

Project—A physical change in or change in the method of operation of an existing facility, including a new emissions unit.

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Refinery component—A piece of equipment which has the potential to leak VOCs when tested in the manner specified in § 129.58 (relating to petroleum refineries—fugitive sources). These sources include, but are not limited to, pump seals, compressor seals, seal oil degassing vents, pipeline valves, pressure relief devices, process drains and open-ended pipes. Excluded from these sources are valves which are not externally regulated.

Refinery gas—Gas produced at a refinery which produces petroleum products, including gasoline, from refinery units.

Refinery unit—A basic process operation, such as distillation hydrotreating, cracking or reforming of hydrocarbons which is made up of a set of refinery components.

Regenerative cycle combustion turbine—A stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.

Regulated NSR pollutant—

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Silicone insulation material—An insulating material applied to exterior metal surfaces of aerospace vehicles for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from ablative coatings in that they are not designed to be purposefully exposed to open flame or extreme heat and charred.

Simple cycle combustion turbine—A stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.

Single coat—One film of coating applied to a metal surface.

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Start-up—For purposes of §§ 129.301—129.310, the period of time, after initial construction, shutdown or cold shutdown, during which a glass melting furnace is heated to stable operating temperature by the primary furnace combustion system, and systems and instrumentation are brought to stabilization.

Stationary combustion turbine—Equipment, including the turbine, fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and ancillary components and subcomponents comprising a simple cycle combustion turbine, a regenerative or recuperative cycle combustion turbine, a combined cycle combustion turbine, and a combined heat and power combustion turbine-based system. The equipment is not self-propelled or intended to be propelled while performing its function. The equipment may be mounted on a vehicle for portability.

Stationary internal combustion engine or stationary reciprocating internal combustion engine—

(i) An internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile.

(ii) The term does not include the following:

(A) A combustion turbine.

(B) A nonroad engine as defined in 40 CFR 1068.30 (relating to what definitions apply to this part), excluding paragraph (2)(ii) of this definition.

(C) An engine used to propel a motor vehicle, an aircraft or a vehicle used solely for competition.

(D) A portable temporary source such as an air compressor or generator.

Stockpiling—The act of placing, storing and removing materials on piles exposed to the outdoor atmosphere. Placing refers to the deposition of material onto the pile. Removing refers to disturbing the pile either for loading of material into or onto vehicles for transportation purposes or for material handling. Material that is not to be utilized in the production of a product or is not itself a useful product is excluded from the definition of stockpile material. Operations which consist entirely of transferring material between different transportation conveyances are also excluded from this definition.

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**CHAPTER 129. STANDARDS FOR SOURCES
ADDITIONAL RACT REQUIREMENTS FOR MAJOR
SOURCES OF NO_x AND VOCs**

§ 129.96. Applicability.

(a) The NO_x requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a major NO_x emitting facility and the VOC requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a major VOC emitting facility that were in existence on or before July 20, 2012, for which a requirement or emission limitation, or both, has not been established in §§ 129.51—129.52c, 129.54—129.69, 129.71—129.73, 129.75, 129.77, 129.101—129.107 and 129.301—129.310.

(b) The NO_x requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a NO_x emitting facility and the VOC requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a VOC emitting facility when the installation of a new source or a modification or change in operation of an existing source after July 20, 2012, results in the source or facility meeting the definition of a major NO_x emitting facility or a major VOC emitting facility and for which a requirement or an emission limitation, or both, has not been established in §§ 129.51—129.52c, 129.54—129.69, 129.71—129.73, 129.75, 129.77, 129.101—129.107 and 129.301—129.310.

(c) This section and §§ 129.97—129.100 do not apply to the owner and operator of a NO_x air contamination source located at a major NO_x emitting facility that has the potential to emit less than 1 TPY of NO_x or a VOC air contamination source located at a major VOC emitting facility that has the potential to emit less than 1 TPY of VOC.

(d) This section and §§ 129.97—129.100 do not apply to the owner and operator of a facility which is not a major NO_x emitting facility or a major VOC emitting facility on or before January 1, 2017.

