

PROPOSED AMENDMENTS TO THE RULES OF THE
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
RELATING TO AIR QUALITY, CHAPTER 391-3-1

The Rules of the Department of Natural Resources, Chapter 391-3-1, Air Quality Control are hereby amended, added to, repealed, repealed in part, revised, as hereinafter explicitly set forth in the attached amendments, additions, partial repeals, and revisions for specific Rules, or such subdivisions thereof as may be indicated.

[Note: Underlined text is proposed to be added. Lined-through text is proposed to be deleted.]

Rule 391-3-1-.01, “Definitions,” subparagraph (nnnn) is amended to read as follows:

(nnnn) **“Procedures for Testing and Monitoring Sources of Air Pollutants”** or “PTM” means the Georgia Department of Natural Resources **Procedures for Testing and Monitoring Sources of Air Pollutants** dated ~~January 1, 2006~~ March 8, 2007.

Rule 391-3-1-.02, paragraph (2) thereof, relating to **“Emission Standards and Limitations,”** is hereby amended by inserting new subparagraph (sss) to read as follows:

(sss) Multipollutant Control for Electric Utility Steam Generating Units

1. Effective December 31, 2008, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:
 - (i) Plant Bowen Unit 4 unless such source is equipped and operated with selective catalytic reduction and flue gas desulfurization.
 - (ii) Plant Bowen Unit 3 unless such source is equipped and operated with selective catalytic reduction and flue gas desulfurization.
 - (iii) Plant Wansley Unit 1 unless such source is equipped and operated with selective catalytic reduction and flue gas desulfurization.
 - (iv) Plant Hammond Unit 1 unless such source is equipped and operated with flue gas desulfurization.
 - (v) Plant Hammond Unit 2 unless such source is equipped and operated with flue gas desulfurization.
 - (vi) Plant Hammond Unit 3 unless such source is equipped and operated with flue gas desulfurization.

- (vii) Plant Hammond Unit 4 unless such source is equipped and operated with selective catalytic reduction and flue gas desulfurization.
 - (viii) Plant Yates Unit 1 unless such source is equipped and operated with flue gas desulfurization.
2. Effective June 1, 2009, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:
- (i) Plant Bowen Unit 2 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).
 - (ii) Plant Scherer Unit 2 unless such source is equipped and operated with sorbent injection and a baghouse.
 - (ii) Plant Scherer Unit 3 unless such source is equipped and operated with sorbent injection and a baghouse.
3. Effective December 31, 2009, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:
- (i) Plant Scherer Unit 1 unless such source is equipped and operated with sorbent injection and a baghouse.
 - (ii) Plant Wansley Unit 2 unless such source is equipped and operated with selective catalytic reduction and flue gas desulfurization.
4. Effective April 30, 2010, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:
- (i) Plant Scherer Unit 4 unless such source is equipped and operated with sorbent injection and a baghouse.
5. Effective June 1, 2010, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:
- (i) Plant Bowen Unit 1 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).
6. Effective December 31, 2011, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:
- (i) Plant Scherer Unit 3 unless such source is equipped and operated with selective catalytic reduction, flue gas desulfurization, sorbent injection, and a baghouse; provided that the owner or operator is not required to operate the selective catalytic reduction system during the non-ozone season months of January through April and October through December of each year.

7. **Effective December 31, 2012**, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:

- (i) Plant Scherer Unit 4 unless such source is equipped and operated with selective catalytic reduction, flue gas desulfurization, sorbent injection, and a baghouse, provided that the owner or operator is not required to operate the selective catalytic reduction system during the non-ozone season months of January through April and October through December of each year.
- (ii) Plant McDonough Unit 1 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).

8. **Effective December 31, 2013**, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:

- (i) Plant Branch Unit 3 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).
- (ii) Plant McDonough Unit 2 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).
- (iii) Plant Scherer Unit 2 unless such source is equipped and operated with selective catalytic reduction, flue gas desulfurization, sorbent injection, and a baghouse, provided that the owner or operator is not required to operate the selective catalytic reduction system during the non-ozone season months of January through April and October through December of each year.

9. **Effective June 1, 2014**, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:

- (i) Plant Branch Unit 4 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).

10. **Effective December 31, 2014**, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:

- (i) Plant Branch Unit 1 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).
- (ii) Plant Branch Unit 2 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).

(iii) Plant Scherer Unit 1 unless such source is equipped and operated with selective catalytic reduction, flue gas desulfurization, sorbent injection, and a baghouse; provided that the owner or operator is not required to operate the selective catalytic reduction system during the non-ozone season months of January through April and October through December of each year.

11. **Effective June 1, 2015**, no person shall cause, let, permit, suffer or allow the operation of the following units except as specified below:

(i) Plant Yates Unit 6 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).

