit for a mercury budget source subject to this chapter must include the following:

(a) A demonstration by the mercury budget source that construction will commence during the extension period; and

(b) A determination by the permitting authority that the source will commence construction, as it is defined in Chapter 173-400 WAC, within the permit extension period.

(c) The permitting authority must notify Ecology of each request for a construction extension and of its decision on that request.

Program for 2013 and Beyond

WAC 173-406-090 Washington mercury emissions budget for calendar year 2013 and beyond.

(1) Beginning January 1, 2013, Washington State will not participate in the national mercury trading market operated by the EPA Clean Air Market Division. (http://www.epa.gov/airmarkets/)

(2) Beginning on January 1, 2013, the Washington State mercury emissions budget for mercury budget sources is limited to the larger of:

(a) 2240 tradable units per year (140 pounds); or

(b) The total number of tradable units recorded and reserved for all mercury budget sources in an air quality permit issued by December 31, 2012, not to exceed 2496 ounces per year.

(c) EXCEPT: For each calendar year 2013 through 2016, an additional 3200 tradable units per year (200 pounds) are available for distribution under the temporary alternate emission standard provisions.

WAC 173-406-110 Allocating and recording tradable units for calendar year 2013 and beyond.

(1) All tradable units in the mercury budget will be held by Ecology until allocated and recorded according to this section, WAC 173-406-140, and WAC 173-406-150.

(2) Starting January 1, 2013, the tradable units in WAC 173-406-090(2)(a) or (2)(b) are allocated to a mercury budget source's tradable unit account as follows:

(a) Tradable units will be calculated using Formula A or B:

(i) Formula A applies to an existing mercury budget unit:

Tradable units per year = A x B x C x D x E

When:
A = Net megawatt-hour rating of mercury budget unit (MWh)
B = 8760 hours per year (maximum operating hours in one year)
C = 1 Gigawatt/1000 Megawatt (units conversion constant)
D = 16 ounces/1 pound (units conversion constant)
E = Emission rate of 0.0080 in pounds of mercury per gigawatt-hour net electrical output (lb/GWh)

(ii) Formula B applies to a new mercury budget unit:

Tradable units per year = A x B x C x D x F

When:

A = Net megawatt-hour rating of mercury budget unit from fuel based on coal or from a burner designed to run on coal or coal-derived fuel (MWh)

B = 8760 hours per year (maximum operating hours in one year)

C = 1 Gigawatt/1000 Megawatt (units conversion constant)

D = 16 ounces/1 pound (units conversion constant)

F = The lesser emission rate of Best Available Control Technology established in the air quality permit and expressed in pounds of mercury per gigawatt-hour net electrical output or 0.0066 pounds of mercury per gigawatt-hour (lb/GWh)

(b) Priority for distribution will be given to the mercury budget source with the earliest date of initial air quality permit, regardless of permitting authority. That is, a plant with an earlier permit issuance date will be given priority over a plant with a later issuance date; and

(i) Tradable units will not be distributed to a mercury budget unit if those units would result in the Washington state emissions budget exceeding the applicable amount in WAC 173-406-090(2) on an annual basis.

(ii) New mercury budget unit.

(A) Ecology will reserve the tradable units allocated through subsection (2)(a)(ii) of this section for a new mercury budget unit starting on the date of issuance of the units' air quality permit.

(B) The mercury budget unit must submit a request to Ecology to be allocated tradable units for its first year of operation. The request must be submitted on or after the date established under WAC 173-406-150(4)(b) and prior to the midnight, March 1st, tradable unit transfer deadline for that control period.

(C) The number of tradable units allocated for the first calendar year of operation will be based on the following revision to Formula B in subsection (2)(a)(ii) of this section: "B" will be equal to 24 hours x number of days of operation for the control year beginning on the date established by WAC 173-406-150(4)(b).

(c) In determining how to distribute tradable units, units other than a whole number must be rounded to the nearest whole unit. That is, 5.1 through 5.4 units are rounded to 5 units and 5.5 through 5.9 units are rounded to 6 units.

(d) All tradable units will be distributed on a calendar year basis.

(3) Recording a tradable unit allocation.

(a) Ecology will record the tradable unit allocation in the tradable unit account for each mercury budget unit based on the following:

(i) By December 1st for the upcoming control period for a mercury budget source that is operating, beginning in 2012; or

(ii) Within 5 calendar days of receiving a request from the mercury budget source for its first year of operation, consistent with the provisions in subsection (2)(b)(i)(B) and (C) of this section.