§ 129.97. Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.

(a) The owner and operator of a source listed in one or more of subsections (b)—(h) located at a major NO_x

emitting facility or major VOC emitting facility subject to § 129.96 (relating to applicability) shall comply with the applicable presumptive RACT requirement or RACT emission limitation, or both, beginning with the specified compliance date as follows, unless an alternative compliance schedule is submitted and approved under subsections (k)—(m) or § 129.99 (relating to alternative RACT proposal and petition for alternative compliance schedule):

(1) January 1, 2017, for a source subject to § 129.96(a).

(2) January 1, 2017, or 1 year after the date the source meets the definition of a major NO_x emitting facility or major VOC emitting facility, whichever is later, for a source subject to § 129.96(b).

(b) The owner and operator of a source specified in this subsection, which is located at a major NO_x emitting facility or major VOC emitting facility subject to § 129.96 shall comply with the following:

(1) The presumptive RACT requirement for a combustion unit with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour, which is the performance of a biennial tune-up conducted in accordance with the procedures in 40 CFR 63.11223 (relating to how do I demonstrate continuous compliance with the work practice and management practice standards). The biennial tune-up must include, at a minimum, the following:

(i) Inspection and cleaning or replacement of fuel-burning equipment, including the burners and components, as necessary, for proper operation as specified by the manufacturer.

(ii) Inspection of the flame pattern and adjustment of the burner, as necessary, to optimize the flame pattern to minimize total emissions of NO_x and, to the extent possible, emissions of CO.

(iii) Inspection and adjustment, as necessary, of the air-to-fuel ratio control system to ensure proper calibration and operation as specified by the manufacturer.

(2) The owner or operator of a combustion unit with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up shall conduct a tune-up of the boiler one time in each 5-year calendar period. The tune-up must include, at a minimum, the following:

(i) Inspection and cleaning or replacement of fuel-burning equipment, including the burners and components, as necessary, for proper operation as specified by the manufacturer.

(ii) Inspection of the flame pattern and adjustment of the burner, as necessary, to optimize the flame pattern to minimize total emissions of NO_x and, to the extent possible, emissions of CO.

(iii) Inspection and adjustment, as necessary, of the air-to-fuel ratio control system to ensure proper calibration and operation as specified by the manufacturer.

(3) The applicable recordkeeping requirements of § 129.100(d), (e) or (f) (relating to compliance demonstration and recordkeeping requirements).

(c) The owner and operator of a source specified in this subsection, which is located at a major NO_x emitting facility or major VOC emitting facility subject to § 129.96 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices:

(1) A NO_x air contamination source that has the potential to emit less than 5 TPY of NO_x.

(2) A VOC air contamination source that has the potential to emit less than 2.7 TPY of VOC.

(3) A boiler or other combustion source with an individual rated gross heat input less than 20 million Btu/hour.

(4) A combustion turbine with a rated output less than 1,000 bhp.

(5) A stationary internal combustion engine rated at less than 500 bhp (gross).

(6) An incinerator, thermal oxidizer or catalytic oxidizer used primarily for air pollution control.

(7) A fuel-burning unit with an annual capacity factor of less than 5%.

(i) For a combustion unit, the annual capacity factor is the ratio of the unit's heat input (in million Btu or equivalent units of measure) to the unit's maximum rated hourly heat input rate (in million Btu/hour or equivalent units of measure) multiplied by 8,760 hours during a period of 12 consecutive calendar months.

(ii) For an electric generating unit, the annual capacity factor is the ratio of the unit's actual electric output (expressed in MWe/hr) to the unit's nameplate capacity (or maximum observed hourly gross load (in MWe/hr) if greater than the nameplate capacity) multiplied by 8,760 hours during a period of 12 consecutive calendar months.

(iii) For any other unit, the annual capacity factor is the ratio of the unit's actual operating level to the unit's potential operating level during a period of 12 consecutive calendar months.

