**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR RESOURCES**

# AIR POLLUTION CONTROL REGULATION NO. 46

# $CO_2$ Budget Trading Program

*Effective: July 22, 2008*

AUTHORITY: These regulations are authorized pursuant to R.I. Gen. Laws §42-17.1-2(s), §23-23 and §23-82, as amended, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws Chapter 42-35.

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46.1. **Definitions**

Unless otherwise expressly defined in this section, the terms used in this regulation shall be defined by reference to the Rhode Island Air Pollution Control General Definitions Regulation. As used in these regulations, the following terms shall, where the context permits, be construed as follows:

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

46.1.2 **"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 federal Clean Air Act.

46.1.3 **"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 federal Clean Air Act and 40 CFR Parts 72 through 78.

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

46.1.5 **"Agent"** means an independent contractor, United States Environmental Protection Agency (USEPA), consumer trustee, or other entity including a regional entity.

46.1.6 **"Allocate" or "allocation"** means the determination by the Department of the number of $CO_2$ allowances to be recorded in the Voluntary Renewable Energy Market Set-aside Account or the Rhode Island Auction/Sale Account.

46.1.7 **"Allocation period"** means the maximum number of years for which the Department may award $CO_2$ offset allowances to a project for a given consistency determination pursuant to section 46.13.

46.1.8 **"Allocation year"** means a calendar year for which the Department allocates or awards $CO_2$ allowances pursuant to sections 46.4 and 46.13. The

allocation year of each $CO_2$ allowance is reflected in the unique identification number given to the allowance pursuant to subsection 46.8.4(b).

46.1.9 **"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 section 46.5, 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 section 46.8, 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 designated representative under the Acid Rain Program.

46.1.10 **"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.

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

46.1.12 "**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.

46.1.13 "**ANSI"** means American National Standards Institute.

46.1.14 **"ASHRAE"** means American Society of Heating, Refrigerating and Air-Conditioner Engineers.

46.1.15 "**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.

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

46.1.17 **"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 sections 46.9 and 46.10, 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 section 46.9 and 46.10.

46.1.18 **"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 section 46.4, 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 section 46.13. Award is a type of allocation.

46.1.19 "**Billing meter"** means a measurement device used to measure electric or thermal output for commercial billing under a contract where the facility selling the electric or thermal output has different owners from the owners of the party purchasing the electric or thermal output.

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

46.1.21 **"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.

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

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

46.1.24 "**British thermal unit" or "Btu"** means the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit.

46.1.25 **"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 including all elements that separate the interior of a building from the outdoor environment, including walls, windows, foundation, basement slab, ceiling, roof, and insulation.

46.1.26 **"$CO_2$"** means carbon dioxide**.**

46.1.27 **"$CO_2$ 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.

46.1.28 **"$CO_2$ 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 sections 46.9 and 46.10, or for the forfeit or retirement of $CO_2$ allowances as provided by this regulation.

46.1.29 **"$CO_2$ 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.

46.1.30 **"$CO_2$ 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 sections 46.7 and 46.8, in a $CO_2$ Allowance Tracking System account.

46.1.31 **"$CO_2$ 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.

46.1.32 **"$CO_2$ 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.

46.1.33 **"$CO_2$ allowance transfer deadline"** means midnight of the March 1 occurring after the end of the relevant control period or, 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 under subsection 46.3.1 for the control period immediately preceding such deadline.

46.1.34 **"$CO_2$ 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 section 46.5, 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 section 46.8 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 designated representative under the Acid Rain program.

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

46.1.36 **"$CO_2$ budget permit"** means the legally binding written document or portion of a title V operating permit, issued by the Department under this regulation to a $CO_2$ budget source or $CO_2$ budget unit that 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.

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

46.1.38 **"$CO_2$ Budget Trading Program"** means a multi-state $CO_2$ 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.

46.1.39 **"$CO_2$ budget unit"** means a unit that is subject to the $CO_2$ Budget Trading Program requirements under section 46.2.

46.1.40 **"$CO_2$ equivalent" or "$CO_2e$"** means the quantity, in tons, of a given greenhouse gas multiplied by its global warming potential.

46.1.41 **"$CO_2$ offset allowance"** means a $CO_2$ allowance that is awarded to the sponsor of a $CO_2$ emissions offset project pursuant to subsection 46.13.6 and is subject to the relevant compliance deduction limitations of 46.8.5(a)(3).

46.1.42 **"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.

46.1.43 **"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.

46.1.44 **"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 section 46.2 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 section 46.2 on the date the unit commences commercial operation, the date the unit becomes a $CO_2$ budget unit under section 46.2 shall be the unit's date of commencement of commercial operation.

46.1.45 **"Commence operation"** means to have begun 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 subsection 46.2 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 subsection 46.2 on the date of commencement of operation, the date the unit becomes a $CO_2$ budget unit under subsection 46.2 shall be the unit's date of commencement of operation.

46.1.46 **"Commercial building"** means a building to which the provisions of ANSI/ASHRAE/IESNA Standard 90.1-2007 apply, except single family homes, multifamily residential structures of three stories or fewer above grade, and manufactured homes (modular and mobile).

46.1.47 **"Compliance account"** means a $CO_2$ Allowance Tracking System account, established by the Department or its agent for a $CO_2$ budget source under section 46.8, in which the $CO_2$ allowances for the source are held and available for use by the source for a control period for the purpose of meeting the $CO_2$ requirements of subsection 46.3.1.

46.1.48 **"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.

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

46.1.50 **“Continuous emissions monitoring system” or "CEMS”** means the equipment required under sections 46.8 to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated DAHS) and 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 Part 75 and sections 46.9 and 46.10.

46.1.51 **“Control period**” means a three calendar-year 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 that 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 oneyear 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.

46.1.52 **“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 noncompliance with this regulation.

46.1.53 **“DAHS”** means data acquisition and handling system.

46.1.54 **“Department”** means the Rhode Island Department of Environmental Management.

46.1.55 **“Eligible biomass”** means 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, and biogas derived from such fuel sources. Liquid biofuels do not qualify as eligible biomass. Sustainably harvested will be determined by the Department.

46.1.56 **“Energy conservation measure” or “ECM” or “energy efficiency measure” or “EEM”** means an activity or a set of activities designed to

increase the energy efficiency of a building or improve the management of energy demand and may include, but not be limited to, 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.

46.1.57 **"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.

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

46.1.59 **"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.

46.1.60 **"Forested condition"** means land that:

(a) Is at least 1.0 acre in size and 120.0 feet wide measured stem-to-stem from the outer-most edge with forested strips that must be 120.0 feet wide for a continuous length of at least 363.0 feet in order to meet the acre threshold; and

(b) Meets at least one of the two following stocking criteria:

(1) The land is at least 10-percent stocked by trees of any size or has been at least 10-percent stocked in the past, and the land 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

(2) In several western woodland species where stocking cannot be determined, the land 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.

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

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

(a) 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.

(b) With regard to a unit that commenced 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.

46.1.63 **"Furnace (residential)"** means a self-contained, indirect-fired appliance that supplies heated air to a residential building through ducts to conditioned spaces.

46.1.64 **"General account"** means a $CO_2$ Allowance Tracking System account, established under section 46.8 that is not a compliance account.

46.1.65 **"Global warming potential" or "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, Third Assessment report, the Scientific Basis (Working Group I), chapter 6, section 12, pages (385-391) (2001).

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

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

46.1.68 **"Hr"** means hour.

46.1.69 **"IESNA"** means the Illuminating Engineering Society of North America.

46.1.70 **"Independent verifier"** means an individual that has been approved by the Department or its agent to conduct verification activities with regard to $CO_2$ emissions offset projects.

46.1.71 **"Lb"** means pound.

46.1.72 **"Life-of-the-unit firm power contractual arrangement"** means a unit participation power sales agreement under which a utility or industrial customer reserves, or is entitled to receive, a specified amount or percentage of nameplate capacity and associated energy from any specified unit and pays its proportional amount of such unit's total costs, pursuant to a contract:

(a) For the life of the unit; or

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

(c) 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.

46.1.73 **"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.

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

46.1.75 **"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.

46.1.76 **"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 Part 75 to report heat input, this value should be calculated, in accordance with 40 CFR Part 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 Part 75, using the maximum potential flowrate and either the maximum carbon dioxide concentration (in percent $CO_2$) or the minimum oxygen concentration (in percent $O_2$).

46.1.77 **"Monitoring system"** means any monitoring system that meets the requirements of section 46.9, including a continuous emission monitoring system, an excepted monitoring system, or an alternative monitoring system.

46.1.78 **"Megawatt" or "MW"** means a unit of power equal to 1000 kilowatts or 1,000,000 watts.

46.1.79 **"MMBtu"** means one million British thermal units.

46.1.80 **"MWe"** means megawatt electrical.

46.1.81 **"Megawatt-hour" or "MWH"**means the amount of power (in megawatts) used or produced in an hour.

46.1.82 **"Nameplate capacity"** means the maximum electrical output (in MWe) that an electric generating unit can sustain over a specified period of time when not restricted by seasonal or other deratings as measured in accordance with the United States Department of Energy standards.

46.1.83 **"Non-census water"** means streams, sloughs, estuaries and canals more than 120 feet and less than 1/8 of a mile wide and lakes, reservoirs and ponds 1 to 40 acres in size.

46.1.84 **"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. Land intermingled with forest areas, unimproved roads and non-forest strips and more than 120.0 feet wide, and clearings more than one acre in size, are not non-forest condition land.

46.1.85 **"Offset project"** means 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 subsection 46.13.3.

46.1.86 **"On-site combustion"** means the combustion of fossil fuel at a building to provide heat, hot water or electricity.

46.1.87 **"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.

46.1.88 **"Owner"** means any of the following persons:

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

(b) 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

(c) 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

(d) 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.

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

46.1.90 **"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.

46.1.91 **"Permanently retired"** means a $CO_2$ allowance or $CO_2$ offset allowance that has been placed in a retirement account controlled by the jurisdiction that generated the $CO_2$ allowance or $CO_2$ offset allowance, 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.

46.1.92 **"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.

46.1.93 **"RESNET"** means the Residential Energy Services Network.

46.1.94 **"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.

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

46.1.96 **"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 referred to as a "community digester" or "centralized digester."

46.1.97 **"Renewable energy"** means electricity generated from biomass, wind, solar thermal, photovoltaic, geothermal, hydroelectric facilities certified by the Low Impact Hydroelectric Institute, wave and tidal action and fuel cells powered by renewable fuels.

46.1.98 **"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.

46.1.99 **"Residential building"** means a low-rise structure used as a single family home of three or fewer stories above grade, or a modular or mobile manufactured home for which the provisions of ANSI/ASHRAE/IESNA Standard 90.1-2007 do not apply.

46.1.100 "**Rhode Island Auction/Sale Account"** means an account administered by the Department or its agent for purposes of auctioning or selling $CO_2$ allowances.

