# DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

## DIVISION OF AIR QUALITY

## Air Quality Management Section

## 1147 $CO_2$ Budget Trading Program

~~03/11/13~~xx/xx/13

**1.0 $CO_2$ Budget Trading Program General Provisions**

1.1 Purpose

This Regulation establishes the State of Delaware component of the $CO_2$ Budget Trading Program, which is designed to stabilize and then reduce anthropogenic emissions of $CO_2$, a greenhouse gas, from $CO_2$ budget sources in an economically efficient manner.

1.2 Applicability.

1.2.1 *Units.* Any unit that, at any time on or after January 1, 2005, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe shall be a $CO_2$ budget unit and any source that includes one or more such units shall be a $CO_2$ budget source, subject to the requirements of this regulation.

1.2.2 *Limited exemption for units with electrical output to the electric grid restricted by permit conditions*.

1.2.2.1 *Applicability*. Notwithstanding 1.2.1 of this regulation, a unit under 1.2.1 of this regulation that is covered by a permit issued pursuant to 7 **DE Admin Code** 1102 or 1130 containing a practically enforceable condition restricting the supply of the unit's annual electrical output to the electric grid to less than or equal to 10 percent of the annual gross generation of the unit, and which complies with the provisions in 1.2.2.3 of this regulation, shall be exempt from the requirements of Regulation 1147, except for the provisions 1.3, 1.4, 1.6 of this regulation ~~and, if applicable because of the allocation of $CO_2$ allowances during the pre-exemption time period, 5.0, 6.0 and 7.0 of this regulation.~~

1.2.2.2 *Effective date*. The exemption under 1.2.2.1 of this regulation shall become effective as of the January 1 that is on or after the date on which the restriction on the percentage of annual gross generation that may be supplied to the electric grid and the provisions in the permit required under 1.2.2.1 of this regulation become final.

1.2.2.3 *Compliance.*

For the purpose of applying permitting requirements under 3.0 of this regulation, and applying monitoring requirements under 8.0 of this regulation, the unit shall be treated as commencing operation on the date the permit required under 1.2.3.1 of this regulation becomes final.

1.2.2.3.1 A unit exempt under 1.2.2.1 of this regulation shall comply with the restriction on percentage of annual gross generation that may be supplied to the electric grid described in 1.2.2.1 of this regulation.

1.2.2.3.2 A unit exempt under 1.2.2.1 of this regulation shall report to the Department the amount of annual gross generation and the amount of annual gross generation supplied to the electric grid during the year by the following February 1.

1.2.2.3.3 For a period of 10 years from the date the records are created, the owners and operators of a unit exempt under 1.2.2.1 of this regulation shall retain, at the source that includes the unit, records demonstrating that the conditions of the permit under 1.2.2.1 of this regulation were met. The 10-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the Department. The owners and operators bear the burden of proof that the unit met the restriction on the percentage of annual gross generation that may be supplied to the electric grid.

1.2.2.3.4 The owners and operators and, to the extent applicable, the $CO_2$ authorized account representative of a unit exempt under 1.2.2.1 of this regulation shall comply with all the requirements of this Regulation concerning all time periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.

1.2.2.3.5 On the earlier of the following dates, a unit exempt under 1.2.2.1 of this regulation shall lose its exemption:

1.2.2.3.5.1 the date on which the restriction on the percentage of annual gross generation that may be supplied to the electric grid described in 1.2.2.1 of this regulation is removed from the unit's permit or otherwise becomes no longer applicable in any year that commences on or after January 1, 2009; or

1.2.2.3.5.2 the first date on which the unit fails to comply, or on which the owners and operators fail to meet their burden of proving that the unit is complying, with the restriction on the percentage of annual gross generation that may be supplied to the electric grid described in 1.2.2.1 of this regulation during any year that commences on or after January 1, 2009.

1.2.2.3.6 A unit that loses its exemption in accordance with 1.2.2.3.5 of this regulation shall be subject to the requirements of Regulation 1147. For the purpose of applying permitting requirements under 3.0 of this regulation, ~~allocating allowances under 5.0 of this regulation,~~ and applying monitoring requirements under 8.0 of this regulation, the unit shall be treated as commencing operation on the date the unit loses its exemption.

1.2.3 Requirements for any $CO_2$ Budget Source that is a petroleum refinery.

1.2.3.1 Applicability. Notwithstanding 1.2.1 of this regulation, a $CO_2$ budget source under 1.2.1 of this regulation that is a petroleum refinery may elect to participate in the $CO_2$ budget trading program by securing a permit issued pursuant to 7 **DE Admin. Code** 1102 or 1130 that contains practically enforceable conditions that require compliance with all of the provisions of this regulation, except "$CO_2$ budget emissions limitation" shall mean for a $CO_2$ budget source, the tonnage equivalent, in $CO_2$ emissions associated with the gross electrical generation output to the electric grid in a control period from all $CO_2$ Budget Units at the CO2

Budget Source, of the CO2 allowances available for compliance deduction for the source for a control period; and the amount of $CO_2$ allowances required to be held pursuant to 1.5.3.1, and deducted pursuant to 6.5.2.1 of this regulation shall include only the number of tons of total $CO_2$ emissions associated with gross generation output to the electric grid.

1.2.3.2 Effective date. The requirements of 1.2.3.1 of this regulation shall become effective as of January 1 of the year that the permit required under 1.2.3.1 of this regulation becomes final.

1.2.2.3 Compliance. For the purpose of applying permitting requirements under 3.0 of this regulation, and applying monitoring requirements under 8.0 of this regulation, the unit shall be treated as commencing operation on the date the permit required under 1.2.3.1 of this regulation becomes final.

~~1.2.4 *Deduction of tons from State of Delaware $CO_2$ Budget Trading Program limited industrial exemption set-aside account*. In the event that the Department grants an exemption under 1.2.2 or approval to comply under 1.2.3 of this regulation to a $CO_2$ source, with one or more units that on January 1, 2005, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe, the Department shall retire the number of $CO_2$ allowances from the set-aside established for such purpose under 5.3 of this regulation.~~

1.3 Definitions.

The following terms, when used in this regulation, shall have the following meanings unless the context clearly indicates otherwise. Terms used but not defined herein shall have the meanings given them in 7 **DE Admin Code** 1101 or the Clean Air Act as amended in 1990, in that order of:

**"Account number"** means the identification number given by the Department or its agent to each $CO_2$ Allowance Tracking System account.

**"Acid rain emissions limitation"** means as defined in 40 CFR 72.2, a limitation on emissions of sulfur dioxide or nitrogen oxides under the Acid Rain Program under title IV of the Clean Air Act.

**"Acid Rain Program"** means a multi-state sulfur dioxide and nitrogen oxides air pollution control and emission reduction program established by the Administrator under title IV of the CAA and 40 CFR 72 through 78.

**"Administrator"** means the Administrator of the United States Environmental Protection Agency or the Administrator's authorized representative.

**"Allocate or allocation**" means the determination by the Department of the number of $CO_2$ allowances to be recorded in the compliance account of a $CO_2$ budget unit, an allocation set-aside account, the consumer benefit or strategic energy purpose account, or the general account of the sponsor of an approved $CO_2$ emissions offset project**.**

**"Allocation year"** means a calendar year for which the Department allocates or awards $CO_2$ allowances pursuant to 5.0 and 10.0 of this regulation. The allocation year of each $CO_2$ allowance is reflected in the unique identification number given to the allowance pursuant to 6.4.5 of this regulation.

**"Allowance auction or auction"** means an auction in which the Department offers $CO_2$ allowances for sale.

**"Alternate $CO_2$ authorized account representative"** means for a $CO_2$ budget source and each $CO_2$ budget unit at the source, the natural person who is authorized by the owners and operators of the source and all $CO_2$ budget units at the source, in accordance with 2.0 of this regulation, to represent and legally bind each owner and operator in matters pertaining to the $CO_2$ Budget Trading Program or, for a general account, the natural person who is authorized, under 6.0 of this regulation, to transfer or otherwise dispose of CO2 allowances held in the general account.

If the $CO_2$ budget source is also subject to the Acid Rain Program, then for a $CO_2$ Budget Trading Program compliance account, this natural person shall be the same person as the alternate designated representative under the Acid Rain Program. If the $CO_2$ budget source is also subject to the Acid Rain Program CAIR NOx Ozone Season Trading Program, CAIR NOx Annual Trading Program Compliance Account, or CAIR $SO_2$ Trading Program, then for a $CO_2$ Budget Trading Program compliance account, this natural person shall be the same person as the alternate designated representative under the Acid Rain Program.

**"Anaerobic digester"** means a device that promotes the decomposition of organic material to simple organics and gaseous biogas products, usually accomplished by means of controlling temperature and volume, and including a methane recovery system.

**"Anaerobic digestion"** means the degradation of organic material including manure brought about through the action of microorganisms in the absence of elemental oxygen.

**"Anaerobic storage"** means storage of organic material in an oxygen-free environment, or under oxygen-free conditions, including but not limited to, holding tanks, ponds, and lagoons.

**"Ascending Price, Multiple Round Auction"** means a multiple round auction starting with an opening price with increases each round by predetermined increments. In each round, bidders offer the quantity they are willing to purchase at the posted price. Rounds continue so long as demand exceeds the quantity offered for sale. At the completion of the final round, allowances may be allocated, subject to Section 11.5 of this regulation:

(1) At the final price to remaining bidders and withhold unsold allowances for a future auction, or
(2) At the penultimate price, first to final round bidders and then to bidders in the penultimate round in chronological order of bid during the penultimate round for all remaining allowances, or
(3) According to an alternative mechanism designed to effectuate the objectives of this section.

**"Attribute"** means a characteristic associated with electricity generated using a particular renewable fuel, such as its generation date, facility geographic location, unit vintage, emissions output, fuel, state program eligibility, or other characteristic that can be identified, accounted for, and tracked.

**"Attribute credit"** means an attribute credit represents the attributes related to one megawatt-hour of electricity generation.

**"Automated data acquisition and handling system or DAHS"** means that component of the continuous emissions monitoring system, or other emissions monitoring system approved

for use under 8.0 of this regulation, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by 8.0 of this regulation.

**"Award"** means the determination by the Department of the number of ~~$CO_2$ allowances to be recorded in the compliance account of a $CO_2$ budget unit for Early Reduction $CO_2$ Allowances pursuant to 5.3.3.5 of this regulation or the determination by the Department of the number of~~ $CO_2$ offset allowances to be recorded in the general account of a project sponsor pursuant to 10.7 of this regulation. Award is a type of allocation.

**"Billing meter"** means to qualify as a billing meter, the measurement device must be used to measure electric or thermal output for commercial billing under a contract. The facility selling the electric or thermal output must have different owners from the owners of the party purchasing the electric or thermal output.

**"Biogas"** means a gas resulting from the decomposition of organic matter under anaerobic conditions. The principle constituents are methane and carbon dioxide.

**"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.

**"Boiler (commercial)"** means a self-contained, low-pressure appliance for supplying steam or hot water to a commercial building.

**"Boiler (residential)"** means a self-contained, low-pressure appliance for supplying steam or hot water to a residential building.

**"Building envelope"** means the elements of a building that separate conditioned space from unconditioned space, or that enclose semi-heated space, through which thermal energy may be transferred to or from the exterior, unconditioned space, or conditioned space. Includes all elements that separate the interior of a building from the outdoor environment, including walls, windows, foundation, basement slab, ceiling, roof, and insulation.

**"$CO_2$e"** means carbon dioxide equivalent.

**"Commercial building"** means a building to which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 apply, which includes buildings except low-rise residential buildings. Low-rise residential buildings include single family homes, multifamily structures of three stories or fewer above grade, and manufactured homes (modular and mobile).

**"Clean Air Interstate Rule (CAIR) NOx Annual Trading Program CAIR NOx Annual Trading Program"** means a multi-state nitrogen oxides air pollution control and emission reduction program approved and administered by the Administrator in accordance with 40 CFR Part 96 subparts AA through II and 40 CFR 51.123(o)(1) or (2) or established by the Administrator in accordance with subparts AA through II of 40 CFR Part 97 and 40 CFR 51.123(p) and 52.35, as a means of mitigating interstate transport of fine particulates and nitrogen oxides.

**"CAIR NOx Ozone Season Trading Program CAIR NOx Ozone Season Trading Program"** means a multi-state nitrogen oxides air pollution control and emission reduction program approved and administered by the Administrator in accordance with subparts AAAA through IIII of 40 CFR Part 96 and 40 CFR 51.123(aa)(1) or (2) (and (bb)(1)), (bb)(2), or (dd) or established by the Administrator in accordance with subparts AAAA through IIII of 40 CFR

Part 97 and 40 CFR 51.123(ee) and 52.35, as a means of mitigating interstate transport of ozone and nitrogen oxides.

**"CAIR $SO_2$ Trading Program CAIR $SO_2$ Trading Program"** means a multi-state sulfur dioxide air pollution control and emission reduction program approved and administered by the Administrator in accordance with subparts AAA through III of 40 CFR Part 96 and 40 CFR 51.124(o)(1) or (2) or established by the Administrator in accordance with subparts AAA through III of 40 CFR Part 97 and 40 CFR 51.124(r) and 52.36, as a means of mitigating interstate transport of fine particulates and sulfur dioxide.

**"Cost Containment Reserve trigger price, or CCR trigger price"** means the CCR trigger price is also the minimum price at which $CO_2$ CCR allowances are offered for sale by the Department at auction. The CCR trigger price shall be $4.00 per $CO_2$ Allowance for calendar year 2014, $6.00 per $CO_2$ Allowance in calendar years 2015, $ 8.00 per $CO_2$ allowance in calendar year 2016, and $10.00 per $CO_2$ Allowances in calendar year 2017, each calendar year thereafter, the CCR trigger price shall be 1.025 multiplied by the CCR trigger price from the previous calendar year, rounded to the nearest whole cent.

**"$CO_2$ allowance"** means a limited authorization by the Department or a participating state under the $CO_2$ Budget Trading Program to emit up to one ton of $CO_2$, subject to all applicable limitations contained in this regulation.

**"$CO_2$ Allowance Auction Website"** means the website containing information regarding the auctions to be conducted pursuant to this Regulation. The website shall be available through a link from the Department's main website at http://www.dnrec.delaware.gov/.

**"$CO_2$ allowance deduction or deduct $CO_2$ allowances"** means the permanent withdrawal of $CO_2$ allowances by the Department or its agent from a $CO_2$ Allowance Tracking System compliance account to account for the number of tons of $CO_2$ emitted from a $CO_2$ budget source for a control period, determined in accordance with 8.0 of this regulation, or for the forfeit or retirement of $CO_2$ allowances as provided by this regulation.

**"$CO_2$ allowance price"** means the price for $CO_2$ allowances in the $CO_2$ Budget Trading Program for a particular time period as determined by the Department or its agent, calculated based on a volume-weighted average of transaction prices reported to the Department or its agent, and taking into account prices as reported publicly through reputable sources.

**"$CO_2$ allowances held or hold $CO_2$ allowances"** means the $CO_2$ allowances recorded by the Department or its agent, or submitted to the Department or its agent for recordation, in accordance with 6.0 and 7.0 of this regulation, in a $CO_2$ Allowance Tracking System account.

**"$CO_2$ Allowance Tracking System"** means the system by which the Department or its agent records allocations, deductions, and transfers of $CO_2$ allowances under the $CO_2$ Budget Trading Program. The tracking system may also be used to track $CO_2$ emissions offset projects, $CO_2$ allowance prices and emissions from affected sources.

**"$CO_2$ Allowance Tracking System account"** means an account in the $CO_2$ Allowance Tracking System established by the Department or its agent for purposes of recording the allocation, holding, transferring, or deducting of $CO_2$ allowances.

**"$CO_2$ allowance transfer deadline"** means midnight of the March 1 occurring after the end of the relevant control period ~~or~~ and each relevant interim control period, if that March 1 is not a business day, midnight of the first business day thereafter and is the deadline by which $CO_2$ allowances must be submitted for recordation in a $CO_2$ budget source's compliance account

in order for the source to meet the $CO_2$ requirements of 1.5.3 of this regulation for the control period and each interim control period immediately preceding such deadline.

**"$CO_2$ authorized account representative"** means for a $CO_2$ budget source and each $CO_2$ budget unit at the source, the natural person who is authorized by the owners and operators of the source and all $CO_2$ budget units at the source, in accordance with 2.0 of this regulation, to represent and legally bind each owner and operator in matters pertaining to the $CO_2$ Budget Trading Program or, for a general account, the natural person who is authorized, under 6.0 of this regulation, to transfer or otherwise dispose of $CO_2$ allowances held in the general account.

If the $CO_2$ budget source is also subject to the Acid Rain Program, then for a $CO_2$ Budget Trading Program compliance account, this natural person shall be the same person as the authorized account representative under the Acid Rain Program. If the $CO_2$ budget source is also subject to the CAIR NOx Ozone Season Trading Program, CAIR NOx Annual Trading Program, or CAIR $SO_2$ Trading Program then, for a $CO_2$ Budget Trading Program compliance account, this natural person shall be the same person as the CAIR designated representative under such programs.

**"$CO_2$ budget emissions limitation"** means for a $CO_2$ budget source, the tonnage equivalent, in $CO_2$ emissions in a control period or an interim control period, of the $CO_2$ allowances available for compliance deduction for the source for a control period or an interim control period.

**"$CO_2$ budget permit"** means the portion of the legally binding permit issued by the Department pursuant to **Regulation 1102, 1130 and 1147** to a $CO_2$ budget source or $CO_2$ budget unit which specifies the $CO_2$ Budget Trading Program requirements applicable to the $CO_2$ budget source, to each $CO_2$ budget unit at the $CO_2$ budget source, and to the owners and operators and the $CO_2$ authorized account representative of the $CO_2$ budget source and each $CO_2$ budget unit.

**"$CO_2$ budget source"** means a source that includes one or more $CO_2$ budget units.

**"$CO_2$ Budget Trading Program"** means a multi-state $CO_2$ air pollution control and emissions reduction program established pursuant to this regulation and corresponding regulations in other states as a means of reducing emissions of $CO_2$ from $CO_2$ budget sources.

**"$CO_2$ budget unit"** means a unit that is subject to the $CO_2$ Budget Trading Program requirements under 1.2 of this regulation.

**"$CO_2$ cost containment reserve allowance or $CO_2$ CCR allowance**" means a $CO_2$ allowance that is offered for sale at an auction by the Department for the purpose of containing the cost of $CO_2$ Allowances. $CO_2$ CCR allowances offered for sale at an auction are separate from and additional to $CO_2$ allowances allocated from Delaware's $CO_2$ Budget Trading Program base and adjusted budgets. $CO_2$ CCR allowances are subject to all applicable limitations contained in this Part.

**"$CO_2$ equivalent"** means the quantity of a given greenhouse gas multiplied by its global warming potential (GWP).

**"$CO_2$ offset allowance"** means a $CO_2$ allowance that is awarded to the sponsor of a $CO_2$ emissions offset project pursuant to 10.7 of this regulation and is subject to the relevant compliance deduction limitations of 6.5.1.3 of this regulation.

**"Combined cycle system"** means a system comprised of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

**"Combustion turbine"** means an enclosed fossil or other fuel-fired device that is comprised of a compressor (if applicable), 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.

**"Commence commercial operation"** means with regard to a unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. For a unit that is a $CO_2$ budget unit under 1.2 of this regulation on the date the unit commences commercial operation, such date shall remain the unit's date of commencement of commercial operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a $CO_2$ budget unit under 1.2 of this regulation on the date the unit commences commercial operation, the date the unit becomes a $CO_2$ budget unit under 1.2 of this regulation shall be the unit's date of commencement of commercial operation.

**"Commence operation"** means to begin any mechanical, chemical, or electronic process, including, with regard to a unit, start-up of a unit's combustion chamber. For a unit that is a $CO_2$ budget unit under 1.2 of this regulation on the date of commencement of operation, such date shall remain the unit's date of commencement of operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a $CO_2$ budget unit under 1.2 of this regulation on the date of commencement of operation, the date the unit becomes a $CO_2$ budget unit under 1.2 of this regulation shall be the unit's date of commencement of operation.

**"Commercial building"** means a building to which the provisions of ANSI/ASHRAE/ IESNA Standard 90.1-~~2004~~ 2010: "Energy Standard for Buildings except Low-Rise Residential Buildings" apply, which includes buildings except low-rise residential buildings. Low-rise residential buildings include single family homes, multifamily structures of three stories or fewer above grade, and manufactured homes (modular and mobile).

**"Compliance account"** means a $CO_2$ Allowance Tracking System account, established by the Department or its agent for a $CO_2$ budget source under 6.0 of this regulation, in which the $CO_2$ allowance allocations for the source are initially recorded and in which are held $CO_2$ allowances available for use by the source for a control period and each interim control period for the purpose of meeting the $CO_2$ requirements of 1.5.3 of this regulation.

**"Condensing mode"** means the design and operation of furnaces or boilers in a mode that leads to the production of condensate in flue gases.

**"Conflict of interest"** means a situation that may arise with respect to an individual in relation to any specific project sponsor, $CO_2$ emissions offset project or category of offset projects, such that the individual's other activities or relationships with other persons or organizations render or may render the individual incapable of providing an impartial certification opinion, or otherwise compromise the individual's objectivity in performing certification functions.

**"Continuous emissions monitoring system or CEMS"** means the equipment required under 8.0 of this regulation to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated DAHS), a permanent record of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide

concentration (as applicable), in a manner consistent with 40 CFR 75 and 8.0 of this regulation. The following systems are types of continuous emissions monitoring systems required under 8.0 of this regulation.

(1) A flow monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in standard cubic feet per hour (scfh);

(2) A nitrogen oxides emissions rate (or $NO_X$-diluent) monitoring system, consisting of a $NO_X$ pollutant concentration monitor, a diluent gas ($CO_2$ or $O_2$) monitor, and an automated data acquisition and handling system and providing a permanent, continuous record of $NO_X$ concentration, in parts per million (ppm), diluent gas concentration, in percent $CO_2$ or $O_2$; and $NO_X$ emissions rate, in pounds per million British thermal units (lb/MMBtu);

(3) A moisture monitoring system, as defined in 40 CFR 75.11(b)(2) and providing a permanent, continuous record of the stack gas moisture content, in percent $H_2O$;

(4) A carbon dioxide monitoring system, consisting of a $CO_2$ pollutant concentration monitor (or an oxygen monitor plus suitable mathematical equations from which the $CO_2$ concentration is derived) and an automated data acquisition and handling system and providing a permanent, continuous record of $CO_2$ emissions, in percent $CO_2$; and

(5) An oxygen monitoring system, consisting of an $O_2$ concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of $O_2$, in percent $O_2$.

**"Control period"** means a three-calendar-year time period ~~unless extended to four years upon occurrence of a stage two trigger event~~. The first control period is from January 1, 2009 to December 31, 2011, inclusive. ~~provided if a stage two trigger event occurs during the first control period, then the first control period will be extended one-year to December 31, 2012, inclusive.~~ Each subsequent sequential three-calendar-year period is a separate control period ~~that is subject to one one-year extension upon occurrence of a stage two trigger event during the control period. In no event may a control period be longer than four calendar years.~~ The first two calendar years of each control period are defined as an interim control period beginning in January 1, 2015.

**"Cooperating Regulatory Agency"** means a regulatory agency in a state or United States jurisdiction that is not a participating state that has entered into a memorandum of understanding with the appropriate regulatory agencies of all participating states to carry out certain obligations relative to $CO_2$ emissions offset projects in that state or United States jurisdiction, including but not limited to the obligation to perform audits of offset project sites, and report violations of this regulation.

**"Delaware Auction Account"** means an account administered by the Department of Natural Resources and Environmental Control or its agent for purposes of auctioning $CO_2$ allowances.

**"Department"** means the State of Delaware Department of Natural Resources and Environmental Control.

**"Eligible biomass"** means eligible biomass includes sustainably harvested woody and herbaceous fuel sources that are available on a renewable or recurring basis (excluding old-growth timber), including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes, biogas, and other neat liquid biofuels derived from such fuel sources. Sustainably harvested will be determined by the Department.

**"Energy conservation measure (ECM) or energy efficiency measure (EEM)"** means a set of activities designed to increase the energy efficiency of a building or improve the management of energy demand. An ECM/EEM may involve one or more of the following: physical changes to facility equipment, modifications to a building, revisions to operating and maintenance procedures, software changes, or new means of training or managing users of the building or operations and maintenance staff.

**"Energy performance"** means a measure of the relative energy efficiency of a building, building equipment, or building components, as measured by the amount of energy required to provide building services. For building equipment and components, a relative measure of the impact of equipment or components on building energy usage.

**"Energy services"** means a provision of useful services to building occupants, such as heating and hot water, cooling, and lighting.

**"Excess emissions"** means any tonnage of $CO_2$ emitted by a $CO_2$ budget source during a control period that exceeds the $CO_2$ budget emissions limitation for the source.

**"Excess interim emission"** means any tonnage of $CO_2$ emitted by a $CO_2$ budget source during an interim control period multiplied by 0.50 that exceeds the $CO_2$ budget emissions limitation for the source.

~~**"Forested condition"** means a land shall be deemed to be in a forested condition if it is:~~

~~(1) At least 1.0 acre in size and 120.0 feet wide measured stem-to-stem from the outer-most edge. Forested strips must be 120.0 feet wide for a continuous length of at least 363.0 feet in order to meet the acre threshold; and~~

~~(2) meets at least one of the two following stocking criteria:~~

~~(i) the condition is at least 10-percent stocked by trees of any size or has been at least 10-percent stocked in the past, and the condition is not subject to non-forest use(s) that prevent normal tree regeneration and succession such as regular mowing, intensive grazing, or recreation activities; or~~

~~(ii) In several western woodland species where stocking cannot be determined, the condition has at least 5-percent crown cover by trees of any size, or has had at least 5-percent cover in the past, and the condition is not subject to non-forest use that prevents normal regeneration and succession such as regular mowing, chaining, or recreation activities.~~

**"Fossil fuel"** means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material.

**"Forest offset project"** mean an offset project involving reforestation, improved forest management, or avoided conversion.

**"Forest offset project data report"** means the report prepared by a project sponsor each year that provides the information and documentation required by this Subpart or the forest offset protocol.

**"Forest offset protocol"** means the protocol titled "Regional Greenhouse Gas Initiative Offset Protocol U.S. Forest Projects", published by the participating states on 02/08/13.

**"First control period interim adjustment for banked allowances"** means an adjustment applied to the State of Delaware $CO_2$ Budget Trading Program base budget for allocation years 2014 through 2020 to address the surplus allocation year 2009, 2010, and 2011 allowances held in general and compliance accounts, including compliance accounts established pursuant to the $CO_2$ Budget Trading Program, but not including accounts opened by participating states.

**"Fossil fuel-fired"** means:

(1) With regard to a unit that commenced operation prior to January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than 50 percent of the annual heat input on a Btu basis during any year.

(2) With regard to a unit that commences operation on or after January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than 5 percent of the annual heat input on a Btu basis during any year.

**"Furnace"** means a self-contained, indirect-fired appliance that supplies heated air to a residential building through ducts to conditioned spaces and that has a heat input rate of less than 225,000 Btu/hr. May apply to a furnace that meets the above heat input rate criteria and is installed in a building.

**"General account"** means a $CO_2$ Allowance Tracking System account, established under 6.0, that is not a compliance account.

**"Global warming potential (GWP)"** means a measure of the radiative efficiency (heat-absorbing ability) of a particular gas relative to that of carbon dioxide ($CO_2$) after taking into account the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of $CO_2$. Global warming potentials used in this Regulation are consistent with the values used in the Intergovernmental Panel on Climate Change, Fourth Assessment Report.

**"Gross generation"** means the electrical output (in MWe) at the terminals of the generator.

**"HVAC system"** means the system or systems that provide, either collectively or individually, heating, ventilation, or air conditioning to a building, including the equipment, distribution network, and terminals.

**"Interim control period"** means an interim control period is a one-calendar-year time period, during each of the first and second calendar years of each three year control period. The first interim control period starts on January 1, 2015 and ends on December 31, 2015, inclusive. The second interim control period starts on January 1, 2016 and ends on December 31, 2016, inclusive. Each successive three year control period will have two interim control periods, comprised of each of the first two calendar years of that control period.

**"Independent verifier"** means an individual that has been approved by the Department or its agent to conduct verification activities.

**"Intentional Reversal"** means any reversal caused by a forest owner's negligence, gross negligence, or willful intent, including harvesting, development, and harm to the area within the offset project boundary

**"Life-of-the-unit contractual arrangement"** means a unit participation power sales agreement under which a customer reserves, or is entitled to receive, a specified amount or percentage of nameplate capacity and/or associated energy from any specified unit pursuant to a contract:

(1) For the life of the unit;

(2) For a cumulative term of no less than 25 years, including contracts that permit an election for early termination; or

(3) For a period equal to or greater than 20 years or 70 percent of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

~~**"Market settling period"** means the first fourteen months of any control period.~~

**"Market penetration rate"** means a measure of the diffusion of a technology, product, or practice in a defined market, as represented by the percentage of annual sales for a product or practice, or as a percentage of the existing installed stock for a product or category of products, or as the percentage of existing installed stock that utilizes a practice. The Department may determine an appropriate market definition and market penetration metric for a category of technology, product or practice, and may issue guidance specifying the technologies, products or practices that meet a specified market penetration rate.

**"Maximum design heat input"** means the ability of a unit to combust a stated maximum amount of fuel per hour on a steady state basis, as determined by the physical design and physical characteristics of the unit.

**"Maximum potential hourly heat input"** means an hourly heat input used for reporting purposes when a unit lacks certified monitors to report heat input. If the unit intends to use appendix D of 40 CFR 75 to report heat input, this value should be calculated, in accordance with 40 CFR 75, using the maximum fuel flow rate and the maximum gross calorific value. If the unit intends to use a flow monitor and a diluent gas monitor, this value should be reported, in accordance with 40 CFR 75, using the maximum potential flow rate and either the maximum carbon dioxide concentration (in percent $CO_2$) or the minimum oxygen concentration (in percent $O_2$).

**"Minimum reserve price"** means the minimum reserve price in calendar year 2014 shall be $2.00. Each calendar year thereafter the minimum reserve price shall be 1.025 multiplied by the minimum reserve price from the previous calendar year, rounded to the nearest whole cent.

**"Monitoring system"** means any monitoring system that meets the requirements of 8.0 of this regulation, including continuous emissions monitoring system, an accepted monitoring system, or an alternative monitoring system.

**“Nameplate capacity”** means the maximum electrical output (in MWe) that a generator can sustain over a specified period of time when not restricted by seasonal or other de-ratings as measured in accordance with the United States Department of Energy standards.