(8) An emergency standby engine operating less than 500 hours in a 12-month rolling period.

(d) Except as specified under subsection (c), the owner and operator of a combustion unit or other combustion source located at a major VOC emitting facility subject to § 129.96 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices for the control of the VOC emissions from the combustion unit or other combustion source.

(e) The owner and operator of a municipal solid waste landfill subject to § 129.96 shall comply with the following applicable presumptive RACT requirement:

(1) For a municipal solid waste landfill constructed on or before May 30, 1991, emission guidelines and compliance times in 40 CFR Part 60, Subpart Cc (relating to emission guidelines and compliance times for municipal solid waste landfills), which are adopted and incorporated by reference in § 122.3 (relating to adoption of standards), and applicable Federal or state plans in 40 CFR Part 62 (relating to approval and promulgation of state plans for designated facilities and pollutants).

(2) For a municipal solid waste landfill constructed after May 30, 1991, New Source Performance Standards in 40 CFR Part 60, Subpart WWW (relating to standards of performance for municipal solid waste landfills), which are adopted and incorporated by reference in § 122.3.

(f) The owner and operator of a municipal waste combustor subject to § 129.96 shall comply with the presumptive RACT requirement of 180 ppmvd NO_x @ 7% oxygen.

(g) Except as specified under subsection (c), the owner and operator of a NO_x air contamination source specified in this subsection, which is located at a major NO_x emitting facility or a VOC air contamination source specified in this subsection, which is located at a major VOC emitting facility subject to § 129.96 may not cause, allow or permit NO_x or VOCs to be emitted from the air contamination source in excess of the applicable presumptive RACT emission limitation:

(1) A combustion unit or process heater:

(i) For a natural gas-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.10 lb NO_x/million Btu heat input.

(ii) For a distillate oil-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.12 lb NO_x/million Btu heat input.

(iii) For a residual oil-fired or other liquid fuel-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.20 lb NO_x/million Btu heat input.

(iv) For a refinery gas-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.25 lb NO_x/million Btu heat input.

(v) For a coal-fired combustion unit with a rated heat input equal to or greater than 50 million Btu/hour and less than 250 million Btu/hour, 0.45 lb NO_x/million Btu heat input.

(vi) For a coal-fired combustion unit with a rated heat input equal to or greater than 250 million Btu/hour that is:

(A) A circulating fluidized bed combustion unit, 0.16 lb NO_x/million Btu heat input.

(B) A tangentially fired combustion unit, 0.35 lb NO_x/million Btu heat input.

(C) Any other type of coal-fired combustion unit, 0.40 lb NO_x/million Btu heat input.

(vii) For any other type of solid fuel-fired combustion unit with a rated heat input equal to or greater than 50 million Btu/hour, 0.25 lb NO_x/million Btu heat input.

(viii) For a coal-fired combustion unit with a selective catalytic reduction system operating with an inlet temperature equal to or greater than 600°F, 0.12 lb NO_x/million Btu heat input. Compliance with this emission limit is also required when by-passing the selective catalytic reduction system.

(ix) For a coal-fired combustion unit with a selective noncatalytic reduction system, the selective noncatalytic reduction system shall be operated with the injection of reagents including ammonia or other NO_x-reducing agents when the temperature at the area of the reagent injection is equal to or greater than 1,600°F.

(2) A combustion turbine:

(i) For a combined cycle or combined heat and power combustion turbine with a rated output equal to or greater than 1,000 bhp and less than 180 MW when firing:

(A) Natural gas or a noncommercial gaseous fuel, 42 ppmvd NO_x @ 15% oxygen.

(B) Fuel oil, 96 ppmvd NO_x @ 15% oxygen.

(C) Natural gas or a noncommercial gaseous fuel, 5 ppmvd VOC (as propane) @ 15% oxygen.

(D) Fuel oil, 9 ppmvd VOC (as propane) @ 15% oxygen.

(ii) For a combined cycle or combined heat and power combustion turbine with a rated output equal to or greater than 180 MW when firing:

(A) Natural gas or a noncommercial gaseous fuel, 4 ppmvd NO_x @ 15% oxygen.