46.1.101 **"Rhode Island $CO_2$ Budget Trading Program Base Budget"** means the annual amount of $CO_2$ tons available in Rhode Island for allocation in a given allocation year, in accordance with the $CO_2$ Budget Trading Program. $CO_2$ offset allowances and Early Reduction $CO_2$ Allowances awarded are separate from and additional to $CO_2$ allowances allocated from the Rhode Island $CO_2$ Budget Trading Program Base Budget.

46.1.102 **"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 subsection 46.8.4(b).

46.1.103 **"Short ton"** means a measure of weight equal to two thousand pounds or 0.9072 metric tons.

46.1.104 **"$SF_6$"** means sulfur hexafluoride.

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

46.1.106 **"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 under the federal Clean Air Act. For purposes of section 502(c) of the federal Clean Air Act, a "source," including a "source" with multiple units, shall be considered a single "facility."

46.1.107 **"Sponsor"** or **"Project Sponsor"** means any person who meets the requirements of the $CO_2$ authorized account representative for the general account of an eligible $CO_2$ emissions offset project or $CO_2$ emissions credit retirement.

46.1.108 **"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.

46.1.109 "**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.

46.1.110 **"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.

46.1.111 **"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.

46.1.112 **"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.

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

(a) in person;
(b) by United States Postal Service; or
(c) 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.

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

46.1.115 "**Title V operating permit"** means an operating permit issued under Air Pollution Control Regulation No. 29 – "Operating Permits".

46.1.116 **"Ton" or "tonnage"** means any short ton. For the purpose of determining compliance with the $CO_2$ requirements of subsection 46.3.1, total tons for a

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 section 46.9 and 46.10, 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.

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

46.1.118 **"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, including 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.

46.1.119 **"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.

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

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

46.1.122 **"Verification"** means the verification by an independent verifier that certain parts of a $CO_2$ emissions offset project consistency application or measurement, monitoring and verification report conforms to the requirements of section 46.13 of this regulation.

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

46.1.124 **"Voluntary renewable energy purchase"** means a purchase of electricity from renewable energy generation or renewable energy attribute credits by a retail electricity customer on a voluntary basis. Renewable energy includes electricity generated from biomass, wind, solar thermal, photovoltaic, geothermal, hydroelectric facilities certified by the Low Impact Hydropower Institute, wave and tidal action, and fuel cells powered by renewable fuels. The renewable energy generation or renewable energy attribute credits related to such purchases may not be used by the generator or purchaser to meet any regulatory mandate, such as a renewable portfolio standard.

46.1.125 **"Voluntary renewable energy market set-aside account"** means an account established by the Department to hold $CO_2$ allowances that are allocated pursuant to subsection 46.4.3(c).

46.1.126 **"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.

46.1.127 **"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.

46.1.128 **"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.

## 46.2 Applicability

46.2.1 General applicability.

(a) 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.

## 46.3 General Requirements

46.3.1 Carbon dioxide requirements.

(a) 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 subsection 46.8.5, 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 control period from all $CO_2$ budget units at the source, as determined in accordance with sections 46.8, 46.9 and 46.10 of this regulation.

(b) Each ton of $CO_2$ emitted in excess of the $CO_2$ budget emissions limitation shall constitute a separate violation of this regulation and applicable State law.

(c) A $CO_2$ budget unit shall be subject to the requirements under 46.3.1(a) of this subsection starting on the later of January 1, 2009 or the date on which the unit commences operation.

(d) $CO_2$ allowances shall be held in, deducted from, or transferred among $CO_2$ Allowance Tracking System accounts in accordance with sections 46.4, 46.7 46.8 and subsection 46.13.6 of this regulation.

(e) A $CO_2$ allowance shall not be deducted, in order to comply with the requirements under 46.3.1(a) of this subsection, for a 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 46.3.1(a) of this subsection, beyond the applicable percent limitations set out in 46.8.5(a)(3).

(f) 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, 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.

(g) A $CO_2$ allowance under the $CO_2$ Budget Trading Program does not constitute a property right.

46.3.2 Excess emissions requirements.

(a) The owners and operators of a $CO_2$ budget source that has excess emissions in any control period shall:

(1) Forfeit the $CO_2$ allowances required for deduction under subsection 46.8.5(d)(1); provided $CO_2$ offset allowances may not be used to cover any part of such excess emissions; and

(2) Pay any fine, penalty, or assessment or comply with any other remedy imposed under subsection 46.8.5(d)(2).

46.3.3 Recordkeeping and reporting requirements.

(a) 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) 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 subsection 46.5.5, 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.

(2) All emissions monitoring information, in accordance with sections 46.9, 46.10 and 40 CFR 75.57.

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

(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.

(b) 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 sections 46.9, 46.10 and 46.11 of this regulation.

46.3.4 Monitoring requirements.

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 sections 46.9 and 46.10.

46.3.5 Liability.

(a) 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.

(b) 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.

(c) 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.

(d) Any person who negligently, willingly or knowingly violates any requirement or prohibition of the $CO_2$ Budget Trading Program or a $CO_2$ budget permit shall be subject to enforcement pursuant to applicable law.

(e) Any person who negligently, willingly or knowingly makes a false material statement in any record, submission, or report under the $CO_2$ Budget Trading Program shall be subject to criminal enforcement pursuant to applicable law.

(f) Each $CO_2$ budget source and each $CO_2$ budget unit shall meet the requirements of the $CO_2$ Budget Trading Program.

46.3.6 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 provision of any Air Pollution Control Regulation, the Rhode Island State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

46.3.7 Computation of time.

(a) 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.

(b) 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.

(c) 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 or Federal holiday, the time period shall be extended to the next business day.

46.3.8 Indemnification.

Any and all persons subject to these regulations agree to indemnify and hold the Department harmless in the event of any dispute over their authority to submit any information to the Department and over their appointment as an authorized account representative or an alternate account representative.

## 46.4 $CO_2$ Allowance Allocations

46.4.1 Rhode Island $CO_2$ trading program base budget is as follows:

(a) The Rhode Island $CO_2$ Budget Trading Program base budget is 2,659,239 tons annually for the 2009 through 2014 allocation years.

(b) The Rhode Island $CO_2$ Budget Trading Program base budget is 2,592,758 tons for the 2015 allocation year.

(c) The Rhode Island $CO_2$ Budget Trading Program base budget is 2,526,277 tons for the 2016 allocation year.

(d) The Rhode Island $CO_2$ Budget Trading Program base budget is 2,459,796 tons for the 2017 allocation year.

(e) The Rhode Island $CO_2$ Budget Trading Program base budget is 2,393,315 tons, annually for the 2018 allocation year and each succeeding allocation year.

46.4.2 Timing requirements for $CO_2$ allowance allocations.

(a) On or before January 1, 2009, the Department shall allocate the $CO_2$ allowances for the 2009, 2010, 2011 and 2012 allocation years.

(b) On or before January 1, 2010 and January 1 of each year thereafter, the Department shall allocate $CO_2$ allowances for the allocation year that is three years after the applicable deadline for allocation under this subsection.

46.4.3 $CO_2$ allowance allocations.

(a) The Department shall allocate to the Rhode Island Auction/Sale Account $CO_2$ allowances to be auctioned or sold in accordance with Air Pollution Control Regulation No. 47 – "$CO_2$ Budget Trading Program Allowance Distribution".

(b) 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 subsection. Total facility shutdowns shall not be eligible for ERAs.

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

(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.

(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:

a. 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:

(i) 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);

(ii) For the purposes of this section, thermal energy output will be converted to units of MWh by the conversion factor 1 MWh = 3.413 MMBtu.

(iii) For the purposes of this section, output shall be monitored in accordance with sections 46.9 and 46.10.

b. 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 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 all of the $CO_2$ budget units at the $CO_2$ budget source during the early reduction period (in tons).

(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 sections 46.9 and 46.10 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 part 75. A $CO_2$ budget source that was not required to submit $CO_2$ data pursuant to 40 CFR part 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 subsection for the use of an alternative data source or sources for the calculation of early reduction allowances.

(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.

(c) Voluntary renewable energy market set-aside allocation.

(1) The Department shall open and manage a general account for the voluntary renewable energy market set-aside for each allocation year.

(2) The Department shall allocate 1% of the number of allowances of the annual base budget to the voluntary renewable energy market set-aside account.

(3) The Department shall permanently retire $CO_2$ allowances from the voluntary renewable energy market set-aside account for a given allocation year. The number of allowances to be retired shall be made based on the following:

a. Any person may submit data to the Department or the Department may gather data documenting purchases of voluntary renewable energy that meet the requirements of this subsection by no later than the March 1 immediately following the allocation year for which it is being made and must include information to assure that the voluntary renewable energy purchase demonstrates accreditable $CO_2$ emissions reductions. Such data must be from reputable sources, which may include retail electricity providers, organizations that certify renewable energy products, and other parties as determined by the Department. To be considered, data must be verifiable and document the following for voluntary renewable energy purchases:

(i) Documentation of voluntary renewable energy or renewable energy attribute credit purchases by retail customers, by customer class, in the State during the allocation year immediately preceding the application date.

(ii) Documentation that the renewable energy or renewable energy attributes related to voluntary renewable energy or renewable energy attribute credit sales was procured by the retail provider.

(iii) Time period when the retail purchase(s) was made.

(iv) State where the electricity was generated or the renewable energy attribute credit was created, including documentation of facility name, unique generator identification number, and fuel type.

(v) Time period when the electricity was generated or the renewable energy attribute credit was created.

b. By October 31st following the March 1st application deadline established in subsection 46.4.3(c), the Department will determine the actual MWh of voluntary renewable energy market purchases that occurred during the allocation year. The department will retire $CO_2$ allowances from the voluntary renewable set-aside account in the amount up to the number of $CO_2$ tons represented by actual voluntary renewable energy market purchases, based on actual MWh purchases demonstrated by each applicant as follows:

$CO_2$ tons = MP x EF

where:
$CO_2$ tons, rounded down to the nearest whole ton, is the number of allowances to be retired from the set-aside account.

MP is the MWh of voluntary renewable energy purchases in the State during the allocation year.

EF is the $CO_2$ emissions factor for the control area where the electricity represented by the sale was generated.

In no event shall the department retire more then 1% of the base budget for the allocation year.

(4) After retiring the $CO_2$ allowances from the voluntary renewable energy market set-aside account, the Department will transfer any remaining $CO_2$ allowances from the set-aside account to the Rhode Island Auction/Sale Account.

## 46.5 $CO_2$ Authorized Account Representative for $CO_2$ Budget Sources

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

(a) Except as provided under subsection 46.5.2, 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.

(b) 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.

(c) Upon receipt by the Department or its agent of a complete account certificate of representation under subsection 46.5.5, 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.

(d) 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 subsection 46.5.5 for a $CO_2$ authorized account representative of the source and the $CO_2$ budget units at the source.

(e) 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."*

(f) 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 46.5.1(e) of this subsection.

46.5.2 Alternate $CO_2$ authorized account representative.

(a) 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.

(b) Upon receipt by the Department or its agent of a complete account certificate of representation under subsection 46.5.5, 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.