**“Non-$CO_2$ budget unit”** means a unit that does not meet the applicability criteria of 1.2 of this regulation.

**“Non-census water”** means streams, sloughs, estuaries, and canals more than 120 feet and less than 1/8 of a mile wide. Lakes, reservoirs, and ponds one (1) to 40 acres in size.

~~**“Non-forested condition”** means land that does not meet the definition of ”forested condition”. Non-forested land includes areas used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining rights-of-way, power line clearings of any width, and non-census water. If intermingled in forest areas, unimproved roads and non-forest strips must be more than 120.0 feet wide, and clearings more than one acre in size, to qualify as non-forest land.~~

**"Offset project"** means an offset project includes all equipment, materials, items, or actions directly related to the reduction of $CO_2$ equivalent emissions or the sequestration of carbon specified in a consistency application submitted pursuant to 10.4 of this regulation. Equipment, materials, items, or actions unrelated to an offset project reduction of $CO_2$ equivalent emissions or the sequestration of carbon, but occurring at a location where an offset project occurs, shall not be considered part of an offset project, unless specified at 10.5 of this regulation.

**“On-site combustion”** means the combustion of fossil fuel at a building to provide building services, such as heating, hot water, or electricity.

**“Operator”** means any person who operates, controls, or supervises a $CO_2$ budget unit or a $CO_2$ budget source and shall include, but not be limited to, any holding company, utility system, or plant manager of such a unit or source.

**“Owner”** means any of the following persons:

(1) Any holder of any portion of the legal or equitable title in a $CO_2$ budget unit; or

(2) Any holder of a leasehold interest in a $CO_2$ budget unit, other than a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the $CO_2$ budget unit; or

(3) Any purchaser of power from a $CO_2$ budget unit under a life-of-the-unit contractual arrangement in which the purchaser controls the dispatch of the unit; or

(4) With respect to any general account, any person who has an ownership interest with respect to the $CO_2$ allowances held in the general account and who is subject to the binding agreement for the $CO_2$ authorized account representative to represent that person's ownership interest with respect to the $CO_2$ allowances.

**“Participating state”** means a state that has established a corresponding regulation as part of the $CO_2$ Budget Trading Program.

**"Passive solar"** means a combination of building design features and building components that utilize solar energy to reduce or eliminate the need for mechanical heating and cooling and daytime artificial lighting.

~~**"Permanently retired"** means a $CO_2$ allowance has been "permanently retired" if it has been placed in a retirement account controlled by the jurisdiction that generated the allowance or credit, or has been placed in an allowance retirement account controlled by the Department, or is otherwise determined by the Department to have been rendered unusable.~~

**"Project commencement"** means for an offset project involving physical construction, other work at an offset project site, or installation of equipment or materials, the date of the beginning of such activity. For an offset project that involves the implementation of a management activity or protocol, the date on which such activity is first implemented or such protocol first utilized. For an offset project involving reforestation, improved forest management, or avoided conversion, the date specified in section 3.2 of the forest offset protocol.

**"Public Benefit Purpose"** shall mean purposes including the promotion of energy efficiency, the mitigation of electricity ratepayer impacts attributable to RGGI, the promotion of distributed renewable or non-carbon-emitting energy technologies, the stimulation and reward of investment in the development of innovative carbon emissions abatement technologies with significant carbon reduction potential, and funding of the administration of the Program established by Title 7, Chapter 60.

**"Receive or receipt of"** means when referring to the Department or its agent, to come into possession of a document, information, or correspondence (whether sent in writing or by authorized electronic transmission), as indicated in an official correspondence log, or by a notation made on the document, information, or correspondence, by the Department or its agent in the regular course of business.

**"Recordation, record, or recorded"** means with regard to $CO_2$ allowances, the movement of $CO_2$ allowances by the Department or its agent from one $CO_2$ Allowance Tracking System account to another, for purposes of allocation, transfer, or deduction.

**"Reserve Price"** means the minimum acceptable price for each $CO_2$ allowance in a specific auction. The reserve price at an auction is either the minimum reserve price or the CCR trigger price, as specified in 9.0 of this regulation

**"Regional-type anaerobic digester"** means an anaerobic digester using feedstock from more than one agricultural operation, or importing feedstock from more than one agricultural operation. Also commonly referred to as a "community digester" or "centralized digester."

**"Reporting Period**" means the period of time covered in by forest offset project data report. The first reporting period for an offset project in an initial crediting period may consist of 6 to 24 consecutive months; all subsequent reporting periods in an initial crediting and all reporting periods in any renewed crediting period must consist of 12 consecutive months.

**"Renewable portfolio standard"** means a statutory or regulatory requirement that a load-serving entity provide a certain portion of the electricity it supplies to its customers from renewable energy sources, or any other statutory or regulatory requirement that a certain portion of electricity supplied to the electricity grid be generated from renewable energy sources.

**“Residential building”** means a low-rise residential building to which the provisions of ANSI/ASHRAE/ IESNA Standard 90.1-2010: “Energy Standard for Buildings Except Low-Rise Residential Buildings” and American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., ANSI/ASHRAE/IESNA Addenda a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, r, s, t, u, v, x, and ak, Supplement to ANSI/ASHRAE/IESNA Standard 90.1-2004:”Energy Standard for Buildings Except Low-Rise Residential Buildings, 2006” do not apply. Includes single family homes, multifamily structures of three stories or fewer above grade, and manufactured homes (modular and mobile).

**“Reversal”** means a GHG emission reduction or GHG removal enhancement for which $CO_2$ offset allowances have been issued that is subsequently released or emitted back into the atmosphere due to any intentional or unintentional circumstance.

**“Serial number”** means when referring to $CO_2$ allowances, the unique identification number assigned to each $CO_2$ allowance by the Department or its agent under 6.4.5 of this regulation.

**“Single Round Sealed-Bid Uniform Price Auction”** means a single round sealed-bid uniform price auction format, under which bidders may submit multiple bids at different prices; the price paid by all awarded bidders will be uniform and equal to the highest rejected bid price.

**“Source”** means any governmental, institutional, commercial, or industrial structure, installation, plant, building, or facility that emits or has the potential to emit any air pollutant. A “source,” including a “source” with multiple units, shall be considered a single “facility.”

~~**“Stage one threshold price”** means the monetary amount, established as of the first day of each calendar year, derived annually from use of the following formula:~~

~~S1TP(2005+n) = S1TP(2005) x [1+(CPI(2005+(n-1)) - CPI (2005))/CPI(2005)]~~

~~Where:~~

~~“**S1TP**” is the stage one threshold price;~~

~~"**S1TP(2005)**" is $7;~~

~~"**n**" is the number of years since 2005; and~~

~~“**CPI**” means, for purposes of the $CO_2$ Budget Trading Program, the U.S. Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers for the U.S. city average, for All Items on the latest reference base, or if such index is no longer published, such other index as the Department determines is appropriate. The CPI for any calendar year is the twelve-month average of the CPI published by the United States Department of Labor, as of the close of the twelve-month period ending on August thirty-first of each calendar year.~~

~~**“Stage one trigger event”** means the occurrence of any twelve month period that completely transpires following the market settling period and is characterized by an average $CO_2$ allowance price that is equal to or greater than the stage one threshold price.~~

~~**“Stage two threshold price”** means the monetary amount, established as of the first day of each calendar year, derived annually from use of the following formula:~~

~~S2TP(2005+n) = [ S2TP(2005+(n-1)) x [[(CPI(2005+(n-1)) - CPI (2005+~~

~~(n-2))}/CPI(2005+(n-2))]+0.02] + S2TP(2005+(n-1))~~

~~Where:~~

~~"**S2TP**" is the stage two threshold price;~~

~~"**S2TP(2005)**" is $10; and~~

~~"**n**" is the number of years since 2005.~~

~~"**CPI"** means, for purposes of the $CO_2$ Budget Trading Program, the U.S. Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers for the U.S. city average, for All Items on the latest reference base, or if such index is no longer published, such other index as the Department determines is appropriate. The CPI for any calendar year is the twelve-month average of the CPI published by the United States Department of Labor, as of the close of the twelve-month period ending on August thirty-first of each calendar year.~~

~~**"Stage two trigger event"** means the occurrence of any twelve month period that completely transpires following the market settling period and is characterized by an average $CO_2$ allowance price that is equal to or greater than the stage two threshold price.~~

**"State"** means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the Northern Mariana Islands.

"**State of Delaware's $CO_2$ Budget Trading Program adjusted budget"** means The State of Delaware's $CO_2$ Budget Trading Program adjusted budget is determined in accordance with section 5.3 and is the annual amount of $CO_2$ tons available in the State of Delaware for allocation in a given allocation year, in accordance with the $CO_2$ Budget Trading Program. $CO_2$ offset allowances allocated to project sponsors and $CO_2$ CCR allowances offered for sale at an auction are separate from and additional to $CO_2$ allowances allocated from the State of Delaware's $CO_2$ Budget Trading Program adjusted budget.

**"State of Delaware $CO_2$ Budget Trading Program Base Budget"** means the annual amount of $CO_2$ tons available in the State of Delaware for allocation in a given allocation year, in accordance with the $CO_2$ Budget Trading Program. $CO_2$ offset ~~and early reduction~~ allowances allocated to project sponsors are separate from and additional to $CO_2$ allowances allocated from the State of Delaware $CO_2$ Budget Trading Program Base Budget.

**"Submit or serve"** means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation:

(1) in person;

(2) by United States Postal Service; or

(3) by other means of dispatch or transmission and delivery.

Compliance with any "submission," "service," or "mailing" deadline shall be determined by the date of dispatch, transmission, or mailing and not the date of receipt.

**"SF6-containing operating equipment"** means any equipment used for the transmission and distribution of electricity that contains $SF_6$.

**"System benefit fund"** means any fund collected directly from retail electricity or natural gas ratepayers.

**"Ton or tonnage"** means any "short ton", or 2,000 pounds. For the purpose of determining compliance with the $CO_2$ requirements of 1.5.3 of this regulation, total tons for a control period and each interim control period shall be calculated as the sum of all recorded hourly emissions (or the tonnage equivalent of the recorded hourly emissions rates) in accordance with 8.0 of this regulation, with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed to equal zero tons. A short ton is equal to 0.9072 metric tons.

**"Total solids"** means total solids are the total of all solids in a sample. They include the total suspended solids, total dissolved solids, and volatile suspended solids.

**"Transmission and/or distribution entity"** means the assets and equipment used to transmit and distribute electricity from an electric generator to the electrical load of a customer. Includes all related assets and equipment located within the service territory of the entity, defined as the service territory of a load-serving entity specified by the applicable state regulatory agency.

**"Twelve month period"** means a period of twelve consecutive months determined on a rolling basis where a new twelve month period begins on the first day of each calendar month.

**"Undistributed $CO_2$ allowances"** mean $CO_2$ allowances originally allocated to a set aside account as pursuant to 5.3 that were not distributed.

**"Unit"** means a fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system.

**"Unit operating day"** means a calendar day in which a unit combusts any fuel.

**"Unsold $CO_2$ allowances"** mean $CO_2$ allowances that have been made available for sale in an auction conducted under the Department or its agent, but not sold.

**"Verification"** means the verification by an independent verifier that certain parts of a $CO_2$ emissions offset project consistency application and/or measurement, monitoring or verification report conforms to the requirements of this regulation.

**"Volatile solids"** means the fraction of total solids that is comprised primarily of organic matter.

**"Whole-building energy performance"** means the overall energy performance of a building, taking into account the integrated impact on energy usage of all building components and systems.

**"Whole-building retrofit"** means any building project that involves the replacement of more than one building system, or set of building components, and also requires a building permit.

**"Zero net energy building"** means a building designed to produce as much energy, using renewable energy sources, as the building is projected to use, as measured on an annual basis.

1.4 Measurements, abbreviations and acronyms.

Measurements, abbreviations, and acronyms used in this regulation are defined as follows:

1.4.1 ANSI **-** American National Standards Institute.

1.4.2 ASHRAE - American Society of Heating, Refrigerating and Air-Conditioner Engineers.

1.4.3 $CO_2$-carbon dioxide.

1.4.4 ”$CO_2$e” - $CO_2$e means carbon dioxide equivalent.

1.4.5 hr-hour.

1.4.6 IESNA - Illuminating Engineering Society of North America.

1.4.7 lb-pounds.

1.4.8 MWe-megawatt electrical.

1.4.9 RESNET-Residential Energy Service Network.

1.5 Standard requirements.

1.5.1 *Permit requirements*.

1.5.1.1 The $CO_2$ authorized account representative of each $CO_2$ budget source required to have an operating permit pursuant to Regulation 1102, 1130 and 1147 of this Title and each $CO_2$ budget unit required to have an operating permit pursuant to Regulation 1102, 1130 and 1147 of this Title shall:

1.5.1.1.1 Submit to the Department a complete $CO_2$ budget permit application under 3.3 of this regulation in accordance with the deadlines specified in 3.2 of this regulation; and

1.5.1.1.2 Submit in a timely manner any supplemental information that the Department determines is necessary in order to review the $CO_2$ budget permit application and issue or deny a $CO_2$ budget permit.

1.5.1.2 The owners and operators of each $CO_2$ budget source required to have an operating permit pursuant to DE Regulations 1102, 1130 and 1147 of this Title and each $CO_2$ budget unit required to have an operating permit pursuant DE Regulations 1102, 1130 and 1147 of this Title for the source shall have a $CO_2$ budget permit and operate the $CO_2$ budget source and the $CO_2$ budget unit at the source in compliance with such $CO_2$ budget permit.

1.5.2 *Monitoring requirements*.

1.5.2.1 The owners and operators and, to the extent applicable, the $CO_2$ authorized account representative of each $CO_2$ budget source and each $CO_2$ budget unit at the source shall comply with the monitoring requirements of 8.0 of this regulation.

1.5.2.2 The emissions measurements recorded and reported in accordance with 8.0 of this regulation shall be used to determine compliance by the unit with the $CO_2$ requirements under 1.5.3 of this regulation.

1.5.3 *$CO_2$ requirements*.

1.5.3.1 The owners and operators of each $CO_2$ budget source and each $CO_2$ budget unit at the source shall hold $CO_2$ allowances available for compliance deductions under 6.5 of this regulation, as of the $CO_2$ allowance transfer deadline, in the source's compliance account in an amount not less than the total $CO_2$ emissions for the control period from all $CO_2$ budget units at the source, less the $CO_2$ allowances deducted to meet the requirements of 1.5.3.2, with respect to the previous two interim control periods, as determined in accordance with 6.0 and 8.0 of this regulation.

1.5.3.2 The owners and operators of each $CO_2$ budget source and each $CO_2$ budget unit at the source shall hold $CO_2$ allowances available for compliance deductions under 6.5, as of the $CO_2$ allowance transfer deadline, in the source's compliance account in an amount not less than the total $CO_2$ emissions for the interim control period from all $CO_2$ budget units at the source multiplied by 0.50, as determined in accordance with 6.0 and 8.0 of this regulation.

~~1.5.3.2~~–1.5.3.3Each ton of $CO_2$ emitted in excess of the $CO_2$ budget emissions limitation for a control period shall constitute a separate violation of this Regulation and applicable state law.

1.5.3.4 Each ton of excess interim emissions shall constitute a separate violation of this Part and applicable state law.

~~1.5.3.3~~–1.5.3.5–A $CO_2$ budget unit shall be subject to the requirements under 1.5.3.1 of this regulation starting on the later, of January 1, 2009 or the date on which the unit commences operation.

~~1.5.3.4~~–1.5.3.6–$CO_2$ allowances shall be held in, deducted from, or transferred among $CO_2$ Allowance Tracking System accounts in accordance with 5.0, 6.0, and 7.0, and 10.7 of this regulation.

~~1.5.3.5~~–1.5.3.7 A $CO_2$ allowance shall not be deducted, in order to comply with the requirements under 1.5.3.1 or 1.5.3.2 of this regulation, for a control period or interim control period that ends prior to the year for which the $CO_2$ allowance was allocated. A $CO_2$ offset allowance shall not be deducted, in order to comply with the requirements under 1.5.3.1 or 1.5.3.2 of this regulation, beyond the applicable percent limitations set out in 6.5.1.3 of this regulation.

~~1.5.3.6~~–1.5.3.8 A $CO_2$ allowance under the $CO_2$ Budget Trading Program is a limited authorization by the Department or a participating state to emit one ton of $CO_2$ in accordance with the $CO_2$ Budget Trading Program. No provision of the $CO_2$ Budget Trading Program, the $CO_2$ budget permit application, or the $CO_2$ budget

permit or any provision of law shall be construed to limit the authority of the Department or a participating state to terminate or limit such authorization.

~~1.5.3.7~~–1.5.3.9 A $CO_2$ allowance under the $CO_2$ Budget Trading Program does not constitute a property right.

1.5.4 *Excess emissions requirements*. The owners and operators of a $CO_2$ budget source that has excess emissions in any control period or excess interim emissions for any interim control period shall:

1.5.4.1 Forfeit the $CO_2$ allowances required for deduction under 6.5.4.1 of this regulation, provided $CO_2$ offset allowances may not be used to cover any part of such excess emissions; and

1.5.4.2 Pay any fine, penalty, or assessment or comply with any other remedy imposed under 6.5.4.2 of this regulation.

1.5.5 *Recordkeeping and reporting requirements*.

1.5.5.1 Unless otherwise provided, the owners and operators of the $CO_2$ budget source and each $CO_2$ budget unit at the source shall keep on site at the source each of the following documents for a period of 10 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 10 years, in writing by the Department.

1.5.5.1.1 The account certificate of representation for the $CO_2$ authorized account representative for the source and each $CO_2$ budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 2.4 of this regulation, provided that the certificate and documents shall be retained on site at the source beyond such 10-year period until such documents are superseded because of the submission of a new account certificate of representation changing the $CO_2$ authorized account representative.

1.5.5.1.2 All emissions monitoring information, in accordance with 8.0 of this regulation and 40 CFR 75.57.

1.5.5.1.3 Copies of all reports, compliance certifications, and other submissions and all records made or required under the $CO_2$ Budget Trading Program.

1.5.5.1.4 Copies of all documents used to complete a $CO_2$ budget permit application and any other submission under the $CO_2$ Budget Trading Program or to demonstrate compliance with the requirements of the $CO_2$ Budget Trading Program.

1.5.5.2 The $CO_2$ authorized account representative of a $CO_2$ budget source and each $CO_2$ budget unit at the source shall submit the reports and compliance certifications required under the $CO_2$ Budget Trading Program, including those under 4.0 of this regulation.

1.5.6 *Liability*.

1.5.6.1 No permit revision shall excuse any violation of the requirements of the $CO_2$ Budget Trading Program that occurs prior to the date that the revision takes effect.

1.5.6.2 Any provision of the $CO_2$ Budget Trading Program that applies to a $CO_2$ budget source (including a provision applicable to the $CO_2$ authorized account representative of a $CO_2$ budget source) shall also apply to the owners and operators of such source and of the $CO_2$ budget units at the source.

1.5.6.3 Any provision of the $CO_2$ Budget Trading Program that applies to a $CO_2$ budget unit (including a provision applicable to the $CO_2$ authorized account representative of a $CO_2$ budget unit) shall also apply to the owners and operators of such unit.

1.5.7 *Effect on other authorities*
No provision of the $CO_2$ Budget Trading Program, a $CO_2$ budget permit application, or a $CO_2$ budget permit, shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the $CO_2$ authorized account representative of a $CO_2$ budget source or $CO_2$ budget unit from compliance with any other provisions of applicable State and federal law and regulations.

1.6 Computation of time.

1.6.1 Unless otherwise stated, any time period scheduled, under the $CO_2$ Budget Trading Program, to begin on the occurrence of an act or event shall begin on the day the act or event occurs.

1.6.2 Unless otherwise stated, any time period scheduled, under the $CO_2$ Budget Trading Program, to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs.

1.6.3 Unless otherwise stated, if the final day of any time period, under the $CO_2$ Budget Trading Program, falls on a weekend or a State of Delaware or Federal holiday, the time period shall be extended to the next business day.

1.7 Severability.
If any provision of this Regulation, or its application to any particular person or circumstances, is held invalid, the remainder of this Regulation, and the application thereof to other persons or circumstances, shall not be affected thereby.

**16 DE Reg. 994 (03/01/13)**

11/11/08

## 2.0 $CO_2$ Authorized Account Representative for $CO_2$ Budget Sources

2.1 Authorization and responsibilities of the $CO_2$ authorized account representative.

2.1.1 Except as provided under 2.2 of this regulation, each $CO_2$ budget source, including all $CO_2$ budget units at the source, shall have one and only one $CO_2$ authorized account representative, with regard to all matters under the $CO_2$ Budget Trading Program concerning the source or any $CO_2$ budget unit at the source.

2.1.2 The $CO_2$ authorized account representative of the $CO_2$ budget source shall be selected by an agreement binding on the owners and operators of the source and all $CO_2$ budget units at the source.

2.1.3 Upon receipt by the Department or its agent of a complete account certificate of representation under 2.4 of this regulation, the $CO_2$ authorized account representative of the source shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each owner and operator of the $CO_2$ budget source represented and each $CO_2$ budget unit at the source in all matters pertaining to the $CO_2$ Budget Trading Program, notwithstanding any agreement between the $CO_2$ authorized account representative and such owners and operators. The owners and operators shall be bound by any decision or order issued to the $CO_2$ authorized account representative by the Department or a court regarding the source or unit.

2.1.4 No $CO_2$ budget permit shall be issued, and no $CO_2$ Allowance Tracking System account shall be established for a $CO_2$ budget source, until the Department or its agent has received a complete account certificate of representation under 2.4 of this regulation for a $CO_2$ authorized account representative of the source and the $CO_2$ budget units at the source.

2.1.5 Each submission under the $CO_2$ Budget Trading Program shall be submitted, signed, and certified by the $CO_2$ authorized account representative for each $CO_2$ budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the $CO_2$ authorized account representative:

> "*I am authorized to make this submission on behalf of the owners and operators of the $CO_2$ budget sources or $CO_2$ budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.*"

2.1.6 The Department or its agent will accept or act on a submission made on behalf of owners or operators of a $CO_2$ budget source or a $CO_2$ budget unit only if the submission has been made, signed, and certified in accordance with 2.1.5 of this regulation.

2.2 Alternate $CO_2$ authorized account representative.

2.2.1 An account certificate of representation may designate one and only one alternate $CO_2$ authorized account representative who may act on behalf of the $CO_2$ authorized account representative. The agreement by which the alternate $CO_2$ authorized account representative is selected shall include a procedure for authorizing the alternate $CO_2$ authorized account representative to act in lieu of the $CO_2$ authorized account representative.

2.2.2 Upon receipt by the Department or its agent of a complete account certificate of representation under 2.4 of this regulation, any representation, action, inaction, or submission by the alternate $CO_2$ authorized account representative shall be deemed to

be a representation, action, inaction, or submission by the $CO_2$ authorized account representative.

2.2.3 Except in 2.1.1, 2.3, 2.4, and 6.2 of this regulation, whenever the term "$CO_2$ authorized account representative" is used in this regulation, the term shall be construed to include the alternate $CO_2$ authorized account representative.

2.3 Changing the $CO_2$ authorized account representative and the alternate $CO_2$ authorized account representative; changes in the owners and operators.

2.3.1 *Changing the $CO_2$ authorized account representative*. The $CO_2$ authorized account representative may be changed at any time upon receipt by the Department or its agent of a superseding complete account certificate of representation under 2.4 of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative prior to the time and date when the Department or its agent receives the superseding account certificate of representation shall be binding on the new $CO_2$ authorized account representative and the owners and operators of the $CO_2$ budget source and the $CO_2$ budget units at the source.

2.3.2 *Changing the alternate $CO_2$ authorized account representative*. The alternate $CO_2$ authorized account representative may be changed at any time upon receipt by the Department or its agent of a superseding complete account certificate of representation under 2.4 of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous or alternate $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative prior to the time and date when the Department or its agent receives the superseding account certificate of representation shall be binding on the new alternate $CO_2$ authorized account representative and the owners and operators of the $CO_2$ budget source and the $CO_2$ budget units at the source.

2.3.3 *Changes in the owners and operators*.

2.3.3.1 In the event a new owner or operator of a $CO_2$ budget source or a $CO_2$ budget unit is not included in the list of owners and operators submitted in the account certificate of representation, such new owner or operator shall be deemed to be subject to and bound by the account certificate of representation, the representations, actions, inactions, and submissions of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative of the source or unit, and the decisions, orders, actions, and inactions of the Department, as if the new owner or operator were included in such list.

2.3.3.2 Within 30 days following any change in the owners and operators of a $CO_2$ budget source or a $CO_2$ budget unit, including the addition of a new owner or operator, the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative shall submit a revision to the account certificate of representation amending the list of owners and operators to include the change.

2.4 Account certificate of representation.

2.4.1 A complete account certificate of representation for a $CO_2$ authorized account representative or an alternate $CO_2$ authorized account representative shall include the following elements in a format prescribed by the Department or its agent:

2.4.1.1 Identification of the $CO_2$ budget source and each $CO_2$ budget unit at the source for which the account certificate of representation is submitted;

2.4.1.2 the name, address, e-mail address, telephone number, and facsimile transmission number of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative;

2.4.1.3 A list of the owners and operators of the $CO_2$ budget source and of each $CO_2$ budget unit at the source;

2.4.1.4 The following certification statement by the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative:
*"I certify that I was selected as the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative, as applicable, by an agreement binding on the owners and operators of the $CO_2$ budget source and each $CO_2$ budget unit at the source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the $CO_2$ Budget Trading Program on behalf of the owners and operators of the $CO_2$ budget source and of each $CO_2$ budget unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department or a court regarding the source or unit."*; and

2.4.1.5 The signature of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative and the dates signed.

2.4.2 Unless otherwise required by the Department or its agent, documents of agreement referred to in the account certificate of representation shall not be submitted to the Department or its agent. Neither the Department nor its agent shall be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

2.5 Objections concerning the $CO_2$ authorized account representative.

2.5.1 Once a complete account certificate of representation under 2.4 of this regulation has been submitted and received, the Department and its agent will rely on the account certificate of representation unless and until the Department or its agent receives a superseding complete account certificate of representation under 2.4 of this regulation.

2.5.2 Except as provided in 2.3.1 or 2.3.2 of this regulation, no objection or other communication submitted to the Department or its agent concerning the authorization, or any representation, action, inaction, or submission of the $CO_2$ authorized account representative shall affect any representation, action, inaction, or submission of the $CO_2$ authorized account representative or the finality of any decision or order by the Department or its agent under the $CO_2$ Budget Trading Program.

2.5.3 Neither the Department nor its agent will adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of any $CO_2$ authorized account representative, including private legal disputes concerning the proceeds of $CO_2$ allowance transfers.

2.6 Delegation by $CO_2$ authorized account representative and alternate $CO_2$ authorized account representative.

2.6.1 A $CO_2$ authorized account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent under this regulation.

2.6.2 An alternate $CO_2$ authorized account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent under this regulation.

2.6.3 In order to delegate authority to make an electronic submission to the Department or its agent in accordance with 2.6.1 and 2.6.2 of this regulation, the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative, as appropriate, must submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following elements:

2.6.3.1 The name, address, e-mail address, telephone number, and facsimile transmission number of such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative;

2.6.3.2 The name, address, e-mail address, telephone number and facsimile transmission number of each such natural person, herein referred to as the "electronic submission agent";

2.6.3.3 For each such natural person, a list of the type of electronic submissions under 2.6.1 or 2.6.2 of this regulation for which authority is delegated to him or her; and

2.6.3.4 The following certification statements by such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative:

2.6.3.4.1 *"I agree that any electronic submission to the Department or its agent that is by a natural person identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under $CO_2$ Budget Trading Program shall be deemed to be an electronic submission by me."*

2.6.3.4.2 *"Until this notice of delegation is superseded by another notice of delegation under the $CO_2$ Budget Trading Program, I agree to maintain an e-mail account and to notify the Department or its agent immediately of any change in my e-mail address unless all delegation authority by me under the $CO_2$ Budget Trading Program is terminated."*

2.6.4 A notice of delegation submitted under 2.6.3 of this regulation shall be effective, with regard to the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative identified in such notice, upon receipt of such notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative as appropriate. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

2.6.5 Any electronic submission covered by the certification in 2.6.3.4.1 of this regulation and made in accordance with a notice of delegation effective under 2.6.4 of this regulation shall be deemed to be an electronic submission by the $CO_2$ authorized account

representative or alternate $CO_2$ authorized account representative submitting such notice of delegation.

11/11/08

**3.0 Permits**

3.1 General $CO_2$ budget permit requirements.

3.1.1 Each $CO_2$ budget source must have a permit issued by the Department pursuant to Regulations 1102, 1130 and 1147.

3.1.2 Each $CO_2$ budget permit shall contain all applicable $CO_2$ Budget Trading Program requirements and shall be a complete and distinguishable portion of the permit under 3.1.1 of this regulation.

3.2 Submission of $CO_2$ budget permit applications.
For any $CO_2$ budget source, the $CO_2$ authorized account representative shall submit a complete $CO_2$ budget permit application under 3.3 of this regulation covering such $CO_2$ budget source to the Department by the later of January 1, 2009 or 12 months before the date on which the $CO_2$ budget source, or a new unit at the source, commences operation.

3.3 Information requirements for $CO_2$ budget permit applications.

3.3.1 A complete $CO_2$ budget permit application shall include the following elements concerning the $CO_2$ budget source for which the application is submitted, in a format prescribed by the Department:

3.3.1.1 Identification of the $CO_2$ budget source, including plant name and the ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by the Energy Information Administration of the United States Department of Energy, if applicable;

3.3.1.2 identification of each $CO_2$ budget unit at the $CO_2$ budget source; and

3.3.1.3 the standard requirements under 1.5 of this regulation.

~~11/11/08~~ xx/xx/13

**4.0 Compliance Certification**

4.1 Compliance certification report.

4.1.1 *Applicability and deadline*. For each control period in which a $CO_2$ budget source is subject to the $CO_2$ requirements of 1.5.3 of this regulation, the $CO_2$ authorized account representative of the source shall submit to the Department by the March 1 following the relevant control period, a compliance certification report. A compliance certification report is not required as part of the compliance obligation during an interim control period.