(B) Fuel oil, 8 ppmvd NO_x @ 15% oxygen.

(C) Natural gas or a noncommercial gaseous fuel, 2 ppmvd VOC (as propane) @ 15% oxygen.

(D) Fuel oil, 2 ppmvd VOC (as propane) @ 15% oxygen.

(iii) For a simple cycle or regenerative cycle combustion turbine with a rated output equal to or greater than 1,000 bhp and less than 6,000 bhp when firing:

(A) Natural gas or a noncommercial gaseous fuel, 150 ppmvd NO_x @ 15% oxygen.

(B) Fuel oil, 150 ppmvd NO_x @ 15% oxygen.

(C) Natural gas or a noncommercial gaseous fuel, 9 ppmvd VOC (as propane) @ 15% oxygen.

(D) Fuel oil, 9 ppmvd VOC (as propane) @ 15% oxygen.

(iv) For a simple cycle or regenerative cycle combustion turbine with a rated output equal to or greater than 6,000 bhp when firing:

(A) Natural gas or a noncommercial gaseous fuel, 42 ppmvd NO_x @ 15% oxygen.

(B) Fuel oil, 96 ppmvd NO_x @ 15% oxygen.

(C) Natural gas or a noncommercial gaseous fuel, 9 ppmvd VOC (as propane) @ 15% oxygen.

(D) Fuel oil, 9 ppmvd VOC (as propane) @ 15% oxygen.

(3) A stationary internal combustion engine:

(i) For a lean burn stationary internal combustion engine with a rating equal to or greater than 500 bhp fired with:

(A) Natural gas or a noncommercial gaseous fuel, 3.0 grams NO_x/bhp-hr.

(B) Natural gas or a noncommercial gaseous fuel, liquid fuel or dual-fuel, 1.0 gram VOC/bhp-hr excluding formaldehyde.

(ii) For a stationary internal combustion engine with a rating equal to or greater than 500 bhp fired with liquid fuel or dual-fuel, 8.0 grams NO_x/bhp-hr.

(iii) For a rich burn stationary internal combustion engine with a rating equal to or greater than 500 bhp fired with:

(A) Natural gas or a noncommercial gaseous fuel, 2.0 grams NO_x/bhp-hr.

(B) Natural gas or a noncommercial gaseous fuel, 1.0 gram VOC/bhp-hr.

(4) A unit firing multiple fuels:

(i) The applicable RACT multiple fuel emission limit shall be determined on a total heat input fuel weighted basis using the following equation:

$$E_{HI\text{weighted}} = \frac{\sum_{i=1}^n E_i HI_i}{\sum_{i=1}^n HI_i}$$

Where:

$E_{HI\text{weighted}}$ = The heat input fuel weighted multiple fuel emission rate or emission limitation for the compliance period, expressed in units of measure consistent with the units of measure for the emission limitation.

E_i = The emission rate or emission limit for fuel i during the compliance period, expressed in units of measure consistent with the units of measure for the emission limitation.

HI_i = The total heat input for fuel i during the compliance period.

n = The number of different fuels used during the compliance period.

(ii) A fuel representing less than 1% of the unit's annual fuel consumption on a heat input basis is excluded when determining the applicable RACT multiple fuel emission limit calculated in accordance with subparagraph (i).

(iii) The determination in subparagraph (i) does not apply to a stationary internal combustion engine that is subject to the RACT emission limits in paragraph (3).

(h) The owner and operator of a Portland cement kiln subject to § 129.96 shall comply with the following applicable presumptive RACT emission limitation:

(1) 3.88 pounds of NO_x per ton of clinker produced for a long wet-process cement kiln as defined in § 145.142 (relating to definitions).

(2) 3.44 pounds of NO_x per ton of clinker produced for a long dry-process cement kiln as defined in § 145.142.

(3) 2.36 pounds of NO_x per ton of clinker produced for:

(i) A preheater cement kiln as defined in § 145.142.