(c) Except in this section and 46.5.1(a), subsections 46.5.3, 46.5.4, 46.5.5, and 46.8.2, 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.

46.5.3 Changing the $CO_2$ authorized account representative and the alternate $CO_2$ authorized account representative.

(a) 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 subsection 46.5.5. 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.

(b) 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 subsection 46.5.5. 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 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.

46.5.4 Changes in the owners and operators.

(a) 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.

(b) 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.

46.5.5 Account certificate of representation.

(a) 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:

(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) The name, address, e-mail address, telephone number, and facsimile transmission number (if any) of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative.

(3) A list of the owners and operators of the $CO_2$ budget source and of each $CO_2$ budget unit at the source.

(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."*

(5) The signature of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative and the dates signed.

(b) 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.

46.5.6 Objections concerning the $CO_2$ authorized account representative.

(a) Once a complete account certificate of representation under subsection 46.5.5 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 subsection 46.5.5.

(b) Except as provided in 46.5.3(a) or (b), 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.

(c) The Department will not adjudicate the interest of private parties including but not limited to those 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.

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

(a) 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.

(b) 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.

(c) In order to delegate authority to make an electronic submission to the Department or its agent in accordance with 46.5.7(a) and 46.5.7(b) of this subsection, the $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative, as appropriate, shall submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following elements:

(1) The name, address, e-mail address, telephone number, and facsimile transmission number (if any) of such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative.

(2) The name, address, e-mail address, telephone number and facsimile transmission number (if any) of each such natural person, herein referred to as the “electronic submission agent”.

(3) For each such natural person, a list of the type of electronic submissions under 46.5.7(a) and 46.5.7(b) of this subsection for which authority is delegated to him or her.

(4) The following certification statements by such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative:

a. *"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 46.5.7(d) shall be deemed to be an electronic submission by me."*

b. *"Until this notice of delegation is superseded by another notice of delegation under 46.5.7(d), 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 subsection 46.5.7 is terminated."*

(d) A notice of delegation submitted under 46.5.7(c) of this subsection 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.

(e) Any electronic submission covered by the certification in 46.5.7(c)(4)a. of this subsection and made in accordance with a notice of delegation effective under 46.5.7(d) of this subsection 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.

## 46.6 Permits

46.6.1 Permit requirements.

(a) Each $CO_2$ budget permit source and each $CO_2$ budget unit must have a $CO_2$ budget permit issued under the requirements of this regulation and shall:

(1) Submit to the Department a complete $CO_2$ budget permit application under subsection 46.6.3 in accordance with the deadline specified in subsection 46.6.2**;** and

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

(b) The owners and operators of each $CO_2$ budget source and each $CO_2$ budget unit shall operate the $CO_2$ budget source and $CO_2$ budget unit in compliance with the requirements of such $CO_2$ budget permit.

(c) Each $CO_2$ budget permit is deemed to incorporate automatically the definitions of terms under section 46.1.

46.6.2 Submission of $CO_2$ budget permit applications.

(a) The $CO_2$ authorized account representative of any $CO_2$ budget source shall submit to the Department a complete $CO_2$ budget permit application under subsection 46.6.3 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.

46.6.3 $CO_2$ budget permit applications.

(a) 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:

(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; and

(2) Identification of each $CO_2$ budget unit at the $CO_2$ budget source,

(3) An output monitoring plan that meets the requirements in section 46.10, and

(4) Any other information requested by the Department.

46.6.4 $CO_2$ budget permit revisions.

(a) If the $CO_2$ budget source is required to have a title V operating permit under Air Pollution Control Regulation No. 29 – Operating Permits, the $CO_2$ budget

portion of the title V operating permit shall be modified in accordance with the procedures in the regulation.

(b) If the $CO_2$ budget source is not required to have a title V operating permit under Air Pollution Control Regulation No. 29 – Operating Permits, the $CO_2$ budget permit shall be modified in accordance with the procedures in the regulation.

46.6.5 Duty to reapply.

(a) For a $CO_2$ budget source required to have a title V operating permit, the $CO_2$ authorized account representative shall submit a complete $CO_2$ budget permit application under subsection 46.6.3 for the $CO_2$ budget source covering the $CO_2$ budget units at the source in accordance with the provisions of Air Pollution Control Regulation No. 29 addressing permit renewals.

(b) For a $CO_2$ budget source not required to have a title V operating permit, the $CO_2$ authorized account representative shall submit a complete $CO_2$ budget permit application under subsection 46.6.3 for the $CO_2$ budget source covering the $CO_2$ budget units at the source in accordance with the provisions of Air Pollution Control Regulation No. 29 addressing permit renewals.

## 46.7 $CO_2$ Allowance Transfers

46.7.1 Submission of $CO_2$ allowance transfers.

(a) 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:

(1) The numbers identifying both the transferor and transferee accounts;

(2) A specification by serial number of each $CO_2$ allowance to be transferred;

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

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

(5) The purchase or sale price of the allowance that is the subject of a sale or purchase transaction under 46.7.1(a)(4) of this subsection.

46.7.2 Recordation.

(a) Within 5 business days of receiving a $CO_2$ allowance transfer, except as provided in 46.7.2(b) of this subsection, 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:

(1) The transfer is correctly submitted under subsection 46.7.1;

(2) The transferor account includes each $CO_2$ allowance identified by serial number in the transfer; and

(3) The transfer meets all other requirements of this regulation.

(b) 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 prior to or the same as the control period to which the $CO_2$ allowance transfer deadline applies will not be recorded until after completion of the process pursuant to subsection 46.8.5(b).

(c) Where a $CO_2$ allowance transfer submitted for recordation fails to meet the requirements of 46.7.2(a) of this subsection, the Department or its agent will not record such transfer.

46.7.3 Notification.

(a) Notification of recordation. Within 5 business days of recordation of a $CO_2$ allowance transfer under subsection 46.7.2, 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.

(b) Notification of non-recordation. Within 10 business days of receipt of a $CO_2$ allowance transfer that fails to meet the requirements of subsection 46.7.2(a), the Department or its agent will notify the $CO_2$ authorized account representatives of both accounts subject to the transfer of:

(1) A decision not to record the transfer, and

(2) The reasons for such non-recordation.

(c) Nothing in this section shall preclude the submission of a $CO_2$ allowance transfer for recordation following notification of non-recordation. All

submissions of $CO_2$ allowances following notification of non-recordation are subject to the provisions of section 46.7.

## 46.8 $CO_2$ Allowance Tracking System

46.8.1 $CO_2$ Allowance Tracking System accounts.

(a) Nature and function of compliance accounts. Consistent with subsection 46.8.2(a), the Department or its agent will establish one compliance account for each $CO_2$ budget source. Deductions or transfers of $CO_2$ allowances pursuant to 46.7, 46.8.5, 46.8.7, or 46.11.2 will be recorded in the compliance accounts in accordance with this section.

(b) Nature and function of general accounts. Consistent with subsection 46.8.2(b), the Department or its agent will establish, upon request, a general account for any person. Transfers of $CO_2$ allowances pursuant to section 46.7 will be recorded in the general account in accordance with this section.

46.8.2 Establishment of accounts.

(a) Compliance accounts. Upon receipt of a complete account certificate of representation under subsection 46.5.5, 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.

(b) General accounts.

(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:

a. Name, mailing address, e-mail address, telephone number, and facsimile transmission number (if any) of the $CO_2$ authorized account representative and any alternate $CO_2$ authorized account representative;

b. At the option of the $CO_2$ authorized account representative, organization name and type of organization;

c. 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;

d. 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.";*

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

f. 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.

(2) Authorization of $CO_2$ authorized account representative.

a. Upon receipt by the Department or its agent of a complete application for a general account under 46.8.2(b)(1) of this subsection:

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

(ii) 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.

(iii) 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.

b. 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."*

c. 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 46.8.2(b)(2)b. of this subsection.

(3) Changing $CO_2$ authorized account representative and alternate $CO_2$ authorized account representative; changes in persons with ownership interest.

a. 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 46.8.2(b)(1) of this subsection. 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.

b. 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 46.8.2(b)(1) of this subsection. 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.

c. 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.

d. 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.

(4) Objections concerning $CO_2$ authorized account representative.

a. Once a complete application for a general account under 46.8.2(b)(1) of this subsection 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 46.8.2(b)(1) of this subsection is received by the Department or its agent.

b. Except as provided in 46.8.2(b)(3)a. and 46.8.2(b)(3)b. of this subsection, 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.

c. 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.

(5) Delegation by $CO_2$ authorized account representative and alternate $CO_2$ authorized account representative.

a. 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 sections 46.7 and 46.8.

b. An alternate $CO_2$ authorized account representative may delegate, to one or more natural person, his or her authority to make an electronic submission to the Department or its agent provided for under sections 46.7 and 46.8.

c. In order to delegate authority to make an electronic submission to the Department or its agent in accordance with 46.8.2(b)(5)a. and 46.8.2(b)(5)b. of this subsection, 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:

(i) The name, address, e-mail address, telephone number, and facsimile transmission number (if any) of such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative;

(ii) The name, address, e-mail address, telephone number and facsimile transmission number (if any) of each such natural person, herein referred to as "electronic submission agent";

(iii) For each such natural person, a list of the type of electronic submissions under 46.8.2(a) or 46.8.2(b) of this section for which authority is delegated to him or her; and

(iv) The following certification statements by such $CO_2$ authorized account representative or alternate $CO_2$ authorized account representative:

(*A*) *"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 46.8.2(b)(5)d. shall be deemed to be an electronic submission by me."*

(*B*) *"Until this notice of delegation is superseded by another notice of delegation under 46.8.2(b)(5)d., 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 46.8.2(b)(5) is terminated."*

d. A notice of delegation submitted under 46.8.2(b)(5)c. of this subsection 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.

e. Any electronic submission covered by the certification in 46.8.2(b)(5)c.(iv)(*A*) of this subsection and made in accordance with a notice of delegation effective under 46.8.2(b)(5)d. of this subsection 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.

(c) Account identification. The Department or its agent will assign a unique identifying number to each account established under subsections 46.8.2(a) or (b) of this section.

46.8.3 $CO_2$ 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.

46.8.4 Recordation of $CO_2$ allowance allocations.

(a) By January 1, 2009, the Department or its agent will record in the Rhode Island Auction/Sale Account the $CO_2$ allowances for allocation years of 2009, 2010, 2011, and 2012.

(b) By January 1, 2010 and each January thereafter, the Department or its agent will record in the Rhode Island Auction/ Sale Account the $CO_2$ allowances for the allocation year three years in the future.

(c) By January 1, 2009, the Department or its agent will record in the Voluntary Renewable Energy Market Set-aside Account the $CO_2$ allowances for allocation years of 2009, 2010, 2011, and 2012.

(d) By January 1, 2010 and each January thereafter, the Department or its agent will record in the Voluntary Renewable Energy Market Set-aside Account the $CO_2$ allowances for the allocation year three years in the future.