(ii) Plant Yates Unit 7 unless such source is equipped and operated with selective catalytic reduction (SCR) and flue gas desulfurization (FGD).

12. **Effective January 1, 2018**, should the annual heat input (from coal combustion) of an affected unit or group of affected units exceed the levels specified in each subparagraph 12.(i) through 12.(iv), the owner/operator will comply with the requirements specified in subparagraphs 12.(v):

(i) Plant Kraft Units 1, 2, and 3 with a total annual heat input of 17,911,898 million Btu;

(ii) Plant McIntosh Unit 1 with a total annual heat input of 14,557,638 million Btu;

(iii) Plant Mitchell Unit 3 with a total annual heat input of 8,621,580 million Btu;

(iv) Plant Yates Units 2, 3, 4, and 5 with a total annual heat input of 33,608,398 million Btu.

(v) The owner/operator shall evaluate the economic and technical feasibility of additional mercury controls on the applicable affected unit(s) specified in subparagraphs 12.(i) through 12.(iv), and submit a report on their findings to the Division no later than September 1 of the calendar year following the calendar year that the annual heat input exceeded the applicable level specified in subparagraphs 12.(i) through 12.(iv).

(vi) The Division will review the report submitted in accordance with subparagraph 12.(v) and determine if additional mercury controls are required and, if additional mercury controls are required, establish deadlines for submission of a permit application(s) to the Division and for start-up of such mercury controls.

- (vii) The Division will document the results of its evaluation conducted in accordance with subparagraph 12.(vi) and notify the owner and/or operator within a timely fashion whether additional mercury controls are required.
13. Control Equipment Monitoring Design: For the anticipated range of operations of the applicable EGUs specified in subparagraphs 1. through 11., the designated representative shall follow the procedures given in Section 2.124 of the Division's **Procedures for Testing and Monitoring Sources of Air Pollutants** for the establishment of optimized operating parameters for the applicable control equipment installed as required in subparagraphs 1. through 11.
14. **Alternative Control Technology:** The owner/operator of an affected unit specified in subparagraphs 1. through 11. may operate alternative control technology or alternative method of emissions reductions from that specified in the applicable subparagraphs 1. through 11. if the following requirements are met:
- (i) The Division has approved the operation of the alternative control technology or the alternative method of emission reductions as being capable of achieving reductions of NO_x, SO₂ and/or mercury emissions equivalent to or greater than the control technology requirement specified in applicable subparagraphs 1. through 11. for an individual emissions unit or the respective plant site as a whole; and
- (ii) The owner/operator has submitted the appropriate permit application(s) to the Division at least twelve months before the effective date of the applicable subparagraph 1. through 11.
15. The owner or operator of any EGU subject to this subsection may submit a request to the Director to delay implementation of any of the controls required by subparagraphs 1. through 11. for a specific EGU if there is a delay caused by reasonably unforeseen circumstances beyond the control of the owner operator. Any delay allowed under this subparagraph is subject to review and approval by the Division. Reasonably unforeseen circumstances beyond the control of the owner or operator shall include, without limitation, the following:
- (i) Failure to secure timely and necessary federal, state or local approvals, responses, notifications or permits to install the controls, provided that such approvals or permits have been timely and diligently sought;
- (ii) Act of God, act of war, insurrection, civil disturbance, flood or other extraordinary weather conditions, vandalism, contractor or supplier strikes or bankruptcy, or unanticipated breakage or accident to machinery or equipment despite diligent maintenance; and

(iii) Any other delay caused by unforeseeable circumstances beyond the reasonable control of owner or operator as reasonably determined by the Director.

16. On and after the effective date of each subparagraph 1. through 11. for a specific EGU, the applicable owner or operator is not required to operate the required control technology under the following conditions:

- (i) Restarting an EGU when all EGUs at a facility are down and off-site power is not available (also known as a "Black Start").
- (ii) Periods of startup of an EGU in accordance with best operational practices to minimize emissions.
- (iii) Periods of shutdown of an EGU in accordance with best operational practices to minimize emissions.
- (iv) Periods of scheduled and/or preventative maintenance of control technology equipment if such maintenance cannot reasonably be performed during a scheduled outage of the respective EGU.
- (v) Periods of malfunction of EGU and/or control technology equipment provided that such periods are consistent with the requirements of paragraph 391-3-1-.02(2)(a)7.
- (vi) Periods when the owner/operator is required to conduct the Relative Accuracy Test Audit on the Continuous Emissions Monitoring System located on the bypass stack pursuant to 40 CFR Part 75, Appendix B.
- (vii) Division approved periods of research and development of emission control technologies, provided that the unit does not exceed other applicable emission limits. For purposes of this subparagraph, the owner/operator shall submit a request for approval under this subparagraph at least 120 days prior to such date as well as including the following items: (1) length of time of research and development (R&D) period; (2) identification of steps to take to minimize emissions in accordance with best operational practices during R&D period.
- (viii) Any other occasion not covered by subparagraph 16.(i) through (vii), as approved by the Division.