4.1.2 *Contents of report*. The $CO_2$ authorized account representative shall include in the compliance certification report under 4.1.1 of this regulation the following elements, in a format prescribed by the Department:

4.1.2.1 Identification of the source and each $CO_2$ budget unit at the source;

4.1.2.2 at the $CO_2$ authorized account representative's option, the serial numbers of the $CO_2$ allowances that are to be deducted from the source's compliance account under 6.5 of this regulation for the control period, including the serial numbers of any $CO_2$ offset allowances that are to be deducted subject to the limitations of 6.5.1.3 of this regulation; and

4.1.2.3 The compliance certification under 4.1.3 of this regulation.

4.1.3 *Compliance certification*. In the compliance certification report under 4.1 of this regulation, the $CO_2$ authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the source and the $CO_2$ budget units at the source in compliance with the $CO_2$ Budget Trading Program, whether the source and each $CO_2$ budget unit at the source for which the compliance certification is submitted was operated during the calendar years covered by the report in compliance with the requirements of the $CO_2$ Budget Trading Program , including:

4.1.3.1 Whether the source was operated in compliance with the $CO_2$ requirements of 1.5.3 of this regulation;

4.1.3.2 whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute $CO_2$ emissions to the unit, in accordance with 8.0 of this regulation;

4.1.3.3 whether all the $CO_2$ emissions from the units at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with 8.0 of this regulation. If conditional data were reported, the owner or operator shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made;

4.1.3.4 whether the facts that form the basis for certification under 8.0 of this regulation of each monitor at each unit at the source, or for using an excepted monitoring method or alternative monitoring method approved under 8.0 of this regulation, if any, have changed; and

4.1.3.5 if a change is required to be reported under 4.1.3.4 of this regulation, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification.

4.2 Department's action on compliance certifications.

4.2.1 The Department or its agent may review and conduct independent audits concerning any compliance certification or any other submission under the $CO_2$ Budget Trading Program and make appropriate adjustments of the information in the compliance certifications or other submissions.

4.2.2 The Department or its agent may deduct $CO_2$ allowances from or transfer $CO_2$ allowances to a source's compliance account based on the information in the compliance certifications or other submissions, as adjusted under 4.2.1 of this regulation.

~~11/11/08~~ xx/xx/13

**5.0 $CO_2$ Allowance Allocations**

5.1 State of Delaware $CO_2$ Trading Program base budget.

5.1.1 For the ~~2009 through~~ 2014 allocation years, the State of Delaware $CO_2$ Trading Program annual base budget is 4,064,687 ~~7,559,787~~ tons.

5.1.2 For the 2015 allocation year, the State of Delaware $CO_2$ Trading Program annual base budget is 3,963,069 ~~7,370,792~~ tons.

5.1.3 For the 2016 allocation year, the State of Delaware $CO_2$ Trading Program annual base budget is 3,863,993 ~~7,181,798~~ tons.

5.1.4 For the 2017 allocation year, the State of Delaware $CO_2$ Trading Program annual base budget is 3,860,079 ~~6,992,803~~ tons.

5.1.5 For the 2018 allocation year ~~and each succeeding allocation year~~, the State of Delaware $CO_2$ Trading Program annual base budget is 3,763,577 ~~6,803,808~~ tons.

5.1.6 For 2019, the State of Delaware $CO_2$ Budget Trading Program base budget is 3,669,487 tons.

5.1.7 For 2020 and each succeeding calendar year, the State of Delaware $CO_2$ Budget Trading Program base budget is 3,577,750 tons.

~~5.2 Timing requirements for $CO_2$ allowance allocations.~~

~~5.2.1 By January 1, 2009, the Department will allocate the $CO_2$ allowance allocations under 5.3 of this regulation for the 2009, 2010, 2011, and 2012 allocation years.~~

~~5.2.2 By January 1, 2010 and January 1 of each year thereafter, the Department will allocate $CO_2$ allowances under 5.3 of this regulation for the allocation year that commences in the year that is three years after the applicable deadline for allocation under this provision.~~

5.2 Undistributed and Unsold $CO_2$ Allowances

5.2.1 The Department may retire undistributed $CO_2$ allowances at the end of each control period.

5.2.2 The Department may retire unsold $CO_2$ allowances at the end of each control period.

5.3 $CO_2$ allowance allocations.

5.3.1 *General allocations*.
Beginning with 2014 $CO_2$ allowances, the Department or its agent shall auction 100% of allowances available to Delaware.

~~Beginning with 2009 CO2 allowances, the Department or its agent shall auction 60% of allowances available to Delaware and allocate 40% to each applicable unit as stated by Table 5-2 or 5-3 of this regulation, as applicable. The percentage of allowances auctioned by the Department or its agent shall increase by 8% per year, such that 100% of Delaware's allowances for 2014 shall be auctioned as reflected by Table 5-1.~~

~~**Table 5-1. Percent Auctioned (2009-2014)**~~

| ~~**Year**~~ | ~~**% Auctioned**~~ | ~~**% Allocated to Units**~~ |
|---|---|---|
| ~~2009~~ | ~~60%~~ | ~~40%~~ |
| ~~2010~~ | ~~68%~~ | ~~32%~~ |
| ~~2011~~ | ~~76%~~ | ~~24%~~ |
| ~~2012~~ | ~~84%~~ | ~~16%~~ |
| ~~2013~~ | ~~92%~~ | ~~8%~~ |
| ~~2014~~ | ~~100%~~ | ~~0%~~ |

5.3.2 *Delaware Auction Allowances.* The Department shall direct allowances in accordance with Title 7, Chapter 60 to the Delaware Auction Account. Except for as provided by 5.3.4 of this regulation, the Department shall make available for auction 100 percent of the allowances annually as described by 5.3.1 of this regulation for public benefit purposes and as described by Title 7, Chapter 60.

~~5.3.3 *Early reduction $CO_2$ allowances*. The Department may award early reduction $CO_2$ allowances (ERAs) to a $CO_2$ budget source for reductions in the $CO_2$ budget source's $CO_2$ emissions (inclusive of all emissions from $CO_2$ budget units at the $CO_2$ budget source) that are achieved by the source during the early reduction period (2006, 2007, and 2008), subject to the requirements of this regulation. Total facility shutdowns shall not be eligible for ERAs.~~

~~5.3. 3.1 The $CO_2$ budget source must submit its application for the award of ERAs by May 1, 2009.~~

~~5.3.3.2 The $CO_2$ budget source must demonstrate that all $CO_2$ budget units that existed at the source during the baseline period (2003, 2004, and 2005) are included as $CO_2$ budget units for the early reduction period. New $CO_2$ budget units added at the $CO_2$ budget source must also be accounted for during the early reduction period.~~

~~5.3.3.3 The Department will calculate the number of ERAs to be awarded to a particular $CO_2$ budget source for the early reduction period pursuant to the following methodology:~~

~~5.3.3.3.1 If total heat input to all $CO_2$ budget units at the $CO_2$ budget source during the early reduction period is less than or equal to the total heat input to all the $CO_2$ budget units at the $CO_2$ budget source during the baseline period, then:~~

~~5.3.3.3.1.1 ERAs shall be calculated as follows:~~

$$ERAs = ((AEER_{BASELINE} - AEER_{ERP}) \times (EO_{ERP} + (TO_{ERP} / 3.413))/2000$$

~~Where:~~

~~"$AEER_{BASELINE}$" is the average $CO_2$ emissions rate resulting from electric energy output and thermal energy output for all of the $CO_2$ budget units at the $CO_2$ budget source during the baseline period (in pounds of $CO_2/MWh_{th+e}$);~~

~~"$AEER_{ERP}$" is the average $CO_2$ emissions rate resulting from electric energy output and thermal energy output for all of the $CO_2$ budget units at the $CO_2$ budget source during the early reduction period (in pounds of $CO_2$/ $MWh_{th+e}$);~~

~~"$EO_{ERP}$" is the total electric energy output from all $CO_2$ budget units at the $CO_2$ budget source during the early reduction period (in $MWh_e$);~~

~~"$TO_{ERP}$" is the total useful thermal energy output from all $CO_2$ budget units at the $CO_2$ budget source during the early reduction period (in MMBtu);~~

~~5.3.3.3.1.2~~

~~For the purposes of this regulation, thermal energy output will be converted to units of MWh by the conversion factor 1 MWh = 3.413 MMBtu.~~

~~5.3.3.3.1.3 For the purposes of this regulation, output shall be monitored in accordance with 8.0 of this regulation.~~

~~5.3.3.3.2 If total heat input to all $CO_2$ budget units at the $CO_2$ budget source during the early reduction period is greater than or equal to the total heat input to all the $CO_2$ budget units at the $CO_2$ budget source during the baseline period, then:~~

~~$ERAs = E_{BASELINE} - E_{ERP}$~~

~~Where:~~

~~"$E_{BASELINE}$" are total $CO_2$ emissions from the all of the $CO_2$ budget units at the $CO_2$ budget source during the baseline period (in tons); and~~

~~"$E_{ERP}$" are total $CO_2$ emissions from the all of the $CO_2$ budget units at the $CO_2$ budget source during the early reduction period (in tons).~~

~~5.3.3.4 The $CO_2$ budget source must demonstrate that the data submitted in support of the early reduction application was recorded in compliance with the requirements of 8.0 of this regulation for all of the baseline years and the early reduction years for which the $CO_2$ budget source was required to report $CO_2$ data pursuant to 40 CFR 75. A $CO_2$ budget source that was not required to submit $CO_2$ data pursuant to 40 CFR 75 for any of the years contained in the baseline period or early reduction period may petition the Department as part of its application under this regulation for the use of an alternative data source or sources for the calculation of early reduction allowances.~~

~~5.3.3.5 Once the Department confirms a $CO_2$ budget source's early reductions of $CO_2$ emissions, it will award the ERAs to the $CO_2$ budget source's compliance account by December 31, 2009.~~

5.3.3 *$CO_2$ Allowances available for allocation.* For allocation years 2014 through 2020, the State of Delaware $CO_2$ Budget Trading Program adjusted budget shall be the maximum number of allowances available for allocation in a given allocation year, except for $CO_2$ offset allowances and $CO_2$ CCR allowances.

~~5.3.4 *Limited industrial exemption set-aside allocation.* The limited industrial exemption set-aside allocation will consist of 1,207,544 tons from the State of Delaware $CO_2$ Budget Trading Program base budget set forth in 5.1 of this regulation. For each control period, the Department will determine $CO_2$ allowance allocations in accordance with the following procedures.~~

~~5.3.4.1 The Department will open and manage a general account for the limited exemption set-aside for each control period.~~

~~5.3.4.2 As of the January 1 that is after the date that an exemption under 1.2.2 or as approval to comply under 1.2.3, has been granted, for each allocation year the Department will retire $CO_2$ allowances in the limited industrial exemption set-aside general account.~~

~~5.3.4.3 After retirement of allowances pursuant to 5.3.10.2 of this regulation, the Department will determine whether any $CO_2$ allowances remain in the limited industrial exemption set-aside general account for the control period. The Department will transfer any such remaining $CO_2$ allowances from the limited industrial exemption set-aside allocation general account to the compliance account of each $CO_2$ budget source that was allocated allowances pursuant to 5.3.10.1 of this regulation using the following methodology:~~

~~Existing $CO_2$ budget unit's share of the $CO_2$ allowances remaining in the limited industrial exemption set-aside general account = Total $CO_2$ allowances remaining in the limited industrial exemption set-aside general account x (The individual $CO_2$ budget unit's $CO_2$ allowance allocation determined in accordance with 5.3.1 of this regulation ÷ the State of Delaware $CO_2$ Budget Trading Program annual base budget, as applicable)~~

~~Where:~~

~~"Total $CO_2$ allowances remaining in the limited industrial exemption set-aside allocation general account" is the total number of $CO_2$ allowances remaining in the limited industrial exemption set-aside allocation general account (established under 5.3.4.1 of this section) for the particular control period to which the limited industrial exemption set-aside allocation applies; and~~

~~"The individual $CO_2$ budget unit's $CO_2$ allowance allocation" is the number of $CO_2$ allowances allocated under 5.3.1 this section to the individual $CO_2$ budget unit for the control period to which the limited industrial exemption set-aside allocation applies.~~

~~The Department will only transfer $CO_2$ allowances in whole ton increments. The Department will continue to hold any fractional shares of $CO_2$ allowances in the name of the $CO_2$ budget unit as banked $CO_2$ allowances until they may be combined with other fractional shares of $CO_2$ allowances in future years and then transferred as whole ton increments.~~

5.3.4 *Cost Containment Reserve (CCR) allocation.* The Department shall allocate $CO_2$ CCR allowances, separate from and additional to the State of Delaware $CO_2$ Budget Trading Program base budget set forth in section 5.1, to the State of Delaware Auction Account. The CCR allocation is for the purpose of containing the cost of $CO_2$ allowances. The Department shall allocate $CO_2$ CCR allowances in the following manner:

5.3.4.1 The Department shall initially allocate _228,829__ $CO_2$ CCR allowances for calendar year 2014.

5.3.4.2 On or before January 1 of 2015 and each calendar year thereafter, the Department shall allocate $CO_2$ CCR allowances in an amount equal to _457,658___, minus the number of $CO_2$ CCR allowances that remain in the State of Delaware Auction Account at the end of the prior calendar year.

5.3.5 *First control period interim adjustment for banked allowances*. By January 15, 2014, the Department shall determine the first control period interim adjustment for banked allowances quantity for allocation years 2014 through 2020 by the following formula:

FCPIABA = (FCPA/7) x (2013 State Budget/2013 Regional Budget)

Where:

FCPIABA is the first control period interim adjustment for banked allowances quantity in tons.

FCPA, first control period adjustment is the total quantity of allocation year 2009, 2010, and 2011 $CO_2$ allowances held in general and compliance accounts, including compliance accounts established pursuant to the $CO_2$ Budget Trading Program, but not including accounts opened by participating states, as reflected in the $CO_2$ Allowance Tracking System (COATS) on January 1, 2014.

RS% is 2013 budget divided by the 2013 regional budget.

5.3.6 *Second control period interim adjustment for banked allowan*ces. On March 17, 2014, the Department shall determine the second control period interim adjustment for banked allowances quantity the allocation years 2015 through 2020 by the following formula:

SCPIABA = ((SCPA – SCPE)/6) x (2013 State Budget/2013 Regional Budget)

Where:

SCPIABA is the second control period interim adjustment for banked allowances quantity in tons.

SCPA, second control period adjustment is the total quantity of allocation year 2012 and 2013 $CO_2$ allowances held in general and compliance accounts, including compliance accounts established pursuant to the $CO_2$ Budget Trading Program, but not including accounts opened by participating states, as reflected in the $CO_2$ Allowance Tracking System (COATS) on March 17, 2014.

SCPE, second control period emissions is the total quantity of 2012 and 2013 emissions from all $CO_2$ budget sources in all participating states, reported pursuant to $CO_2$ Budget

Trading Program as reflected in the $CO_2$ Allowance Tracking System (COATS) on March 17, 2014.

RS% is 2013 budget divided by the 2013 regional budget.

5.3.7 *$CO_2$ Budget Trading Program adjusted budget 2014*. The Department shall determine the State of Delaware $CO_2$ Budget Trading Program adjusted budget for the 2014 allocation year by the following formula:

AB = BB – FCPIABA

Where:

AB is the State of Delaware $CO_2$ Budget Trading Program 2014 adjusted budget.

BB is the State of Delaware $CO_2$ Budget Trading Program 2014 base budget.

FCPIABA is the first control period interim adjustment for banked allowances quantity.

$CO_2$ Budget Trading Program adjusted budgets for 2015 through 2020. On April 15, 2014 the Department shall determine the State of Delaware $CO_2$ Budget Trading Program adjusted budgets for the 2015 through 2020 allocation years by the following formula:

AB = BB – (FCPIABA + SCPIABA)

Where:

AB is the State of Delaware $CO_2$ Budget Trading Program adjusted budget.

BB is the State of Delaware $CO_2$ Budget Trading Program base budget.

FCPIABA is the first control period interim adjustment for banked allowances.

SCPIABA is the second control interim adjustment for banked allowances.

5.3.8 After making the determinations in 5.3.7 and 5.3.8, the Department or its Agent will publish the $CO_2$ trading program adjusted budgets for the 2014 through 2020 allocation years.

~~**Table 5-2. $CO_2$ Budget Unit Allocation (2009-2014)**~~

| ~~Allocation with Valero Refinery $CO_2$ Budget Units~~ | | | ~~2009~~ | ~~2010~~ | ~~2011~~ | ~~2012~~ | ~~2013~~ | ~~2014~~ |
|---|---|---|---|---|---|---|---|---|
| ~~**Plant Name**~~ | ~~**Boiler ID**~~ | ~~**Gen. ID**~~ | ~~**40% Allocation**~~ | ~~**32% Allocation**~~ | ~~**24% Allocation**~~ | ~~**16% Allocation**~~ | ~~**8% Allocation**~~ | ~~**100% Auction**~~ |
| ~~Conectiv Christina~~ | ~~3~~ | | ~~907~~ | ~~725~~ | ~~544~~ | ~~408~~ | ~~227~~ | ~~0~~ |
| ~~Conectiv Christina~~ | ~~4~~ | | ~~876~~ | ~~701~~ | ~~526~~ | ~~394~~ | ~~219~~ | ~~0~~ |
| ~~Conectiv Edge Moor~~ | ~~3~~ | ~~3~~ | ~~236,979~~ | ~~189,583~~ | ~~142,187~~ | ~~106,640~~ | ~~59,245~~ | ~~0~~ |
| ~~Conectiv Edge Moor~~ | ~~4~~ | ~~4~~ | ~~388,482~~ | ~~310,785~~ | ~~233,089~~ | ~~174,817~~ | ~~97,120~~ | ~~0~~ |
| ~~Conectiv Edge Moor~~ | ~~5~~ | ~~5~~ | ~~266,033~~ | ~~212,826~~ | ~~159,620~~ | ~~119,715~~ | ~~66,508~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~1~~ | ~~1~~ | ~~174,107~~ | ~~139,286~~ | ~~104,464~~ | ~~78,348~~ | ~~43,527~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~2~~ | ~~2~~ | ~~189,267~~ | ~~151,413~~ | ~~113,560~~ | ~~85,170~~ | ~~47,317~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~3~~ | ~~3~~ | ~~204,590~~ | ~~163,672~~ | ~~122,754~~ | ~~92,065~~ | ~~51,147~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~4~~ | ~~4~~ | ~~622,557~~ | ~~498,045~~ | ~~373,534~~ | ~~280,151~~ | ~~155,639~~ | ~~0~~ |
| ~~City of Dover McKee Run~~ | ~~3~~ | ~~3~~ | ~~60,128~~ | ~~48,102~~ | ~~36,077~~ | ~~27,058~~ | ~~15,032~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~1~~ | ~~1~~ | ~~69,398~~ | ~~55,519~~ | ~~41,639~~ | ~~31,229~~ | ~~17,350~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~2~~ | ~~2~~ | ~~72,576~~ | ~~58,061~~ | ~~43,546~~ | ~~32,659~~ | ~~18,144~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~3~~ | ~~3~~ | ~~75,105~~ | ~~60,084~~ | ~~45,063~~ | ~~33,797~~ | ~~18,776~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~4~~ | ~~4~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~5~~ | ~~5~~ | ~~58,216~~ | ~~46,572~~ | ~~34,929~~ | ~~26,197~~ | ~~14,554~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~6~~ | ~~6~~ | ~~59,261~~ | ~~47,409~~ | ~~35,557~~ | ~~26,667~~ | ~~14,815~~ | ~~0~~ |

| ~~Allocation with Valero Refinery $CO_2$ Budget Units~~ | | | ~~2009~~ | ~~2010~~ | ~~2011~~ | ~~2012~~ | ~~2013~~ | ~~2014~~ |
|---|---|---|---|---|---|---|---|---|
| ~~**Plant Name**~~ | ~~**Boiler ID**~~ | ~~**Gen. ID**~~ | ~~**40% Allocation**~~ | ~~**32% Allocation**~~ | ~~**24% Allocation**~~ | ~~**16% Allocation**~~ | ~~**8% Allocation**~~ | ~~**100% Auction**~~ |
| ~~Conectiv Hay Road~~ | ~~7~~ | ~~7~~ | ~~60,986~~ | ~~48,789~~ | ~~36,592~~ | ~~27,444~~ | ~~15,247~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~8~~ | ~~8~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ |
| ~~City of Dover Van Sant~~ | ~~11~~ | ~~1~~ | ~~2,056~~ | ~~1,645~~ | ~~1,234~~ | ~~925~~ | ~~514~~ | ~~0~~ |
| ~~Warren F. Beasley Station~~ | ~~1~~ | ~~1~~ | ~~5,420~~ | ~~4,336~~ | ~~3,252~~ | ~~2,439~~ | ~~1,355~~ | ~~0~~ |
| ~~NRG Energy Center Dover~~ | ~~2~~ | ~~2~~ | ~~4,068~~ | ~~3,255~~ | ~~2,441~~ | ~~1,831~~ | ~~1,017~~ | ~~0~~ |
| ~~NRG Energy Center Dover~~ | ~~3~~ | ~~3~~ | ~~3,598~~ | ~~2,878~~ | ~~2,159~~ | ~~1,619~~ | ~~900~~ | ~~0~~ |
| ~~Valero Refinery~~ | ~~BLR1~~ | ~~G1~~ | ~~115,803~~ | ~~92,643~~ | ~~69,482~~ | ~~52,111~~ | ~~28,951~~ | ~~0~~ |
| ~~Valero Refinery~~ | ~~BLR2~~ | ~~G2~~ | ~~90,173~~ | ~~72,138~~ | ~~54,104~~ | ~~40,578~~ | ~~22,543~~ | ~~0~~ |
| ~~Valero Refinery~~ | ~~BLR3~~ | ~~G3~~ | ~~95,791~~ | ~~76,633~~ | ~~57,475~~ | ~~43,106~~ | ~~23,948~~ | ~~0~~ |
| ~~Valero Refinery~~ | ~~DCPP4~~ | ~~G4~~ | ~~125,163~~ | ~~100,130~~ | ~~75,098~~ | ~~56,323~~ | ~~31,291~~ | ~~0~~ |
| ~~Valero Refinery~~ | ~~MECCU1~~ | ~~CT1~~ | ~~27,188~~ | ~~21,750~~ | ~~16,313~~ | ~~12,234~~ | ~~6,797~~ | ~~0~~ |
| ~~Valero Refinery~~ | ~~MECCU2~~ | ~~CT2~~ | ~~15,188~~ | ~~12,151~~ | ~~9,113~~ | ~~6,835~~ | ~~3,797~~ | ~~0~~ |

~~Table 5-3 $CO_2$ Budget Unit Allocation without Valero Refinery $CO_2$ Budget Units (2009-2014)~~

| ~~Allocation without Valero Refinery $CO_2$ Budget Units~~ | | | ~~2009~~ | ~~2010~~ | ~~2011~~ | ~~2012~~ | ~~2013~~ | ~~2014~~ |
|---|---|---|---|---|---|---|---|---|
| ~~Plant Name~~ | ~~Boiler ID~~ | ~~Gen. ID~~ | ~~40% Allo-cation~~ | ~~32% Allo-cation~~ | ~~24% Allo-cation~~ | ~~16% Allo-cation~~ | ~~8% Alloca-tion~~ | ~~100% Auction~~ |
| ~~Conectiv Christina~~ | ~~3~~ | | ~~902~~ | ~~722~~ | ~~541~~ | ~~406~~ | ~~225~~ | ~~0~~ |
| ~~Conectiv Christina~~ | ~~4~~ | | ~~872~~ | ~~697~~ | ~~523~~ | ~~392~~ | ~~218~~ | ~~0~~ |
| ~~Conectiv Edge Moor~~ | ~~3~~ | ~~3~~ | ~~235,707~~ | ~~188,565~~ | ~~141,424~~ | ~~106,068~~ | ~~58,927~~ | ~~0~~ |
| ~~Conectiv Edge Moor~~ | ~~4~~ | ~~4~~ | ~~386,397~~ | ~~309,117~~ | ~~231,838~~ | ~~173,878~~ | ~~114,962~~ | ~~0~~ |
| ~~Conectiv Edge Moor~~ | ~~5~~ | ~~5~~ | ~~264,605~~ | ~~211,684~~ | ~~158,763~~ | ~~119,072~~ | ~~78,726~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~1~~ | ~~1~~ | ~~173,173~~ | ~~138,538~~ | ~~103,904~~ | ~~77,928~~ | ~~51,523~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~2~~ | ~~2~~ | ~~188,251~~ | ~~150,601~~ | ~~112,950~~ | ~~84,713~~ | ~~56,009~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~3~~ | ~~3~~ | ~~203,492~~ | ~~162,793~~ | ~~122,095~~ | ~~91,571~~ | ~~60,544~~ | ~~0~~ |
| ~~NRG Indian River~~ | ~~4~~ | ~~4~~ | ~~619,215~~ | ~~495,372~~ | ~~371,529~~ | ~~278,647~~ | ~~184,232~~ | ~~0~~ |
| ~~City of Dover McKee Run~~ | ~~3~~ | ~~3~~ | ~~59,805~~ | ~~47,844~~ | ~~35,883~~ | ~~26,912~~ | ~~17,793~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~1~~ | ~~1~~ | ~~69,026~~ | ~~55,221~~ | ~~41,415~~ | ~~31,062~~ | ~~20,537~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~2~~ | ~~2~~ | ~~72,187~~ | ~~57,749~~ | ~~43,312~~ | ~~32,484~~ | ~~21,477~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~3~~ | ~~3~~ | ~~74,702~~ | ~~59,761~~ | ~~44,821~~ | ~~33,616~~ | ~~22,226~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~4~~ | ~~4~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~5~~ | ~~5~~ | ~~57,903~~ | ~~46,322~~ | ~~34,742~~ | ~~26,056~~ | ~~17,228~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~6~~ | ~~6~~ | ~~58,943~~ | ~~47,154~~ | ~~35,366~~ | ~~26,524~~ | ~~17,537~~ | ~~0~~ |

| ~~Allocation without Valero Refinery $CO_2$ Budget Units~~ | | | ~~2009~~ | ~~2010~~ | ~~2011~~ | ~~2012~~ | ~~2013~~ | ~~2014~~ |
|---|---|---|---|---|---|---|---|---|
| ~~**Plant Name**~~ | ~~**Boiler ID**~~ | ~~**Gen. ID**~~ | ~~**40% Allo-cation**~~ | ~~**32% Allo-cation**~~ | ~~**24% Allo-cation**~~ | ~~**16% Allo-cation**~~ | ~~**8% Alloca-tion**~~ | ~~**100% Auction**~~ |
| ~~Conectiv Hay Road~~ | ~~7~~ | ~~7~~ | ~~60,659~~ | ~~48,527~~ | ~~36,395~~ | ~~27,297~~ | ~~18,048~~ | ~~0~~ |
| ~~Conectiv Hay Road~~ | ~~8~~ | ~~8~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ |
| ~~City of Dover Van Sant~~ | ~~11~~ | ~~1~~ | ~~2,045~~ | ~~1,636~~ | ~~1,227~~ | ~~920~~ | ~~608~~ | ~~0~~ |
| ~~Warren F. Beasley Station~~ | ~~1~~ | ~~1~~ | ~~5,391~~ | ~~4,313~~ | ~~3,235~~ | ~~2,426~~ | ~~1,604~~ | ~~0~~ |
| ~~NRG Energy Center Dover~~ | ~~2~~ | ~~2~~ | ~~4,046~~ | ~~3,237~~ | ~~2,428~~ | ~~1,821~~ | ~~1,204~~ | ~~0~~ |
| ~~NRG Energy Center Dover~~ | ~~3~~ | ~~3~~ | ~~3,579~~ | ~~2,863~~ | ~~2,147~~ | ~~1,610~~ | ~~1,065~~ | ~~0~~ |

## 6.0 $CO_2$ Allowance Tracking System

6.1 $CO_2$ Allowance Tracking System accounts.

6.1.1 *Nature and function of compliance accounts*. Consistent with 6.2.1 of this regulation, the Department or its agent will establish one compliance account for each $CO_2$ budget source. Allocations of $CO_2$ allowances pursuant to 5.0 of this regulation and deductions or transfers of $CO_2$ allowances pursuant to 4.2, 6.5, 6.7, or 7.0 of this regulation will be recorded in the compliance accounts in accordance with this regulation.

6.1.2 *Nature and function of general accounts*. Consistent with 6.2.2 of this regulation, the Department or its agent will establish, upon request, a general account for any person. Transfers of $CO_2$ allowances pursuant to 7.0 of this regulation will be recorded in the general account in accordance with this regulation.

6.2 Establishment of accounts.

6.2.1 *Compliance accounts*. Upon receipt of a complete account certificate of representation under 2.4 of this regulation, the Department or its agent will establish a compliance account for each $CO_2$ budget source for which the account certificate of representation was submitted.

6.2.2 *General accounts*.

6.2.2.1 *Application for general account.* Any person may apply to open a general account for the purpose of holding and transferring $CO_2$ allowances. An application for a general account may designate one and only one $CO_2$ authorized account representative and one and only one alternate $CO_2$ authorized account representative who may act on behalf of the $CO_2$ authorized account representative. The agreement by which the alternate $CO_2$ authorized account representative is selected shall include a procedure for authorizing the alternate $CO_2$ authorized account representative to act in lieu of the $CO_2$ authorized account representative. A complete application for a general account shall be submitted to the Department or its agent and shall include the following elements in a format prescribed by the Department or its agent:

6.2.2.1.1 name, address, e-mail address, telephone number, and facsimile transmission number of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative;

6.2.2.1.2 at the option of the $CO_2$ authorized account representative, organization name and type of organization;

6.2.2.1.3 a list of all persons subject to a binding agreement for the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative to represent their ownership interest with respect to the $CO_2$ allowances held in the general account;

6.2.2.1.4 The following certification statement by the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative:

*"I certify that I was selected as the $CO_2$ authorized account representative or the $CO_2$ alternate authorized account representative,*

*as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to $CO_2$ allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the $CO_2$ Budget Trading Program on behalf of such persons and that each such person shall be fully bound by my representations, actions, inactions, or submissions and by any order or decision issued to me by the Department or its agent or a court regarding the general account."*;

6.2.2.1.5 The signature of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative and the dates signed; and

6.2.2.1.6 Unless otherwise required by the Department or its agent, documents of agreement referred to in the application for a general account shall not be submitted to the Department or its agent. Neither the Department nor its agent shall be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

6.2.2.2 *Authorization of $CO_2$ authorized account representative.*

6.2.2.2.1 Upon receipt by the Department or its agent of a complete application for a general account under 6.2.2.1 of this regulation:

6.2.2.2.1.1 The Department or its agent will establish a general account for the person or persons for whom the application is submitted.

6.2.2.2.1.2 The $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative for the general account shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each person who has an ownership interest with respect to $CO_2$ allowances held in the general account in all matters pertaining to the $CO_2$ Budget Trading Program, notwithstanding any agreement between the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative and such person. Any such person shall be bound by any order or decision issued to the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative by the Department or its agent or a court regarding the general account.