(b) Tradable unit allocations are valid for the control period for which they are issued.

(c) Tradable units will continue to be recorded for five years once a unit has shut down or ceased operation. A unit that has operated for five years without generating power at an annual capacity factor above 10% (meaning the unit operated less than 876 hours per year) is considered to have shut down and will no longer receive tradable units.

(4) Tradable units in WAC 173-406-090(2)(c) are allocated and recorded following the requirements in WAC 173-406-140(5).

(5) Ecology will track the tradable unit allocation and distribution of the annual mercury budget allocation. This information will be made available to the public on the agency internet web site.

(6) Construction extension request. In addition to other applicable requirements, evaluation of a request for an extension of an air quality permit for a mercury budget source subject to this chapter must include the following:

(a) A demonstration by the mercury budget source that construction will commence during the extension period; and

(b) A determination by the permitting authority that the source will commence construction, as it is defined in Chapter 173-400 WAC, within the permit extension period.

WAC 173-406-120 Emission standards for a mercury budget unit.

(1) Beginning January 1, 2013, a mercury budget unit must comply with one of the following emission standards on a rolling 12-month basis:

(a) For an existing mercury budget unit: 0.008 pounds of mercury per gigawatt-hour net electrical output; or

(b) For a new mercury budget unit: Best Available Control Technology established in the air quality permit in pounds of mercury per gigawatt-hour net electrical output which must not be greater than 0.0066 pounds of mercury per gigawatt-hour net electrical output.

(c) Exceptions are listed in WAC 173-406-130.

(2) Determining compliance with subsection (1) of this section begins on the following dates:

(a) January 1, 2014 for the mercury budget unit that commences commercial operation before July 1, 2012; or

(b) For the owner or operator of a mercury budget unit that commences commercial operation on or after July 1, 2012, the first anniversary of the latter of the following dates:

(i) January 1, 2013; or

(ii) 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which the unit commences commercial operation.

(3) Monitoring, reporting, and recordkeeping requirements.

(a) The owner or operator of a mercury budget source must measure, record, and report the mercury in the exhaust gases following the requirements and procedures in 40 CFR 60.4170 – 60.4176, and 40 CFR Part 75, Subpart I.

(b) The emissions measurements recorded and reported according to 40 CFR 60.4170 – 60.4176, and 40 CFR Part 75, Subpart I, must be used to determine compliance by each mercury budget unit with the mercury budget emissions limitation under WAC 173-406-140 and 150. In addition, net megawatt electric (MWe) must be measured by a Bonneville Power Administration certified meter.

(c) Quarterly reports required under 40 CFR 75.84(f) must also be sent to Ecology and the permitting authority.

(d) The owner or operator of the mercury budget source must submit a monthly emissions report to Ecology and the source's permitting authority within 30 days of

the end of a month in which a unit fails to achieve the emission standard either on a monthly average basis or in the quarterly report required under 40 CFR 75.84(f).

(4) Mercury reduction plan.

(a) By January 1, 2011, the owner or operator of an existing mercury budget source must submit an application to the permitting authority describing how it will establish appropriate monitoring, recordkeeping, reporting, operational requirements and other conditions necessary to ensure compliance with the mercury emission standard in subsection (1) of this section.

(b) The application must include the following elements, at a minimum:

(i) A mercury control plan projected to achieve compliance with the emission limit;

(ii) Technology or any other mercury control practices proposed to be used to achieve compliance;

(iii) A schedule for implementing the selected control technology, including major milestones;

(iv) Installation and operation requirements; and

(v) Work practice standards for the selected technology.

(c) If the permitting authority determines that the mercury emission control strategy is projected to achieve compliance with the emission standard, the permitting authority must include the provisions of the control strategy as conditions in either a regulatory order or a revision to a permit.

(i) The permitting agency must post receipt of the application containing the mercury reduction plan on the internet;

(ii) The permitting agency must provide a minimum 30 day public notice and comment period consistent with WAC 173-400-151(3) and (4) before approving or denying the proposed order or permit revision; and

(iii) The permitting agency must post the final regulatory order or permit revision on the internet.

WAC 173-406-130 Temporary alternate emission standard for calendar years 2013 through 2016.