(e) 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.

(c) On or before December 31, 2009, the Department shall record any ERAs awarded pursuant to 46.4.3(b)(5) in the $CO_2$ budget source's compliance account.

46.8.5 Compliance.

(a) 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 subsection 46.3.1 for a control period.

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

(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 are transferred into the compliance account by a $CO_2$ allowance transfer correctly submitted for recordation under subsection 46.7.1 by the $CO_2$ allowance transfer deadline for that control period.

(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 subsection 46.3.1 for a 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, as determined in accordance with sections 46.8, 46.9 and 46.10:

a. Unless the provisions of 46.8.5(a)(3)b. or 46.8.5(a)(3)c. apply, 3.3 percent;

b. If the Department determines that there has been a stage one trigger event, 5 percent; or

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

(4) The $CO_2$ allowances are not necessary for deductions for excess emissions for a prior control period under subsection 46.8.5(d) of this section.

(b) Deductions for compliance.

(1) Following the recordation, in accordance with subsection 46.7.2, 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, the Department or its agent will deduct $CO_2$ allowances available under 46.8.5(a) of this subsection to cover the source's $CO_2$ emissions (as determined in accordance with sections 46.9 and 46.10) for the control period, as follows:

a. Until the amount of $CO_2$ allowances deducted equals the number of tons of total $CO_2$ emissions, less any $CO_2$ emissions attributable to the burning of eligible biomass, determined in accordance with sections 46.9 and 46.10, from all $CO_2$ budget units at the $CO_2$ budget source for the control period; or

b. If there are insufficient $CO_2$ allowances to complete the deductions in 46.8.5(b)(1) of this subsection, until no more $CO_2$ allowances available under 46.8.5(b)(1)a. of this subsection remain in the compliance account.

(c) Identification of available $CO_2$ allowances by serial number; default compliance deductions.

(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 in accordance with 46.8.5(b), or 46.8.5(d) of this subsection. Such identification shall be made in the

compliance certification report submitted in accordance with subsection 46.11.1.

(2) The Department or its agent will deduct $CO_2$ allowances for a control period from the $CO_2$ budget source's compliance account, in the absence of an identification or in the case of a partial identification of available $CO_2$ allowances by serial number under 46.8.5(c)(1) of this subsection, in the following order:

a. First, subject relevant compliance deduction limitations under 46.8.5(a)(3) and 46.8.5(d)(1), $CO_2$ 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.

b. Second, any $CO_2$ allowances, other than $CO_2$ offset allowances that are available for deduction under 46.8.5 (a). $CO_2$ 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.

(d) Deductions for excess emissions.

(1) After making the deductions for compliance under 46.8.5(b) of this subsection, 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.

(2) Any $CO_2$ allowance deduction required under 46.8.5(d)(1) of this subsection 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.

a. 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. The Department or its agent will have complete discretion to determine if the owner or operator of the unit demonstrated that a lesser number of days should be used.

b. Each ton of excess emissions is a separate violation.

(3) The propriety of the Department's determination that a $CO_2$ budget source had excess emissions and the associated deduction of $CO_2$ allowances from that $CO_2$ budget source's account may be later challenged in the context of an 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 shall:

a. In any instance where the Department's determination of the extent of excess emissions was too low, the Department will take further action under 46.8.5(d)(1) and 46.8.5(d)(2) of this section to address the expanded violation.

b. 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.

(e) The Department will record in the appropriate compliance account all deductions from such an account pursuant to 46.8.5(b) and 46.8.5(d) of this subsection.

(f) Action by the Department on submissions.

(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.

(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 46.8.5(f)(1) of this subsection.

46.8.6 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 subsection 46.7, subsection 46.8.5, subsection 46.8.7, or section 46.11.2.

46.8.7 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 ten (10) business days of making such correction, the Department or its agent will notify the $CO_2$ authorized account representative for the account.

46.8.8 Closing of general accounts.

(a) 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 subsection 46.7.1 a $CO_2$ allowance transfer of all $CO_2$ allowances in the account to one or more other $CO_2$ Allowance Tracking System accounts.

(b) 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 twenty (20) business days after the notice is sent. The account will be closed after the twenty (20)-day period unless before the end of the twenty (20)-day period the Department or its agent receives a correctly submitted transfer of $CO_2$ allowances into the account under subsection 46.7.1 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.

## 46.9 Monitoring

46.9.1 Monitoring requirements.

(a) 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 requirements as provided in this subsection and all applicable sections of 40 CFR part 75. Where referenced in 46.9 and 46.10, the monitoring requirements of 40 CFR Part 75 shall be adhered to in a manner consistent with the purpose of monitoring and reporting $CO_2$ mass emissions pursuant to this regulation. For purposes of complying with such requirements, the definitions in section 46.1. 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 part 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 subsection 46.1. For units not subject to an Acid Rain emissions limitation, the term “Administrator” in 40 CFR Part 75 shall be replaced with “the Department or its agent”. Owners or operators of a $CO_2$ budget unit who monitor a unit that is not a $CO_2$ 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 this regulation shall monitor and report $CO_2$ mass emissions from such unit that is not a $CO_2$ budget unit according to the procedures for $CO_2$ budget units established in this section and 46.10.

(b) The emissions measurements recorded and reported in accordance with this section shall be used to determine compliance by the unit with the $CO_2$ requirements of subsection 46.3.1

46.9.2 General requirements.

(a) Requirements for installation, certification, and data accounting. The owner or operator of each $CO_2$ budget unit shall meet the following requirements.

(1) Install all monitoring systems necessary to monitor $CO_2$ mass emissions in accordance with 40 CFR Part 75, except for equation G-1. Equation G-1 in Appendix G shall not be used to determine CO2 emissions under this section. This may require systems to monitor $CO_2$ concentration, stack gas flow rate, $O_2$ concentration, heat input, and fuel flow rate.

(2) Successfully complete all certification tests required under subsection 46.9.3 and meet all other requirements of this section and 40 CFR part 75 applicable to the monitoring systems under 46.9.2(a)(1) of this subsection.

(3) Record, report and quality-assure the data from the monitoring systems under 46.9.2(a)(1) of this subsection.

(b) Compliance dates. The owner or operator of a $CO_2$ budget unit shall meet the monitoring system certification and other requirements of 46.9.2(a)(1) through 46.9.2(a)(3) of this section on or before the following dates. The owner or operator of a $CO_2$ budget unit shall record, report and quality-assure the data from the monitoring systems under 46.9.2(a)(1) of this subsection on and after the following dates:

(1) The owner or operator of a $CO_2$ budget unit, except for a $CO_2$ budget unit under 46.9.2(b)(2) of this section, that commences commercial operation before July 1, 2008, must comply with the requirements of this section by January 1, 2009.

(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 section by the later of the following dates:

a. January 1, 2009; or

b. the earlier of:

(i) 90 unit operating days after the date on which the unit commences commercial operation; or

(ii) 180 calendar days after the date on which the unit commences commercial operation.

(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 46.9.2(b)(1) or 46.9.2(b)(2) of this subsection by the earlier of:

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

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

(c) Reporting data.

(1) Except as provided in 46.9.2(c)(2) of this subsection, the owner or operator of a $CO_2$ budget unit that does not meet the applicable compliance date set forth in 46.9.2(b)(1), 46.9.2(b)(2) and 46.9.2(b)(3) of this subsection for any monitoring system under 46.9.2(a)(1) of this subsection 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 part 75 as applicable.

(2) The owner or operator of a $CO_2$ budget unit that does not meet the applicable compliance date set forth in 46.9.2(b)(3) of this subsection for any monitoring system under 46.9.2(a)(1) of this subsection 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 part 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 46.9.2(b)(3) of this subsection.

(3) $CO_2$ budget units subject to an acid rain emissions limitation that qualify for the optional $SO_2$, $NO_X$, and $CO_2$ (for acid rain) 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 this regulation.

(4) $CO_2$ budget units subject to an acid rain emissions limitation or that do not qualify for the optional $SO_2$, $NO_X$, and $CO_2$ (for acid rain) 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 this regulation.

(5) $CO_2$ budget units not subject to an acid rain emissions limitation 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.

(d) Prohibitions.

(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 subsection 46.10.5

(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 section and 40 CFR part 75.

(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 section and 40 CFR part 75.

(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 section, except under any one of the following circumstances:

a. The owner or operator is monitoring emissions from the unit with another certified monitoring system approved, in accordance with the applicable provisions of this section and 40 CFR part 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

b. The $CO_2$ authorized account representative submits notification of the date of certification testing of a replacement monitoring system in accordance with 46.9.3(d)(3)a.

46.9.3 Initial certification and recertification procedures.

(a) The owner or operator of a $CO_2$ budget unit shall be exempt from the initial certification requirements of this subsection for a monitoring system under 46.9.1(a)(1) if the following conditions are met:

(1) The monitoring system has been previously certified in accordance with 40 CFR part 75; and

(2) The applicable quality-assurance and quality-control requirements of 40 CFR 75.21 and appendix B and appendix D of 40 CFR part 75 are fully met for the certified monitoring system described in 46.9.3(a)(1) of this subsection.

(b) The recertification provisions of this subsection shall apply to a monitoring system under 46.9.2(a)(1) exempt from initial certification requirements under 46.9.3(a) of this subsection.

(c) Notwithstanding subsection 46.9.3(a) 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 part 75, the $CO_2$ authorized account representative shall submit the petition to the Department under 46.10.5(a) to determine whether the approval applies under this program.

(d) Except as provided in 46.9.3(a) of this subsection, 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 part 75 and under 46.9.2(a)(1). 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 part 75 shall comply with the procedures in 46.9.3(e) or 46.9.3(f) of this subsection, respectively.

(1) Requirements for initial certification. The owner or operator shall ensure that each monitoring system required under 46.9.2(a)(1) (which includes the automated data acquisition and handling system)

successfully completes all of the initial certification testing required under 40 CFR 75.20. The owner or operator shall ensure that all applicable certification tests are successfully completed by the deadlines specified in subsection 46.9.2(b). In addition, whenever the owner or operator installs a monitoring system in order to meet the requirements of this section in a location where no such monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required.

(2) Requirements for recertification.

a. Whenever the owner or operator makes a replacement, modification, or change in a certified monitoring system 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 requirements of 40 CFR 75.21 or Appendix B to 40 CFR part 75, the owner or operator shall recertify the monitoring system according to 40 CFR 75.20(b).

b. 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.

(3) Approval process for initial certifications and recertification. Subsections 46.9.3(d)(3)a. through d. apply to both initial certification and recertification of a monitoring system under 46.9.2(a)(1). For recertifications, 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 46.9.3(d)(3)e. of this subsection.

a. 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 subsection 46.9.5.

b. 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.

c. 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 46.9.3(d)(3)b. of this subsection. Data measured and recorded by the provisionally certified monitoring system or component thereof, in accordance with the requirements of 40 CFR part 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.

d. 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 46.9.3(d)(3)b. of this subsection. 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 part 75 and is included in the certification application will be deemed certified for use under the $CO_2$ Budget Trading Program.