6.2.2.2.1.3 Any representation, action, inaction, or submission by any alternate $CO_2$ authorized account representative shall be deemed to be a representation, action, inaction, or submission by the $CO_2$ authorized account representative.

6.2.2.2.2 Each submission concerning the general account shall be submitted, signed, and certified by the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative for the persons having an ownership interest with respect to $CO_2$ allowances held in the general account. Each such submission shall include the following certification statement by the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative:

"I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the $CO_2$ allowances held in

the general account. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

6.2.2.2.3 The Department or its agent will accept or act on a submission concerning the general account only if the submission has been made, signed, and certified in accordance with 6.2.2.2.2 of this regulation.

6.2.2.3 *Changing $CO_2$ authorized account representative and alternate $CO_2$ authorized account representative; changes in persons with ownership interest*.

6.2.2.3.1 The $CO_2$ authorized account representative for a general account may be changed at any time upon receipt by the Department or its agent of a superseding complete application for a general account under 6.2.2.1 of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous $CO_2$ authorized account representative, or the previous alternate $CO_2$ authorized account representative, prior to the time and date when the Department or its agent receives the superseding application for a general account shall be binding on the new $CO_2$ authorized account representative and the persons with an ownership interest with respect to the $CO_2$ allowances in the general account.

6.2.2.3.2 The alternate $CO_2$ authorized account representative for a general account may be changed at any time upon receipt by the Department or its agent of a superseding complete application for a general account under 6.2.2.1 of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous $CO_2$ authorized account representative, or the previous alternate $CO_2$ authorized account representative, prior to the time and date when the Department or its agent receives the superseding application for a general account shall be binding on the new alternate $CO_2$ authorized account representative and the persons with an ownership interest with respect to the $CO_2$ allowances in the general account.

6.2.2.3.3 In the event a new person having an ownership interest with respect to $CO_2$ allowances in the general account is not included in the list of such persons in the application for a general account, such new person shall be deemed to be subject to and bound by the application for a general account, the representations, actions, inactions, and submissions of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative, and the decisions, orders, actions, and inactions of the Department or its agent, as if the new person were included in such list.

6.2.2.3.4 Within 30 days following any change in the persons having an ownership interest with respect to $CO_2$ allowances in the general account, including the addition or deletion of persons, the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative shall submit a revision

to the application for a general account amending the list of persons having an ownership interest with respect to the $CO_2$ allowances in the general account to include the change.

6.2.2.4 *Objections concerning $CO_2$ authorized account representative*.

6.2.2.4.1 Once a complete application for a general account under 6.2.2.1 of this regulation has been submitted and received, the Department or its agent will rely on the application unless and until a superseding complete application for a general account under 6.2.2.1 of this regulation is received by the Department or its agent.

6.2.2.4.2 Except as provided in 6.2.2.3.1 and 6.2.2.3.2 of this regulation, no objection or other communication submitted to the Department or its agent concerning the authorization, or any representation, action, inaction, or submission of the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative for a general account shall affect any representation, action, inaction, or submission of the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative or the finality of any decision or order by the Department or its agent under the $CO_2$ Budget Trading Program.

6.2.2.4.3 Neither the Department nor its agent will adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of the $CO_2$ authorized account representative or any alternate $CO_2$ authorized account representative for a general account, including private legal disputes concerning the proceeds of $CO_2$ allowance transfers.

6.2.2.5 *Delegation by $CO_2$ authorized account representative and alternate $CO_2$ authorized account representative*.

6.2.2.5.1 A $CO_2$ authorized account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent provided for under 6.0 and 7.0 of this regulation.

6.2.2.5.2 An alternate $CO_2$ authorized account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent provided for under 6.0 and 7.0 of this regulation.

6.2.2.5.3 In order to delegate authority to make an electronic submission to the Department or its agent in accordance with 6.2.2.5.1 and 6.2.2.5.2 of this regulation, the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative, as appropriate, must submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following elements:

6.2.2.5.3.1 The name, address, e-mail address, telephone number, and facsimile transmission number of such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative;

6.2.2.5.3.2 The name, address, e-mail address, telephone number and facsimile transmission number of each such natural person, herein referred to as “electronic submission agent”;

6.2.2.5.3.3 For each such natural person, a list of the type of electronic submissions under 6.2.1 and 6.2.2 of this regulation for which authority is delegated to him or her; and

6.2.2.5.3.4 The following certification statements by such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative:

6.2.2.5.3.4.1 *"I agree that any electronic submission to the Department or its agent that is by a natural person identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under the $CO_2$ Budget Trading Program shall be deemed to be an electronic submission by me."*

6.2.2.5.3.4.2 *"Until this notice of delegation is superseded by another notice of delegation under $CO_2$ Budget Trading Program, I agree to maintain an e-mail account and to notify the Department or its agent immediately of any change in my e-mail address unless all delegation authority by me under $CO_2$ Budget Trading Program is terminated."*

6.2.2.5.4 A notice of delegation submitted under 6.2.2.5.3 of this regulation shall be effective, with regard to the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative identified in such notice, upon receipt of such notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative as appropriate. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

6.2.2.5.5 Any electronic submission covered by the certification in *6.2.2.5.3.4.1 of this regulation* and made in accordance with a notice of delegation effective under 6.2.2.5.4 of this regulation shall be deemed to be an electronic submission by the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative submitting such notice of delegation.

6.2.3 *Account identification*. The Department or its agent will assign a unique identifying number to each account established under 6.2.1 or 6.2.2 of this regulation.

6.3 $CO_2$ Allowance Tracking System responsibilities of $CO_2$ authorized account representative. Following the establishment of a $CO_2$ Allowance Tracking System account, all submissions to the Department or its agent pertaining to the account, including, but not limited to, submissions concerning the deduction or transfer of $CO_2$ allowances in the account, shall be made only by the $CO_2$ authorized account representative for the account.

6.4 Recordation of $CO_2$ allowance allocations.

6.4.1 By January 1, 2009, the Department or its agent will record in the Delaware Auction Account the CO2 allowances for allocation years of 2009, 2010, 2011, and 2012.

6.4.2 By January 1, 2010 and each January thereafter, the Department or its agent will record in the Delaware Auction Account the CO2 allowances for the allocation year three years in the future.

~~6.4.3 By January 1, 2009, the Department or its agent will record in the Industrial Exemption Set-aside Account the CO2 allowances for allocation years of 2009, 2010, 2011, and 2012.~~

~~6.4.4 By January 1, 2010 and each January thereafter, the Department or its agent will record in the Industrial Exemption Set-aside Account the CO2 allowances for the allocation year three years in the future.~~

6.4.~~5~~3 Serial numbers for allocated $CO_2$ allowances. When allocating $CO_2$ allowances to and recording them in an account, the Department or its agent will assign each $CO_2$ allowance a unique identification number that will include digits identifying the year for which the $CO_2$ allowance is allocated.

6.4.~~6~~4 On or before December 31, 2009, the Department shall record any ERAs awarded pursuant to 5.3.3 of this regulation in the $CO_2$ budget source's compliance account.

6.4.~~7~~5 By January 1, 2009, the Department or its agent will record in the $CO_2$ budget source's compliance account the CO2 allowances for allocation years of 2009, 2010, 2011, 2012 and 2013 pursuant to the amounts established by 5.3 of the regulation.

6.5 Compliance.

6.5.1 *Allowances available for compliance deduction.* $CO_2$ allowances that meet the following criteria are available to be deducted in order for a $CO_2$ budget source to comply with the $CO_2$ requirements of 1.5.3 of this regulation for a control period or an interim control period.

6.5.1.1 The $CO_2$ allowances, other than $CO_2$ offset allowances, are of allocation years that fall within a prior control period, the same control period or the same interim control period for which the allowances will be deducted.

6.5.1.2 The $CO_2$ allowances are held in the $CO_2$ budget source's compliance account as of the $CO_2$ allowance transfer deadline for that control period or interim control period or are transferred into the compliance account by a $CO_2$ allowance transfer correctly submitted for recordation under 7.1 of this regulation by the $CO_2$ allowance transfer deadline for that control period or interim control period.

6.5.1.3 For $CO_2$ offset allowances, the number of $CO_2$ offset allowances that are available to be deducted in order for a $CO_2$ budget source to comply with the $CO_2$ requirements of 1.5.3 of this regulation for a control period or interim control period may not exceed the number of tons representing the following percentages of the $CO_2$ budget source's $CO_2$ emissions for that control period, or of 0.50 times the $CO_2$ budget source's $CO_2$ emissions for an interim control period, as determined in accordance with 6.0 and 8.0 of this regulation:

~~6.5.1.3.1 Unless the provisions of 6.5.1.3.2 and 6.5.1.3.3 of this regulation apply, 3.3 percent;~~

~~6.5.1.3.2 If the Department determines that there has been a stage one trigger event, 5 percent;~~

~~6.5.1.3.3 If the Department determines that there has been a stage two trigger event, 10 percent.~~

6.5.1.4 The $CO_2$ allowances are not necessary for deductions for excess emissions for a prior control period under 6.5.4 of this regulation.

6.5.2 *Deductions for compliance*. Following the recordation, in accordance with 7.2 of this regulation, of $CO_2$ allowance transfers submitted for recordation in the $CO_2$ budget source's compliance account by the $CO_2$ allowance transfer deadline for a control period or interim control period, the Department or its agent will deduct $CO_2$ allowances available under 6.1 of this regulation to cover the source's $CO_2$ emissions (as determined in accordance with 8.0 of this regulation for the control period, as follows:

6.5.2.1 until the amount of $CO_2$ allowances deducted equals the number of tons of total $CO_2$ emissions, (or 0.50 times the number of tons of total $CO_2$ emissions for an interim control period), less any $CO_2$ emissions attributable to the burning of eligible biomass, determined in accordance with 8.0 of this regulation, from all $CO_2$ budget units at the $CO_2$ budget source for the control period; or interim **control** period or

6.5.2.2 If there are insufficient $CO_2$ allowances to complete the deductions 6.2.1 of this regulation, until no more $CO_2$ allowances available under 6.5.1 of this regulation remain in the compliance account.

6.5.3 *Identification of available $CO_2$ allowances by serial number; default compliance deductions.*

6.5.3.1 The $CO_2$ authorized account representative for a source's compliance account may request that specific $CO_2$ allowances, identified by serial number, in the compliance account be deducted for emissions or excess emissions for a control period or interim control period in accordance with 6.5.2 or 6.5.4 of this regulation. Such identification shall be made in the compliance certification report submitted in accordance with 4.1 of this regulation.

6.5.3.2 The Department or its agent will deduct $CO_2$ allowances for a control period or interim control period from the $CO_2$ budget source's compliance account, in the absence of identification or in the case of a partial identification of available $CO_2$ allowances by serial number under 6.5.3.1 of this regulation, in the following order:

6.5.3.2.1 First, subject to the relevant compliance deduction limitations under 6.5.1.3 and 6.5.4.1 of this regulation, $CO_2$ offset allowances. $CO_2$ offset allowances shall be deducted in chronological order (i.e., $CO_2$ offset allowances from earlier allocation years shall be deducted before $CO_2$ offset allowances from later allocation years). In the event that some, but not all, $CO_2$ offset allowances from a particular allocation year are to be deducted, $CO_2$ offset allowances shall be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances.

6.5.3.2.2 Second, any $CO_2$ allowances, other than $CO_2$ offset allowances, which are available for deduction under 6.5.1 of this regulation. $CO_2$ allowances shall be deducted in chronological order (i.e., $CO_2$ allowances from earlier allocation years shall be deducted before $CO_2$ allowances from later

allocation years). In the event that some, but not all, $CO_2$ allowances from a particular allocation year are to be deducted, $CO_2$ allowances shall be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances.

6.5.4 *Deductions for excess emissions*.

6.5.4.1 After making the deductions for compliance under 6.5.2 of this regulation, the Department or its agent will deduct from the $CO_2$ budget source's compliance account a number of $CO_2$ allowances, from allocation years that occur after the control period in which the source has excess emissions, equal to three times the number of the source's excess emissions. In the event that a source has insufficient $CO_2$ allowances to cover three times the number of the source's excess emissions, the source shall be required to immediately transfer sufficient allowances into its compliance account. No $CO_2$ offset allowances may be deducted to account for the source's excess emissions.

6.5.4.2 Any $CO_2$ allowance deduction required under 6.5.4.1 of this regulation shall not affect the liability of the owners and operators of the $CO_2$ budget source or the $CO_2$ units at the source for any fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under applicable State law. The following guidelines will be followed in assessing fines, penalties or other obligations.

6.5.4.2.1 For purposes of determining the number of days of violation, if a $CO_2$ budget source has excess emissions for a control period, each day in the control period constitutes a day in violation unless the owners and operators of the unit demonstrate that a lesser number of days should be considered.

6.5.4.2.2 Each ton of excess emissions is a separate violation.

6.5.4.2.3 For purposes of determining the number of days of violation, if a $CO_2$ budget source has excess interim emissions for an interim control period, each day in the interim control period constitutes a day in violation unless the owners and operators of the unit demonstrate that a lesser number of days should be considered.

6.5.4.2.4 Each ton of excess interim emissions is a separate violation.

6.5.4.3 The propriety of the Department's determination that a $CO_2$ budget source had excess emissions and the concomitant deduction of $CO_2$ allowances from that $CO_2$ budget source's account may be later challenged in the context of the initial administrative enforcement, or any civil or criminal judicial action arising from or encompassing that excess emissions violation. The commencement or pendency of any administrative enforcement, or civil or criminal judicial action arising from or encompassing that excess emissions violation will not act to prevent the Department or its agent from initially deducting the $CO_2$ allowances resulting from the Department's original determination that the relevant $CO_2$ budget source has had excess emissions. Should the Department's determination of the existence or extent of the $CO_2$ budget source's excess emissions be revised either by a settlement or final conclusion of any administrative or judicial action, the Department will act as follows.

6.5.4.3.1 In any instance where the Department's determination of the extent of excess emissions was too low, the Department will take further action under 6.5.4.1 and 6.5.4.2 of this regulation to address the expanded violation.

6.5.4.3.2 In any instance where the Department's determination of the extent of excess emissions was too high, the Department will distribute to the relevant $CO_2$ budget source a number of $CO_2$ allowances equaling the number of $CO_2$ allowances deducted which are attributable to the difference between the original and final quantity of excess emissions. Should such $CO_2$ budget source's compliance account no longer exist, the $CO_2$ allowances will be provided to a general account selected by the owner or operator of the $CO_2$ budget source from which they were originally deducted.

6.5.5 The Department or its agent will record in the appropriate compliance account all deductions from such an account pursuant to 6.5.2 and 6.5.4 of this regulation.

6.5.6 *Action by the Department on submissions*.

6.5.6.1 The Department may review and conduct independent audits concerning any submission under the $CO_2$ Budget Trading Program and make appropriate adjustments of the information in the submissions.

6.5.6.2 The Department may deduct $CO_2$ allowances from or transfer $CO_2$ allowances to a source's compliance account based on information in the submissions, as adjusted under 6.5.6.1 of this regulation.

6.6 Banking.

Each $CO_2$ allowance that is held in a compliance account or a general account will remain in such account unless and until the $CO_2$ allowance is deducted or transferred under 4.2, 6.5, 6.7, or 7.0 of this regulation.

6.7 Account error.

The Department or its agent may, at its sole discretion and on his or her own motion, correct any error in any $CO_2$ Allowance Tracking System account. Within 10 business days of making such correction, the Department or its agent will notify the $CO_2$ authorized account representative for the account.

6.8 Closing of general accounts.

6.8.1 A $CO_2$ authorized account representative of a general account may instruct the Department or its agent to close the account by submitting a statement requesting deletion of the account from the $CO_2$ Allowance Tracking System and by correctly submitting for recordation under 7.1 of this regulation a $CO_2$ allowance transfer of all $CO_2$ allowances in the account to one or more other $CO_2$ Allowance Tracking System accounts.

6.8.2 If a general account shows no activity for a period of six years or more and does not contain any $CO_2$ allowances, the Department or its agent may notify the $CO_2$ authorized account representative for the account that the account will be closed in the $CO_2$ Allowance Tracking System 20 business days after the notice is sent. The account will be closed after the 20-day period unless before the end of the 20-day period the

Department or its agent receives a correctly submitted transfer of $CO_2$ allowances into the account under 7.1 of this regulation or a statement submitted by the $CO_2$ authorized account representative demonstrating to the satisfaction of the Department or its agent good cause as to why the account should not be closed. The Department or its agent will have sole discretion to determine if the owner or operator of the unit demonstrated that the account should not be closed.

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**7.0 $CO_2$ Allowance Transfers**

7.1 Submission of $CO_2$ allowance transfers.

The $CO_2$ authorized account representatives seeking recordation of a $CO_2$ allowance transfer shall submit the transfer to the Department or its agent. To be considered correctly submitted, the $CO_2$ allowance transfer shall include the following elements in a format specified by the Department or its agent:

7.1.1 The numbers identifying both the transferor and transferee accounts;

7.1.2 A specification by serial number of each $CO_2$ allowance to be transferred;

7.1.3 The printed name and signature of the $CO_2$ authorized account representative of the transferor account and the date signed;

7.1.4 The date of the completion of the last sale or purchase transaction for the allowance, if any; and

7.1.5 The purchase or sale price of the allowance that is the subject of a sale or purchase transaction under 7.1.4 of this regulation.

7.2 Recordation.

7.2.1 Within 5 business days of receiving a $CO_2$ allowance transfer, except as provided in 7.2.2 of this regulation, the Department or its agent will record a $CO_2$ allowance transfer by moving each $CO_2$ allowance from the transferor account to the transferee account as specified by the request, provided that:

7.2.1.1 The transfer is correctly submitted under 7.1 of this regulation; and

7.2.1.2 The transferor account includes each $CO_2$ allowance identified by serial number in the transfer.

7.2.2 A $CO_2$ allowance transfer into or out of a compliance account that is submitted for recordation following the $CO_2$ allowance transfer deadline and that includes any $CO_2$ allowances that are of allocation years that fall within a control period or interim control period prior to or the same as the control period or interim control period to which the $CO_2$ allowance transfer deadline applies will not be recorded until after completion of the process pursuant to 6.5.2 of this regulation.

7.2.3 Where a $CO_2$ allowance transfer submitted for recordation fails to meet the requirements of 7.2.1 of this regulation, the Department or its agent will not record such transfer.

7.3 Notification.

7.3.1 *Notification of recordation*. Within 5 business days of recordation of a $CO_2$ allowance transfer under 7.2 of this regulation, the Department or its agent will notify each party to the transfer. Notice will be given to the $CO_2$ authorized account representatives of both the transferor and transferee accounts.

7.3.2 *Notification of non-recordation*. Within 10 business days of receipt of a $CO_2$ allowance transfer that fails to meet the requirements of 7.2.1 of this regulation, the Department or its agent will notify the $CO_2$ authorized account representatives of both accounts subject to the transfer of:

7.3.2.1 A decision not to record the transfer, and

7.3.2.2 The reasons for such non-recordation.

7.3.3 Nothing in this regulation shall preclude the submission of a $CO_2$ allowance transfer for recordation following notification of non-recordation.

~~11/11/08~~ xx/xx13

## 8.0 Monitoring and Reporting

8.1 General requirements.

The owners and operators, and to the extent applicable, the $CO_2$ authorized account representative of a $CO_2$ budget unit, shall comply with the monitoring, recordkeeping and reporting requirements as provided in this regulation and all applicable sections of 40 CFR 75. Where referenced in 8.0 of this regulation, the monitoring requirements of 40 CFR 75 shall be adhered to in a manner consistent with the purpose of monitoring and reporting $CO_2$ mass emissions pursuant to these regulations. For purposes of complying with such requirements, the definitions in 1.3 of this regulation and in 40 CFR 72.2 shall apply, and the terms ''affected unit,'' ''designated representative,'' and ''continuous emissions monitoring system'' (or ''CEMS'') in 40 CFR 75 shall be replaced by the terms ''$CO_2$ budget unit,'' ''$CO_2$ authorized account representative,'' and ''continuous emissions monitoring system'' (or ''CEMS''), respectively, as defined in 1.3 of this regulation.

For units not subject to an Acid Rain emissions limitation, the term "Administrator" in 40 CFR 75 shall be replaced with "the Department or its agent." Owners or operators of a $CO_2$ budget unit who monitor a non-$CO_2$ budget unit pursuant to the common, multiple, or bypass stack procedures in 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16 (b)(2)(ii)(B) as pursuant to 40 CFR 75.13, for purposes of complying with [these regulations], shall monitor and report $CO_2$ mass emissions from such non-$CO_2$ budget unit according to the procedures for $CO_2$ budget units established in 8.1 through 8.7 of this regulation.

8.1.1 *Requirements for installation, certification, and data accounting.* The owner or operator of each $CO_2$ budget unit must meet the following requirements.

8.1.1.1 Install all monitoring systems necessary to monitor $CO_2$ mass emissions in accordance with 40 CFR 75, except for equation G-1. Equation G-1 in Appendix G shall not be used to determine $CO_2$ emissions under this Regulation for determining $CO_2$ mass emissions from coal-fired units. This may require systems to monitor $CO_2$ concentration, stack gas flow rate, $O_2$ concentration, heat input, and fuel flow rate.

8.1.1.2 Successfully complete all certification tests required under 8.2 of this regulation and meet all other requirements of this regulation and 40 CFR 75 applicable to the monitoring systems under 8.1.1 of this regulation.

8.1.1.3 Record, report and quality-assure the data from the monitoring systems under 8.1.1 of this regulation.

8.1.2 *Compliance dates.* The owner or operator shall meet the monitoring system certification and other requirements of 8.1.1 through 8.1.3 of this regulation on or before the following dates. The owner or operator shall record, report and quality-assure the data from the monitoring systems under 8.1.1 of this regulation on and after the following dates.

8.1.2.1 The owner or operator of a $CO_2$ budget unit, except for a $CO_2$ budget unit under 8.1.2.2 of this regulation, that commences commercial operation before July 1, 2008, must comply with the requirements of this regulation by January 1, 2009.

8.1.2.2 The owner or operator of a $CO_2$ budget unit that commences commercial operation on or after July 1, 2008 must comply with the requirements of this regulation by the later of the following dates:

8.1.2.2.1 January 1, 2009; or

8.1.2.2.2 The earlier of:

8.1.2.2.2.1 90 unit operating days after the date on which the unit commences commercial operation; or

8.1.2.2.2.2 180 calendar days after the date on which the unit commences commercial operation.

8.1.2.3 For the owner or operator of a $CO_2$ budget unit for which construction of a new stack or flue installation is completed after the applicable deadline under 8.1.2.1 or 8.1.2.2 of this regulation by the earlier of:

8.1.2.3.1 90 unit operating days after the date on which emissions first exit to the atmosphere through the new stack or flue; or

8.1.2.3.2 180 calendar days after the date on which emissions first exit to the atmosphere through the new stack or flue.

8.1.3 *Reporting data.*

8.1.3.1 Except as provided in 8.1.3.2 of this regulation, the owner or operator of a $CO_2$ budget unit that does not meet the applicable compliance date set forth in 8.1.2.1, 8.1.2.2 and 8.1.2.3 of this regulation for any monitoring system under 8.1.1 of this regulation shall, for each such monitoring system, determine, record, and report maximum potential (or as appropriate minimum potential) values for $CO_2$ concentration, $CO_2$ emissions rate, stack gas moisture content, fuel flow rate, heat input, and any other parameter required to determine $CO_2$ mass emissions in accordance with 40 CFR 75.31(b)(2) or (c)(3), or section 2.4 of Appendix D of 40 CFR 75 as applicable.

8.1.3.2 The owner or operator of a $CO_2$ budget unit that does not meet the applicable compliance date set forth in 8.2.3 of this regulation for any monitoring system

under 8.1.1 of this regulation shall, for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures in Subpart D, or Appendix D of 40 CFR 75, in lieu of the maximum potential (or as appropriate minimum potential) values for a parameter if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under 8.2.3 of this regulation.

8.1.3.3

8.1.3.3.1 $CO_2$ budget units subject to an acid rain emissions limitation ~~(Regulation 1136)~~ (7 DE Admin. Code 1136) or the NOx Budget Trading Program ~~(Regulation 1139)~~ (7 DE Admin Code 1139) that qualify for the optional $SO_2$, $NO_X$, and $CO_2$ (for acid rain) or NOx (for NOx Budget) emissions calculations for low mass emissions (LME) units under 40 CFR 75.19 and report emissions for such programs using the calculations under 40 CFR 75.19 , shall also use the $CO_2$ emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with these regulations ~~(Regulation 1136 and 1139)~~ (7 DE Admin Code 1139).

8.1.3.3.2 $CO_2$ budget units subject to an acid rain emissions limitation ~~(Regulation 1136)~~ (7 DE Admin. Code 1136) or NOx Budget Trading program (Regulation 1139) that do not qualify for the optional $SO_2$, $NO_X$, and $CO_2$ (for acid rain) or NOx (NOx Budget) emissions calculations for LME units under 40 CFR 75.19, shall not use the $CO_2$ emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with these regulations.

8.1.3.3.3 $CO_2$ budget units not subject to an acid rain emissions limitation (Regulation 1136) or NOx Budget Trading program ~~(Regulation 1139)~~ (7 DE Admin. Code 1139) shall qualify for the optional $CO_2$ emissions calculation for LME units under 40 CFR 75.19, provided that they emit less than 100 tons of $NO_X$ annually and no more than 25 tons of $SO_2$ annually.

8.1.4 *Prohibitions.*

8.1.4.1 No owner or operator of a $CO_2$ budget unit shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emissions monitoring system without having obtained prior written approval in accordance with 8.6 of this regulation.

8.1.4.2 No owner or operator of a $CO_2$ budget unit shall operate the unit so as to discharge, or allow to be discharged, $CO_2$ emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this regulation and 40 CFR 75.

8.1.4.3 No owner or operator of a $CO_2$ budget unit shall disrupt the continuous emissions monitoring system, any portion thereof, or any other approved emissions monitoring method, and thereby avoid monitoring and recording $CO_2$ mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of this regulation and 40 CFR 75.

8.1.4.4 No owner or operator of a $CO_2$ budget unit shall retire or permanently discontinue use of the continuous emissions monitoring system, any component thereof, or

any other approved emissions monitoring system under this regulation, except under any one of the following circumstances:

8.1.4.4.1 The owner or operator is monitoring emissions from the unit with another certified monitoring system approved, in accordance with the applicable provisions of this regulation and 40 CFR 75, by the Department for use at that unit that provides emissions data for the same pollutant or parameter as the retired or discontinued monitoring system; or

8.1.4.4.2 The $CO_2$ authorized account representative submits notification of the date of certification testing of a replacement monitoring system in accordance with 8.2.4.3.1 of this regulation.

8.2 Initial certification and recertification procedures.

8.2.1 The owner or operator of a $CO_2$ budget unit shall be exempt from the initial certification requirements of this regulation for a monitoring system under 8.1.1.1 of this regulation if the following conditions are met:

8.2.1.1 The monitoring system has been previously certified in accordance with 40 CFR 75; and

8.2.1.2 The applicable quality-assurance and quality-control requirements of 40 CFR 75.21 and appendix B and appendix D of 40 CFR 75 are fully met for the certified monitoring system described in 8.2.1.1 of this regulation.

8.2.2 The recertification provisions of this regulation shall apply to a monitoring system under 8.1.1.1 exempt from initial certification requirements under 8.2.1 of this regulation.

8.2.3 Notwithstanding 8.2.1 of this regulation, if the Administrator has previously approved a petition under 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16(b)(2)(ii)(B) as pursuant to 40 CFR 75.13 for apportioning the $CO_2$ emissions rate measured in a common stack or a petition under 40 CFR 75.66 of this chapter for an alternative requirement in 40 CFR 75, the $CO_2$ authorized account representative shall submit the petition to the Department under 8.6.1 of this regulation to determine whether the approval applies under this program.

8.2.4 Except as provided in 8.2.1 of this regulation, the owner or operator of a $CO_2$ budget unit shall comply with the following initial certification and recertification procedures for a continuous emissions monitoring system and an excepted monitoring system under appendix D of 40 CFR 75 and under 8.1.1.1 of this regulation. The owner or operator of a unit that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR 75.19 or that qualifies to use an alternative monitoring system under Subpart E of 40 CFR 75 shall comply with the procedures in 8.5 and 8.6 of this regulation, respectively.

8.2.4.1 *Requirements for initial certification.* The owner or operator shall ensure that each continuous emissions monitoring system required under 8.1.1.1 of this regulation (which includes the automated data acquisition and handling system) successfully completes all of the initial certification testing required under 40 CFR 75.20 by the applicable deadlines specified in 8.1.2 of this regulation. In addition, whenever the owner or operator installs a monitoring system in order to meet the requirements of this regulation in a location where no such monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required.

8.2.4.2 *Requirements for recertification.*

8.2.4.2.1 Whenever the owner or operator makes a replacement, modification, or change in a certified continuous emissions monitoring system under 8.1.1.1 of this regulation that the Administrator or the Department determines significantly affects the ability of the system to accurately measure or record $CO_2$ mass emissions or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or appendix B to 40 CFR 75, the owner or operator shall recertify the monitoring system according to 40 CFR 75.20(b).

8.2.4.2.2 For systems using stack measurements such as stack flow, stack moisture content, $CO_2$ or $O_2$ monitors, whenever the owner or operator makes a replacement, modification, or change to the flue gas handling system or the unit's operation that the Administrator or the Department determines to significantly change the flow or concentration profile, the owner or operator shall recertify the continuous emissions monitoring system according to 40 CFR 75.20(b). Examples of changes which require recertification include: replacement of the analyzer, change in location or orientation of the sampling probe or site, or changing of flow rate monitor polynomial coefficients.

8.2.4.3 *Approval process for initial certifications and recertification. 8.2.4.3.1 Through 8.2.4.3.4* of this regulation apply to both initial certification and recertification of a monitoring system under 8.1.1.1 of this regulation. For recertification, replace the words "certification" and "initial certification" with the word "recertification," replace the word "certified" with "recertified," and proceed in the manner prescribed in 40 CFR 75.20(b)(5) and (g)(7) in lieu of 8.2.4.3.5 of this regulation.

8.2.4.3.1 *Notification of certification.* The $CO_2$ authorized account representative shall submit to the Department or its agent, the appropriate EPA Regional Office and the Administrator a written notice of the dates of certification in accordance with 8.4 of this regulation.

8.2.4.3.2 *Certification application.* The $CO_2$ authorized account representative shall submit to the Department or its agent a certification application for each monitoring system. A complete certification application shall include the information specified in 40 CFR 75.63.