(1) Regardless of other conditions in this section, the existing mercury budget source is subject to a compliance action by its permitting authority if its mercury emissions exceed

the number of tradable units allocated to the mercury budget source through WAC 173-406-110(2) plus an additional 3200 tradable units (200 pounds) for any control period.

(2) An existing mercury budget source may apply for a compliance order containing an alternate emission standard if the control technology fails to meet the emission standard in WAC 173-406-120(1).

(3) The mercury budget source will not be subject to a compliance action for failing to meet the requirements in WAC 173-406-110(2)(a) and WAC 173-406-120(1) if the source submits a request that meets all of the following conditions:

(a) The owner or operator of the mercury budget source properly implemented the mercury control plan approved under WAC 173-406-120(4);

(b) The mercury control technology failed under normal operation to meet the emission standard in WAC 173-406-120(1);

(c) The owner or operator maintained the mercury budget source, including all associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing mercury emissions; and

(d) An emissions report was filed with Ecology and the source's permitting authority within 30 days of the end of each month in which the emissions standard was not met;

(e) By June 1, 2014, the owner or operator files a request with the permitting authority for a compliance order that includes at a minimum:

(i) A compliance schedule providing for compliance with the emission standard as soon as practical, but no later than January 1, 2017;

(ii) A revised mercury emissions reduction plan; and

(iii) Other information necessary to support the request.

(4) The permitting authority may issue a compliance order in response to a request submitted under subsection (3) of this section if it determines that the control strategy submitted by the owner or operator will achieve the emission standard in WAC 173-406-120(1). The compliance order must, at a minimum, include the following terms:

(a) An emission rate in pounds per gigawatt-hour net electrical output that the monitoring data for the mercury budget unit indicate can be achieved with controls and practices in place on the date the revision is issued. The emission rate established expires no later than midnight on December 31, 2016;

(b) A requirement that the mercury emissions must not exceed the tradable units allocated to the mercury budget source through WAC 173-406-110(2) and up to an additional 3200 tradable units per year (200 pounds);

(c) A schedule for installation, with intermediate benchmark dates, as appropriate;

(d) The earliest date by which compliance with WAC 173-406-120(1) must be achieved; and

(e) A requirement that the emissions for the twelve calendar months beginning with the expiration date established under subsection (5)(d) of this section, and each subsequent twelve month period, must meet the limit in WAC 173-406-120(1).

(5) Allocating and recording temporary alternate standard tradable units. Tradable units in WAC 173-406-090(2)(c) are allocated to the existing mercury budget unit for calendar years 2013 through 2016 and recorded as follows:

(a) Ecology must transfer and record the applicable tradable units from WAC 173-406-090(2)(c) prior to deducting tradable units for compliance in WAC 173-406-140(3) if the permitting agency has not issued a compliance order under subsection (5) of this section if the following apply. That is, this subsection is available for calendar year 2013 and possibly calendar year 2014:

(i) The mercury budget unit designated account representative or alternate requests additional tradable units prior to the March 1st tradable unit transfer deadline for the previous calendar year;

(ii) The number of tradable units requested does not exceed the number of ounces of mercury emissions reported in the 4th quarter emissions report required by 40 CFR 75.84(f), minus the allocation from WAC 173-406-110(2)(a);

(iii) Monthly emissions reports submitted met the requirements of WAC 173-406-120(3)(d); and

(iv) The permitting authority determines that the unit exceeded the emissions standard due to a failure of the new control equipment.

(b) Ecology must transfer and record the applicable tradable units from WAC 173-406-090(2)(c) if the permitting agency has issued a compliance order under subsection (4) of this section consistent with the following:

(i) The allocation will be based on the equivalent number of tradable units established through a revised allocation formula A in WAC 173-406-110(2)(a)(i). “E” in the allocation formula must be the emission rate included in the regulatory order or permit issued under subsection (4)(a) of this section; and

(ii) The allocation will be recorded in the source's tradable unit account:

(A) Within 5 calendar days of the date the order is issued for the first year; and

(B) By December 1st for each subsequent upcoming year.

WAC 173-406-140 Compliance with the Washington State mercury emissions budget beginning January 1, 2013.

(1) Recordkeeping. Each month, the owner or operator of each mercury budget unit must evaluate the rolling 12-month total mercury emissions from each unit and compare that to the tradable units recorded in the source's tradable unit account under WAC 173-406-110(3) or WAC 173-406-130(5) for the control period.

(2) Tradable unit transfer deadline.