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

(ii) 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 46.9.3(d)(3)d.(iii) of this subsection. The 120 day review period shall not begin before receipt of a complete certification application.

(iii) Disapproval notice. If the certification application shows that any monitoring system or component thereof does not meet the performance requirements of 40 CFR part 75, or if the certification application is incomplete and the requirement for disapproval under 46.9.3(d)(3)d.(ii) of this subsection 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 46.9.3(d)(3)e. of this subsection for each monitoring system or component thereof, which is disapproved for initial certification.

(iv) Audit decertification. The Department may issue a notice of disapproval of the certification status of a monitor in accordance with subsection 46.9.4(b).

e. Procedures for loss of certification. If the Department issues a notice of disapproval of a certification application under 46.9.3(d)(3)d.(iii) of this subsection or a notice of disapproval of certification status under 46.9.3(d)(3)d.(iv) of this subsection, then:

(i) 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):

(*A*) For units monitoring 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

(*B*) For units monitoring or 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 part 75.

(ii) The $CO_2$ authorized account representative shall submit a notification of certification retest dates and a new certification application in accordance with 46.9.3(d)(3)a. and 46.9.3(d)(3)b. of this subsection; and

(iii) 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.

(e) Initial certification and recertification procedures for low mass emissions units using the excepted methodologies under 46.9.2(c)(3). The owner or operator of a unit qualified to use the low mass emissions excepted methodology under 46.9.2(c)(3) shall meet the applicable certification and recertification requirements of 40 CFR 75.19(a)(2), 40 CFR 75.20(h) and subsection 46.9.3. 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).

(f) Certification/recertification procedures for alternative monitoring systems. The $CO_2$ authorized account representative representing the owner or operator of each unit applying to monitor using an alternative monitoring system approved by the Administrator and, if applicable, the Department

under Subpart E of 40 CFR part 75 shall comply with the applicable notification and application procedures of 40 CFR 75.20(f).

46.9.4 Out-of-control periods.

(a) Whenever any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR part 75, data shall be substituted using the applicable procedures in subpart D or appendix D of 40 CFR part 75.

(b) 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 subsection 46.9.3 or the applicable provisions of 40 CFR part 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 subsection 46.9.3 for each disapproved monitoring system.

46.9.5 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.

## 46.10 Recordkeeping and Reporting

46.10.1 General requirements.

(a) The $CO_2$ authorized account representative shall comply with all recordkeeping and reporting requirements in this section, the applicable record keeping and reporting requirements under 40 CFR 75.73 and with the requirements of subsection 46.5.1(e).

46.10.2 Monitoring plans.

(a) The owner or operator of a $CO_2$ budget unit shall submit a monitoring plan in the manner prescribed in of 40 CFR 75.62.

46.10.3 Certification applications.

(a) 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 subsection 46.9.3 including the information required under 40 CFR 75.63 and 40 CFR 75.53(e) and (f).

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

(a) 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:

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

(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 subsection 46.9.2(b) 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.

(b) 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 part 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 part 75, except for opacity, $NO_x$ and $SO_2$ provisions.

(c) 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:

(1) The monitoring data submitted were recorded in accordance with the applicable requirements of this section, section 46.9 and 40 CFR part 75, including the quality assurance procedures and specifications;

(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 part 75 and the substitute values do not systematically underestimate $CO_2$ emissions; and

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

46.10.5 Petitions.

(a) Except as provided in 46.10.5(c) of this subsection, 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 Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with this section and section 46.9 only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

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

(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 Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with sections 46.9 and 46.10 only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

(2) In the event that the Administrator declines to review a petition under 46.10.5(b)(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 Department requesting approval to apply an alternative to any requirement in section 46.9 and 46.10. That petition shall contain all the relevant information specified in 40 CFR 75.66. Application of an alternative to any requirement in sections 46.9 and 46.10 is in accordance with sections 46.9 and 46.10 only to the extent that the petition is approved in writing by the Department.

(c) 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 section and 46.10 only to the extent the petition is approved in writing by the Administrator, and subsequently approved in writing by the Department.

46.10.6 $CO_2$ budget units that co-fire eligible biomass.

(a) 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:

(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.

(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.

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

(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.

(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.

(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.

(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) 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 46.10.6(b).

(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 46.10.6(c).

(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 46.10.6(d)(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 46.10.6(d)(2).

(12) Description and documentation of monitoring technology employed, and description and documentation of fuel sampling methodology employed, including sampling frequency; and

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

(b) 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:

(1) For solid fuel types:

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

where:
$F_j$ = Total eligible biomass fuel input (lbs) for fuel type j;
$F_i$ = Eligible biomass 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.

(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 = Density of biogas (lbs/scf) for fuel type j;
V = Total volume (scf) for fuel type j;
$M_j$ = Moisture content (fraction) for fuel type j,
j = fuel type.

(c) $CO_2$ emissions due to firing of eligible biomass shall be determined as follows:

(1) For any full calendar quarter during which no fuel other than eligible biomass combusted at the $CO_2$ budget unit, as measured and recorded in accordance with this section and 46.9; or

(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:

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

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 46.10.6.(b);
$C_j$ = 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 46.10.6(a)(12); 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 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.

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

(1) For each distinct fuel type:

$$H_j = F_j \times HHV_j$$

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

(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.

(e) Fuel sampling methods and fuel sampling technology shall be consistent with the New York State Renewable Portfolio Standard Biomass Guidebook, May 2006.

46.10.7 Additional requirements to provide output data.

(a) A $CO_2$ budget source shall submit to the Department or its agent a method for quantification of net electrical output.

(b) $CO_2$ 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 unit that is not a $CO_2$ 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.

(c) Monitoring. The owner or operator of each $CO_2$ budget unit shall submit an output monitoring plan. The output monitoring plan must include a description and diagram as stated below:

(1) Submit a diagram of the electrical and/or steam system for which output is being monitored, specifically including the following:

a. If the $CO_2$ budget unit monitors net electric output, the diagram should contain all $CO_2$ budget unit and all generators served by each $CO_2$ budget units and generators. If a generator served by a $CO_2$ budget unit is also served by a unit that is not a $CO_2$ budget unit, the unit that is not a $CO_2$ budget 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.

b. 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 units that are not $CO_2$ budget 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.

(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 energy systems descriptions and justifications of each useful load should be included.

(3) Submit a detailed description of all quality assurance/quality control activities that will be performed to maintain the output system in accordance with subsection 46.10.7(e).

(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 subsection.

(d) 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 in paragraph 46.10.7(d)(2) of this subsection. This statement may be submitted with the certification application required under subsection 46.10.3.

(1) Billing meters. The billing meter shall 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.

(2) Non-billing meters. For non-billing meters, the output monitoring system shall 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.

a. 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 wattmeters used to calculate the final net electric output data and/or any flowmeters for steam or condensate, temperature measurement devices, absolute pressure measurement devices, and differential pressure devices used for measuring thermal energy.

b. 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.

(e) Ongoing QA/QC. The following ongoing quality assurance/quality control activities must be performed in order to maintain the output system:

(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.

(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 such pressure and temperature transmitters, and 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.

(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 subsection 46.10.7(c).

(f) Recordkeeping and reporting.

(1) General provisions. The $CO_2$ authorized account representative shall comply with all recordkeeping and reporting requirements in this section and with the requirements of subsections 46.3.3 and 46.5.1(e).

(2) Recordkeeping. The owner or operator of a $CO_2$ budget unit shall retain data used to monitor, determine, or calculate net generation for ten years from the date reported.

(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 the annual total unit level MWh, the annual total useful thermal energy 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."*

## 46.11 Compliance Certification

41.11.1 Compliance certification report.

(a) Applicability and deadline. For each control period in which a $CO_2$ budget source is subject to the $CO_2$ requirements of subsection 46.3.1, 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.

(b) Contents of report. The $CO_2$ authorized account representative shall include in the compliance certification report under 46.11.1(a) of this subsection the following elements, in a format prescribed by the Department concerning each unit at the source and subject to the $CO_2$ budget emissions limitation for the control period covered by the report:

(1) Identification of the source and each $CO_2$ budget unit at the source;

(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 subsection 46.8.5 for the control period, including the serial numbers of any $CO_2$ offset allowances that are to be deducted subject to the limitations of 46.8.5(a)(3); and

(3) The compliance certification under 46.11.1(c) of this subsection.

(c) Compliance certification. In the compliance certification report under 46.11.1(a) of this subsection, 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 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, applicable to the unit, including:

(1) Whether the source was operated in compliance with the $CO_2$ requirements of 46.3.1;

(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 sections 46.9 and 46.10;

(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 sections 46.9 and 46.10. 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) Whether the facts that form the basis for certification under section 46.9 and 46.10 of each monitor at each unit at the source, or for using an accepted monitoring method or alternative monitoring method approved under sections 46.9 and 46.10, if any, have changed; and

(5) If a change is required to be reported under 46.11.1(c)(4) of this subsection, 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.

46.11.2 Department's action on compliance certifications.

(a) 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.

(b) 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 46.11.2(a) of this subsection.

## 46.12 Reserved

## 46.13 $CO_2$ Emissions Offset Projects

46.13.1 Applicability.

This section applies to the sponsor of any $CO_2$ emissions offset project undertaken to create $CO_2$ offset allowances for sale or use in the State of Rhode Island in accordance with the requirements of this regulation or in any other participating state.

46.13.2 General requirements for $CO_2$ emissions offset projects.

(a) 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 this section.

(1) Offset project types. The following types of offset projects are eligible for the award of $CO_2$ offset allowances.

a. Landfill methane capture and destruction;

b. Reduction in emissions of sulfur hexafluoride ($SF_6$);

c. Sequestration of carbon due to afforestation;

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

e. Avoided methane emissions from agricultural manure management operations.

(2) Offset project locations.

a. To qualify for the award of $CO_2$ allowances under section 46.13, eligible offset projects may be located in any of the

following locations:

(i) In Rhode Island; and

(ii) In any state or other 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 section 46.13.

b. Projects located (in whole or in part) in one or more participating states are not eligible for $CO_2$ offset allowances under section 46.13 unless more of the $CO_2$ equivalent emissions reduction or carbon sequestration due to the offset project is projected to occur in Rhode Island than in any other participating state.

(b) Eligible $CO_2$ emissions credit retirements. To qualify for the award of $CO_2$ offset allowances, a $CO_2$ emissions credit retirement shall satisfy all the applicable requirements of section 46.13.

(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 46.13.3 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.

(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.

(c) 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 of subsection 46.13.3.

(d) General additionality requirements. Except as provided with respect to specific offset project standards in subsection 46.13.4, the following general requirements shall apply to each offset project:

(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 subsection 46.13.3 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.

(2) $CO_2$ offset allowances shall not be awarded to an offset project that includes an electric generation component, unless the project sponsor transfers to the Department or its agent legal rights to any and all attribute credits (other than the $CO_2$ offset allowances that would be awarded under subsection 46.13.6) generated from the operation of the offset project that may be used for compliance with a renewable portfolio standard or other regulatory requirement.