8.2.4.3.3 *Provisional certification data.* The provisional certification date for a monitor shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitor may be used under the $CO_2$ budget Trading Program for a period not to exceed 120 days after receipt by the Department of the complete certification application for the monitoring system or component thereof under 8.2.4.3.2 of this regulation. Data measured and recorded by the provisionally certified monitoring system or component thereof, in accordance with the requirements of 40 CFR 75, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Department does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of receipt of the complete certification application by the Department.

8.2.4.3.4 *Certification application approval process.* The Department will issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification

application under 8.2.4.3.2 of this regulation. In the event the Department does not issue such a notice within such 120-day period, each monitoring system which meets the applicable performance requirements of 40 CFR 75 and is included in the certification application will be deemed certified for use under the $CO_2$ Budget Trading Program.

8.2.4.3.4.1 *Approval notice.* If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR 75, then the Department will issue a written notice of approval of the certification application within 120 days of receipt.

8.2.4.3.4.2 *Incomplete application notice.* If the certification application is not complete, then the Department will issue a written notice of incompleteness that sets a reasonable date by which the $CO_2$ authorized account representative must submit the additional information required to complete the certification application. If the $CO_2$ authorized account representative does not comply with the notice of incompleteness by the specified date, then the Department may issue a notice of disapproval under 8.2.4.3.4.3 of this regulation. The 120 day review period shall not begin before receipt of a complete certification application

8.2.4.3.4.3 *Disapproval notice.* If the certification application shows that any monitoring system or component thereof does not meet the performance requirements of 40 CFR 75, or if the certification application is incomplete and the requirement for disapproval under 8.2.4.3.4.2 of this regulation is met, then the Department will issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the Department and the data measured and recorded by each uncertified monitoring system or component thereof shall not be considered valid quality assured data beginning with the date and hour of provisional certification. The owner or operator shall follow the procedures for loss of certification in 8.2.4.3.5 of this regulation for each monitoring system or component thereof, which is disapproved for initial certification.

8.2.4.3.4.4 *Audit decertification.* The Department may issue a notice of disapproval of the certification status of a monitor in accordance with 8.3.2 of this regulation.

8.2.4.3.5 *Procedures for loss of certification.* If the Department issues a notice of disapproval of a certification application under 8.2.4.3.4.3 of this regulation or a notice of disapproval of certification status under 8.2.4.3.4.4 of this regulation, then:

8.2.4.3.5.1 The owner or operator shall substitute the following values for each disapproved monitoring system, for each hour of unit operation during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR 75.20(a)(5)(i) or 40 CFR 75.20(g)(7):

8.2.4.3.5.1.1 For units using or intending to monitor for $CO_2$ mass emissions using heat input or for units using the low mass emissions

excepted methodology under 40 CFR 75.19, the maximum potential hourly heat input of the unit; or

8.2.4.3.5.1.2 For units intending to monitor for $CO_2$ mass emissions using a $CO_2$ pollutant concentration monitor and a flow monitor, the maximum potential concentration of $CO_2$ and the maximum potential flow rate of the unit under section 2.1 of Appendix A of 40 CFR 75.

8.2.4.3.5.2 The $CO_2$ authorized account representative shall submit a notification of certification retest dates and a new certification application in accordance with 8.2.4.3.1 and 8.2.4.3.2 of this regulation; and

8.2.4.3.5.3 The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Department's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval.

8.2.5 *Initial certification and recertification procedures for low mass emissions units using the excepted methodologies under ~~8.1.3.3~~ 8.1.3.2 of this regulation*. The owner or operator of a unit qualified to use the low mass emissions excepted methodology under ~~8.1.3.3~~ 8.1.3.2 of this regulation shall meet the applicable certification and recertification requirements of 40 CFR 75.19(a)(2), 40 CFR 75.20(h) and 8.2 of this regulation. If the owner or operator of such a unit elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR 75.20(g).

8.2.6 *Certification/recertification procedures for alternative monitoring systems*. The $CO_2$ authorized account of each unit for which the owner or operator intends to use an alternative monitoring system approved by the Administrator and, if applicable, the Department under Subpart E of 40 CFR 75 shall comply with the applicable notification and application procedures of 40 CFR 75.20(f).

8.3 Out-of-control periods.

8.3.1 Whenever any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR 75, data shall be substituted using the applicable procedures in Subpart D or Appendix D of 40 CFR 75.

8.3.2 *Audit decertification.* Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under 8.2 of this regulation or the applicable provisions of 40 CFR 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department or Administrator will issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this paragraph, an audit shall be either a field audit or an audit of any information submitted to the Department or the Administrator. By issuing the notice of disapproval, the Department or Administrator revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the initial certification or

recertification procedures in 8.2 of this regulation for each disapproved monitoring system.

8.4 Notifications.
The $CO_2$ authorized account representative for a $CO_2$ budget unit shall submit written notice to the Department and the Administrator in accordance with 40 CFR 75.61.

8.5 Recordkeeping and reporting.

8.5.1 *General provisions.* The $CO_2$ authorized account representative shall comply with all recordkeeping and reporting requirements in this regulation, the applicable record keeping and reporting requirements under 40 CFR 75.73 and with the requirements of 2.1.5 of this regulation.

8.5.2 *Monitoring plans.* The owner or operator of a $CO_2$ budget unit shall submit a monitoring plan in the manner prescribed in 40 CFR 75.62.

8.5.3 *Certification applications.* The $CO_2$ authorized account representative shall submit an application to the Department within 45 days after completing all $CO_2$ monitoring system initial certification or recertification tests required under 8.2 of this regulation including the information required under 40 CFR 75.63 and 40 CFR 75.53(e) and (f).

8.5.4 *Quarterly reports.* The $CO_2$ authorized account representative shall submit quarterly reports, as follows:

8.5.4.1 The $CO_2$ authorized account representative shall report the $CO_2$ mass emissions data for the $CO_2$ budget unit, in an electronic format prescribed by the Administrator unless otherwise prescribed by the Department for each calendar quarter beginning with:

8.5.4.1.1 for a unit that commences commercial operation before July 1, 2008, the calendar quarter covering January 1, 2009 through March 31, 2009; or

8.5.4.1.2 for a unit commencing commercial operation on or after July 1, 2008, the calendar quarter corresponding to, the earlier of the date of provisional certification or the applicable deadline for initial certification under 8.1.2 of this regulation or, unless that quarter is the third or fourth quarter of 2008, in which case reporting shall commence in the quarter covering January 1, 2009 through March 31, 2009.

8.5.4.2 The $CO_2$ authorized account representative shall submit each quarterly report to the Department or its agent within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in Subpart H of 40 CFR 75 and 40 CFR 75.64. Quarterly reports shall be submitted for each $CO_2$ budget unit (or group of units using a common stack), and shall include all of the data and information required in Subpart G of 40 CFR 75, except for opacity, NOx, and $SO_2$ provisions.

8.5.4.3 *Compliance certification.* The $CO_2$ authorized account representative shall submit to the Department or its agent a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall state that:

8.5.4.3.1 The monitoring data submitted were recorded in accordance with the applicable requirements of this regulation and 40 CFR 75, including the quality assurance procedures and specifications;

8.5.4.3.2 for a unit with add-on $CO_2$ emissions controls and for all hours where data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on emissions controls were operating within the range of parameters listed in the quality assurance/quality control program under appendix B of 40 CFR 75 and the substitute values do not systematically underestimate $CO_2$ emissions; and

8.5.4.3.3 The $CO_2$ concentration values substituted for missing data under Subpart D of 40 CFR 75 do not systematically underestimate $CO_2$ emissions.

8.6 Petitions.

8.6.1 Except as provided in 8.6.3 of this regulation, the $CO_2$ authorized account representative of a $CO_2$ budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternative to any requirement of 40 CFR 75. Application of an alternative to any requirement of 40 CFR 75 is in accordance with this regulation only to the extent that the petition is approved in writing by the Administrator, and subsequently approved in writing by the Department

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8.6.2 Petitions for a $CO_2$ budget unit that is not subject to an Acid Rain emissions limitation.

8.6.2.1 The $CO_2$ authorized account representative of a $CO_2$ budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternative to any requirement of 40 CFR 75. Application of an alternative to any requirement of 40 CFR 75 is in accordance with this regulation only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

8.6.2.2 In the event that the Administrator declines to review a petition under 8.6.2.1 of this regulation, the $CO_2$ authorized account representative of a $CO_2$ budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the Department requesting approval to apply an alternative to any requirement of 8.0 of this regulation. That petition shall contain all of the relevant information specified in 40 CFR 75.66. Application of an alternative to any requirement of 8.0 of this regulation is in accordance with 8 only to the extent that the petition is approved in writing by the Department.

8.6.3 The $CO_2$ authorized account representative of a $CO_2$ budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternative to a requirement concerning any additional CEMS required under the common stack provisions of 40 CFR 75.72 or a $CO_2$ concentration CEMS used under 40 CFR 75.71(a)(2). Application of an alternative to any such requirement is in accordance with this regulation only to the extent the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

8.7 $CO_2$ budget units that co-fire eligible biomass.

8.7.1 The $CO_2$ authorized account representative of a $CO_2$ budget unit that co-fires eligible biomass as a compliance mechanism under this regulation shall report the following information to the Department or its agent for each calendar quarter:

8.7.1.1 For each shipment of solid eligible biomass fuel fired at the $CO_2$ budget unit, the total eligible biomass fuel input, on an as-fired basis, in pounds.

8.7.1.2 For each shipment of solid eligible biomass fuel fired at the $CO_2$ budget unit, the moisture content, on an as-fired basis, as a fraction by weight.

8.7.1.3 For each distinct type of gaseous eligible biomass fuel fired at the $CO_2$ budget unit, the density of the biogas, on an as-fired basis, in pounds per standard cubic foot.

8.7.1.4 For each distinct type of gaseous eligible biomass fuel fired at the $CO_2$ budget unit, the moisture content of the biogas, as a fraction by total weight.

8.7.1.5 For each distinct type of gaseous eligible biomass fuel fired at the $CO_2$ budget unit, the total eligible biomass fuel input, in standard cubic feet.

8.7.1.6 For each distinct type of eligible biomass fuel fired at the $CO_2$ budget unit, the dry basis carbon content of the fuel type, as a fraction by dry weight.

8.7.1.7 For each distinct type of eligible biomass fuel fired at the $CO_2$ budget unit, the dry basis higher heating value, in MMBtu per dry pound.

8.7.1.8 For each distinct type of eligible biomass fuel fired at the $CO_2$ budget unit, the total dry basis eligible biomass fuel input, in pounds, calculated in accordance with 8.7.2 of this regulation.

8.7.1.9 The total amount of $CO_2$ emitted from the $CO_2$ budget unit due to firing eligible biomass fuel, in tons, calculated in accordance with 8.7.3 of this regulation.

8.7.1.10 For each distinct type of eligible biomass fuel fired at the $CO_2$ budget unit, the total eligible biomass fuel heat input, in MMBtu, calculated in accordance with 8.7.4.1 of this regulation.

8.7.1.11 The total amount of heat input to the $CO_2$ budget unit due to firing eligible biomass fuel, in MMBtu, calculated in accordance with 8.7.4.2 of this regulation.

8.7.1.12 Description and documentation of monitoring technology employed, and description and documentation of fuel sampling methodology employed, including sampling frequency; and,

8.7.1.13 For each distinct type of eligible biomass fuel fired at the $CO_2$ budget unit, chemical analysis, including heating value and carbon content.

8.7.2 An owner or operator of a $CO_2$ budget unit shall calculate and submit to the Department or its agent on a quarterly basis the total dry weight for each distinct type of eligible biomass fired by the $CO_2$ budget unit during the reporting quarter. The total dry weight shall be determined for each fuel type as follows:

8.7.2.1 For solid fuel types:

$$F_j = \sum_{j=1}^{m} (1 - M_i) \times F_i$$

Where:

$F_j$ = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

$F_i$ = Eligible biomass as fired fuel input (lbs) for fired shipment i;

$M_i$ = Moisture content (fraction) for fired shipment i;

i = fired fuel shipment;

j = fuel type; and,

m = number of shipments.

8.7.2.2 For gaseous fuel types:

$$F_j = D_j \times V_j \times (1 - M_j)$$

Where:

$F_j$ = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

$D_j$ = Density of biogas (lbs/scf) for fuel type j;

$V_j$ = Total volume (scf) for fuel type j;

$M_j$ = Moisture content (fraction) for fuel type j,

j = fuel type.

8.7.3 $CO_2$ emissions due to firing of eligible biomass shall be determined as follows:

8.7.3.1 For any full calendar quarter during which no fuel other than eligible biomass is combusted at the $CO_2$ budget unit, as measured and recorded in accordance with 8.1 through 8.6 of this regulation; or

8.7.3.2 For any full calendar quarter during which fuels other than eligible biomass are combusted at the $CO_2$ budget unit, as determined using the following equation:

$$CO_2 \text{ ton} = \sum_{j=1}^{n} F_j \times C_j \times O_j \times 44/12 \times 0.0005$$

Where:

$CO_2$ tons = $CO_2$ emissions due to firing of eligible biomass for the reporting quarter;

$F_j$ = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in 8.7.2 of this regulation;

$C_j$ = carbon fraction (dry basis) for fuel type j;

$O_j$ = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined pursuant to 8.7.1.12 of this regulation; for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used;

44/12 = The number of tons of carbon dioxide that are created when one ton of carbon is combusted (44/12);

0.0005 = The number of short tons which is equal to one pound;

j = fuel type; and,

n = number of distinct fuel types.

8.7.4 Heat input due to firing of eligible biomass for each quarter shall be determined as follows:

8.7.4.1 For each distinct fuel type:

$$H_j = F_j \times HHV_j \times 0.0005$$

Where:

$H_j$ = Heat input (MMBtu) for fuel type j;

$F_j$ = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in 8.7(b);

$HHV_j$ = Higher heating value (MMBtu/lb), dry basis, for fuel type j, as determined through chemical analysis;

j = fuel type.

8.7.4.2 For all fuel types:

$$\text{Heat Input MMBtu} = \sum_{j=1}^{n} H_j$$

Where:

$H_j$ = Heat input (MMBtu) for fuel type j;

j = fuel type; and,

n = number of distinct fuel types.

8.7.5 Fuel sampling methods and fuel sampling technology shall be consistent with the New York State Renewable Portfolio Standard Biomass Guidebook, ~~May 2006~~ September 2011.

8.8 Additional requirements to provide output data ~~for early reduction allowances~~.

~~8.8.1 A $CO_2$ budget unit applying for early reduction allowances pursuant to 5.3.3 of this regulation shall submit to the department or its agent information in accordance with 8.8.3.1 of this regulation. A $CO_2$ budget source whose electrical output is not used in ISO energy market settlement determinations shall propose to the department a method for quantification of net electrical output.~~

8.8.1 A $CO_2$ budget unit that requires the use of information submitted to the Regional Transmission Organization (RTO) to document megawatt-hours (MWh) the $CO_2$ budget unit shall submit to the Department or its agent the same MWh value submitted to the RTO and a statement certifying that the MWh of electrical output reported reflects the total actual electrical output for all $CO_2$ budget units at the facility used by the RTO to determine settlement resources of energy market participants.

8.8.2 A $CO_2$ budget unit that requires gross output to be used that also reports gross hourly MW to the Administrator, shall use the same electronic data report (EDR) gross output (in MW), as submitted to the Administrator, for the hour times operating time in the hour, added for all hours in a year. A $CO_2$ budget unit that does not report gross hourly MW to the Administrator shall submit to the Department or its agent information in accordance with 8.8.5.1.

8.8.3 A $CO_2$ budget unit that requires net electrical output shall submit to the Department or its agent information in accordance with 8.8.5.1. A $CO_2$ budget source whose electrical output is not used in the RTO energy market settlement determinations shall propose to the Department a method for quantification of net electrical output.

~~8.8.2~~ 8.8.4 $CO_2$ budget sources selling steam should use billing meters to determine net steam output. A $CO_2$ budget source whose steam output is not measured by billing meters or whose steam output is combined with output from a non-$CO_2$ budget unit prior to measurement by the billing meter shall propose to the Department an alternative method for quantification of net steam output. If data for steam output is not available, the $CO_2$ budget source may report heat input providing useful steam output as a surrogate for steam output.

~~8.8.3~~ 8.8.5 *Monitoring.* The owner or operator of each $CO_2$ budget unit, in a state that requires the $CO_2$ budget unit's net output, must meet the following requirements. Each $CO_2$ budget source must submit an output monitoring plan. The output monitoring plan must include a description and diagram as stated below.

~~8.8.3.1~~ 8.8.5.1 Submit a diagram of the electrical and/or steam system for which output is being monitored, specifically including the following.

~~8.8.3.1.1~~ 8.8.5.1.1 If the $CO_2$ budget unit monitors net electric output, the diagram should contain all $CO_2$ budget units and all generators served by each $CO_2$ budget unit and the relationship between $CO_2$ budget units and generators. If a generator served by a $CO_2$ budget unit is also served by a non-affected unit, the non-affected unit and its relationship to each generator should be indicated on the diagram as well. The diagram should indicate where the net electric output is measured and should include all electrical inputs and outputs to and from the plant. If net electric output is determined using a billing meter, the diagram should show each billing meter used to determine net sales of electricity and should show that all electricity measured at the point of sale is generated by the $CO_2$ budget units.

~~8.8.3.1.2~~ 8.8.5.1.2 If the $CO_2$ budget unit monitors net thermal output, the diagram should include all steam or hot water coming into the net steam system, including steam from $CO_2$ budget units and non-affected units, and all exit points of steam or hot water from the net steam system. In addition, each input and output stream will have an estimated temperature, pressure and phase indicator, and an enthalpy in Btu/lb. The diagram of the net steam system should identify all useful loads, house loads, parasitic loads, any other steam loads and all boiler feedwater returns. The diagram will represent all energy losses in the system as either usable or unusable losses. The diagram will also indicate all flow meters, temperature or pressure sensors or other equipment used to calculate gross thermal output. If a sales agreement is used to determine net thermal output, the diagram should show the monitoring equipment used to determine the sales of steam.

~~8.8.3.2~~ 8.8.5.2 Submit a description of each output monitoring system. The description of the output monitoring system should include a written description of the output system and the equations used to calculate output. For net thermal output systems descriptions and justifications of each useful load should be included.

~~8.8.3.3~~ 8.8.5.3 Submit a detailed description of all quality assurance/quality control activities that will be performed to maintain the output system in accordance with 8.8.5 of this regulation.

~~8.8.3.4~~ 8.8.5.4 Submit documentation supporting any output value(s) to be used as a missing data value should there be periods of invalid output data. The missing data output value must be either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under this regulation.

~~8.8.4~~ 8.8.6 *Initial certification*. A certification statement must be submitted by the $CO_2$ authorized account representative stating that either the output monitoring system consists entirely of billing meters or that the output monitoring system meets one of the accuracy requirements for non-billing meters at 8.8.4.2 of this regulation. This statement may be submitted with the certification application required under 8.5.3 of this regulation.

~~8.8.4.1~~ 8.8.6.1 *Billing meters*. The billing meter must record the electric or thermal output. Any electric or thermal output values that the facility reports must be the same as the values used in billing for the output. Any output measurement equipment used as a billing meter in commercial transactions requires no additional certification or testing.

~~8.8.4.2~~ 8.8.6.2 *Non-billing meters*. For non-billing meters, the output monitoring system must either meet an accuracy of within 10% of the reference value, or each component monitor for the output system must meet an accuracy of within 3% of the full scale value, whichever is less stringent.

~~8.8.4.2.1~~ 8.8.6.2.1 *System approach to accuracy*. The system approach to accuracy must include a determination of how the system accuracy of 10% is achieved using the individual components in the system and should include data loggers and any watt-meters used to calculate the final net electric output data and/or any flow meters for steam or condensate, temperature measurement devices, absolute pressure measurement devices, and differential pressure devices used for measuring thermal energy.

~~8.8.4.2.2~~ 8.8.6.2.2 *Component approach to accuracy*. If testing a piece of output measurement equipment shows that the output readings are not accurate to within 3.0 percent of the full scale value, then the equipment should be repaired or replaced to meet that requirement. Data shall remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.

~~8.8.5~~ 8.8.7 *Ongoing QA/QC*. Ongoing quality assurance/quality control activities must be performed in order to maintain the output system.

~~8.8.5.1~~ 8.8.7.1 *Billing meters*. In the case where billing meters are used to determine output, no QA/QC activities beyond what are already performed are required.

~~8.8.5.2~~ 8.8.7.2 *Non-billing meters*. Certain types of equipment such as potential transformers, current transformers, nozzle and venture type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate will require periodic retesting. For other types of equipment, either recalibrate or re-verify the meter accuracy at least once every two years (i.e., every eight calendar quarters), unless a consensus standard allows for less frequent calibrations or accuracy tests. For non-billing meters, the output monitoring system must either meet an accuracy of within 10% of the reference value, or each component monitor for the output system must meet an accuracy of within 3% of the full scale value, whichever is less stringent. If testing a piece of output measurement equipment shows that the output readings are not accurate to within 3.0 percent of the full scale value, then the equipment should be repaired or replaced to meet that requirement.

~~8.8.5.3~~ 8.8.7.3 *Out-of-control periods*. If testing a piece of output measurement equipment shows that the output readings are not accurate to the certification value, data remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test. All invalid data shall be replaced by either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under 8.8.5 of this regulation.

~~8.8.6~~ 8.8.8 *Recordkeeping and reporting.*

~~8.8.6.1~~ 8.8.8.1 *General provisions.* The $CO_2$ authorized account representative shall comply with all recordkeeping and reporting requirements in this regulation and with the requirements of 1.5.5 and 2.1.5 of this regulation.

~~8.8.6.2~~ 8.8.8.2 *Recordkeeping.* Facilities shall retain data used to monitor, determine, or calculate net generation for ten years.

~~8.8.6.3~~ 8.8.8.3 *Annual reports.* The $CO_2$ authorized account representative shall submit annual output reports, as follows. The data must be sent both electronically and in hardcopy by March 1 for the immediately preceding calendar year to the Department or its agent. The annual report shall include unit level MWh, all useful steam output and a certification statement from the $CO_2$ authorized account representative stating the following,

*"I am authorized to make this submission on behalf of the owners and operators of the $CO_2$ budget sources or $CO_2$ budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."*

~~11/11/08~~ xx/xx/13

## 9.0 ~~RESERVED~~ Auction of $CO_2$ CCR allowances

9.1 Purpose.

9.1.1 The following rules shall apply to each allowance auction. The Department may specify additional information in the auction notice for each auction. Such additional information may include the time and location of the auction, auction rules, registration deadlines, and any additional information deemed necessary or useful.

9.2 General Requirements

9.2.1 The Department or its agent shall include the following information in the auction notice for each auction:

9.2.1.1 The number of $CO_2$ allowances offered for sale at the auction, not including any $CO_2$ CCR allowances;

9.2.1.2 The number of $CO_2$ CCR allowances that will be offered for sale at the auction if the condition of 9.2.2.1 of this section is met;

9.2.1.3 The minimum reserve price for the auction; and

9.2.1.4 The CCR trigger price for the auction.

9.2.2 The Department shall follow these rules for the sale of $CO_2$ CCR allowances:

9.2.2.1 $CO_2$ CCR allowances shall only be sold at an auction in which total demand for allowances, above the CCR trigger price, exceeds the number of $CO_2$ allowances available for purchase at the auction, not including any $CO_2$ CCR allowances.

9.2.2.2 If the condition of 9.2.2.1 of this regulation is met at an auction, then the number of $CO_2$ CCR allowances offered for sale by the Department at the auction shall be equal to the number of $CO_2$ CCR allowances in the State of Delaware auction account at the time of the auction.

9.2.2.3 After all of the $CO_2$ CCR allowances in the State of Delaware auction have been sold in a given calendar year, no $CO_2$ CCR allowances will be sold at the auction, even if the condition of 9.2.2.1 of this regulation is met at an auction; and

9.2.2.4 At an auction in which $CO_2$ CCR allowances are sold, the reserve price at for the auction shall be the CCR trigger price.

9.2.2.5 If the condition of 9.2.2.1 of this regulation is not satisfied, no $CO_2$ CCR allowances shall be offered for sale at the auction, and the reserve price for the auction shall be equal to the minimum reserve prices.

9.2.3 The Department shall implement the reserve price in the following manner:

9.2.3.1 No allowances shall be sold at any auction for a price below the reserve price for that auction; and

9.2.3.2 If the total demand for allowances at an auction is less than or equal to the total number of allowances made available for sale in that auction, then the auction clearing price for the auction shall be the reserve price.

**General Requirements**

~~11/11/08~~ xx/xx/13

**10.0 $CO_2$ Emissions Offset Projects**

10.1 Purpose

The Department will provide for the award of $CO_2$ offset allowances to sponsors of $CO_2$ emissions offset projects ~~or $CO_2$ emissions credit retirements~~ that have reduced or avoided atmospheric loading of $CO_2$, $CO_2$ equivalent or sequestered carbon as demonstrated in accordance with the applicable provisions of this regulation. The requirements of this regulation seek to ensure that $CO_2$ offset allowances awarded represent $CO_2$ equivalent emission reductions or carbon sequestration that are real, additional, verifiable, enforceable, and permanent within the framework of a standards-based approach. Subject to the relevant compliance deduction limitations of 6.5.1.3 of this regulation, $CO_2$ offset allowances may be used by any $CO_2$ budget source for compliance purposes.

10.2 RESERVED

10.3 General requirements

10.3.1 *Eligible $CO_2$ emissions offset projects*. To qualify for the award of $CO_2$ offset allowances, offset projects shall satisfy all the applicable requirements of 10.0 of this regulation.

10.3.1.1 *Offset project types*. The following types of offset projects are eligible for the award of $CO_2$ offset allowances.

10.3.1.1.1 Landfill methane capture and destruction;

10.3.1.1.2 Reduction in emissions of sulfur hexafluoride ($SF_6$);

10.3.1.1.3 Sequestration of carbon due to reforestation, improved forest management, or avoided conversion ~~afforestation~~;

10.3.1.1.4 Reduction or avoidance of $CO_2$ emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency; and

10.3.1.1.5 Avoided methane emissions from agricultural manure management operations.

10.3.1.2 *Offset project locations*. To qualify for the award of $CO_2$ allowances under 10.0 of this regulation, eligible offset projects may be located in any of the following locations:

10.3.1.2.1 In the State of Delaware

10.3.1.2.3 In any state or United States jurisdiction in which a cooperating regulatory agency has entered into a memorandum of understanding with the appropriate regulatory agencies of all participating states to carry out certain obligations relative to $CO_2$ emissions offset projects in that state or U.S. jurisdiction, including but not limited to the obligation to perform audits of offset project sites, and report violations of 10.0

10.3.1.2.3.1 Projects located (in whole or in part) in one or more participating states are not eligible for $CO_2$ offset allowances under 10.0 unless more of the $CO_2$ equivalent emissions reduction or carbon sequestration due to the offset project is projected to occur in the State of Delaware than in any other participating state.

10.3.1.2.3.1 Projects located (in whole or in part) in one or more participating states are not eligible for $CO_2$ offset allowances under 10.0 unless more of the $CO_2$ equivalent emissions reduction or carbon sequestration due to the offset project is projected to occur in the State of Delaware than in any other participating state.

~~10.3.1.2.1.1 Partly in the State of Delaware and partly in one or more other participating states, provided that the larger part of the $CO_2$ equivalent emissions reduction or carbon sequestration due to the offset project is projected to occur in the State of Delaware.~~

~~10.3.1.2.1.2 In any state or United States jurisdiction, other than a participating state, in which a cooperating regulatory agency has entered into a memorandum of understanding with the appropriate regulatory agencies of all participating states to carry out certain obligations relative to $CO_2$ emissions offset projects in that state, including but not limited to the obligation to perform audits of offset project sites, and report violations of 10.0 of this regulation.~~

~~10.3.2 *Eligible $CO_2$ emissions credit retirements*. To qualify for the award of $CO_2$ offset allowances, CO2 emissions credit retirement shall satisfy all the applicable requirements of 10.0 of this regulation.~~

~~10.3.2.1 $CO_2$ emissions credit retirements include the permanent retirement of greenhouse gas allowances or credits issued pursuant to any governmental mandatory carbon constraining program outside the United States that places a specific tonnage limit on greenhouse gas emissions, provided the allowances or~~

~~credits are acceptable and valid for use in that program at the time of the filing of the consistency application under 10.4 of this regulation, or certified greenhouse gas emissions reduction credits issued pursuant to the United Nations Framework Convention on Climate Change (UNFCCC) or protocols adopted through the UNFCCC process.~~

~~10.3.2.2 The Department may award $CO_2$ offset allowances for $CO_2$ emissions credit retirements only after the occurrence of a stage two trigger event.~~

~~10.3.3~~ 10.3.2 *Project sponsor.* Any person may act as the sponsor of an eligible $CO_2$ emissions offset project or $CO_2$ emissions credit retirement, provided that person meets the requirements at 10.4 of this regulation.

~~10.3.4~~ 10.3.3 *General additionality requirements.* Except as provided with respect to specific offset project standards in 10.5 of this regulation, the following general requirements shall apply.

~~10.3.4.1~~ 10.3.3.1 $CO_2$ offset allowances shall not be awarded to an offset project or $CO_2$ emissions credit retirement that is required pursuant to any local, state or federal law, regulation, or administrative or judicial order. If an offset project receives a consistency determination under 10.4 of this regulation and is later required by local, state or federal law, regulation, or administrative or judicial order, then the offset project shall remain eligible for the award of $CO_2$ offset allowances until the end of its current allocation period but its eligibility shall not be extended for an additional allocation period.

~~10.3.4.2~~ 10.3.3.2 $CO_2$ offset allowances shall not be awarded to an offset project that includes an electric generation component, unless the project sponsor transfers legal rights to any and all attribute credits (other than the $CO_2$ offset allowances awarded under 10.7 of this regulation) generated from the operation of the offset project that may be used for compliance with a renewable portfolio standard or other regulatory requirement, to the Department or its agent.

~~10.3.4.3~~ 10.3.3.3 $CO_2$ offset allowances shall not be awarded to an offset project that receives funding or other incentives from any system benefit fund, or funds or other incentives provided through the consumer benefit or strategic energy purpose allocation required pursuant to 5.3.2 of this regulation.

~~10.3.4.4~~ 10.3.3.4 $CO_2$ offset allowances shall not be awarded to an offset project or $CO_2$ emissions credit retirement that is awarded credits or allowances under any other mandatory or voluntary greenhouse gas program.

~~10.3.5~~ 10.3.4 Maximum allocation periods for $CO_2$ emissions offset projects.