17. The requirements of subparagraph 16 do not relieve the owner or operator from the requirement to comply with any other applicable requirements of Georgia Rules for Air Quality Control Chapter 391-3-1.

18. Technology and Mercury Impact Review – Periodic Evaluation: The Director shall submit a report to the Georgia Department of Natural Resources Board by

December 31, 2023. The report shall constitute an evaluation of available and relevant information to determine if additional reductions of mercury emissions from EGUs are necessary or appropriate. This report shall include an evaluation that includes, but is not limited to, the following:

- (i) mercury concentrations in fish tissue in water bodies in the State and any changes or trends of such concentrations over time;
- (ii) the sources of mercury (including air, land, and water sources) that might influence in-state mercury concentrations in fish tissue;
- (iii) the state of the science regarding the relationship among sources of mercury, mercury speciation and mercury concentrations in fish tissue in water bodies in the State;
- (iv) the health impact of mercury contamination in fish tissue;
- (v) technically and economically feasible controls for the reduction of mercury emissions from coal-fired EGUs or other sources;
- (vi) whether additional reductions of mercury from coal-fired EGUs or other sources and/or whether additional time or study is appropriate and necessary in light of items (i) through (v);
- (vii) recommendations for any necessary revisions to paragraph (sss) or other actions as needed to address other sources; and
- (viii) recommendations for an appropriate timeline for the development of any such additional regulations; provided, however, that implementation and operation of any such additional controls shall be required no earlier than January 1, 2027.

Rule 391-3-1-.02, paragraph (2) thereof, relating to “**Emission Standards and Limitations**,” is hereby amended by inserting new subparagraph (ttt) to read as follows:

(ttt) Mercury Emissions from New Electric Generating Units

1. No person shall cause, let, suffer, permit, or allow the emissions of mercury, from any affected unit described below that is installed on or after January 1, 2007, to exceed the following:
 - (i) Such affected unit has been approved by the Director as meeting the appropriate requirements for best available control technology in controlling those emissions of mercury.

2. The requirements of this subsection do not apply to an affected unit whose owner or operator has submitted a complete air quality permit application for such affected unit to the Director before January 1, 2007.
3. For purpose of this subsection, the following definitions apply:
 - (i) “Affected unit” means:
 - (I) A stationary coal-fired boiler or a stationary coal-fired combustion turbine serving at any time, since the start-up of the affected unit’s combustion chamber, a generator with nameplate capacity of more than 25 megawatts producing electricity for sale.
 - (ii) “Coal” means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials Designation ASTM D388 (Standard Classification of Coals by Rank).
 - (iii) “Coal-fired” means the combustion of fuel consisting of coal or any coal-derived fuel alone or in combination with any other fuel, where:
 - (I) A unit is “coal-fired” independent of the percentage of coal or coal derived fuel consumed in any calendar year.
 - (iv) “Boiler” means any enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or any other medium.
 - (v) “Best available control technology” means an emissions limitation based on the maximum degree of mercury reduction which would be emitted from a proposed affected unit which the Director, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such affected unit through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of mercury. In no event shall application of best available control technology result in emissions of mercury which would exceed the emissions allowed by any applicable standard under this chapter 391-3-1. If the Director determines that technological or economic limitations on the application of measurement methodology to a affected unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

Rule 391-3-1-.02, relating to “**Emission Standards and limitations**,” is hereby amended by inserting new paragraph (14) to read as follows:

(14) Clean Air Mercury Annual Trading Program

- (a) General Requirements. The provisions of this paragraph (14) shall apply to the owner and operator of any source subject to any requirements under 40 Code of Federal Regulations (hereinafter, 40 CFR), Part 60 Subpart HHHH as amended. The term “Permitting Authority” as used in regulations adopted in this section shall mean the Environmental Protection Division of the Georgia Department of Natural Resources, except when used in the definitions of “Allocate or allocations” and “Hg (mercury) allowance” in 40 CFR 60.4102, in which case “Permitting Authority” is defined as stated in 40 CFR 60.4102.
- (b) Hg (Mercury) Budget Trading Program General Provisions-Purpose: 40 CFR Part 60.4101, as amended is hereby incorporated and adopted by reference.
- (c) Mercury Budget Trading Program General Provisions – Definitions: 40 CFR Part 60.4102, as amended is hereby incorporated and adopted by reference.
- (d) Mercury Budget Trading Program General Provisions – Measurements, Abbreviations, and Acronyms: 40 CFR Part 60.4103, as amended is hereby incorporated and adopted by reference.
- (e) Mercury Budget Trading Program General Provisions – Applicability: 40 CFR Part 60.4104, as amended is hereby incorporated and adopted by reference.
- (f) Mercury Budget Trading Program General Provisions –Retired Unit Exemption: 40 CFR Part 60.4105, as amended is hereby incorporated and adopted by reference with the following exception:
 - 1. In lieu of 40 CFR Part 60.4105(b)(2), the following provision applies:
 - (i) The Permitting Authority will not allocate mercury allowances under subparagraph (w) to a unit exempt under 40 CFR Part 60.4105(a) which has permanently retired in a control period prior to or during any of the control periods used in subparagraph (w) to determine the mercury allowance baseline.
- (g) Mercury Budget Trading Program General Provisions –Standard Requirements: 40 CFR Part 60.4106, as amended is hereby incorporated and adopted by reference.

- (h) Mercury Budget Trading Program General Provisions –Computation of Time: 40 CFR Part 60.4107, as amended is hereby incorporated and adopted by reference.
- (i) Mercury Budget Trading Program General Provisions –Appeal Procedures: 40 CFR Part 60.4108, as amended is hereby incorporated and adopted by reference.
- (j) Mercury Designated Representative for Mercury Budget Sources – Authorization and Responsibilities of Mercury Designated Representative: 40 CFR Part 60.4110, as amended is hereby incorporated and adopted by reference.
- (k) Mercury Designated Representative for Mercury Budget Sources – Alternate Mercury Designated Representative: 40 CFR Part 60.4111, as amended is hereby incorporated and adopted by reference.
- (l) Mercury Designated Representative for Mercury Budget Sources – Changing Mercury Designated Representative and Alternate Mercury Designated Representative; Changes in Owners and Operators: 40 CFR Part 60.4112, as amended is hereby incorporated and adopted by reference.
- (m) Mercury Designated Representative for Mercury Budget Sources – Certificate of Representation: 40 CFR Part 60.4113, as amended is hereby incorporated and adopted by reference.
- (n) Mercury Designated Representative for Mercury Budget Sources – Objections Concerning Mercury Designated Representative: 40 CFR Part 60.4114, as amended is hereby incorporated and adopted by reference.
- (o) Permits – General Mercury Budget Trading Program Permit Requirements: 40 CFR Part 60.4120, as amended is hereby incorporated and adopted by reference.
- (p) Permits – Submission of Mercury Budget Permit Applications: 40 CFR Part 60.4121, as amended is hereby incorporated and adopted by reference.
- (q) Permits – Information Requirements for Mercury Budget Permit Applications: 40 CFR Part 60.4122, as amended is hereby incorporated and adopted by reference.
- (r) Permits – Mercury Budget Permit Contents and Term: 40 CFR Part 60.4123, as amended is hereby incorporated and adopted by reference.
- (s) Permits – Mercury Budget Permit Revisions: 40 CFR Part 60.4124, as amended is hereby incorporated and adopted by reference.
- (t) Permits – Reserved: 40 CFR Part 60.4130, as amended is hereby incorporated and adopted by reference.
- (u) Mercury Allowance Allocations – State Trading Budgets: 40 CFR 60.4140, as amended is hereby incorporated and adopted by reference.

(v) Mercury Allowance Allocations – Timing Requirements for Mercury Allowance Allocations: 40 CFR 60.4141, as amended is hereby incorporated and adopted by reference with the following exceptions:

1. In lieu of 40 CFR Part 60.4141, the following provisions apply:

- (i) By October 31, 2007, the Permitting Authority will submit to the Administrator the mercury allowance allocations in a format prescribed by the Administrator and in accordance with subparagraphs (w)1. through (w)3. for the control periods 2010, 2011, and 2012;
- (ii) By October 31, 2009, and October 31 of each year thereafter, the Permitting Authority will submit to the Administrator the mercury allowance allocations in a format prescribed by the Administrator and in accordance with subparagraphs (w)1. through (w)3., for the control period in the fourth year after the year of the applicable deadline for submission under this subparagraph; and
- (iii) By October 31, 2010 and October 31 of each year thereafter, the Permitting Authority will submit to the Administrator the mercury allowance allocations in a format prescribed by the Administrator and in accordance with subparagraphs (w)1. and (w)4. through (w)5., for the control period in the year of the applicable deadline for submission under this paragraph.