(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 auction/sale of $CO_2$ allowances.

(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.

(e) Maximum allocation periods for $CO_2$ emissions offset projects.

(1) Maximum allocation periods. Except as provided in 46.13.2(e)(2) of this section, the Department may award $CO_2$ offset allowances under subsection 46.13.6 for an initial ten (10) year allocation period. At the end of the initial ten (10) year allocation period the Department may award $CO_2$ offset allowances for a second ten (10) year allocation period, provided the offset sponsor has submitted a consistency application pursuant to subsection 46.13.3 prior to the expiration of the initial allocation period, and the Department has issued a consistency determination pursuant to 46.13.3(e)(2).

(2) Maximum afforestation allocation period. The Department may award $CO_2$ offset allowances under subsection 46.13.6 for any afforestation offset project for an initial twenty (20) year allocation

period. At the end of the initial twenty (20) year allocation period the Department may award $CO_2$ offset allowances for a second twenty (20) year allocation period, provided the offset sponsor has submitted a consistency application for the afforestation offset project pursuant to subsection 46.13.3 prior to the expiration of the initial allocation period, and the Department has issued a consistency determination pursuant to 46.13.3(e)(2). At the end of the second twenty (20) year allocation period, the Department may award $CO_2$ offset allowances for a third twenty (20) year allocation period, provided the offset sponsor has submitted a consistency application for the afforestation offset project pursuant to subsection 46.13.3 prior to the expiration of the second allocation period, and the Department has issued a consistency determination pursuant to 46.13.3(e)(2). In no event may an afforestation-offset project be awarded $CO_2$ offset allowances for more than a total of sixty (60) allocation years.

(f) Timing of offset projects. The Department may award $CO_2$ offset allowances under subsection 46.13.6 only for offset projects that are initially commenced on or after December 20, 2005.

(g) 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 section. 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 section.

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

46.13.3 Application process.

(a) Establishment of general account. The sponsor of an offset project or $CO_2$ emissions credit retirement must establish a general account under subsection 46.8.2(b). All submissions to the Department required for the award of $CO_2$ offset allowances under this section 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."

(b) Consistency application time frames.

(1) For offset projects commenced prior to January 1, 2009, the project sponsor must submit the consistency application on or before June 30, 2009.

(2) For offset projects 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.

(3) Any consistency application that fails to meet the deadlines of this subsection will result in the denial of the consistency application and the continued ineligibility of the subject offset project.

(c) Consistency application contents.

(1) For an offset project, the consistency application must include the following information.

a. The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number (if any), and account number.

b. The offset project description as required by the relevant provisions of subsection 46.13.4.

c. A demonstration that the offset project meets all applicable requirements set forth in this section.

d. The emissions baseline determination as required by the relevant provisions of subsection 46.13.4.

e. 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 subsection 46.13.4.

f. 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 section 46.13. 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 section 46.13 is contingent on meeting the requirements of section 46.13. 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 Rhode Island."*

g. 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 Subsection (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;

h. A verification report and certification statement signed by an independent verifier accredited pursuant to subsection 46.13.5 that expresses that the independent verifier has reviewed the entire application and evaluated the following in relation to the applicable requirements in subsections 46.13.2 and 46.13.4, and any applicable guidance issued by the Department.

(i) The adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of subsections 46.13.2 and 46.13.4.

(ii) The adequacy and validity of information supplied by the project sponsor to demonstrate baseline emissions pursuant to the applicable requirements of subsection 46.13.4.

(iii) The adequacy of the monitoring and verification plan submitted pursuant to the applicable requirements of subsection 46.13.4.

(iv) Such other evaluations and statements as may be required by the Department.

i. 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;

j. 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; and

k. Any other information the department or the department's designee may require in order to evaluate the proposed offset project.

(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 subsection 46.13.2(b), was lawfully held by the project sponsor, and has been permanently and irrevocably retired.

(3) Consistency applications shall be submitted in a format approved by the Department.

(d) Prohibition against filing consistency applications in more than one participating state.

(1) 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 Rhode Island than in any other participating state.

(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.

(e) Department action on consistency applications.

(1) Completeness determination. Within sixty (60) days following receipt of the consistency application filed pursuant to 46.13.3(b) of this subsection, 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 46.13.3(e)(2) of this subsection.

(2) Consistency determination. Within one hundred and twenty (120) days of making the completeness determination under 46.13.3(e)(1) of this subsection, the Department will issue a determination as to whether the offset project is consistent with the requirements of subsections 46.13.2 and 46.13.3 and the requirements of the applicable offset project standard of subsection 46.13.4. For any offset project found to lack consistency with these requirements, the Department will inform the project sponsor of the offset project's deficiencies.

46.13.4 $CO_2$ emissions offset project standards.

(a) Landfill methane capture and destruction. To qualify for the award of $CO_2$ offset allowances under 46.13, offset projects that capture and destroy methane from landfills shall meet the requirements of subsection 46.13.4(a) and all other applicable requirements of section 46.13.

(1) Eligibility. Eligible offset projects shall occur at landfills that are not subject to Section 111 of the Federal Clean Air Act that addresses New Source Performance Standards (NSPS) for municipal solid waste landfills, 40 CFR Part 60, Subpart Cc and Subpart WWW.

(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 46.13.4(a)(1) of this subsection. The project narrative shall include the following information.

a. The owner and operator of the offset project;

b. The location and specifications of the landfill where the offset project will occur, including waste in place;

c. The owner and operator of the landfill where the offset project will occur; and

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

(3) Emissions baseline determination. The emissions baseline shall represent the potential fugitive landfill emissions of methane (in tons of $CO_2e$), as represented by the methane collected and metered for thermal destruction as part of the offset project, and calculated in accordance with this paragraph.

Emissions (tons $CO_2e$) = (V x M x (1-OX) x GWP)/2000

where:
V = Volume of methane collected ($ft^3$)
M = Mass of methane 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 methane that would have eventually oxidized to $CO_2$ if not collected
GWP = $CO_2e$ global warming potential of methane (23)

(4) Calculating emissions reductions. Emissions reductions shall be determined based on potential fugitive methane emissions that would have occurred at the landfill if metered methane collected from the landfill for thermal destruction as part of the offset project was not collected and destroyed. $CO_2e$ emissions reductions shall be calculated as follows:

Emissions Reductions (tons $CO_2e$) = (V x M x (1 - OX) x $C_{ef}$ x GWP)/2000

where:
V = Volume of methane collected ($ft_3$)
M = Mass of methane 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 methane that would have eventually oxidized to $CO_2$ if not collected
$C_{ef}$ = Combustion efficiency of methane control technology (0.98)
GWP = $CO_2e$ global warming potential of methane (23)

(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 methane concentration. Annual monitoring and verification reports shall include monthly volumetric flow rate and methane

concentration data, including documentation that the methane was actually supplied to the combustion source. Monitoring and verification is also subject to the following requirements.

a. 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 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 subsection 46.13.5.

b. The project sponsor shall annually verify landfill gas methane concentration through landfill gas sampling and independent laboratory analysis using applicable U.S. Environmental Protection Agency laboratory test methods.

(b) Reduction in emissions of sulfur hexafluoride ($SF_6$). To qualify for the award of $CO_2$ offset allowances under 46.13, 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 subsection 46.13.4(b) and all other applicable requirements of section 46.13.

(1) Eligibility.

a. 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 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 control gear, 1st ed., 1995.

b. Except as provided in 46.13.3(b)(1)c. of this subsection, 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 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 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.

c. 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 46.13.4(b)(1)b. of this subsection, provided that the project sponsor demonstrates in writing 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 $SF_6$.

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

(ii) 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.

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

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

(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 46.13.4(b)(1) of this subsection. The offset project narrative shall include the following information:

a. A description of the transmission and/or distribution entity specifying the service territory served by the entity.

b. The owner and operator of the transmission and/or distribution entity.

(3) Emissions baseline determination. If the consistency application is filed after June 30, 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 by June 30, 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.

a. 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.

b. Emissions shall be calculated as follows:

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

c. As part of the consistency application required pursuant to subsections 46.13.3(b) and 46.13.3(c) and in annual monitoring and verification reports required pursuant to subsections 46.13.6(b) and 46.13.6(c), the project sponsor shall provide the documentation required in 46.13.4(b)(5)a. through c. of this subsection to support emissions calculations.

(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 46.13.4(b)(3)b. of this subsection 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)

(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.

a. The project sponsor shall identify all facilities 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 facilities and the weight of each cylinder after return to the facilities. 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.

b. 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 subsection 46.13.5.

c. 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 subsection 46.13.5.

(c) Sequestration of carbon due to afforestation. To qualify for the award of $CO_2$ offset allowances under 46.13, offset projects that sequester carbon through the conversion of land from a non-forested to forested condition shall meet the requirements of subsection 46.13.4(c) and all other applicable requirements of section 46.13:

(1) Eligibility.

a. Eligible offset projects shall occur on land that has been in a non-forested state for at least ten (10) years preceding the commencement of the offset project.

b. 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.

(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 46.13.4(c)(1) of this subsection. The offset project narrative shall include the following information:

a. The owner of the land within the offset project boundary;

b. A detailed map of the land within the offset project boundary and areas adjacent to the offset project boundary;

c. A copy of the permanent conservation easement required under 46.13.4(c)(6) of this subsection;

d. 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

e. Plant species to be planted or established via natural regeneration, and a forest management plan consistent with the requirements of 46.13.4(c)(1)b. of this subsection.

(3) Carbon sequestration baseline determination. 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.

a. Carbon content shall be calculated for the following required carbon pools:

(i) live above-ground tree biomass;

(ii) live below-ground tree biomass;

(iii) soil carbon; and

(iv) 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.

b. Carbon content may be calculated for the following optional carbon pools:

(i) live above-ground non-tree biomass; and

(ii) dead organic matter, forest floor.

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

d. 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, such as soil type, elevation, slope, age class, and other factors as warranted.

e. 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 g/mol $CO_2$/12 g/mol C )] / 0.9072 metric tons/short ton

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

f. Total carbon contained within the offset project boundary (represented in $CO_2$ tons, calculated pursuant to 46.13.4(c)(3)e. of this subsection) 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 46.13.4(c)(3)a.(iv) of this subsection] = Sum of carbon content of dead organic matter, coarse woody debris in all reporting sub-populations

g. 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:

(i) An adequate sample size that meets the requirements of 46.13.4(c)(3)g. of this subsection shall be determined for each sub-population.

(ii) The minimum number of required sampling plots for each sub-population shall not be less than 30, and shall be determined based on the following:

$$n = (s \times 1.960)/(\text{mean} \times re)^2$$

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

h. Direct measurement procedures shall be consistent with current forestry good practice and the guidance contained in U.S. Department of Energy, 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).

(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

a. Except as provided in 46.13.4(c)(3)a.(iv) of this subsection, 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 46.13.4(c)(3)g. and 46.13.4(c)(3)h. of this subsection, as that used for the baseline determination.

b. The net change in each 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 46.13.4(c)(3) of this subsection.

c. 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 46.13.6(a)(1).