~~10.3.5.1~~ 10.3.4.1 *Maximum allocation periods*. Except as provided in 10.3.5.2 of this regulation, the Department may award $CO_2$ offset allowances under 10.7 of this regulation for an initial 10-year allocation period. At the end of the initial 10-year allocation period, the Department may award $CO_2$ offset allowances for a second 10-year allocation period, provided the offset sponsor has submitted a consistency application pursuant to 10.4 of this regulation prior to the expiration of the initial allocation period, and the Department has issued a consistency determination pursuant to 10.4.5.2 of this regulation.

~~10.3.5.2~~ 10.3.4.2 *Maximum ~~afforestation~~ allocation period*. The Department may award $CO_2$ offset allowances under 10.7 of this regulation for any involving reforestation, improved forest management, or avoided conversion ~~afforestation~~ offset project for an initial 20-year allocation period. At the end of the initial 25 ~~20~~-year allocation period, or any subsequent crediting period the Department may award $CO_2$ offset allowances for a second 25 ~~20~~-year allocation period, provided the offset sponsor has submitted a consistency application for the ~~afforestation~~ offset project pursuant to 10.4 of this regulation prior to the expiration of the initial allocation period, and the Department has issued a consistency determination pursuant to 10.4.5.2 of this regulation. ~~At the end of the second 20-year allocation period, the Department may award $CO_2$ offset allowances for a third 20-year allocation period, provided the offset sponsor has submitted a consistency application for the afforestation offset project pursuant to 10.4 of this regulation prior to the expiration of the second allocation period, and the Department has issued a consistency determination pursuant 10.4.5.2 of this regulation. In no event may an afforestation offset project be awarded $CO_2$ offset allowances for more than a total of 60 allocation years.~~

~~10.3.6 *Timing of offset projects.* The Department may award $CO_2$ offset allowances under 10.7 of this regulation only for offset projects that are initially commenced on or after December 20, 2005.~~

~~10.3.7~~ 10.3.5 *Offset project audit*. Project sponsors shall provide, in writing, an access agreement to the Department granting the Department or its agent access to the physical location of the offset project to inspect for compliance with this regulation. For offset projects located in any state or other U.S. jurisdiction that is not a participating state, project sponsors shall also provide, in writing, an access agreement to the Department granting the cooperating regulatory agency with access to the physical location of the offset project to inspect for compliance with this regulation.

~~10.3.8~~ 10.3.6 *Ineligibility due to noncompliance*. If at any time the Department determines that a project sponsor has not complied with the requirements of this regulation, then the Department may revoke and retire any and all $CO_2$ offset allowances in the project sponsor's account. If at any time the Department determines that an offset project does not comply with the requirements of this regulation, then the Department may revoke any approvals it has issued relative to an offset project.

10.4 Application process

10.4.1 *Establishment of general account.* The sponsor of an offset project ~~or $CO_2$ emissions credit retirement~~ must establish a general account under 6.2.2 of this regulation. All submissions to the Department required for the award of $CO_2$ offset allowances under this regulation must be from the $CO_2$ authorized account representative for the general account of the sponsor of the relevant offset project ~~or $CO_2$ emissions credit retirement,~~ herein referred to as "project sponsor."

10.4.2 *Consistency application deadlines*.

10.4.2.1 For offset projects not involving reforestation, improved forest management, or avoided conversion the consistency application must be submitted by the date that is 6 months after the offset project is commenced ~~prior to January 1, 2009, the project sponsor must submit the consistency application by June 30, 2009.~~

10.4.2.2 For offset projects involving reforestation, improved forest management, or avoided conversion the consistency application must be submitted by the date that is one year after the offset project is commenced, except for as described in 10.5.3.9. ~~commenced on or after January 1, 2009, the consistency application must be submitted by the date that is 6 months after the offset project is commenced.~~

10.4.2.3 Any consistency application that fails to meet the deadlines of this regulation will result in the denial of the consistency application and the continued ineligibility of the subject offset project.

10.4.3 *Consistency application contents.*

10.4.3.1 For an offset project, the consistency application must include the following information.

10.4.3.1.1 The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number.

10.4.3.1.2 The offset project description as required by the relevant provisions of 10.5 of this regulation.

10.4.3.1.3 A demonstration that the offset project meets all applicable requirements set forth in this regulation.

10.4.3.1.4 The emissions baseline determination as required by the relevant provisions of 10.5 of this regulation.

10.4.3.1.5 An explanation of how the projected reduction or avoidance of atmospheric loading of $CO_2$ or $CO_2$ equivalent or the sequestration of carbon is to be quantified, monitored, and verified as required by the relevant provisions of 10.5 of this regulation.

10.4.3.1.6 A completed consistency application agreement that reads as follows: *"The undersigned project sponsor recognizes and accepts that the application for, and the receipt of, $CO_2$ offset allowances under the $CO_2$ Budget Trading Program is predicated on the project sponsor following all the requirements of 10.0 of this regulation. The undersigned project sponsor holds the legal rights to the offset project, or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the award of $CO_2$ offset allowances under 10.0 of this regulation is contingent on meeting the requirements of 10.0 of this regulation. I authorize the Department or its agent to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in this application. I understand that this right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the State of Delaware."*

10.4.3.1.7 A statement and certification report signed by the offset project sponsor certifying that all offset projects for which the sponsor has received $CO_2$ offset allowances under this regulation (or similar provisions in the rules of other participating states), under the sponsor's ownership or control (or under

the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor) are in compliance with all applicable requirements of the $CO_2$ Budget Trading Program in all participating states.

10.4.3.1.8 A verification report and certification statement signed by an independent verifier accredited pursuant to 10.6 that expresses that the independent verifier has reviewed the entire application and evaluated the following in relation to the applicable requirements at 10.3 and 10.5 of this regulation, and any applicable guidance issued by the Department.

10.4.3.1.8.1 The adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of 10.3 and 10.5 of this regulation.

10.4.3.1.8.2 The adequacy and validity of information supplied by the project sponsor to demonstrate baseline emissions pursuant to the applicable requirements at 10.5 of this regulation.

10.4.3.1.8.3 The adequacy of the monitoring and verification plan submitted pursuant to the applicable requirements at 10.5 of this regulation.

10.4.3.1.8.4 Such other evaluations and statements as may be required by the Department.

10.4.3.1.9 Disclosure of any voluntary or mandatory programs, other than the $CO_2$ Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been, or will be reported.

10.4.3.1.10 For offset projects located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.

~~10.4.3.2 For a $CO_2$ emissions credit retirement, the consistency application must include sufficient information to demonstrate that the $CO_2$ emissions credit is eligible pursuant to 10.3.2 of this regulation, was lawfully held by the project sponsor, and has been permanently and irrevocably retired.~~

~~10.4.3.3~~ 10.4.3.2 Consistency applications shall be submitted in a format approved by the Department.

10.4.4 ~~Prohibition against filing consistency applications in more than one participating state.~~

Consistency applications may not be submitted to the Department if a consistency application has already been submitted for the same project, or any portion of the same project, in another participating state, unless the consistency application was rejected by another participating state solely because more of the $CO_2$ equivalent emissions reduction or carbon sequestration due to the offset project is projected to occur in the State of Delaware than in any other participating state.

~~10.4.4.2 Consistency applications may not be submitted to the Department if a consistency application has already been submitted for the same $CO_2$ emissions credit retirement in another participating state.~~

10.4.5 *Department action on consistency applications*.

10.4.5.1 *Completeness determination*. Within 30 days following receipt of the consistency application filed pursuant to 10.4.2 of this regulation, the Department will notify the project sponsor whether the consistency application is complete. A complete consistency application is one that is in an approved form and is determined by the Department to be complete for the purpose of commencing review of the consistency application. In no event shall a completeness determination prevent the Department from requesting additional information in order to enable the Department to make a consistency determination under 10.4.5.2 of this regulation.

10.4.5.2 *Consistency determination*. Within 90 days of making the completeness determination under 10.4.5.1 of this regulation, the Department will issue a determination as to whether the offset project is consistent with the requirements of 10.3 and 10.4 of this regulation and the requirements of the applicable offset project standard of 10.5 of this regulation. For any offset project found to lack consistency with these requirements, the Department will inform the project sponsor of the offset project's deficiencies.

10.5 $CO_2$ emissions offset project standards

10.5.1 *Landfill methane capture and destruction.* To qualify for the award of $CO_2$ offset allowances under 10.0 of this regulation, offset projects that capture and destroy methane from landfills shall meet the requirements of 10.5.1 of this regulation and all other applicable requirements of 10.0 of this regulation.

10.5.1.1 *Eligibility.* Eligible offset projects shall occur at landfills that are not subject to the New Source Performance Standards (NSPS) for municipal solid waste landfills, 40 CFR 60, Section Cc and Section WWW.

10.5.1.2 *Offset project description*. The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of 10.5.1.1 of this regulation. The project narrative shall include the following information.

10.5.1.2.1 Owner and operator of the offset project;

10.5.1.2.2 Location and specifications of the landfill where the offset project will occur, including waste in place;

10.5.1.2.3 Owner and operator of the landfill where the offset project will occur; and

10.5.1.2.4 Specifications of the equipment to be installed and a technical schematic of the offset project.

10.5.1.3 *Emissions baseline determination*. The emissions baseline shall represent the potential fugitive landfill emissions of $CH_4$ (in tons of $CO_2$e), as represented by the $CH_4$ collected and metered for thermal destruction as part of the offset project, and calculated in accordance with this paragraph.

Emissions (tons $CO_2$e) = (V x M x (1-OX) x GWP)/2000

Where:

V = Volume of $CH_4$ collected ($ft^3$)

M = Mass of $CH_4$ per cubic foot (0.04246 $lbs/ft^3$ default value at 1 atmosphere and $20^o$ C)

OX = Oxidation factor (0.10), representing estimated portion of collected $CH_4$ that would have eventually oxidized to $CO_2$ if not collected

GWP = $CO_2$e global warming potential of $CH_4$ (~~23~~ 25)

10.5.1.4 *Calculating emissions reductions*. Emissions reductions shall be determined based on potential fugitive $CH_4$ emissions that would have occurred at the landfill if metered $CH_4$ collected from the landfill for thermal destruction as part of the offset project was not collected and destroyed. $CO_2$e emissions reductions shall be calculated as follows:

Emissions Reductions (tons $CO_2$e) = (V x M x (1 - OX) x $C_{ef}$ x GWP)/2000

Where:

V = Volume of $CH_4$ collected ($ft_3$)

M = Mass of $CH_4$ per cubic foot (0.04246 $lbs/ft^3$ default value at 1 atmosphere and $20^o$ C)

OX = Oxidation factor (0.10), representing estimated portion of collected $CH_4$ that would have eventually oxidized to $CO_2$ if not collected

$C_{ef}$ = Combustion efficiency of methane control technology (0.98)

GWP = $CO_2$e global warming potential of $CH_4$ (~~23~~ 25)

10.5.1.5 *Monitoring and verification requirements*. Offset projects shall employ a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and $CH_4$ concentration. Annual monitoring and verification reports shall include monthly volumetric flow rate and $CH_4$ concentration data, including documentation that the $CH_4$ was actually supplied to the combustion source. Monitoring and verification is also subject to the following requirements.

10.5.1.5.1 The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program associated with equipment used to determine landfill gas volumetric flow rate and $CH_4$ composition. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to 10.6 of this regulation.

10.5.1.5.2 The project sponsor shall annually verify landfill gas $CH_4$ composition through landfill gas sampling and independent laboratory analysis using applicable U.S. Environmental Protection Agency laboratory test methods.

10.5.2 *Reduction in emissions of sulfur hexafluoride ($SF_6$).* To qualify for the award of $CO_2$ offset allowances under 10.0 of this regulation, offset projects that prevent emissions of sulfur hexafluoride to the atmosphere from equipment in the electricity transmission and distribution sector, through capture and storage, recycling, or destruction, shall meet the requirements of 10.5.2 of this regulation and all other applicable requirements of 10.0 of this regulation.

10.5.2.1 *Eligibility*.

10.5.2.1.1 Eligible offset projects shall consist of incremental actions beyond those taken during the baseline year to achieve a reduction in $SF_6$ emissions relative to the baseline year. Eligible actions may include an expansion of existing actions. The identified actions to be taken shall be consistent with the guidance provided in High-voltage switchgear and controlgear - Part 303: Use and handling of sulfur hexafluoride ($SF_6$) ~~International Electrotechnical Commission (CEI/IEC), IEC TR 61634: High-voltage switchgear and control gear—Use and handling of sulfur hexafluoride ($SF_6$) in high-voltage switchgear and controlgear, 1st ed., 1995.~~ (IEC/TR 62271-303 ed1.), and Electric Power Research Institute (EPRI), "$SF_6$ Management for Substations," ~~Practical Guide to SF6 Handling Practices, TR-113933, 2002~~(1020014, 2010).

10.5.2.1.2 Except as provided in 10.5.2.1.3 of this regulation, eligible offset projects shall have an $SF_6$ entity-wide emissions rate for the baseline year that is less than the applicable emissions rate in Table 10-1. The entity-wide $SF_6$ emissions rate shall be calculated as follows:

$SF_6$ Emissions Rate (%) = (Total $SF_6$ Emissions for Reporting Year)/ (Total $SF_6$ Nameplate Capacity at End of Reporting Year)

Where:

*$SF_6$ Nameplate Capacity* refers to all $SF_6$-containing equipment owned and/or operated by the entity, at full and proper $SF_6$ charge of the equipment rather than the actual charge of the equipment (which may reflect leakage).

**Table 10-1. $SF_6$ Emissions Rate Performance Standards**

| **A. Emission Regions** | | | | |
|---|---|---|---|---|
| Region A | Region B | Region C | Region D | Region E |
| Connecticut | Alabama | Colorado | Arkansas | Alaska |
| Delaware | District of Columbia | Illinois | Iowa | Arizona |
| Maine | Florida | Indiana | Kansas | California |
| Massachusetts | Georgia | Michigan | Louisiana | Hawaii |

| | | | | |
|---|---|---|---|---|
| New Jersey | Kentucky | Minnesota | Missouri | Idaho |
| New York | Maryland | Montana | Nebraska | Nevada |
| New Hampshire | Mississippi | North Dakota | New Mexico | Oregon |
| Pennsylvania | North Carolina | Ohio | Oklahoma | Washington |
| Rhode Island | South Carolina | South Dakota | Texas | |
| Vermont | Tennessee | Utah | | |
| | Virginia | Wisconsin | | |
| | West Virginia | Wyoming | | |

**B. Emissions Rate Performance Standards**

| Region | Emission Rate[a] |
|---|---|
| Region A | 9.68% |
| Region B | 5.22% |
| Region C | 9.68% |
| Region D | 5.77% |
| Region E | 3.65% |
| U.S. (National) | 9.68% |

[a] Based on weighted average 2004 emissions rates for U.S. EPA $SF_6$ Partnership utilities in each region. If the weighted average emissions rate in a region is higher than the national weighted average, the default performance standard is the national weighted average emissions rate.

10.5.2.1.3 An $SF_6$ offset project shall be eligible even if the $SF_6$ entity-wide emissions rate in the baseline year exceeds the applicable rate in 10.5.2.1.2 of this regulation, provided that the project sponsor demonstrates and the Department determines that the project is being implemented at a transmission and/or distribution entity serving a predominantly urban service territory and that at least two of the following factors prevent optimal management of $SF_6$.

10.5.2.1.3.1 The entity is comprised of older than average installed transmission and distribution equipment in relation to the national average age of equipment.

10.5.2.1.3.2 A majority of the entity's electricity load is served by equipment that is located underground, and poor accessibility of such underground equipment precludes management of $SF_6$ emissions through regular ongoing maintenance.

10.5.2.1.3.3 The inability to take a substantial portion of equipment out of service, as such activity would impair system reliability.

10.5.2.1.3.4 Required equipment purpose or design for a substantial portion of entity transmission and distribution equipment results in inherently leak-prone equipment.

10.5.2.2 *Offset project description*. The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of 10.5.2.1 of this regulation. The offset project narrative shall include the following information.

10.5.2.2.1 Description of the transmission and/or distribution entity suitable in detail to specify the service territory served by the entity.

10.5.2.2.2 Owner and operator of the transmission and/or distribution entity.

10.5.2.3 *Emissions baseline determination*. If the consistency application is filed on or after January 1, 2009, baseline $SF_6$ emissions shall be determined based on annual entity-wide reporting of $SF_6$ emissions for the calendar year immediately preceding the calendar year in which the consistency application is filed (designated the baseline year). ~~If the consistency application is filed prior to 2009, the baseline year may be 2005, but no earlier.~~ The reporting entity shall systematically track and account for all entity-wide uses of $SF_6$ in order to determine entity-wide emissions of $SF_6$. The scope of such tracking and accounting shall include all electric transmission and distribution assets and all $SF_6$-containing and $SF_6$-handling equipment owned and/or operated by the reporting entity.

10.5.2.3.1 Emissions shall be determined based on the following mass balance method:

$SF_6$ Emissions (lbs.) = ($SF_6$ Change in Inventory) + ($SF_6$ Purchases and Acquisitions) – ($SF_6$ Sales and Disbursements) – (Change in Total $SF_6$ Nameplate Capacity of Equipment)

Where:

*Change in Inventory* is the difference between the quantity of $SF_6$ gas in storage at the beginning of the reporting year and the quantity in storage at the end of the reporting year. The term “quantity in storage” includes all $SF_6$ gas contained in cylinders (such as 115-pound storage cylinders), gas carts, and other storage containers. It does not refer to $SF_6$ gas held in $SF_6$-using operating equipment. The change in inventory will be negative if the quantity of $SF_6$ gas in storage increases over the course of the year.

*Purchases and Acquisitions of $SF_6$* is the sum of all the $SF_6$ gas acquired from other parties during the reporting year, as contained in storage containers or $SF_6$-using operating equipment.

*Sales and disbursements of $SF_6$* is the sum of all the $SF_6$ gas sold or otherwise disbursed to other parties during the reporting year, as contained in storage containers and $SF_6$-using operating equipment.

*Change in Total $SF_6$ Nameplate Capacity of Equipment* is the net change in the total volume of $SF_6$-containing operating equipment during the reporting year. The net change in nameplate capacity is equal to new

equipment nameplate capacity, minus retired equipment nameplate capacity. This quantity will be negative if the retired equipment has a total nameplate capacity larger than the total nameplate capacity of the new equipment. "Total nameplate capacity" refers to the full and proper $SF_6$ charge of the equipment rather than to the actual charge, which may reflect leakage.

10.5.2.3.2 Emissions shall be calculated as follows:

Emissions (tons $CO_2e$) = $[(V_{iby} - V_{iey}) + (PA_{psd} + PA_e + PA_{rre}) - (SD_{op} + SD_{rs} + SD_{df} + SD_{sor}) - (CNP_{ne} - CNP_{rse})] \times GWP/2000$

Where (all $SF_6$ values in lbs.):

$V_{iby}$ = $SF_6$ inventory in cylinders, gas carts, and other storage containers (not $SF_6$-containing operating equipment) at the beginning of the reporting year

$V_{iey}$ = $SF_6$ inventory in cylinders, gas carts, and other storage containers (not $SF_6$-containing operating equipment) at the end of the reporting year

$PA_{psd}$ = $SF_6$ purchased from suppliers or distributors in cylinders

$PA_e$ = $SF_6$ provided by equipment manufacturers with or inside $SF_6$-containing operating equipment

$PA_{rre}$ = $SF_6$ returned to the reporting entity after off-site recycling

$SD_{op}$ = Sales of $SF_6$ to other parties, including gas left in $SF_6$-containing operating equipment that is sold

$SD_{rs}$ = Returns of $SF_6$ to supplier (producer or distributor)

$SD_{df}$ = $SF_6$ sent to destruction facilities

$SD_{sor}$ = $SF_6$ sent off-site for recycling

$CNP_{ne}$ = Total $SF_6$ nameplate capacity of new $SF_6$-containing operating equipment at proper full charge

$CNP_{rse}$ = Total $SF_6$ nameplate capacity of retired or sold $SF_6$-containing operating equipment at proper full charge

GWP = $CO_2e$ global warming potential of $SF_6$ (22,~~-200~~800)

10.5.2.3.3 As part of the consistency application required pursuant to 10.4.2 and 10.4.3 of this regulation and in annual monitoring and verification reports required pursuant to 10.7.2 and 10.7.3 of this regulation, the project sponsor shall provide the documentation required at 10.5.2.5.1 through 10.5.2.5.3 of this regulation to support emissions calculations.

10.5.2.4 *Calculating emissions reductions*. Emissions reductions shall represent the annual entity-wide emissions reductions of $SF_6$ for the reporting entity, relative to emissions in the baseline year. Emissions reductions shall be determined as

follows, using the quantification method outlined in 10.5.2.3.2 of this regulation to determine emissions in both the baseline year and reporting year(s):

Emissions Reduction (tons $CO_2e$) = (Total Pounds of $SF_6$ Emissions in Baseline Reporting Year) – (Total Pounds of $SF_6$ Emissions in Reporting Year) x GWP/2000

Where:

GWP = $CO_2e$ global warming potential of $SF_6$ (22,~~200~~800)

10.5.2.5 *Monitoring and verification requirements*. The annual monitoring and verification report shall include supporting material detailing the calculations and data used to determine $SF_6$ emissions reductions, and shall also provide the following documentation.

10.5.2.5.1 The project sponsor shall identify a facility(ies) managed by the entity from which all $SF_6$ gas is procured and disbursed and maintain an entity-wide log of all $SF_6$ gas procurements and disbursals. The entity-wide log shall include the weight of each cylinder transported before shipment from the facility(ies) and the weight of each cylinder after return to the facility(ies). A specific cylinder log shall also be maintained for each cylinder that is used to fill equipment with $SF_6$ or reclaim $SF_6$ from equipment. The cylinder log shall be retained with the cylinder and indicate the location and specific identifying information of the equipment being filled, or from which $SF_6$ is reclaimed, and the weight of the cylinder before and after this activity. The cylinder log shall be returned with the cylinder to the facility when the activity is complete or the cylinder is empty.

10.5.2.5.2 A current entity-wide inventory of all $SF_6$-containing operating equipment and all other $SF_6$-related items, including cylinders, gas carts, and other storage containers used by the entity. The inventory shall be certified by an independent verifier accredited pursuant to 10.6 of this regulation.

10.5.2.5.3 The project sponsor shall provide a monitoring and verification plan as part of the consistency application, which shall include an $SF_6$ inventory management and auditing protocol and a process for quality assurance and quality control of inventory data. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to 10.6 of this regulation.

10.5.3 *Sequestration of carbon due to reforestation, improved forest management, or avoided conversion ~~afforestation~~.* To qualify for the award of $CO_2$ offset allowances under 10, offset projects that involve reforestation, improved forest management, or avoided conversion ~~sequester carbon through the conversion of land from a non-forested to forested condition~~ shall meet ~~the~~ all requirements of 10.5.3 and the and the forest offset protocol of this regulation and all other applicable requirements of 10.0 of this regulation.

10.5.3.1 *Eligibility.* Eligible forest offset projects shall satisfy all eligibility requirements of the forest offset protocol and this Subpart. ~~Eligible offset projects shall occur on land that has been in a non-forested state for at least 10 years preceding the commencement of the offset project.~~

~~10.5.3.1.1 Eligible offset projects shall be managed in accordance with widely accepted environmentally sustainable forestry practices and designed to promote the restoration of native forests by using mainly native species and avoiding the introduction of invasive non-native species. If commercial timber harvest activities are to occur, certification must be obtained, prior to any harvest activities at the site, through the Forest Stewardship Council (FSC), Sustainable Forestry Institute (SFI), American Tree Farm System (ATFS), or such other similar organizations as may be approved by the Department.~~

10.5.3.2 *Offset project description*. The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of 10.5.3.1 of this regulation. The offset project narrative shall include the ~~following~~ information identified in sections 8.1 and 9.1 of the forest offset protocol, and any other information deemed necessary by the Department

~~10.5.3.2.1 Owner of the land within the offset project boundary;~~

~~10.5.3.2.2 Detailed map of the land within the offset project boundary and areas adjacent to the offset project boundary;~~

~~10.5.3.2.3 A copy of the permanent conservation easement required pursuant 10.5.3.6 of this regulation;~~

~~10.5.3.2.4 For offset projects located in a state or United States jurisdiction that is not a participating state, a written legal opinion from an attorney licensed to practice in the state where the offset project is located, or from the cooperating regulatory agency, confirming the enforceability of the permanent conservation easement; and~~

~~10.5.3.2.5 Plant species to be planted or established via natural regeneration, and a forest management plan consistent with the requirements at 10.5.3.1.2 of this regulation.~~

10.5.3.3 *Carbon sequestration baseline determination*. Baseline onsite carbon stocks shall be determined as required by sections 6.1.1, 6.1.2, 6.2.1, 6.2.2, 6.2.3, 6.3.1, and 6.3.2 of the forest offset protocol, as applicable.~~The existing sequestered carbon within the offset project boundary shall be calculated prior to commencement of the offset project. The carbon sequestration baseline shall be determined based on a sum of measurements, made no more than 12 months prior to offset project commencement, of the carbon content of the following carbon pools.~~

~~10.5.3.3.1 Carbon content shall be calculated for the following required carbon pools:~~

~~10.5.3.3.1.1 Live above-ground tree biomass;~~

~~10.5.3.3.1.2 Live below-ground tree biomass;~~

~~10.5.3.3.1.3 Soil carbon; and~~

~~10.5.3.3.1.4 Dead organic matter, coarse woody debris, unless the baseline measurement for this carbon pool is at or near zero, in which case measurement of this carbon pool during the allocation period is optional.~~

~~10.5.3.3.2 Carbon content may be calculated for the following optional carbon pools:~~

~~10.5.3.3.2.1 Live above-ground non-tree biomass; and~~

~~10.5.3.3.2.2 Dead organic matter, forest floor.~~

~~10.5.3.3.3 Carbon content shall be calculated individually for each carbon pool within the offset project boundary.~~

~~10.5.3.3.4 To increase the accuracy of measurement and verification, the area within the offset project boundary shall be divided into sub-populations that form relatively homogenous units. When defining sub-populations, the project sponsor shall consider vegetation and tree species (including existing vegetation and trees and those to be utilized as part of the offset project activity) and site factors (soil type, elevation, slope, age class, and other factors as warranted).~~

~~10.5.3.3.5 Calculation of sequestered carbon for each carbon pool in each reporting sub-population shall be based on the following:~~

~~$CO_2$ tons = [(A x C/ha)(44/12)] / 0.9072~~

~~Where:~~

~~A = Area in hectares within each reporting sub-population~~

~~C = Carbon content (metric tons of carbon for each carbon pool)~~

~~C/ha = Mean carbon content per hectare for each carbon pool~~

~~10.5.3.3.6 Total carbon contained within the offset project boundary (represented in $CO_2$ tons, calculated pursuant to 10.5.3.3.5 of this regulation) shall be calculated as follows:~~

~~$TC_{pb} = TC_{latb} + TC_{lbtb} + TC_s$ [+ $TC_{lantb} + TC_{doff} + TC_{docwd}$]~~

~~Where:~~

~~$TC_{pb}$ = Total carbon content within the offset project boundary (sum of carbon content of all carbon pools in all reporting sub-populations)~~

~~$TC_{latb}$ = Sum of carbon content of live above-ground tree biomass in all reporting sub-populations~~

~~$TC_{lbtb}$ = Sum of carbon content of live below-ground tree biomass in all reporting sub-populations~~

~~$TC_s$ = Sum of carbon content of soil carbon in all reporting sub-populations~~

~~$TC_{lantb}$ [option] = Sum of carbon content of live above-ground non-tree biomass in all reporting sub-populations~~

~~$TC_{doff}$ [option] = Sum of carbon content of dead organic matter, forest floor in all reporting sub-populations~~

~~$TC_{docwd}$ [mandatory/option, as applicable pursuant to 10.5.3.3.1.4 of this regulation] = Sum of carbon content of dead organic matter, coarse woody debris in all reporting sub-populations~~

~~10.5.3.3.7 Each individual carbon pool to be measured must be directly measured using a measurement protocol and sample size that achieves a demonstrated quantified accuracy for the combined carbon pool measurement such that there is 95% confidence that the resulting reported value is within 10% of the true mean. Measurement and sampling practices shall meet the following requirements.~~

~~10.5.3.3.7.1 An adequate sample size that meets the requirements of 10.5.3.3.7 of this regulation shall be determined for each sub-population.~~

~~10.5.3.3.7.2 The minimum number of required sampling plots for each sub-population shall be determined based on the following:~~

~~$n = (s \times 1.960)/(mean \times re)^2$~~

~~Where:~~

~~n = required number of sample plots for each reporting sub-population~~

~~s = standard deviation~~

~~Mean = mean reported carbon content for the sample population~~

~~re = level of sampling error (0.08) to assure a total maximum error of 10% for the 95% confidence interval, which assumes total error due to measurement error of 0.02~~

~~10.5.3.3.8 Direct measurement procedures shall be consistent with current forestry good practice and the guidance contained in U.S. Department of Energy, Office of Policy and International Affairs, Technical Guidelines, Voluntary Reporting of Greenhouse Gases (1605(b)) Program, "Section 3, Measurement Protocols for Forest Carbon Sequestration," in Chapter 1 (Emissions Inventories) Part I Appendix (Forestry), March 2006.~~

~~10.5.3.4 *Calculating carbon sequestered*. Carbon sequestration shall be determined using a base year approach, where the amount of carbon sequestered is measured as a net increase in carbon relative to the base year measurement. Carbon sequestration shall be the amount of net additional carbon sequestered during each reporting period, based upon aggregate carbon uptake and carbon emissions for the sum of carbon pools, relative to the baseline carbon content or the carbon content as of the previous reporting period (if above the baseline carbon content), as applicable. $CO_2$ offset allowances shall be issued based on the amount of net additional carbon sequestered within the offset project boundary during each reporting period, as represented in tons of $CO_2$. Sequestered carbon shall be calculated using a stock-change approach as follows:~~

~~$NCS_t = I_t - I_{t-1}$~~

~~Where:~~

~~$NCS_t$ = Net carbon sequestered in reporting period t~~

~~$I_t$ = Inventory of carbon stock for all carbon pools in all reporting sub-populations within the offset project boundary in reporting period t~~

~~$I_{t-1}$ = Inventory of carbon stock for all carbon pools in all reporting sub-populations within the offset project boundary in the reporting period immediately preceding reporting period t~~

~~10.5.3.4.1 Except as provided in 10.5.3.3.1.4 of this regulation, each of the carbon pools that were measured as part of the baseline determination must be re-measured using the same methodology, and to the same or better quantified precision consistent with the requirements of 10.5.3.3.7 and 10.5.3.3.8 of this regulation, as that used for the baseline determination.~~

~~10.5.3.4.2 The net change in each carbon pool's carbon stock in each reporting sub-population is calculated by subtracting the baseline carbon stock (or carbon stock at the previous monitoring, if above the baseline carbon content) from the carbon stock at the time of the current monitoring. Determination of carbon stock shall be in accordance with the formulas and procedures in 10.5.3.3 of this regulation.~~

~~10.5.3.4.3 Net carbon stock change for the offset project is the sum of the net changes in the carbon stock of all applicable pools in all reporting sub-populations within the offset project boundary, less ten percent (10%) to account for potential losses of sequestered carbon. This 10% discount shall not be required, provided the project sponsor retains long-term insurance, approved by the Department, that guarantees replacement of any lost sequestered carbon for which $CO_2$ offset allowances were awarded pursuant to 10.7.1.1 of this regulation.~~

10.5.3.4 Calculating carbon sequestered. Net GHG reductions and GHG removal enhancements shall be calculated as required by 6.0 of the forest offset protocol. The project's risk reversal rating shall be calculated as required by Appendix D of the forest offset protocol.