(w) Mercury Allowance Allocations

1. In lieu of 40 CFR 60.4142(a), the following provisions apply:

- (i) The baseline heat input (in MMBtu) used for calculating the mercury allowance allocations under subparagraph (w)2.(i) through (iii) for each mercury budget unit under subparagraph (w)2. for control periods 2010, 2011 and 2012 will be the highest annual amount of the mercury budget unit's adjusted control period heat input for 2001 through 2005 with the adjusted control period heat input for each year calculated as the sum of the following:
 - (I) Any portion of the unit's control period heat input for the year that results from the unit's combustion of lignite, multiplied by 3.0;
 - (II) Any portion of the unit's control period heat input for the year that results from the unit's combustion of subbituminous coal multiplied by 1.25; and
 - (III) Any portion of the unit's control period heat input for the year that is not covered by subparagraphs (w)1.(i)(I) or (II) multiplied by 1.0.

- (ii) For a mercury budget unit that has operated during any or each of the years that are five, six, seven, eight, and nine years before the year for which the mercury allocation is being calculated, the baseline heat input (in MMBtu) used for calculating the mercury allowance allocations under subparagraph (w)2.(i) through (iii) for each unit under subparagraph (w)2. for control periods 2013 and thereafter is the highest annual amount of the mercury budget unit's adjusted control period heat input from the years that are five, six, seven, eight and nine years before the year for which the mercury allocation is being calculated with the adjusted control period heat input for each year calculated as the sum of the following:
- (I) Any portion of the unit's control period heat input for the year that results from the unit's combustion of lignite multiplied by 3.0;
- (II) Any portion of the unit's control period heat input for the year that results from the unit's combustion of subbituminous coal multiplied by 1.25; and
- (III) Any portion of the unit's control period heat input for the year that is not covered by subparagraphs (w)1.(ii)(I) or (II) multiplied by 1.0.
- (iii) A mercury budget unit's control period heat input under subparagraph (w)1. and a mercury budget unit's total ounces of mercury emissions during a calendar year under subparagraph (w)4.(i)(IV) will be determined in accordance with 40 CFR Part 75 to the extent the mercury budget unit was otherwise subject to the requirements of 40 CFR Part 75 for the year or will be based on the best available data reported to the Permitting Authority for the mercury budget unit to the extent the mercury budget unit was not otherwise subject to the requirements of 40 CFR Part 75 for the year. The mercury budget unit's types and amounts of fuel combusted under subparagraph (w)1. will be based on the best available data reported to the permitting authority for the mercury budget unit.

2. In lieu of 40 CFR 60.4142(b)(1), the following provisions apply:

- (i) For each control period 2010 through 2017, the Permitting Authority will allocate to all mercury budget units in the State that have a baseline heat input, as determined under subparagraph (w)1., a total amount of mercury allowances equal to thirty-seven thousand three hundred one (37,301) ounces;
- (ii) The available mercury allowances to be allocated to all mercury budget units in the State that have a baseline heat input, as determined under subparagraph (w)1., for control periods 2018 through 2023 is the lesser of fourteen thousand seven hundred fourteen (14,714) ounces or the amount determined in accordance with the following formula:

Total Available Mercury Allowances (ounces) = [Hg_{a1} + Hg_{b1} + Hg_{b2}] * (16 ounces per pound)

where,

Hg_{a1} = Total available mercury allowances for Mercury Budget Units operating mercury controls during or prior to 2010 as determined in subparagraph (w)2.(ii)(I), Mercury Budget Units located in Chatham, Coweta (excluding Plant Yates Units 6 and 7), Dougherty, and Effingham Counties, and any unit whose initial startup is prior to January 1, 2014;

Hg_{b1} = Total available mercury allowances for mercury budget units which operated mercury controls prior to 2016 but not before or during 2010 whose mercury controls are similar to mercury controls installed on mercury budget units during or prior to 2010 as determined in subparagraph (w)2.(ii)(II); and

Hg_{b2} = Total available mercury allowances for mercury budget units which operated mercury controls prior to 2016 but not before or during 2010 and whose mercury controls are not similar to mercury controls installed on mercury budget units during or prior to 2010 as determined in accordance with subparagraph (w)2.(ii)(III).

(I) The formula for computing Hg_a is as follows:

$$\underline{Hg_{a1} = \sum_{i=1}^n [EF_i * HI_i * 1.05]}$$

Where,

i, n = Applicable Mercury Budget Units located in Bartow, Chatham, Coweta (excluding Plant Yates Units 6 and 7), Dougherty, Effingham, Floyd, Heard, and Monroe Counties, and any new unit that began operation prior to January 1, 2014;

EF_i = 4-Year Calendar Average Mercury Emission Factor (pounds per trillion Btu) for control periods 2010 through 2013 with such factor calculated by dividing the average mercury emissions from 2010-2013 by the average heat input from the same period;

HI = Highest Calendar Year Amount of the Mercury Budget Unit's coal-fired Heat Input (trillion Btu per

year) for the control periods 2004 through 2013;
and

1.05 = Growth Factor.