(ii) A precalciner cement kiln as defined in § 145.142.

(i) The requirements and emission limitations of this section supersede the requirements and emission limitations of a RACT permit issued to the owner or operator of an air contamination source subject to one or more of subsections (b)—(h) prior to April 23, 2016, under §§ 129.91—129.95 (relating to stationary sources of NO_x and VOCs) to control, reduce or minimize NO_x emissions or VOC emissions, or both, from the air contamination source unless the permit contains more stringent requirements or emission limitations, or both.

(j) The requirements and emission limitations of this section supersede the requirements and emission limitations of §§ 129.201—129.205, 145.111—145.113 and 145.141—145.146 (relating to additional NO_x requirements; emissions of NO_x from stationary internal combustion engines; and emissions of NO_x from cement manufacturing) unless the requirements or emission limitations of §§ 129.201—129.205, §§ 145.111—145.113 or §§ 145.141—145.146 are more stringent.

(k) The owner or operator of a major NO_x emitting facility or a major VOC emitting facility subject to § 129.96 that includes an air contamination source subject to one or more of subsections (b)—(h) that cannot meet the applicable presumptive RACT requirement or RACT emission limitation without installation of an air cleaning device may submit a petition, in writing, requesting an alternative compliance schedule in accordance with the following:

(1) The written petition shall be submitted to the Department or appropriate approved local air pollution control agency as soon as possible but not later than:

(i) October 24, 2016, for a source subject to § 129.96(a).

(ii) October 24, 2016, or 6 months after the date that the source meets the definition of a major NO_x emitting facility, whichever is later, for a source subject to § 129.96(b).

(2) The written petition must include:

(i) A description, including make, model and location, of each affected source subject to a RACT requirement or a RACT emission limitation in one or more of subsections (b)—(h).

(ii) A description of the proposed air cleaning device to be installed.

(iii) A schedule containing proposed interim dates for completing each phase of the required work to install the air cleaning device described in subparagraph (ii).

(iv) A proposed interim emission limitation that will be imposed on the affected source until compliance is achieved with the applicable RACT requirement or RACT emission limitation.

(v) A proposed final compliance date that is as soon as possible but not later than 3 years after the written approval of the petition by the Department or the appropriate approved local air pollution control agency. The approved petition shall be incorporated in an applicable operating permit or plan approval.

(l) The Department or appropriate approved local air pollution control agency will review the timely and complete written petition requesting an alternative compliance schedule submitted in accordance with subsection (k) and approve or deny the petition in writing.

(m) Approval or denial under subsection (l) of the timely and complete petition for an alternative compliance schedule submitted under subsection (k) will be effective on the date the letter of approval or denial of the petition is signed by the authorized representative of the Department or appropriate approved local air pollution control agency.

§ 129.98. Facility-wide or system-wide NO_x emissions averaging plan general requirements.

(a) The owner or operator of a major NO_x emitting facility subject to § 129.96 (relating to applicability) that includes at least one air contamination source subject to a NO_x RACT emission limitation in § 129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) that cannot meet the applicable NO_x RACT emission limitation may elect to meet the applicable NO_x RACT emission limitation in § 129.97 by averaging NO_x emissions on either a facility-wide or system-wide basis using a 30-day rolling average. System-wide emissions averaging must be among sources under common control of the same owner or operator within the same ozone nonattainment area in this Commonwealth.

(b) The owner or operator of each facility that elects to comply with subsection (a) shall submit a written NO_x emissions averaging plan to the Department or appropriate approved local air pollution control agency as part of an application for an operating permit modification or a plan approval, if otherwise required. The application incorporating the requirements of this section shall be submitted by the applicable date as follows:

(1) October 24, 2016, for a source subject to § 129.96(a).

(2) October 24, 2016, or 6 months after the date that the source meets the definition of a major NO_x emitting facility, whichever is later, for a source subject to § 129.96(b).

(c) Each NO_x air contamination source included in the application for an operating permit modification or a plan approval, if otherwise required, for averaging NO_x emis-