(5) Monitoring and verification 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.

a. 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.

b. The project sponsor shall provide a monitoring and verification plan as part of the consistency application. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to subsection 46.13.5. The monitoring and verification plan shall include the following:

(i) Direct carbon measurement procedures consistent with the requirements of 46.13.4(c)(3)h. of this subsection.

(ii) The designation of sub-populations pursuant to 46.13.4(c)(3)d. of this subsection . The determination of the minimum number of sampling plots pursuant to 46.13.4(c)(3)g. of this subsection.

(iii) 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.

(6) Carbon sequestration permanence. The offset project shall meet the following requirements to address permanence of sequestered carbon.

a. 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.

b. 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 46.13.2(e)(2).

c. The conservation easement shall require that the land be managed in accordance with environmentally sustainable forestry practices.

(d) 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 46.13, 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 subsection 46.13.4(d) and all other requirements of section 46.13. 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.

(1) Eligibility.

a. Eligible offset projects shall reduce $CO_2$ emissions through one or more of the following energy conservation measures (ECMs):

(i) 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;

(ii) Improvements in the efficiency of heating distribution systems, including proper sizing and commissioning of heating systems;

(iii) Installation or improvement of energy management systems;

(iv) Improvement in the efficiency of hot water distribution systems and reduction in demand for hot water;

(v) Measures that improve the thermal performance of the building envelope and/or reduce building envelope air leakage;

(vi) Measures that improve the passive solar performance of buildings and utilization of active heating systems using renewable energy; and

(vii) 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.

b. Performance standards.

(i) All end-use energy efficiency offset projects. All offset projects under this subsection shall meet the applicable performance criteria set forth below:

(*A*) 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 1. and 2. below:

1. Commercial HVAC systems shall meet the applicable sizing and installation requirements of ANSI/ASHRAE/IESNA Standard 90.1-2007: Energy Standard for Buildings Except Low-Rise Residential Buildings and ANSI/ASHRAE Standard 62.1-2007: Ventilation for Acceptable Indoor Air Quality.

2. Residential HVAC systems shall meet the applicable sizing specifications of Air Conditioner Contractors of America (ACCA) Manual J: Residential Load Calculation (Eighth Edition), Version 2.00, March 2006 and the applicable installation specifications of Air Conditioner Contractors of America (ACCA), ANSI/ACCA 5 QI-2007,

HVAC Quality Specification: Residential and Commercial Heating, Ventilating, and Air Conditioning (HVAC) Applications, 2007.

(*B*) Whole-building energy performance. Eligible new buildings or whole-building retrofits that are part of an offset project shall meet the requirements in 1. and 2. below:

1. Commercial buildings shall exceed the energy performance requirements of ANSI/ASHRAE/IESNA Standard 90.1-2007: 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 90.1-2007, which shall exceed these energy performance requirements by 20%.

2. Residential buildings shall exceed the energy performance requirements of the 2006 International Energy Conservation Code Supplement by 30%.

(ii) 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 below.

(*A*) Combustion equipment. Combustion equipment installed as part of an offset project commenced before January 1, 2009 shall meet the energy efficiency performance standards contained below:

1. Commercial boilers. Commercial boilers shall meet or exceed the energy efficiency criteria in Table 2 below.

Table 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.

2. Residential combustion equipment. Residential combustion equipment, including furnaces, boilers, and water heaters, shall meet or exceed the energy efficiency criteria in Table 3 below.

Table 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[a] | ≥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.

(*B*) 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.

(iii) 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%.

(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 46.13.4(d)(1) of this subsection. The offset project narrative shall include the following information:

a. The location and specifications of the building(s) where the offset project actions will occur;

b. The owner and operator of the building(s);

c. The parties implementing the offset project, including lead contractor(s), subcontractors, and consulting firms;

d. Specifications of equipment and materials to be installed as part of the offset project; and

e. Building plans and offset project technical schematics, as applicable.

(3) Emissions baseline determination. The emissions baseline shall be determined in accordance with the requirements of this subsection, 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 4 below.

Table 4
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 |

a. 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 46.13.4(d)(5) of this subsection.

b. 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 46.13.4(d)(5) of this subsection.
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 46.13.4(d)(5) of this subsection.

c. Annual baseline emissions shall be determined as follows:

$$\text{Emissions (lbs. } CO_2) = \sum_{i=1}^{n} BEU_i \times EF_i \times OF_i$$

where:
$BEU_i$ = Annual baseline energy usage for fuel type i (MMBtu) demonstrated pursuant to the requirements in 46.13.4(d)(5)a. through d. of this subsection.
$EF_i$ = Emissions factor (lbs. $CO_2$/MMBtu) for fuel type i listed at 46.13.4(d)(3), Table 4 of this subsection.
$OF_i$ = Oxidation factor for fuel type i listed at 46.13.4(d)(3), Table 4 of this subscetion.

(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 46.13.4(d)(3), Table 4 of this subsection.

a. Annual energy savings shall be determined as follows:

$$\text{Energy Savings (MMBtu)} = (BEU_{AECM} \times A) - (PIEU_{ECM} \times A)$$

where:

$BEU_{AECM}$ = Annual pre-installation baseline energy use by fuel type (MMBtu) calculated pursuant to 46.13.4(d)(5)a. through d. of this subsection.
$PIEU_{ECM}$ = 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 46.13.4(d)(5)a. through d. of this subsection.
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 of 46.13.4(d)(5) of this subsection.

b. Annual emissions reductions shall be determined as follows:

$$\text{Emissions Reduction (lbs. } CO_2) = \sum_{i=1}^{n} ES_i \times EF_i \times OF_i$$

where:
$ES_i$ = Energy savings for fuel type i (MMBtu) demonstrated pursuant to the requirements at 46.13.4(d)(5) of this subsection.
$EF_i$ = Emissions factor (lbs. $CO_2$/MMBtu) for fuel type i listed at 46.13.4(d)(3), Table 4 of this subsection.
$OF_i$ = Oxidation factor for fuel type i listed at 46.13.4(d)(3), Table 4 of this subsection.

(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 section 46.13.5. Annual monitoring and verification reports shall be certified by an independent verifier accredited pursuant to section 46.13.5. 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.

a. 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.

(i) 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 Facility" 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.

(ii) 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. Calibrated Simulation." 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.

(iii) For existing and new residential buildings, determination of baseline energy usage shall be consistent with the requirements of the RESNET (Residential Energy Services Network, Inc.) and the National Home Energy Rating Technical Guidelines, 2006 Mortgage Industry National Home Energy Rating System Standards, Chapter 3, National Energy Rating Technical Standards and Appendix A, National Home Energy Rating Technical Guidelines, On-Site Inspection Procedures for Minimum Rated features of 2006.

b. 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 90.1-2007: Energy Standard for Buildings Except Low-Rise Residential Buildings. For residential buildings, this process shall be consistent with the requirements of RESNET (Residential Energy Services Network, Inc.) and the National Home Energy Rating Technical Guidelines, 2006 Mortgage Industry National Home Energy Rating System Standards, Chapter 3, National Energy Rating Technical Standards and Appendix A, National Home Energy Rating Technical Guidelines, On-Site Inspection Procedures for Minimum Rated Features, 2006.

(i) 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.

c. 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 90.1-2007, 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 90.1-2007, Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be conducted in accordance with the requirements of RESNET (Residential Energy Services Network, Inc.) and the National Home Energy Rating Technical Guidelines, 2006 Mortgage Industry National Home Energy Rating System Standards, Chapter 3, National Energy Rating Technical Standards and Appendix A, National Home Energy Rating Technical Guidelines, On-Site Inspection Procedures for Minimum Rated Features, 2006.

$PIEU_{ECM}$ = 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 90.1-2007, Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be consistent with the requirements of RESNET (Residential Energy Services Network, Inc.) and the National Home Energy Rating Technical Guidelines, 2006 Mortgage Industry National Home Energy Rating System Standards, Chapter 3, National Energy Rating Technical Standards and Appendix A, National Home Energy Rating Technical Guidelines, On-Site Inspection Procedures for Minimum Rated Features, 2006.

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 90.1-2007, Section 11 and Appendix G. For residential buildings, adjustments shall be consistent with the specifications of RESNET (Residential Energy Services Network, Inc.) and the National Home Energy Rating Technical Guidelines, 2006 Mortgage Industry National Home Energy Rating System Standards, Chapter 3, National Energy Rating Technical Standards and Appendix A, National Home Energy Rating Technical Guidelines, On-Site Inspection Procedures for Minimum Rated Features, 2006.

d. 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 subsection 46.13.5.

(e) Avoided methane emissions from agricultural manure management operations. To qualify for the award of $CO_2$ offset allowances under 46.13, offset projects that capture and destroy methane from animal manure and organic food waste using anaerobic digesters shall meet the requirements of subsection 46.13.4(e) and all other applicable requirements of section 46.13:

(1) Eligibility.

a. 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 that would have been stored under anaerobic conditions in the absence of the offset project.

b. 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.

c. The provisions of 46.13.2(d)(2) and 46.13.2(d)(3) shall not apply to agricultural manure management offset projects provided either of the following requirements are met.

(i) 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 subsection 46.13.3 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 subsection 46.13.3.
$MG_{STATE}$ = average annual manure production of all dairy cows and swine in the state at the time of submission of a consistency application pursuant to subsection 46.13.3.

(ii) The 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.

(2) Offset project description. The 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 46.13.4(e)(1) of this subsection. The offset project narrative shall include the following information:

a. The owner and operator of the offset project;

b. The location and specifications of the facility where the offset project will occur;

c. The owner and operator of the facility where the offset project will occur;

d. The specifications of the equipment to be installed and a technical schematic of the offset project; and

e. The 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.

(3) Emissions baseline determination. The emissions baseline shall represent the potential emissions of the methane 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.

a. Baseline methane 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 methane production under site-specific anaerobic storage and weather conditions
$V_m$ = Volume of methane 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 methane per cubic foot (0.04246 lb/$ft^3$ default value at one atmosphere and 20°C)
GWP = Global warming potential of methane (23)

b. The estimated amount of volatile solids degraded each month under the uncontrolled anaerobic storage baseline scenario (kg) shall be calculated as follows:

$VS_{deg} = VS_{avail}$ x f

where:
VS = volatile solids as determined from the equation:
$VS = M_m$ x $TS_{\%}$ x $VS_{\%}$

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 USGS I-3750 (USGS, 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, Method Number I-3750, "Solids, residue on evaporation at 105 degrees C, total, gravimetric") and
$VS_{\%}$ = 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:

$$VS_{avail} = VS_p + ½\ VS_{in} - VS_{out}$$

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 degrees Celsius to degrees Kelvin) as determined from the nearest National Weather Service certified weather station (if $T_2 > 5^o$ C; if T2 < $5^o$ 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)

c. The volume of methane produced ($ft^3$) from degradation of volatile solids shall be calculated as follows:

$V_m = (VS_{deg} \times B_o) \times 35.3147\ ft^3/m^3$

where:
$V_m$ = volume of methane ($ft^3$)
$VS_{deg}$ = 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: 1990-2005, Annex 3, Table A-162 (U.S. EPA, April 2007), 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.