(a) Tradable units must be held in the source's tradable unit account prior to midnight, March 1st, of the year following the control period to be available to be deducted for compliance with their mercury budget emissions limitation for the prior year's control period.

(b) Requests that are correctly submitted prior to the March 1 tradable unit transfer deadline for the prior calendar year are considered to be held in the source's tradable unit account. These include:

(i) A tradable unit transfer request;

(ii) A request for tradable units from the temporary alternate emission standard account; and

(iii) The first request for a tradable unit allocation submitted under WAC 173-406-110(3)(a)(ii).

(3) Deductions for compliance. To determine whether the source meets its mercury budget emissions limitation for the control period, Ecology will:

(a) Record any transfers in the tradable unit trading account that are correctly submitted; and

(b) Deduct one tradable unit from the source's trading account for each ounce of the source's actual mercury emissions as determined by the source's 4th quarter emissions report required by 40 CFR 75.84(f). If there are more ounces of mercury emissions than tradable units, the mercury budget unit is subject to deductions for excess emissions as described in subsection (4) of this section.

(4) Deductions for excess emissions.

(a) If the mercury budget source has more ounces of mercury than tradable units, Ecology must deduct from the source's tradable unit account 2 tradable units for each ounce of excess emissions. This amount must be taken from the number of tradable units allocated for the subsequent control period.

(b) The tradable unit deduction required under subsection (4)(a) of this section does not relieve the owners and operators from the responsibility to comply with the requirements of this rule nor from any other resulting liabilities and/or legal remedies for failure to comply with any part of this rule

(5) Recording. Ecology will record in the appropriate tradable unit account all deductions from such an account under subsections (3) and (4) of this section.

WAC 173-406-150 In-state trading of tradable units.

(1) Scope of trading program

(a) Participation in the trading program is limited to mercury budget units located in the State of Washington.

(b) A tradable unit is valid for one control period.

(c) Trading can occur at any time; however, a tradable unit transfer form must be submitted prior to the March 1st tradable unit transfer deadline to be valid for the control period.

(d) Banking of any unused tradable units for use in another calendar year is not allowed.

(e) The first year mercury budget sources may transfer a tradable unit is 2013.

(f) A tradable unit does not constitute a property right.

(g) RCW 70.94.850 requires that the number of tradable units able to be transferred from one mercury budget unit to another must be less than the number of tradable units allocated to that source by Ecology.

(2) Every allocation, transfer or deduction of a tradable unit to or from a mercury budget unit's tradable unit account is incorporated automatically in the source's mercury budget permit as required by 40 CFR 60.4120 through 60.4124.

(3) Responsibilities of Ecology as "Banker."

(a) The official banker of the Washington State in-state trading program is the Department of Ecology's Air Quality Program. The buyer and seller authorize Ecology to transfer and record tradable units after they reach agreement and have filed the correct form.

(b) Ecology must notify the applicable permitting authority regarding each tradable unit transfer to and from a mercury budget source under their jurisdiction.

(c) Recording tradable unit transfers.

(i) Within 5 calendar days of receipt of a tradable unit transfer form, Ecology will record the request, provided that:

(A) The transfer is correctly submitted under subsection (4) of this section;

(B) The seller has a tradable unit allocation that is equal to or greater than the number of allocation to be transferred; and

(C) A transfer submitted within 5 days of the end of February will be recorded by March 10. If March 10 is not a business day, the transfer will be recorded by the first business day thereafter.

(ii) Ecology will not record a tradable unit transfer that fails to meet the requirements of subsection (3)(c)(i)(A) and (B) of this section.

(iii) A recorded transfer with a future control period delivery date will be held in the tradable unit account until December 1 of the applicable immediately following control period. Subsection (3)(c)(i)(B) of this section must continue to be valid or the transfer is denied.

(iv) Each transfer will be posted to the agency web site. Information will include: the name of the buyer and seller; quantity of tradable units transferred; the year the transfer is to cover; the date of the posting; and the price paid per tradable unit.

(d) Denied transfer request.

(i) Ecology must notify the buyer and seller in writing within 5 business days of receipt of a transfer request that does not meet the requirements of this section. The notification must include:

(A) The decision not to record the transfer; and

(B) The reasons the request was denied.

(ii) A copy of the notification must also be sent to the applicable permitting authority.

(e) End of year mercury emission reconciliation.