10.5.3.5 *Monitoring and verification requirements*. Monitoring and verification is subject to the following requirements. ~~Total carbon stock within the offset project boundary shall be calculated not less than every five years. Monitoring and verification is subject to the following requirements.~~

~~10.5.3.5.1 Monitoring and verification reports shall include data from direct measurement of carbon content for all plots used to determine baseline and reporting period carbon content.~~

~~10.5.3.5.2 The consistency application shall include a monitoring and verification plan certified by the Department or an independent verifier accredited pursuant to 10.6 of this regulation. The monitoring and verification plan shall include the following:~~

~~10.5.3.5.2.1 Direct carbon measurement procedures consistent with the requirements at 10.5.3.3.8 of this regulation.~~

~~10.5.3.5.2.2 The designation of sub-populations pursuant to 10.5.3.3.4 of this regulation. The determination of the minimum number of sampling plots pursuant to 10.5.3.3.7 of this regulation.~~

~~10.5.3.5.2.3 If commercial timber harvest activities have occurred or will occur, an assessment of management practices to ensure that the offset project has been or will be managed in accordance with environmentally sustainable forestry practices consistent with the Forest Stewardship Council (FSC), Sustainable Forestry Institute (SFI), American Tree Farm System (ATFS), or such other similar organizations as may be approved by the Department.~~

10.5.3.5.1 Monitoring and verification reports shall include all forest offset project data reports submitted to the Department , including any additional data required by 9.2.2 of the forest offset protocol.

10.5.3.5.2 The consistency application shall include a monitoring and verification plan certified by an independent verifier accredited pursuant to 10.6 of this regulation. The monitoring and verification plan shall consist of a forest carbon inventory program, as required by section 8.1 of the forest offset protocol.

10.5.3.5.3 Monitoring and verification reports shall be submitted not less than every six years, except that the first monitoring and verification report for reforestation projects must be submitted within twelve years of project commencement

10.5.3.6 Forest Offset Project Data Reports A project sponsor shall submit a forest offset Project data report to the Department for each reporting period. Each forest offset project data report must cover a single reporting period. Reporting periods must be contiguous; there must be no gaps in reporting once the first reporting period has commenced.

10.5.3.7 Prior to the award of $CO_2$ offset allowances pursuant to 10.7 of this regulation, or to any transfer allowances pursuant to 10.5.3.8, any quantity expressed in metric tons, or metric tons of $CO_2$ equivalent, shall be converted to tons using the conversion factor specified in 1.2 of this regulation.

~~*10.5.3.6*~~ *10.5.3.8* *Carbon sequestration permanence*. The offset project shall meet the following requirements to address ~~permanence~~ reversal of sequestered carbon.

~~10.5.3.6.1 The project sponsor shall place the land within the offset project boundary under a legally binding permanent conservation easement, approved by the Department, that requires the land to be maintained in a forested state in perpetuity.~~

~~10.5.3.6.2 The conservation easement shall include a requirement that the carbon density within the offset project boundary be maintained at long-term levels at or above that achieved as of the end of the $CO_2$ offset crediting period pursuant to 10.3.5.2 of this regulation.~~

~~10.5.3.6.3 The conservation easement shall require that the land be managed in accordance with environmentally sustainable forestry practices.~~

10.5.3.8.1 Unintentional reversals. Requirements for unintentional reversals are as follows:

10.5.3.8.2.1 The project sponsor must notify the Department of the reversal and provide an explanation for the nature of the unintentional reversal within 30 calendar days of its discovery; and

10.5.3.8.2.2 The project sponsor must submit to the Department a verified estimate of current carbon stocks within the offset project boundary within one year of the discovery of the unintentional reversal.

.10.5.3.8.3 Intentional Reversals. Requirements for intentional reversals are as follows:

10.5.3.8.3.1 If an intentional reversal occurs, the project sponsor shall, within 30 calendar days of the intentional reversal:

10.5.3.8.3.1.1 Provide notice, in writing, to Department of the intentional reversal; and

10.5.3.8.3.1.2 Provide a written description and explanation of the intentional reversal to the Department.

10.5.3.8.3.2 Within one year of the occurrence of an intentional reversal, the project sponsor shall submit to the Department a verified estimate of current carbon stocks within the offset project boundary.

10.5.3.8.3.3 If an intentional reversal occurs, and $CO_2$ offset allowances have been awarded to the offset project, to the offset project, the forest owner must transfer to the forest offset retirement account a quantity of $CO_2$ allowances corresponding to the number of metric tons of $CO_2$ equivalent reversed within six months of notification by the Department

.

10.5.3.8.3.3.1 Notification by the Department will occur after the verified estimate of carbon stocks has been submitted to the Department, or after one year has elapsed since the occurrence of the reversal if the project sponsor fails to submit the verified estimate of carbon stocks.

10.5.3.8.3.3.2 If the forest owner does not surrender valid $CO_2$ allowances to the Department within six months of notification by the Department, the Forest owner will be subject to enforcement action and each $CO_2$ equivalent ton of carbon sequestration reversed will constitute a separate violation of this regulation and applicable state law.

10.5.3.8.4 Project Termination. Requirements for project termination are as follows:

10.5.3.8.4.1 The project sponsor must surrender to the Department its agent for retirement a quantity of $CO_2$ Allowances in the amount calculated

pursuant to project termination provisions in the forest offset protocol within six months of project termination.

10.5.3.8.4.2 If the project sponsor does not surrender to the Department or its agent a quantity of $CO_2$ Allowances in the amount calculated pursuant to project termination provisions in the forest offset protocol within six months of project termination, they will be subject to enforcement action and each CO2 offset allowance not surrendered will constitute a separate violation of this Part and applicable state law

10.5.3.8.5 Disposition of Forest Sequestration Projects after a Reversal. If a reversal lowers the forest offset project's actual standing live carbon stocks below its project baseline standing live carbon stocks, the forest offset project will be terminated by the Department.

10.5.3.9 Timing of forest offset projects. The Department may award $CO_2$ offset allowances under 10.7 only for forest offset projects that are initially commenced on or after January 1, 2014.

10.5.3.10 Projects that Have Been Awarded Credits by a Voluntary Greenhouse Gas Reduction Program. The provisions of paragraphs 10.3.3.4 and 10.4.3.2 shall not apply to forest projects that have been awarded credits under a voluntary greenhouse gas reduction program provided that the following conditions are satisfied. For such projects, the number of $CO_2$ Offset Allowances will be calculated pursuant to the requirements of 10.5.3, without regard to quantity of credits that were awarded to the project under the voluntary program.

10.5.3.10.1 The project satisfies all other general requirements of 10.0, including all specific requirements of 10.5.3, for all reporting periods for which the project has been awarded credits under a voluntary greenhouse gas program and also intends to be awarded $CO_2$ offset allowances pursuant to 10.7.

10.5.3.10.2 At the time of submittal of the consistency application for the project, the project submits forest offset data reports and a monitoring and verification report covering all reporting periods for which the project has been awarded credits under a voluntary greenhouse gas program and also intends to be awarded CO2 offset allowances pursuant to 10.7. Forest offset data reports and monitoring and verification reports must meet all requirements of 10.5.3.5 and 10.5.3.6.

10.5.3.10.3 The consistency application includes information sufficient to allow the Department to make the following determinations, and the voluntary greenhouse gas program has published information on its website to allow the Department to verify the information included in the consistency application.

10.5.3.10.3.1 The offset project has met all legal and contractual requirements to allow it to terminate its relationship with the voluntary greenhouse gas program, and such termination has been completed.

10.5.3.10.3.2 The project sponsor or voluntary greenhouse gas program has cancelled or retired all credits that were awarded for carbon sequestration that occurred during the time periods

for which the project intends to be awarded $CO_2$ offset allowances pursuant to 10.7, and such credits were cancelled or required for the sole purpose of allowing the project to be awarded $CO_2$ offset allowances pursuant to 10.7.

10.5.4 *Reduction or avoidance of $CO_2$ emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency*. To qualify for the award of $CO_2$ offset allowances under 10.0 of this regulation, offset projects that reduce $CO_2$ emissions by reducing on-site combustion of natural gas, oil, or propane for end-use in an existing or new commercial or residential building by improving the energy efficiency of fuel usage and/or the energy-efficient delivery of energy services shall meet the requirements of 10.5.4 of this regulation and all other applicable requirements of 10.0 of this regulation. Eligible new buildings are limited to new buildings that are designed to replace an existing building on the offset project site, or new buildings designed to be zero net energy buildings.

10.5.4.1 *Eligibility*.

10.5.4.1.1 Eligible offset projects shall reduce $CO_2$ emissions through one or more of the following energy conservation measures (ECMs):

10.5.4.1.1.1 improvements in the energy efficiency of combustion equipment that provide space heating and hot water, including a reduction in fossil fuel consumption through the use of solar and geothermal energy;

10.5.4.1.1.2 Improvements in the efficiency of heating distribution systems, including proper sizing and commissioning of heating systems;

10.5.4.1.1.3 Installation or improvement of energy management systems;

10.5.4.1.1.4 Improvement in the efficiency of hot water distribution systems and reduction in demand for hot water;

10.5.4.1.1.5 Measures that improve the thermal performance of the building envelope and/or reduce building envelope air leakage;

10.5.4.1.1.6 Measures that improve the passive solar performance of buildings and utilization of active heating systems using renewable energy; and

10.5.4.1.1.7 Fuel switching to a less carbon-intensive fuel for use in combustion systems, including the use of liquid or gaseous eligible biomass, provided that conversions to electricity are not eligible.

10.5.4.1.2 *Performance standards*.

10.5.4.1.2.1 *All end-use energy efficiency offset projects.* All offset projects under this regulation shall meet the applicable performance criteria set forth in this regulation.

10.5.4.1.2.1.1 *Installation best practice*. Any combustion equipment and related air handling equipment (HVAC systems) installed as part of an offset project shall be sized and installed in accordance with the

applicable requirements and specifications outlined in this regulation.

10.5.4.1.2.1.1.1 Commercial HVAC systems shall meet the applicable sizing and installation requirements of ANSI/ASHRAE/IESNA Standard 90.1 (SI Edition)-2010 ~~90.1-2004~~: Energy Standard for Buildings Except Low-Rise Residential Buildings; ANSI/ASHRAE Standard 62.2-2010 ~~1-2004~~: Ventilation for Acceptable Indoor Air Quality. ~~and American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., ANSI/ASHRAE Addenda a, b, c, d, and g, Supplement to ANSI/ASHRAE Standard 62.1-2004: Ventilation for Acceptable Indoor Air Quality, 2006.~~

10.5.4.1.2.1.1.2 Residential HVAC systems shall meet the applicable sizing specifications of Air Conditioner Contractors of America (ACCA) Manual J: Residential Load Calculation (Eight Edition-Full), and the applicable installation specifications ~~of Standard #~~ ANSI/ACCA 5 QI-2007) "HVAC Quality Installation Specification"~~:—Residential and Commercial Heating, Ventilating, and Air Conditioning (HVAC) Applications," 2007.~~

10.5.4.1.2.1.2 *Whole-building energy performance*. Eligible new buildings or whole-building retrofits that are part of an offset project shall meet the requirements of this regulation.

10.5.4.1.2.1.2.1 Commercial buildings shall exceed the energy performance requirements of ANSI/ASHRAE/IESNA Standard 90.1-(SI Edition ) ~~2004~~ 2010: Energy Standard for Buildings Except Low-Rise Residential Buildings by 30%, with the exception of multi-family residential buildings classified as commercial by ANSI/ASHRAE/IESNA Standard 90.1 (SI Edition) –~~2004~~ 2010, which shall exceed these energy performance requirements by 20%.

10.5.4.1.2.1.2.2 Residential buildings shall exceed the energy performance requirements of the ~~2004~~2012 International Energy Conservation Code Supplement by 30%.

~~10.5.4.1.2.2 *Offset projects commenced before January 1, 2009.* Energy conservation measures implemented as part of an offset project commenced before January 1, 2009 shall meet the performance and prescriptive criteria set forth in this regulation.~~

~~10.5.4.1.2.2.1 *Combustion equipment.* Combustion equipment installed as part of an offset project commenced before January 1, 2009 shall meet the energy efficiency performance standards contained in this regulation.~~

~~10.5.4.1.2.2.1.1 *Commercial boilers.* Commercial boilers shall meet or exceed the energy efficiency criteria in Table 10-2 below.~~

**~~Table 10-2. Minimum Commercial Boiler Energy Efficiency~~**

| ~~Technology~~ | ~~Size (Btu/hr)~~ | ~~Rating Method~~ | ~~Minimum Efficiency~~ |
|---|---|---|---|
| ~~Gas-fired[a]~~ | ~~125,000-300,000~~ | ~~AFUE~~ | ~~≥88.0%~~ |
| | ~~300,000-12,500,000~~ | ~~Thermal Efficiency[b]~~ | ~~≥90.0%~~ |
| ~~Oil-fired~~ | ~~>300,000~~ | ~~Thermal Efficiency~~ | ~~≥88.0%~~ |

~~[a] Gas-fired boilers shall be installed with controls that allow the boiler to operate in condensing mode and installed with vents designed for positive vent static pressure and vent gas temperature that leads to condensate production in the vent.~~

~~[b] Thermal Efficiency is defined as useful energy output (Btu) divided by energy input (Btu), and presented as a percentage. This shall be measured under steady state conditions, at full rated useful thermal output, 140°F supply from, and 120°F return water temperature to, the boiler.~~

~~10.5.4.1.2.2.1.2 *Residential combustion equipment.* Residential combustion equipment, including furnaces, boilers, and water heaters, shall meet or exceed the energy efficiency criteria in Table 10-3 below.~~

**~~Table 10-3. Minimum Residential Combustion Equipment[a] Energy Efficiency~~**

| ~~Technology~~ | ~~Rating Method~~ | ~~Minimum Efficiency~~ |
|---|---|---|
| ~~Gas-fired furnace~~ | ~~AFUE~~ | ~~≥94%~~ |
| ~~Oil-fired furnace~~ | ~~AFUE~~ | ~~≥92%~~ |
| ~~Gas/oil-fired boiler~~ | ~~AFUE~~ | ~~≥90%~~ |
| ~~Gas/oil-fired water heater~~ | ~~Energy Factor~~ | ~~≥0.62~~ |

~~[a] For furnaces, defined as equipment with a heat input rate of less than 225,000 Btu/hr; for boilers, defined as equipment with a heat input rate of less than 300,000 Btu/hr; for water heaters, defined as equipment subject to 10 CFR 430.~~

~~10.5.4.1.2.2.2 *Other energy conservation measures.* All other energy conservation measures implemented as part of an offset project shall meet the prescriptive requirements, as applicable, in Energy Benchmark for High Performance Buildings, Version 1.1, New Buildings Institute, 2005 (herein referred to as EBHPB), or state building energy codes, whichever result in better energy performance. Energy conservation measures without specified performance criteria in the referenced EBHPB shall meet the requirements of Federal Energy Management Program (FEMP) Product Energy Efficiency Recommendations, issued pursuant to Executive Orders 13123 and 13221, or Energy Star criteria~~

~~issued jointly by the U.S. Environmental Protection Agency and U.S. Department of Energy, whichever result in better energy performance~~.

~~10.5.4.1.2.3~~–10.5.4.1.2.2 *Maximum market penetration rate for offset projects commenced on or after January 1, 2009.* For offset projects initiated on or after January 1, 2009, the project sponsor shall demonstrate, to the satisfaction of the Department, that the energy conservation measures implemented as part of the offset project have a market penetration rate of less than 5%.

10.5.4.2 *Offset project description*. The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of 10.5.4.1 of this regulation. The offset project narrative shall include the following information.

10.5.4.2.1 Location and specifications of the building(s) where the offset project actions will occur;

10.5.4.2.2 Owner and operator of the building(s);

10.5.4.2.3 The parties implementing the offset project, including lead contractor(s), subcontractors, and consulting firms;

10.5.4.2.4 Specifications of equipment and materials to be installed as part of the offset project; and

10.5.4.2.5 Building plans and offset project technical schematics, as applicable.

10.5.4.3 *Emissions baseline determination*. The emissions baseline shall be determined in accordance with the requirements of this paragraph, based on energy usage (MMBtu) by fuel type for each energy conservation measure, derived using historic fuel use data from the most recent calendar year for which data is available, and multiplied by an emissions factor and oxidation factor for each respective fuel in Table 10-4-2 below.

**~~Table 10-4~~ Table 10-2. Emissions and Oxidation Factors**

| Fuel | Emissions Factor (lbs. $CO_2$/MMBtu) | Oxidation Factor |
|---|---|---|
| Natural Gas | 116.98 | 0.995 |
| Propane | 139.04 | 0.995 |
| Distillate Fuel Oil | 161.27 | 0.99 |
| Kerosene | 159.41 | 0.99 |

10.5.4.3.1 *Isolation of applicable energy conservation measure baseline*. The baseline energy usage of the application to be targeted by the energy conservation measure shall be isolated in a manner consistent with the guidance at 10.5.4.5 of this regulation.

10.5.4.3.2 Annual baseline energy usage shall be determined as follows:

Energy Usage (MMBtu) = $BEU_{AECM}$ x A

Where:

$BEU_{AECM}$ = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application(s) to be targeted by the energy conservation measure(s). If applicable building codes or equipment standards require that equipment or materials installed as part of the offset project meet certain minimum energy performance requirements, baseline energy usage for the application shall assume that equipment or materials are installed that meet such minimum requirements. For offset projects that replace existing combustion equipment, the assumed minimum energy performance required by applicable building codes or equipment standards shall be that which applies to new equipment that uses the same fuel type as the equipment being replaced. Baseline energy usage shall be determined in accordance with the applicable requirements at 10.5.4.5 of this regulation.

A = Adjustments to account for differing conditions during the two time periods (pre-installation and post-installation), such as weather, building occupancy, and changes in building use or function. Adjustments shall be determined in accordance with the applicable requirements at 10.5.4.5 of this regulation.

10.5.4.3.3 Annual baseline emissions shall be determined as follows:

Emissions (lbs. $CO_2$) = $\sum_{j=1}^{n} BEU_i \times EF_i \times OF_i$

Where:

$BEU_i$ = Annual baseline energy usage for fuel type i (MMBtu) demonstrated pursuant to the requirements at 10.5.4.5.1 through 10.5.4.5.4 of this regulation.

$EF_i$ = Emissions factor (lbs. $CO_2$/MMBtu) for fuel type i listed at 10.5.4.3 of this regulation, ~~Table 3~~ Table 10-2 of this regulation.

$OF_i$ = Oxidation factor for fuel type i listed at 10.5.4.3 of this regulation, ~~Table 10-4~~ Table 10-2 of this regulation.

10.5.4.4 *Calculating emissions reductions.* Emissions reductions shall be determined based upon annual energy savings by fuel type (MMBtu) for each energy conservation measure, multiplied by the emissions factor and oxidation factor for the respective fuel type at 10.5.4.3 of this regulation, Table 3 of this regulation.

10.5.4.4.1 Annual energy savings shall be determined as follows:

Energy Savings (MMBtu) = ($BEU_{AECM}$ x A) – ($PIEU_{ECM}$ x A)

Where:

$BEU_{AECM}$ = Annual pre-installation baseline energy use by fuel type (MMBtu) calculated pursuant to 10.5.4.5.1 through 10.5.4.5.4 of this regulation.

$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure. Post-installation energy usage shall be determined in accordance with the applicable requirements at 10.5.4.5.1 through 10.5.4.5.4 of this regulation.

A = Adjustments to account for any differing conditions during the two time periods (pre-installation and post-installation), such as weather, building occupancy, and changes in building use or function. Adjustments shall be determined in accordance with the applicable requirements at 10.5.4.5 of this regulation.

10.5.4.4.2 Annual emissions reductions shall be determined as follows:

Emissions Reduction (lbs. $CO_2$) = $\sum_{j=1}^{n} ESi \ x \ EFi \ x \ OFi$

Where:

$ES_i$ = Energy savings for fuel type i (MMBtu) demonstrated pursuant to the requirements at 10.5.4.5 of this regulation.

$EF_i$ = Emissions factor (lbs. $CO_2$/MMBtu) for fuel type i listed at 10.5.4.3 of this regulation, ~~Table 3~~ Table 10-2 of this regulation.

$OF_i$ = Oxidation factor for fuel type i listed at 10.5.4.3 of this regulation, ~~Table 10-4~~ Table 10-2 of this regulation.

10.5.4.5 *Monitoring and verification requirements*. As part of the consistency application, the project sponsor shall provide a monitoring and verification plan certified by an independent verifier accredited pursuant to 10.6 of this regulation. Annual monitoring and verification reports shall be certified by an independent verifier accredited pursuant to 10.6 of this regulation. Independent verifiers must conduct a site audit when reviewing the first monitoring and verification report submitted by the project sponsor, except for offset projects that save less than 1,500 MMBtu per year. For offset projects that save less than 1,500 MMBtu per year, the project sponsor must provide the independent verifier with equipment specifications and copies of equipment invoices and other relevant offset project-related invoices. All offset project documentation, including the consistency application and monitoring and verification reports, shall be signed by a Professional Engineer, identified by license number. Monitoring and verification shall also meet the following requirements.

10.5.4.5.1 *General energy measurement and verification requirements*. Monitoring and verification of energy usage shall be demonstrated through a documented process consistent with the following protocols and procedures, as applicable.

10.5.4.5.1.1 For existing commercial buildings, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume I: Concepts and Options for Determining Energy and Water Savings (IPMVP), “Option B.

Retrofit Isolation" and "Option D. Calibrated Simulation." If a building project involves only energy conservation measures implemented as part of a $CO_2$ emissions offset project, a process consistent with IPMVP "Option C. Whole Building" may be used, as applicable. Application of the IPMVP general guidance shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings.

10.5.4.5.1.2 For new commercial buildings, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume III: Concepts and Options for Determining Energy Savings in New Construction (IPMVP), "Option D: Whole Building Calibrated Simulation," EVO 30000-1: 2006, Efficiency Valuation Organization." Application of the IPMVP general guidance shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings.

10.5.4.5.1.3 For existing and new residential buildings, determination of baseline energy usage shall be consistent with the requirements of the RESNET National Energy Rating Technical Standards and National Home Energy Rating Technical Guidelines, ~~2006~~ 2013(Chapter 3 and Appendix A of ~~2006~~ 2013 Mortgage Industry National Home Energy Rating System Standards).

10.5.4.5.2 *Isolation of applicable energy conservation measure*. In calculating both baseline energy usage and energy savings, the applicant shall isolate the impact of each eligible energy conservation measure (ECM), either through direct metering or energy simulation modeling. For offset projects with multiple ECMs, and where individual ECMs can affect the performance of others, the sum of energy savings due to individual ECMs shall be adjusted to account for the interaction of ECMs. For commercial buildings, this process shall be consistent with the requirements of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1 (SI Edition)-2010 ~~-2004~~: Energy Standard for Buildings Except Low-Rise Residential Buildings. For residential buildings, this process shall be consistent with the requirements of RESNET National Energy Rating Technical Standards and National Home Energy Rating Technical Guidelines, ~~2006~~ 2013 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

10.5.4.5.2.1 Reductions in energy usage due to the energy conservation measure shall be based upon actual energy usage data. Energy simulation modeling shall only be used to determine the relative percentage contribution to total fuel usage (for each respective fuel type) of the application targeted by the energy conservation measure.

10.5.4.5.3 *Calculation of energy savings*. Annual energy savings are to be determined based on the following:

Energy Savings (MMBtu) = $(BEU_{AECM} \times A) - (PIEU_{ECM} \times A)$

Where:

$BEU_{AECM}$ = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application(s) to be targeted by the energy conservation measure(s), based upon annual fuel usage data for the most recent calendar year for which data is available. For new buildings, baseline energy use for a reference building equivalent in basic configuration, orientation, and location to the building in which the eligible energy conservation measure(s) is implemented shall be determined according to ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings and ANSI/ASHRAE/IESNA Standard 90.1 (SI Edition)-2010 ~~-2004~~, Section 11 and Appendix G. Where energy simulation modeling is used to evaluate an existing building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1 (SI Edition)-2010 ~~-2004,~~ Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be conducted in accordance with the requirements of RESNET National Energy Rating Technical Standards and National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of ~~2006~~ 2013 Mortgage Industry National Home Energy Rating System Standards).

$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure, to be verified based on annual energy usage after installation of the energy conservation measure(s), consistent with the requirements of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings. Where energy simulation modeling is used to evaluate a new or existing building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1 (SI Edition)-2010 ~~-2004~~, Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be consistent with the requirements of RESNET National Energy Rating Technical Standards and National Home Energy Rating Technical Guidelines, ~~2006~~ 2013 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

A = Adjustments to account for any differing conditions during the two time periods (pre-installation and post-installation), such as weather (weather normalized energy usage based on heating and cooling degree days), building occupancy, and changes in building use or function. For commercial buildings, adjustments shall be consistent with the specifications of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1 (SI Edition)-2010 ~~-2004~~, Section 11 and Appendix G. For residential buildings, adjustments shall be consistent with the specifications of RESNET National Energy Rating Technical Standards and National Home Energy Rating Technical Guidelines, ~~2006~~ 2013 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

10.5.4.5.4 *Provision for sampling of multiple like offset projects in residential buildings*. Offset projects that implement similar measures in multiple residential buildings may employ representative sampling of buildings to determine aggregate baseline energy usage and energy savings. Sampling protocols shall employ sound statistical methods such that there is 95% confidence that the reported value is within 10% of the true mean. Any sampling plan

shall be certified by an independent verifier, accredited pursuant to 10.6 of this regulation.

10.5.5 *Avoided methane emissions from agricultural manure management operations*. To qualify for the award of $CO_2$ offset allowances under 10.0 of this regulation, offset projects that capture and destroy methane from animal manure and organic food waste using anaerobic digesters shall meet the requirements of 10.5.5 of this regulation and all other applicable requirements of 10.0 of this regulation.

10.5.5.1 *Eligibility*.

10.5.5.1.1 Eligible offset projects shall consist of the destruction of that portion of methane generated by an anaerobic digester that would have been generated in the absence of the offset project through the uncontrolled anaerobic storage of manure or organic food waste.

10.5.5.1.2 Eligible offset projects shall employ only manure-based anaerobic digester systems using livestock manure as the majority of digester feedstock, defined as more than 50% of the mass input into the digester on an annual basis. Organic food waste used by an anaerobic digester shall only be that which would have been stored in anaerobic conditions in the absence of the offset project.

10.5.5.1.3 The provisions of 10.3.4.2 and 10.3.4.3 of this regulation shall not apply to agricultural manure management offset projects provided either of the following requirements are met.

10.5.5.1.3.1 The offset project is located in a state that has a market penetration rate for anaerobic digester projects of 5% or less. The market penetration determination shall utilize the most recent market data available at the time of submission of the consistency application pursuant to 10.4 of this regulation and shall be determined as follows:

$$MP\ (\%) = MG_{AD} / MG_{STATE}$$

Where:

$MG_{AD}$ = Average annual manure generation for the number of dairy cows and swine serving all anaerobic digester projects in the applicable state at the time of submission of a consistency application pursuant to 10.4 of this regulation.

$MG_{STATE}$ = average annual manure production of all dairy cows and swine in the state at the time of submission of a consistency application pursuant to 10.4 of this regulation.

10.5.5.1.3.2 The offset project is located at a farm with 4,000 or less head of dairy cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows (lbs./cow) of 1,400 lbs., or, if the project is a regional-type digester, total annual manure input to the digester is designed to be less than the average annual manure produced by a farm with 4,000 or less head of dairy cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows (lbs./cow) of 1,400 lbs.

10.5.5.2 *Offset project description.* The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of 10.5.5.1 of this regulation. The offset project narrative shall include the following information.

10.5.5.2.1 Owner and operator of the offset project;

10.5.5.2.2 Location and specifications of the facility where the offset project will occur;

10.5.5.2.3 Owner and operator of the facility where the offset project will occur;

10.5.5.2.4 Specifications of the equipment to be installed and a technical schematic of the offset project; and

10.5.5.2.5 Location and specifications of the facilities from which anaerobic digester influent will be received, if different from the facility where the offset project will occur.

10.5.5.3 *Emissions baseline determination.* The emissions baseline shall represent the potential emissions of the $CH_4$ that would have been produced in a baseline scenario under uncontrolled anaerobic storage conditions and released directly to the atmosphere in the absence of the offset project.

10.5.5.3.1 Baseline $CH_4$ emissions shall be calculated as follows**:**

$CO_2e$ (tons) = ($V_m$ x M)/2000 x GWP

Where:

$CO_2e$ = Potential $CO_2e$ emissions due to calculated $CH_4$ production under site-specific anaerobic storage and weather conditions

$V_m$ = Volume of $CH_4$ produced each month from degradation of volatile solids in a baseline uncontrolled anaerobic storage scenario under site-specific storage and weather conditions for the facility at which the manure or organic food waste is generated ($ft^3$)

M = Mass of $CH_4$ per cubic foot (0.04246 $lb/ft^3$ default value at one atmosphere and 20°C)

GWP = Global warming potential of $CH_4$ (~~23~~25)

10.5.5.3.2 The estimated amount of volatile solids degraded each month under the uncontrolled anaerobic storage baseline scenario (kg) shall be calculated as follows:

$VS_{deg} = VS_{avail} \times f$

Where:

VS = volatile solids as determined from the equation:

$VS = M_m \times TS_{\%} \times VS_{\%}$

where:

$M_m$ = mass of manure or organic food waste produced per month (kg)
$TS_{\%}$ = concentration (percent) of total solids in manure or organic food waste as determined through I-3750, "Solids, residue on evaporation at 105 degrees C, total, gravimetric," Methods for the Determination of Inorganic Substances in Water and Fluvial Sediments, Techniques of Water-Resources Investigations of the United States Geological Survey, Book 5, Chapter A1. Edited by Marvin J. Fishman and Linda C. Friedman.