(II) The formula for computing Hg_{b1} is as follows:

$$Hg_{b1} = \sum_{j=1}^k \left[\sum_{y=1}^m \left[EF_j * HI_y * 1.05 \right] \right]$$

Where,

y, m = Applicable Mercury Budget Units located in Cobb and Putnam Counties whose mercury controls began operation after 2010 as well as Plant Yates Units 6 and 7 located in Coweta County;

j, k = Type of similar mercury control;

1.05 = Growth Factor;

HI = Highest Calendar Year Amount of the Mercury Budget Unit's coal-fired Heat Input (trillion Btu per year) for the control periods 2004 through 2013;
and

EF_j = Mercury Emission Factor (pounds per trillion Btu) for type of mercury control; in other words:

$$EF_j = \frac{\sum_{x=1}^z EF_x}{T}$$

where,

x, z= Similar type of mercury control;

j= Mercury Emission Factor (pounds per trillion Btu) for type of mercury control;

EF_x = 4-Year Calendar Average Mercury Emission Factor (pounds per trillion Btu) for control periods 2010 through 2013 for applicable Mercury Budget Units located in Bartow, Floyd, Heard, and Monroe Counties, with a similar type of mercury control that commenced operation during or prior to 2010; and

T = Total number of mercury budget units with this similar type of mercury control.

(III) The formula for computing Hg_{b2} is as follows:

$$Hg_{b2} = \sum_{p=1}^t [EF_a * HI_a * 1.05]$$

Where,

p, t = Applicable Mercury Budget Units located in Cobb and Putnam Counties and Plant Yates Units 6 and 7 located in Coweta County;

1.05 = Growth Factor;

HI = Highest Calendar Year Amount of the Mercury Budget Unit's coal-fired Heat Input (trillion Btu per year) for control periods 2004 through 2013, and

EF = The Permittee shall submit a proposed emission factor to the Division based on best available information for the mercury control technology employed. The Division shall review the request and may approve the use of a specific mercury emission factor for the applicable unit.

(iii) The available mercury allowances to be allocated to all mercury budget units in the State that have a baseline heat input, as determined under subparagraph (w)1. for control periods 2024 and thereafter is the lesser of fourteen thousand seven hundred fourteen (14,714) ounces or the amount determined in accordance the following formula:

$$Total\ Available\ Mercury\ Allowances\ (ounces\ per\ year) = [Hg_{a2} + Hg_{b3}] * (16\ ounces\ per\ pound)$$

where,

Hg_{a2} = Total available mercury allowances for Mercury Budget Units operating mercury controls during or prior to 2010, Mercury Budget Units located in Chatham, Coweta (excluding Plant Yates Units 6 and 7), Dougherty, and Effingham Counties, and any new unit that began operation prior to January 1, 2014; and

Hg_{b3} = Total available mercury allowances for mercury budget units which operated mercury controls prior to 2016 but not before or during 2010 and any unit whose initial startup is on or after January 1, 2014 but prior to January 1, 2020.

(I) The formula for computing Hg_{a2} is as follows:

$$\underline{Hg_{a2} = \sum_{s=1}^g [EF_s * HI_s * 1.05]}$$

Where,

s, g = Applicable Mercury Budget Units located in Bartow, Chatham, Coweta (excluding Plant Yates Units 6 and 7), Dougherty, Effingham, Floyd, Heard, and Monroe Counties;

1.05 = Growth Factor;

HI = Highest Calendar Year Amount of the Mercury Budget Unit's coal-fired Heat Input (trillion Btu per year) during control periods 2010 through 2019; and

EF_i = The unit emission factor determined in accordance with subparagraph (w)2.(ii)(I).

(II) The formula for computing Hg_{b3} is as follows:

$$\underline{Hg_{b3} = \sum_{h=1}^e [EF_h * HI_h * 1.05]}$$

Where,

h, e = Applicable Mercury Budget Units located in Putnam and Cobb counties, Yates 6 and 7, and any new unit that began operation prior to January 1, 2020;

HI = The highest calendar amount of the Mercury Budget Unit's heat input from control periods 2010 through 2019;

1.05 = Growth Factor; and

EF = 4-Year Calendar Average Mercury Emission Factor (pounds per trillion Btu) over control periods 2016 through 2019 with such factor calculated by dividing the average mercury emissions from 2016-2019 by the average heat input from the same period.

3. In lieu of 40 CFR 60.4142(b)2., the following provisions apply:

a. The Permitting Authority will allocate mercury allowances for each control period 2010 through 2017 to each mercury budget unit under subparagraph (w)2.(i) in an amount determined by multiplying the total amount of mercury allowances allocated under subparagraph (w)2.(i) by the ratio of the baseline heat input under subparagraph (w)1. of such mercury budget unit to the total amount of baseline heat inputs under subparagraph (w)1. for all such mercury budget units in the State and rounding to the nearest whole allowance as appropriate.