(4) Calculating emissions reductions. Emissions reductions shall be determined based on the the potential emissions (in tons of $CO_2e$) of the methane 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 46.13.4(e)(3)a. through 46.13.4(e)(3)c. of this subsection, 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 methane produced by the anaerobic digester, as monitored pursuant to 46.13.4(e)(5) of this subsection. 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 46.13.4(e)(3)a. through 46.13.4(e)(3)c. of this subsection. Transportation related

$CO_2$ emissions shall be determined through one of the following methods.

a. Documentation of transportation 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:

(i) Diesel fuel: 22.912 lbs. $CO_2$/gallon.

(ii) Gasoline: 19.878 lbs. $CO_2$/gallon.

(iii) Other fuel: submitted emissions factor approved by the Department.

b. Documentation of total tons of manure transported from off-site for input into the anaerobic digester during each reporting year, as monitored pursuant to 46.13.4(e)(5)a. of this subsection, and a log of transport miles 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.

(i) Diesel fuel: 0.131 lbs. $CO_2$ per ton-mile,

(ii) Gasoline: 0.133 lbs. $CO_2$ per ton-mile, or.

(iii) Other fuel: submitted emissions factor approved by the Department.

(5) Monitoring and verification requirements. Offset projects shall employ a system that provides metering of biogas volumetric flow rate and determination of methane concentration. Annual monitoring and verification reports shall include monthly biogas volumetric flow rate and methane concentration determination. Monitoring and verification shall also meet the following requirements.

a. 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 (kg) and organic food waste (kg) being digested and percentage of volatile solids present before digestion, consistent with the requirements of 46.13.4(e)(3) and 46.13.4(e)(5)c. of this subsection, and apportioned accordingly. The project sponsor shall provide supporting material and receipts tracking the monthly receipt of manure (kg) and organic food waste (kg) used to supply the anaerobic digester from each manure supplier.

b. If the offset project includes the digestion of organic food waste eligible pursuant to 46.13.4(e)(1)b. of this subsection, organic food waste shall be sampled monthly to determine the amount of volatile solids present before digestion, consistent with the requirements of 46.13.4(e)(3) and 46.13.4(e)(5)c. of this subsection, and apportioned accordingly.

c. 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 methane composition. The monitoring and verification plan shall be specified in accordance with the applicable monitoring requirements listed in Table 5 (Input Monitoring Requirements) below. 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 subsection 46.13.5.

d. The project sponsor shall verify biogas methane composition quarterly through gas sampling and third party laboratory analysis using applicable U.S. EPA test methods.

Table 5
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><br>b) Digester influent pump flow<br><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 | USGS, 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, Method Number I-3750, "Solids, residue on evaporation at 105 degrees C, total, gravimetric" |
| 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 |

46.13.5 Accreditation of independent verifiers.

(a) Standards for accreditation. Independent verifiers must be accredited by the Department to provide verification services as required of project sponsors under this section, after meeting all of the requirements of this subsection.

(1) Verifier minimum requirements. Each accredited

independent verifier shall demonstrate knowledge of the following topics:

a. Utilizing engineering principles;

b. Quantifying greenhouse gas emissions;

c. Developing and evaluating air emissions inventories:

d. Auditing and accounting principles;

e. Knowledge of information management systems;

f. Knowledge of the requirements of this section and other applicable requirements of this regulation; and

g. Such other qualifications as may be required by the Department to provide competent verification services as required for individual offset categories specified at subsection 46.13.4.

(2) Organizational qualifications. Accredited independent verifiers shall demonstrate that they meet the following requirements:

a. 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;

b. Verifiers shall employ staff with knowledge, experience, and where appropriate professional licenses relevant to the specific category(ies) of offset projects in subsection 46.13.4 that they seek to verify;

c. 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

d. 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 subsection 46.13.3(e), and remedy any such conflicts of interest prior to providing verification services.

(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.

(b) Application for accreditation. An application for accreditation shall not contain any proprietary information, and shall include on a form prescribed by the Department the following:

(1) The applicant's name, address, e-mail address, telephone number, and facsimile transmission number (if any);

(2) Documentation that the applicant has at least two years of experience in each of the knowledge areas specified at 46.13.5(a)(1)a. through 46.13.5(a)(1)e. of this subsection, and as may be required pursuant to 46.13.5(a)(1)g. of this subsection;

(3) Documentation that the applicant has successfully completed the requirements of 46.13.5(a)(3) of this subsection, as applicable;

(4) A sample of at least one work product that provides supporting evidence that the applicant meets the requirements at 46.13.5(a)(1) and 46.13.5(a)(2) of this subsection. 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;

(5) Documentation that the applicant holds professional liability insurance as required pursuant to 46.13.5(a)(2)c. of this subsection.

(6) 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 46.13.5(a)(2)d. of this subsection.

(c) Department action on applications for accreditation. The Department shall approve or deny a complete application for accreditation within ninety (90) days after submission. Upon approval of an application for accreditation, the

independent verifier shall be accredited for a period of three (3) years from the date of application approval.

(d) Reciprocity. Independent verifiers accredited in other participating states may be deemed to be accredited in Rhode Island, at the discretion of the Department.

(e) Conduct of accredited verifiers.

(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.

(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.

(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 subsection 46.13.3(b) or submitted as part of a monitoring and verification report submitted pursuant to subsection 46.13.6(b), if the Department determines that the accredited verifier has a conflict of interest related to the offset project, offset project developer, or project sponsor.

(4) The Department may revoke the accreditation of a verifier at any time given cause, for the following:

a. 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;

b. The verifier is no longer qualified due to changes in staffing or other criteria;

c. negligence or neglect of responsibilities pursuant to the requirements of this subsection; and

d. intentional misrepresentation of data or other intentional fraud.

46.13.6 Award and recordation of $CO_2$ offset allowances.

(a) Quantities of $CO_2$ offset allowances awarded, and subsequently recorded.

(1) Award of $CO_2$ offset allowances.

a. $CO_2$ emissions offset projects. Following the issuance of a consistency determination under 46.13.3(e)(2) and the approval of a monitoring and verification report under the provisions of 46.13.6(e) of this subsection, the Department or their designee shall award one $CO_2$ offset allowance for each ton of demonstrated reduction in $CO_2$ or $CO_2$ equivalent emissions or sequestration of $CO_2$.

b. $CO_2$ emissions credit retirement. If a project sponsor received a consistency determination pursuant to 46.13.3(e)(2), 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.

(2) Recordation of $CO_2$ offset allowances. After $CO_2$ offset allowances are awarded under subsection 46.13.6(a)(1), the Department shall record such $CO_2$ offset allowances in the project sponsor's general account.

(b) Deadlines for submittal of monitoring and verification reports.

(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 on or before June 30, 2009.

(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.

(c) Contents of monitoring and verification reports. For an offset project, the monitoring and verification report must include the following information.

(1) The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number (if any), and account number.

(2) The $CO_2$ emissions reduction or $CO_2$ sequestration determination as required by the relevant provisions of subsection 46.13.4, including a demonstration that the project sponsor complied with the required quantification, monitoring, and verification procedures under subsection 46.13.4, as well as those outlined in the consistency application approved pursuant to 46.13.3(e)(2).

(3) A signed statement by the offset project sponsor 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 section 46.13 of Air Pollution Control Regulation No. 46 – "$CO_2$ 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 section 46.13 of Air Pollution Control Regulation No. 46 – "$CO_2$ Budget Trading Program"is contingent on meeting the requirements of section 46.13 of Air Pollution Control Regulation No. 46 – "$CO_2$ 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 Rhode Island."*

(4) A certification signed by the offset project sponsor certifying that all offset projects for which the sponsor has received offset allowances under this section or any similar provisions in the rules of other participating states that are 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.

(5) A verification report and certification statement signed by an independent verifier accredited pursuant to subsection 46.13.5 documenting that the independent verifier has reviewed the monitoring and verification report and evaluated the following in relation to the applicable requirements of subsection 46.13.4, and any applicable guidance issued by the Department.

a. 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 of subsection 46.13.4.

b. 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 in subsection 46.13.4 and as outlined in the consistency application approved pursuant to 46.13.3(e)(2) of this section.

c. Any other evaluations and verification reviews required by the Department, to determine the adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of subsection 46.13.4.

(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.

(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.

(d) Prohibition against filing monitoring and verification reports in more than one participating state. Monitoring and verification reports may only be filed under 46.13.6 for projects that have received consistency determinations under 46.13.3(e)(2). Monitoring and verification reports may not be filed under 46.13.6 for projects that have received consistency determinations in other participating states.

(e) Department's action on monitoring and verification reports. The Department shall approve or deny a complete monitoring and verification report, in a format approved by the Department, filed with the Department pursuant to 46.13.6(d), within ninety (90) 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 section 46.13.6.

## 46.14 Duty to Comply

46.14.1 Issuance of a permit pursuant to the provisions of this regulation does not relieve the owner/operator from the responsibility to comply fully with any applicable state or federal air pollution control rules or regulations and any other requirements under local, state or federal law.

46.14.2 Any conditions included with a permit issued pursuant to this regulation shall have the full force and effect of rules and regulations.

46.14.3 Any person who receives a permit shall comply with all conditions included with the permit.

46.14.4 Failure to comply with any condition included in a permit issued pursuant to this regulation shall be considered failure to comply with this regulation.

## 46.15 General Provisions

46.15.1 Purpose.

This regulation establishes the Rhode Island 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 the $CO_2$ budget sources in an economically efficient manner. 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 46.8.5(a)(3), $CO_2$ offset allowances may be used by any $CO_2$ budget source for compliance purposes.

46.15.2 Authority.

These regulations are authorized pursuant to R.I. Gen. Laws §42-17.1-2(s), §23-23 and §23-82, as amended, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws 42-35.

46.15.3 Application.

The terms and provisions of this regulation shall be liberally construed to permit the Department to effectuate the purposes of state law, goals and policies.

## 46.16 Severability

If any provision of this regulation or the application thereof to any person or circumstance, is held invalid by a court of competent jurisdiction, the validity of the remainder of the regulation shall not be affected thereby.

## 46.17 Effective Date

The foregoing regulation, " $CO_2$ Budget Trading Program", after due notice, is hereby adopted and filed with the Secretary of State this 2nd day of July, 2008 to become effective twenty (20) days thereafter, in accordance with the provisions of Chapters 23-23, 42-35, 42-17.1, 42-17.6, of the General Laws of Rhode Island of 1956, as amended.

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W. Michael Sullivan, PhD., Director
Department of Environmental Management

**Notice Given on:** **May 2, 2008**

**Public Hearing held:** **June 5, 2008**

**Filing Date:** **July 2, 2008**

**Effective Date:** **July 22, 2008**