$VS_{\%}$ = concentration (percent) of volatile solids in total solids as determined through EPA 160.4 testing method (U.S.EPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020))

$VS_{avail}$ = volatile solids available for degradation in manure or organic food waste storage each month as determined from the equation:

$$VS_{avail} = VS_p + \frac{1}{2} VS_{in} - VS_{out}$$

Where:

$VS_p$ = volatile solids present in manure or organic food waste storage at beginning of month (left over from previous month) (kg)

$VS_{in}$ = volatile solids added to manure or organic food waste storage during the course of the month (kg). The factor of ½ is multiplied by this number to represent the average mass of volatile solids available for degradation for the entire duration of the month.

$VS_{out}$ = volatile solids removed from the manure or organic food waste storage for land application or export (assumed value based on standard farm practice)

f = van't Hoff-Arrhenius factor for the specific month as determined using the equation below. Using a base temperature of $30^{o}$ C, the equation is as follows:

$$f = \exp\{[E(T_2 - T_1)]/[(GC \times T_1 \times T_2)]\}$$

Where:

f = conversion efficiency of VS to $CH_4$ per month

E = activation energy constant (15,175 cal/mol)

$T_2$ = average monthly ambient temperature for facility where manure or organic food waste is generated (converted from $^{o}$ Celsius to $^{o}$ Kelvin) as determined from the nearest National Weather Service certified weather station (if reported temperature $^{o}C > 5^{o}C$; if reported temperature $^{o}C < 5^{o}C$, then F = 0.104)

$T_1$ = 303.15 (30$^o$ C converted to $^o$K)
GC = ideal gas constant (1.987 cal/K mol)

10.5.5.3.3 The volume of $CH_4$ produced (ft$^3$) from degradation of volatile solids shall be calculated as follows:

$V_m = (VS_{deg} \times B_o) \times 35.3147$

Where:

$V_m$ = volume of $CH_4$ (ft$^3$)

$VS_{deg}$ = volatile solids degraded (kg)

$B_o$ = manure or organic food waste type-specific maximum methane generation constant (m$^3$ $CH_4$/kg VS degraded). For dairy cow manure, $B_o$ = 0.24 m$^3$ $CH_4$/kg VS degraded. The methane generation constant for other types of manure shall be those cited at U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-~~2004~~2010, Annex 3.10, Table A-162 (U.S. Environmental Protection Agency, April ~~2007~~2012), unless the project sponsor proposes an alternate methane generation constant. If the project sponsor proposes to use a methane generation constant other than the ones found in the above-cited reference, the project sponsor must provide justification and documentation to the Department.

10.5.5.4 *Calculating emissions reductions.* Emissions reductions shall be determined based on the potential emissions (in tons of $CO_2$e) of the $CH_4$ that would have been produced in the absence of the offset project under a baseline scenario that represents uncontrolled anaerobic storage conditions, as calculated pursuant to 10.5.5.3.1 through 10.5.5.3.3 of this regulation, and released directly to the atmosphere. Emissions reductions may not exceed the potential emissions of the anaerobic digester, as represented by the annual volume of $CH_4$ produced by the anaerobic digester, as monitored pursuant to 10.5.5.5 of this regulation. If the project is a regional-type digester, $CO_2$ emissions due to transportation of manure and organic food waste from the site where the manure and organic food waste was generated to the anaerobic digester shall be subtracted from the emissions reduction calculated pursuant to 10.5.5.3.1 through 10.5.5.3.3 of this regulation. Transport $CO_2$ emissions shall be determined through one of the following methods.

10.5.5.4.1 Documentation of transport fuel use for all shipments of manure and organic food waste from off-site to the anaerobic digester during each reporting year and a log of transport miles for each shipment. $CO_2$ emissions shall be determined through the application of an emissions factor for the fuel type used. If this option is chosen, the following emissions factors shall be applied as appropriate.

10.5.5.4.1.1 Diesel fuel: 22.912 lbs. $CO_2$/gallon.

10.5.5.4.1.2 Gasoline: 19.878 lbs. $CO_2$/gallon.

10.5.5.4.1.3 Other fuel: submitted emissions factor approved by the Department.

10.5.5.4.2 Documentation of total tons of manure and organic food waste transported from off-site for input into the anaerobic digester during each reporting year, as monitored pursuant to 10.5.5.5.1 of this regulation, and a log of transport miles and fuel type used for each shipment. $CO_2$ emissions shall be determined through the application of a ton-mile transport emission factor for the fuel type used. If this option is chosen, the following emissions factors shall be applied as appropriate for each ton of manure delivered, and multiplied by the number of miles transported.

10.5.5.4.2.1 Diesel fuel: 0.131 lbs. $CO_2$ per ton-mile.

10.5.5.4.2.2 Gasoline: 0.133 lbs. $CO_2$ per ton-mile.

10.5.5.4.2.*3* Other fuel: submitted emissions factor approved by the Department.

10.5.5.5 *Monitoring and verification requirements.* Offset projects shall employ a system that provides metering of biogas volumetric flow rate and determination of $CH_4$ concentration. Annual monitoring and verification reports shall include monthly biogas volumetric flow rate and $CH_4$ concentration determination. Monitoring and verification shall also meet the following requirements.

10.5.5.5.1 If the offset project is a regional-type digester, manure and organic food waste from each distinct source supplying to the anaerobic digester shall be sampled monthly to determine the amount of volatile solids present. Any emissions reduction will be calculated according to mass of manure and organic food waste (kg) being digested and percentage of volatile solids present before digestion, consistent with the requirements at 10.5.5.3 and 10.5.5.5.3 of this regulation, and apportioned accordingly among sources. The project sponsor shall provide supporting material and receipts tracking the monthly receipt of manure and organic food waste (kg) used to supply the anaerobic digester from each supplier.

10.5.5.5.2 If the offset project includes the digestion of organic food waste eligible pursuant to 10.5.5.1.2 of this regulation, organic food waste shall be sampled monthly to determine the amount of volatile solids present before digestion, consistent with the requirements at 10.5.5.3 and 10.5.5.5.3 of this regulation, and apportioned accordingly.

10.5.5.5.3 The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program associated with equipment used to determine biogas volumetric flow rate and $CH_4$ composition. The monitoring and verification plan shall be specified in accordance with the applicable monitoring requirements listed in Table 10-3 ~~Table 10-5.~~ The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer's recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to 10.6 of this regulation.

10.5.5.5.4 The project sponsor shall verify biogas $CH_4$ composition quarterly through gas sampling and third party laboratory analysis using applicable U.S. EPA test methods.

**~~Table 10-5~~Table 10-3. Input Monitoring Requirements**

| Input Parameter | Measurement Unit | Frequency of Sampling | Sampling Method(s) |
|---|---|---|---|
| Influent flow (mass) into the digester | Kilograms (kg) per month (wet weight) | Monthly total into the digester | a) Recorded weight<br>b) Digester influent pump flow<br>c) Livestock population and application of American Society of Agricultural and Biological Engineers (ASABE) standard (ASAE D384.2, March 2005) |
| Influent total solids concentration (TS) | Percent (of sample) | Monthly, depending upon recorded variations | U.S. EPA Method Number 160.3, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020)<br>~~I-3750, "Solids, residue on evaporation at 105 degrees C, total, gravimetric," Methods for the Determination of Inorganic Substances in Water and Fluvial Sediments, Techniques of Water-Resources Investigations of the United States Geological Survey, Book 5, Chapter A1. Edited by Marvin J. Fishman and Linda C. Friedman.~~ |
| Influent volatile solids (VS) concentration | Percent (of TS) | Monthly, depending upon recorded variations | USEPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020) |
| Average monthly ambient temperature | Temperature $^{o}$C | Monthly (based on farm averages) | Closest National Weather Service-certified weather station |

10.6 Accreditation of independent verifiers

10.6.1 *Standards for accreditation*. Independent verifiers may be accredited by the Department to provide verification services as required of project sponsors under this Regulation, provided that independent verifiers meet all of the requirements of this regulation.

10.6.1.1 *Verifier minimum requirements*. Each accredited independent verifier shall demonstrate knowledge of the following topics:

10.6.1.1.1 Utilizing engineering principles;

10.6.1.1.2 Quantifying greenhouse gas emissions;

10.6.1.1.3 Developing and evaluating air emissions inventories:

10.6.1.1.4 Auditing and accounting principles;

10.6.1.1.5 Knowledge of information management systems;

10.6.1.1.6 Knowledge of the requirements of this Regulation and other applicable requirements of this Regulation; and

10.6.1.1.7 Such other qualifications as may be required by the Department to provide competent verification services as required for individual offset categories specified at 10.5 of this regulation.

10.6.1.2 *Organizational qualifications*. Accredited independent verifiers shall demonstrate that they meet the following requirements:

10.6.1.2.1 Verifiers shall have no direct or indirect financial relationship, beyond a contract for provision of verification services, with any offset project developer or project sponsor;

10.6.1.2.2 verifiers shall employ staff with professional licenses, knowledge, and experience appropriate to the specific category(ies) of offset projects at 10.5 of this regulation that they seek to verify;

10.6.1.2.3 Verifiers shall hold a minimum of one million U.S. dollars of professional liability insurance. If the insurance is in the name of a related entity, the verifier shall disclose the financial relationship between the verifier and the related entity, and provide documentation supporting the description of the relationship; and

10.6.1.2.4 verifiers shall demonstrate that they have implemented an adequate management protocol to identify potential conflicts of interest with regard to an offset project, offset project developer, or project sponsor, or any other party with a direct or indirect financial interest in an offset project that is seeking or has been granted approval of a consistency application pursuant to 10.4.5 of this regulation, and remedy any such conflicts of interest prior to providing verification services.

10.6.1.3 *Pre-qualification of verifiers*. The Department may require prospective verifiers to successfully complete a training course, workshop, or test developed by the Department or its agent, prior to submitting an application for accreditation.

10.6.2 *Application for accreditation*. An application for accreditation shall not contain any proprietary information, and shall include the following:

10.6.2.1 The applicant's name, address, e-mail address, telephone number, and facsimile transmission number;

10.6.2.1.1 Documentation that the applicant has at least two years of experience in each of the knowledge areas specified at 10.6.1.1.1 through 10.6.1.1.5 of this regulation, and as may be required pursuant to 10.6.1.1.7 of this regulation;

10.6.2.1.2 Documentation that the applicant has successfully completed the requirements at 10.6.1.3 of this regulation, as applicable;

10.6.2.1.3 A sample of at least one work product that provides supporting evidence that the applicant meets the requirements at 10.6.1.1 and 10.6.1.2 of this regulation. The work product shall have been produced, in whole or part, by the applicant and shall consist of a final report or other material provided to a client under contract in previous work. For a work product that was jointly

produced by the applicant and another entity, the role of the applicant in the work product shall be clearly explained;

10.6.2.1.4 Documentation that the applicant holds professional liability insurance as required pursuant to 10.6.1.2.3 of this regulation.

10.6.2.1.5 Documentation that the applicant has implemented an adequate management protocol to address and remedy any conflict of interest issues that may arise, as required pursuant to 10.6.1.2.4 of this regulation.

10.6.3 *Department action on applications for accreditation*. The Department shall approve or deny a complete application for accreditation within 45 days after submission. Upon approval of an application for accreditation, the independent verifier shall be accredited for a period of three years from the date of application approval

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10.6.4 *Reciprocity*. Independent verifiers accredited in other participating states may be deemed to be accredited in the State of Delaware, at the discretion of the Department.

10.6.5 *Conduct of accredited verifiers*.

10.6.5.1 Prior to engaging in verification services for an offset project sponsor, the accredited verifier shall disclose all relevant information to the department to allow for an evaluation of potential conflict of interest with respect to an offset project, offset project developer, or project sponsor. The accredited verifier shall disclose information concerning its ownership, past and current clients, related entities, as well as any other facts or circumstances that have the potential to create a conflict of interest.

10.6.5.2 Accredited verifiers shall have an ongoing obligation to disclose to the Department any facts or circumstances that may give rise to a conflict of interest with respect to an offset project, offset project developer, or project sponsor.

10.6.5.3 The Department may reject a verification report and certification statement from an accredited verifier, submitted as part of a consistency application required pursuant to 10.4.2 of this regulation or submitted as part of a monitoring and verification report submitted pursuant to 10.7.2 of this regulation, if the Department determines that the accredited verifier has a conflict of interest related to the offset project, offset project developer, or project sponsor.

10.6.5.4 The Department may revoke the accreditation of a verifier at any time given cause, for the following:

10.6.5.4.1 Failure to fully disclose any issues that may lead to a conflict of interest situation with respect to an offset project, offset project developer, or project sponsor;

10.6.5.4.2 The verifier is no longer qualified due to changes in staffing or other criteria;

10.6.5.4.3 Negligence or neglect of responsibilities pursuant to the requirements of this Regulation; and

10.6.5.4.4 Intentional misrepresentation of data or other intentional fraud.

10.7 Award and Recordation of $CO_2$ offset allowances.

10.7.1 *Quantities of $CO_2$ offset allowances awarded, and subsequently recorded*.

10.7.1.1 Award of *$CO_2$ offset allowances.*

10.7.1.1.1 *$CO_2$ emissions offset projects*. Following the issuance of a consistency determination under 10.4.5.2 of this regulation and the approval of a monitoring and verification report under the provisions of 10.7.5 of this regulation, the Department will award one $CO_2$ offset allowance for each ton of demonstrated reduction in $CO_2$ or $CO_2$ equivalent emissions or sequestration of $CO_2$.

~~10.7.1.1.2 *$CO_2$ emissions credit retirement*. If a project sponsor received a consistency determination pursuant to 10.4.5.2 of this regulation, one $CO_2$ offset allowance will be awarded for each ton of reduction of $CO_2$ or $CO_2$ equivalent or sequestration of $CO_2$, represented by the relevant credits or allowances retired. If a credit or allowance is represented in metric tons, 1.1023 tons will be awarded for every metric ton, provided that total $CO_2$ offset allowances awarded shall be rounded down to the nearest whole ton.~~

10.7.1.2 Recordation of $CO_2$ offset allowances. After $CO_2$ offset allowances are awarded under 10.7.1.1 of this regulation, the Department shall record such $CO_2$ offset allowances in the project sponsor's general account.

10.7.2 *Deadlines for submittal of monitoring and verification reports*.

10.7.2.1 For $CO_2$ emissions offset projects undertaken prior to January 1, 2009, the project sponsor must submit the monitoring and verification report covering the pre-2009 period by June 30, 2009.

10.7.2.2 For $CO_2$ emissions offset projects undertaken on or after January 1, 2009, the monitoring and verification report must be submitted within 6 months following the completion of the last calendar year during which the offset project achieved $CO_2$ equivalent reductions or sequestration of $CO_2$ for which the project sponsor seeks the award of $CO_2$ offset allowances.

10.7.3 *Contents of monitoring and verification reports.* For an offset project, the monitoring and verification report must include the following information.

10.7.3.1 The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number.

10.7.3.2 The $CO_2$ emissions reduction or $CO_2$ sequestration determination as required by the relevant provisions of 10.5 of this regulation, including a demonstration that the project sponsor complied with the required quantification, monitoring, and verification procedures under 10.5 of this regulation, as well as those outlined in the consistency application approved pursuant to 10.4.5.2 of this regulation.

10.7.3.3 A signed statement that reads

"The undersigned project sponsor hereby confirms and attests that the offset project upon which this monitoring and verification report is based is in full compliance with all of the requirements of the $CO_2$ Budget Trading Program. The project sponsor holds the legal rights to the offset project, or has been

granted the right to act on behalf of a party that holds the legal rights to the offset project.

I understand that eligibility for the award of $CO_2$ offset allowances under the $CO_2$ Budget Trading Program is contingent on meeting the requirements of the $CO_2$ Budget Trading Program. I authorize the Department or its agent to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in the consistency application that was the subject of a consistency determination by the Department.

I understand that this right to audit shall include the right to enter the physical location of the offset project and to make available to the Department or its agent any and all documentation relating to the offset project at the Department's request. I submit to the legal jurisdiction of the State of Delaware."

10.7.3.4 A certification signed by the offset project sponsor certifying that all offset projects for which the sponsor has received offset allowances under this Regulation (or similar provisions in the rules of other participating states), under the sponsor's ownership or control (or under the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor) are in compliance with all applicable requirements of the $CO_2$ Budget Trading Program in all participating states.

10.7.3.5 A verification report and certification statement signed by an independent verifier accredited pursuant to 10.6 of this regulation that documents that the independent verifier has reviewed the monitoring and verification report and evaluated the following in relation to the applicable requirements at 10.5 of this regulation, and any applicable guidance issued by the Department.

10.7.3.5.1 The adequacy and validity of information supplied by the project sponsor to determine $CO_2$ emissions reductions or $CO_2$ sequestration pursuant to the applicable requirements at 10.5 of this regulation.

10.7.3.5.2 The adequacy and consistency of methods used to quantify, monitor, and verify $CO_2$ emissions reductions and $CO_2$ sequestration in accordance with the applicable requirements at 10.5 of this regulation and as outlined in the consistency application approved pursuant to 10.4.5.2 of this regulation.

10.7.3.5.3 Such other evaluations and verification reviews as may be required by the Department. The adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of 10.5 of this regulation.

10.7.3.6 Disclosure of any voluntary or mandatory programs, other than the $CO_2$ Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been, or will be reported.

10.7.3.7 For offset projects located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.

10.7.4 Prohibition against filing monitoring and verification reports in more than one participating state. Monitoring and verification reports may only be filed under 10.7 of this regulation for projects that have received consistency determinations under 10.4.5.2 of this regulation Monitoring and Verification reports may not be filed under 10.7 of this regulation for projects that have received consistency determinations in other participating states.

10.7.5 *Department action on monitoring and verification reports*. The Department will approve or deny a complete monitoring and verification report, in a format approved by the Department, filed with the Department pursuant to 10.7.4 of this regulation, within 45 days following receipt of a complete report. A complete monitoring and verification report is one that is in an approved form and is determined by the Department to be complete for the purpose of commencing review of the monitoring and verification report. In no event shall a completeness determination prevent the Department from requesting additional information in order to enable the Department to approve or deny a monitoring and verification report submitted in a format approved by the Department, and filed under 10.7 of this regulation.

~~11/11/08~~ xx/xx/2013

**11.0 $CO_2$ Allowance Auction**

11.1 Purpose

The purpose of this section is to provide for the administration and implementation by the Department of $CO_2$ Allowance Auctions and programs to promote the purposes of the $CO_2$ Budget Trading Program.

11.2 RESERVED

11.3 Multi-State Auctions

11.3.1 The Department shall participate in a multi-state $CO_2$ Allowance Auction or Auctions if the Department determines, in consultation the Delaware Public Service Commission that:

11.3.1.1 A multi-state auction capability and process is in place for the Participating States;

11.3.1.2 The multi-state auction can provide benefits that meet or exceed the objectives of the auction and purposes of the Account, as described in this Regulation, and;

11.3.1.3 The multi-state auction process would be consistent with the process described in this regulation.

11.3.2 Should the Department, in consultation with the Public Service Commission, find that these conditions have not been satisfied, the Department may conduct a Delaware State auction or auctions pursuant to this regulation or may take such other action as the Secretary deems appropriate.

11.3.3 Proceeds associated with the sale of all of State of Delaware's $CO_2$ Allowances, whether sold in a multi-state or a Delaware State $CO_2$ Allowance Auction shall be generated and appropriated as provided for in 7 Del C Chapter IIA Regional Greenhouse Gas Initiative and CO2 Emission Trading Program.

11.4 Implementation of $CO_2$ Allowance Auctions

11.4.1 The Department may design, implement and administer $CO_2$ Allowance Auctions in the event a regional auction is not held or does not meet the needs of the Department or this regulation. The Department shall make every effort to participate in a regional auction if at all possible.

11.4.2 Implementation and administrative support functions for any auction conducted pursuant to this Regulation and with respect to the administration of the Account may be delegated by the Department to a contractor deemed qualified by the Department to perform such functions, provided that such designee shall perform all such functions under the direction and oversight of the Department.

11.5 Commencement, Frequency and Quantity of $CO_2$ Allowance Auctions

11.5.1 **Commencement**: The Department or its agent shall participate in or conduct $CO_2$ Allowance Auctions to sell such allowances pursuant to this regulation. The initial auction shall be conducted at such time and manner as determined by the Department in consultation with the Delaware Public Service Commission.

11.5.2 **Frequency:** $CO_2$ Allowance Auctions will be held ~~quarterly, or~~ as often as practical and necessary to effectuate the objectives of the $CO_2$ Program.

11.5.3 **Calendar:** The Department or its agent shall maintain a calendar of anticipated auction dates on its Website. The calendar shall indicate the auction format and the number of allowances and allocation years of allowances to be auctioned at each auction. The Department or its agent may periodically revise the calendar, provided that the information relevant to the next scheduled $CO_2$ Allowance Auction shall be fixed no later than 45 calendar days prior to such auction. The calendar shall include the dates of at least the next four (4) $CO_2$ Allowance Auctions and may also include the anticipated number of allowances to be auctioned at each Auction. The Department or its agent may periodically modify the anticipated dates of Auctions listed on such calendar.

11.5.4 **Quantity**: Prior to the end of each Control Period, $CO_2$ Allowances for such Control Period will be made available for sale. $CO_2$ Allowances will be made available for sale by allocation year. Up to 50% of the allowances from an allocation year may be made available for sale in advance of the respective allocation year; such allowances may be made available for sale up to four (4) years in advance of such allocation year. Specific quantities of $CO_2$ Allowances that will be offered for sale will be included in each Notice of $CO_2$ Allowance Auction.

11.5.5 **Lot Sizes**: The Department shall make $CO_2$ Allowances available for sale in lot sizes of 1,000 allowances, except where available supply requires a smaller lot size.

11.5.6 **Reserve Price**: In administering Auctions, the Department may employ the use of a Reserve Price and the Department shall publish or announce such reserve price prior to each $CO_2$ Allowance Auction.

11.5.7 **Unsold Allowances**: Unsold $CO_2$ Allowances may be made available for sale in subsequent auctions or after consultation with the Public Service Commission.

11.6 Action Format

The initial auction shall be conducted as a Single Round Sealed-Bid Uniform Price Auction. The Department, in consultation with the Delaware Public Service Commission, may employ a Single Round Sealed-Bid Uniform Price Auction or an Ascending Price, Multiple Round Auction in subsequent auctions or such other auction design as determined by the Department.

11.7 Participant Eligibility and Limitations

11.7.1 The owners or operators of $CO_2$ Budget Units located in the State of Delaware shall be eligible to participate in all auctions.

11.7.2 Categories of bidders that may be eligible to participate in auctions include but are not limited to:

11.7.2.1 Owners or operators of $CO_2$ Budget Units within a Participating State

11.7.2.2 Owners or operators of a generation source located outside of the Participating States,

11.7.2.3 Brokers,

11.7.2.4 Environmental groups,

11.7.2.5 Financial and investment institutions, and

11.7.2.6 Other market participants.

11.7.3 The Department, in consultation with the Delaware Public Service Commission, may preclude or limit the participation of any one or all of the categories of bidders. Notification of eligible categories of bidders will be included in each Notice of $CO_2$ Allowance Auction.

11.7.4 Any party wishing to participate in a $CO_2$ Allowance Auction will be required to open and maintain a compliance or general account pursuant to the provisions in 6.0 of this regulation.

11.7.5 Limitations: Participation in any auction may be limited to the level of financial security provided.

11.7.6 The Department may institute a purchasing and/or bidding limitation in each auction. In no instance shall this limitation be greater than 25% of the allowances available in an auction not including the CCR. Any such limitations shall be included in the Notice of $CO_2$ Allowance Auction.

11.7.7 Any applicant or bidder that has been found to have violated any rule, regulation, or law associated with any commodity market or exchange may be denied eligibility or precluded from participation in $CO_2$ Allowance Auctions.

11.8 Participation Requirements

11.8.1 **Qualification**: Any party wishing to participate in a $CO_2$ Allowance Auction or Auctions shall submit an application for qualification in the form and manner provided in the Notice of $CO_2$ Allowance Auction to the Department or its agent on or before the application

deadline date specified in the Notice of $CO_2$ Allowance Auction. As a part of their application, applicants will be required to provide information and documentation relating to their ability and authority to execute bids and honor contractual obligations. Such documentation may include but may not be limited to:

11.8.1.1 Information and documentation regarding the corporate identity, ownership, affiliations, and capital structure of the applicant;

11.8.1.2 Declarations as to the beneficial ownership of any allowance that may be acquired through the auction;

11.8.1.3 The identification of any indictment or felony conviction of any member, director, principle, partner or officer of the applicant or any affiliate or related entity;

11.8.1.4 The identification of any previous or pending investigation with respect to any alleged violation of any rule, regulation, or law associated with any commodity market or exchange.

11.8.1.5 Evidence demonstrating that such applicant has opened a general or compliance account as provided for in the provisions in 6.0 of this regulation and identification of relationships with any other account holder.

11.8.1.6 Applicants may be denied qualification based on the information provided or upon information as to such applicant obtained independent of the application process.

11.8.2 The Department or its agent will review each application for qualification and make determinations as to qualification to participate or otherwise submit bids in $CO_2$ Allowance Auctions. Failure to provide any information required by the Notice of $CO_2$ Allowance Auction may result in the application being declared incomplete or otherwise deficient. If an application for qualification is determined to be incomplete or otherwise deficient, the Department or its agent shall notify the Applicant and state the reason therefore. The Department may offer an opportunity for the applicant to remedy their application by the deadline pursuant to the Auction Notice. Qualified applicants will be notified by the Department or its agent pursuant to the Auction Notice.

11.8.3 Parties found qualified for participation under 11.8.2 of this regulation will be qualified for subsequent $CO_2$ Allowance Auctions, and will be qualified to participate in such auctions within the financial security limitations of 11.8.8 of this regulation; provided that there has been no material change to the information provided in the application, that the party is within one of the categories of eligible bidders described in the Notice of $CO_2$ Allowance Auction for such auction, and such party meets all other requirements for participation. Any party found qualified shall notify the Department of any material change in the information provided in the application for qualification by the date on which qualification applications for the next auction are due. Such notification shall state the date the change occurred and describe the change in sufficient detail to enable the Department or its agent to determine if a change in the qualification status to participate in future auctions is warranted.

11.8.4 The Department may require parties previously found qualified to up-date and re-file applications for qualification on an annual basis or as requested by the Department.

11.8.5 The Department may suspend or revoke previously granted qualification of any party if such party fails to comply with this section and/or the provisions of this regulation.

11.8.6 Bid Submittal Instructions. All bids shall be in a form prescribed by the Department, which shall be made available electronically on the $CO_2$ Allowance Auction Website, as appropriate. All bids submitted will be considered binding offers for the purchase of allowances under the rules of the auction, and this regulation.

11.8.7 If the Department determines that a bidder has provided false or misleading information, or has withheld pertinent information in its application, or has otherwise failed to comply with any material provision of this Regulation or has violated any part of the auctions rules, the bidder may be prohibited from participating in any future $CO_2$ Allowance Auctions.

11.8.8 To receive approval to participate in any specific auction, otherwise qualified bidders will be required to provide financial security in the form of a bond, cash, certified funds, or an irrevocable stand-by letter of credit, in a form acceptable to the Department. Financial security shall be provided in a form and manner as described in the Notice of $CO_2$ Allowance Auction.

11.8.8.1 Parties who have posted financial security may request return of their financial security at any time prior to or following any $CO_2$ Allowance Auction, and the Department shall return said financial security provided that the Department has no current or pending claim to such security as a result of a failure of the party to comply with these regulations or to pay the full amount of its accepted bid when due.

11.8.8.2 Financial security may be forfeited to and retained by the Department or its agent in the event the bidder's offer is accepted in a $CO_2$ Allowance Auction and the bidder fails to tender payment of the full amount when due.

11.9 Notice of Auctions

11.9.1 A Notice of $CO_2$ Allowance Auction ("Notice") shall be published on the $CO_2$ Allowance Auction Website no later than 45 days prior to the date upon which each auction may be conducted. Such Notices may be transmitted electronically to parties requesting such notification provided they have submitted an electronic-mail address to the Department or its agent.

11.9.2 Each Notice will provide a specific description of all auction participation requirements, and shall include but not be limited to information including the date, time and location of the $CO_2$ Allowance Auction, the categories of bidders who will be eligible to bid, the quantity of $CO_2$ Allowances to be auctioned, the auction format, amount and type of security required, any participation limitations, information regarding settling and clearing of allowance payments, instructions as to qualification applications, a standard allowance purchase and sale contract, other pertinent rules of the auction, and provide a point of contact for further information.

11.10 Auction Reporting and Transfer of $CO_2$ Allowances

An independent monitor such as a certified public accounting firm or similar entity shall observe the conduct and outcome of each auction and issue a report to the Department or its agent in accordance with professional auditing standards addressing whether the auction was conducted in accordance with the rules and procedures in the respective Notice of $CO_2$ Allowance Auction. Upon receipt and approval by the Department of the report and upon payment in full by successful bidders, the Department shall transfer or have transferred the

corresponding $CO_2$ Allowances to each successful bidder's applicable compliance or general account.

11.11 Auction and Secondary Market Monitoring

11.11.1 In advising the Department or its agent, the professional independent auction monitor will monitor each $CO_2$ Allowance Auction and develop and apply data collection methods, metrics, and analytic techniques, and thresholds for identifying any bidding behavior or activity that may have a significant impact on the efficiency and performance of such auctions, including, but not limited to:

11.11.1.1 Collusion,

11.11.1.2 Market power, and/or

11.11.1.3 Price manipulation.

11.11.2 The independent auction monitor shall also monitor allowance market data and information known to the Department including allowance transactions and associated pricing reported in the $CO_2$ Allowance Tracking System, and other relevant data and information to ensure fair competition, efficient pricing, and protection against collusive or manipulative behavior in the $CO_2$ Allowance Auctions and the $CO_2$ Budget Trading Program.

11.12 Anti-deceptive Practices.
It is unlawful for a bidder to use or employ any manipulative, misleading, or deceptive practice in connection with its prequalification application or purchase of allowances from the Department, including but not limited to any practice that is in contravention of any applicable federal or state law or regulation.

11.13 Publication of Results
Within 10 days of the Transfer of $CO_2$ Allowances provided for under 11.10 of this regulation, the Department shall publish on its website the auction clearing price and the total amount of Allowances sold in such Auction.

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