(ii) The Permitting Authority will allocate mercury allowances for each control period 2018 through 2023 to each mercury budget unit under subparagraph (w)2.(ii) in an amount determined by multiplying the total amount of mercury allowances allocated under subparagraph (w)2.(ii) by the ratio of the baseline heat input under subparagraph (w)1. of such mercury budget unit to the total amount of baseline heat inputs under subparagraph (w)1. for all such mercury budget units in the State and rounding to the nearest whole allowance as appropriate.

(iii) The Permitting Authority will allocate mercury allowances for each control period 2024 and thereafter to each mercury budget unit under subparagraph (w)2.(iii) in an amount determined by multiplying the total amount of mercury allowances allocated under subparagraph (w)2.(iii) by the ratio of the baseline heat input under subparagraph (w)1. of such mercury budget unit to the total amount of baseline heat inputs under subparagraph (w)1. for all such mercury budget units in the State and rounding to the nearest whole allowance as appropriate.

(iv) The difference between the total mercury allowances determined in subparagraph (w)2. and 14,714 ounces for control periods 2018 through 2023 and the difference between the total mercury allowances determined in subparagraph (w)2. and 14,714 ounces for control periods 2024 and thereafter shall be held in reserve by the Division. The Director

shall issue allocations from the reserve to any owner or operator that demonstrates that such allocations are necessary for the purpose of complying with this rule on a case-by-case basis.

4. In lieu of 40 CFR Part 60.4142(c), the following provisions apply:

- (i) For each control period in 2010 and thereafter, the Permitting Authority will allocate mercury allowances to mercury budget units in the State that commenced operation on or after January 1, 2006, and do not yet have a baseline heat input [as determined under subparagraphs (w)1.(i) through (ii)], in accordance with the following procedures:
 - (I) The Permitting Authority will establish a separate new unit set-aside for each control period. Each new unit set-aside will be allocated Mercury allowances equal to one thousand nine hundred sixty-three (1,963) ounces for a control period in 2010 through 2017.
 - (II) The Permitting Authority will establish a separate new unit set-aside for each control period. Each new unit set-aside will be allocated mercury allowances equal to seven hundred seventy-four (774) ounces for a control period in 2018 and thereafter.
 - (III) The Mercury Designated Representative of such a mercury budget unit may submit to the Permitting Authority a request, in a format specified by the Permitting Authority, to be allocated mercury allowances starting with the later of the control period in 2010 or the first control period after the control period in which the mercury budget unit commences commercial operation and until the first control period for which the unit is allocated mercury allowances under subparagraphs (w)1. through (w)3. The mercury allowance allocation request must be submitted on or before July 1 of the first control period for which the mercury allowances are requested and after the date on which the mercury budget unit commences commercial operation.
 - (IV) In a mercury allowance allocation request under subparagraph (w)4.(i)(III), the mercury designated representative may request for a control period mercury allowances in an amount not exceeding the mercury budget unit's total ounces of mercury emissions during the calendar year immediately before such control period.
 - (V) The Permitting Authority will review each mercury allowance allocation request under subparagraph (w)4.(i)(III) and will allocate mercury allowances for each control period pursuant to such request as follows:

- I. The Permitting Authority will accept the allowance allocation request only if the request meets, or is adjusted by the Permitting Authority as necessary to meet, the requirements of subparagraph (w)4.(i)(III) through (w)4.(i)(IV).
- II. On or after July 1 of the control period, the Permitting Authority will determine the sum of the mercury allowances requested [as adjusted under subparagraph (w)4.(i)(V)I.] in all allowance allocation requests accepted under subparagraph (w)4.(i)(V)I. for the control period.
- III. If the amount of mercury allowances in the new unit set-aside for the control period is greater than or equal to the sum under subparagraph (w)4.(i)(V)II., then the Permitting Authority will allocate the amount of Mercury allowances requested [as adjusted under subparagraph (w)4.(i)(V)I.]
- IV. If the amount of mercury allowances in the new unit set-aside for the control period is less than the sum under subparagraph (w)4.(i)(V)II., then the Permitting Authority will allocate to each mercury budget unit covered by an allowance allocation request accepted under subparagraph (w)4.(i)(V)I. the amount of the mercury allowances requested [as adjusted under subparagraph (w)4.(i)(V)I.] multiplied by the amount of mercury allowances in the new unit set-aside for the control period divided by the sum determined under subparagraph (w)4.(i)(V)II. and rounded to the nearest whole allowance as appropriate.
- V. The Permitting Authority will notify each mercury designated representative that submitted an allowance request of the amount of mercury allowances (if any) allocated for the control period to the mercury budget unit covered by the request.