(i) Ecology must compare the number in the 4th quarter mercury emissions report submitted to EPA by each mercury budget unit under 40 CFR 75.84(f) to the tradable units in their tradable unit bank account. The report is due within 30 days of the end of each December.

(ii) Ecology will notify the mercury budget unit owner and the permitting authority of the results of the reconciliation within 10 calendar days of receiving the 4th quarter mercury emissions report.

(4) Responsibilities of the mercury budget owner.

(a) The owners and operators of each mercury budget source must hold tradable units in the source's tradable unit account for compliance deductions for the control period consistent with these conditions:

(i) The tradable units must be in the account as of the March 1st tradable unit transfer deadline; and

(ii) The number of tradable units available for deduction must not be less than the number of ounces of total mercury emissions from all mercury budget units at the source.

(b) A mercury budget unit becomes subject to the requirements under subsection 4)(a) of this section for the control period starting on the later of January 1, 2013 or the following deadline and for each control period thereafter:

(i) For the owner or operator of a mercury budget unit that commences commercial operation before July 1, 2012, by January 1, 2013.

(ii) For the owner or operator of a mercury budget unit that commences commercial operation on or after July 1, 2012, by the later of the following dates:

(A) January 1, 2013; or

(B) 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which the unit commences commercial operation.

(c) To be considered correctly submitted, each transfer request must comply with these requirements:

(i) A completed Washington State Tradable Unit Transfer Form described in subsection (5)(d) of this section;

(ii) The transfer request must be submitted prior to the midnight, March 1st tradable unit transfer deadline for the control period; and

(iii) The form may be submitted via US Post, courier, or electronically to a location determined by Ecology.

(d) Excess emissions requirements. If a mercury budget source emits mercury during any control period in excess of the mercury budget emissions limitation, then:

(i) The owners and operators of the each mercury budget unit must surrender the tradable units required for deduction under WAC 173-406-140(4) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the federal Clean Air Act or applicable state law.

(ii) Each ounce of excess emissions and each day constitutes a separate violation of this part, the federal Clean Air Act, and applicable state law.

(iii) Ecology will record the deductions from the mercury budget source's tradable unit account on the agency's internet web site and notify the source and the source's permitting authority of this action.

(5) Transfer of tradable units between mercury budget units.

(a) Tradable units may be traded freely between mercury budget units located within the boundaries of the State of Washington.

(b) Tradable units may be traded between mercury budget units permitted by Ecology, a permitting authority, or EFSEC.

(c) A tradable unit transfer is complete once Ecology has recorded the transaction.

(d) The Washington State Mercury Emission Tradable Unit Transfer Form must include the following elements:

(i) The company name for both the seller and buyer;

(ii) ORIS ID number for both the seller and buyer;

(iii) Mailing address for both the seller and buyer;

(iv) The name of each mercury budget unit;

(v) The number of tradable units in the seller's account that are to be transferred to the buyer's account;

(vi) The name and signature of the mercury authorized account representative who is designated by the certificate of representation required by 40 CFR 60.4112 for both the seller's and buyer's account and the date signed; and

(vii) Price per tradable unit of mercury emissions.

General Regulations for Air Pollution Sources, Chapter 173-400 WAC

WAC 173-400-112 Requirements for new sources in nonattainment areas.

(2) The permitting authority that is reviewing an application to establish a new source in a nonattainment area must issue the order of approval if it determines that the proposed project satisfies each of the following requirements:

…

(j) <u>If the proposed new stationary source or the proposed modification is subject to 40 CFR Part 60, Subpart Da, Standards Of Performance For Electric Utility Steam Generating Units For Which Construction Is Commenced After September 18, 1978, the source must include an evaluation of its ability to acquire an adequate mercury emission or tradable unit allocation under WAC 173-406-110 or 150 in order to operate at its intended operating mode as part of its application.</u>

WAC 173-400-113 Requirements for new sources in attainment or unclassifiable areas.
The permitting authority that is reviewing an application to establish a new source or modification in an attainment or unclassifiable area must issue an order of approval if it determines that the proposed project satisfies each of the following requirements:

…

(7) If the proposed new stationary source or the proposed modification is subject to 40 CFR Part 60, Subpart Da, Standards Of Performance For Electric Utility Steam Generating Units For Which Construction Is Commenced After September 18, 1978, <u>the source must include an evaluation of its ability to acquire an adequate mercury emission or tradable unit allocation under WAC 173-406-110 or 150 in order to operate at its intended operating mode as part of its application.</u>