5. In lieu of 40 CFR Part 60.4142(d), the following provisions apply:

- (i) If, after completion of the procedures under subparagraph (w)4.(i)(V), any unallocated mercury allowances remain in the new unit set-aside for the control period, the Permitting Authority will allocate to each mercury budget unit that was allocated mercury allowances under subparagraphs (w)2. through (w)3., an amount of mercury allowances equal to the total amount of such remaining unallocated mercury allowances multiplied by the unit's allocation under subparagraphs (w)2. through (w)3. divided by 37,301 ounces for a control period during 2010 through 2017, the amount of ounces determined in accordance with subparagraph (w)2.(ii) for a

control period during 2018 through 2023, and the amount of ounces determined in accordance with subparagraph (w)2.(iii) for 2024 and thereafter, and rounded to the nearest whole allowance as appropriate.

- (x) Mercury Allowance Tracking System – Reserved: 40 CFR 60.4150, as amended is hereby incorporated and adopted by reference.
- (y) Mercury Allowance Tracking System – Establishment of Accounts: 40 CFR 60.4151, as amended is hereby incorporated and adopted by reference.
- (z) Mercury Allowance Tracking System – Responsibilities of Mercury Authorized Account Representative: 40 CFR 60.4152, as amended is hereby incorporated and adopted by reference.
- (aa) Mercury Allowance Tracking System – Recordation of Mercury Allowance Allocations: 40 CFR 60.4153, as amended is hereby incorporated and adopted by reference with the following exceptions:
 - 1. In lieu of 40 CFR Part 60.4153(a) through (d), the following provision applies:
 - (i) By December 1, 2007, the Administrator will record in the Mercury Budget source’s compliance account the Mercury allowances allocated for the Mercury Budget Units at the source in accordance with subparagraph (v)1.(i) for the control periods 2010, 2011, and 2012.
 - (ii) By December 1, 2009, and December 1 of each year thereafter, the Administrator will record in the Mercury Budget source’s compliance account the mercury allowances allocated for the mercury budget units at the source, as submitted by the Permitting Authority or as determined by the Administrator in accordance with subparagraph (v)1.(ii), for the control period that is four years after the applicable deadline for recordation under this subparagraph.
 - (iii) By December 1, 2010, and December 1 of each year thereafter, the Administrator will record in the Mercury Budget source’s compliance account the Mercury allowances allocated for the Mercury Budget units at the source, as submitted by the Permitting Authority or determined by the Administrator in accordance with subparagraphs (v)1.(iii) for the control period in the year of the applicable deadline for recordation under this subparagraph.
- (bb) Mercury Allowance Tracking System – Compliance with Mercury Budget Emissions Limitation: 40 CFR 60.4154, as amended is hereby incorporated and adopted by reference.
- (cc) Mercury Allowance Tracking System – Banking: 40 CFR 60.4155, as amended is hereby incorporated and adopted by reference.

- (dd) Mercury Allowance Tracking System – Account Error: 40 CFR 60.4156, as amended is hereby incorporated and adopted by reference.
- (ee) Mercury Allowance Tracking System – Closing of General Accounts: 40 CFR 60.4157, as amended is hereby incorporated and adopted by reference.
- (ff) Mercury Allowance Transfers – Submission of Mercury Allowance Transfers: 40 CFR 60.4160, as amended is hereby incorporated and adopted by reference.
- (gg) Mercury Allowance Transfers – EPA Recordation: 40 CFR 60.4161, as amended is hereby incorporated and adopted by reference.
- (hh) Mercury Allowance Transfers – Notification: 40 CFR 60.4162, as amended is hereby incorporated and adopted by reference.
- (ii) Monitoring and Reporting – General Requirements: 40 CFR 60.4170, as amended is hereby incorporated and adopted by reference.
- (jj) Monitoring and Reporting –Initial Certification and Recertification Procedures: 40 CFR 60.4171, as amended is hereby incorporated and adopted by reference.
- (kk) Monitoring and Reporting – Out of Control Periods: 40 CFR 60.4172, as amended is hereby incorporated and adopted by reference.
- (ll) Monitoring and Reporting – Notifications: 40 CFR 60.4173, as amended is hereby incorporated and adopted by reference.
- (mm) Monitoring and Reporting – Recordkeeping and Reporting: 40 CFR 60.4174, as amended is hereby incorporated and adopted by reference.
- (nn) Monitoring and Reporting – Petitions: 40 CFR 60.4175, as amended is hereby incorporated and adopted by reference.

Authority: O.C.G.A. Section 12-9-1 et seq., as amended.