



February 1, 2016

U.S. Environmental Protection Agency
EPA Docket Center
Mail Code 2821T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attention: EPA-HQ-OAR-2015-0500

Re: Comments on EPA's Proposed Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS (80 FR 75706, December 3, 2015)

To Whom It May Concern:

The Pennsylvania Department of Environmental Protection (PA DEP) appreciates the opportunity to comment on the proposed Cross-State Air Pollution Rule Update for the 2008 Ozone National Ambient Air Quality Standard (NAAQS) (hereinafter "CSAPR Update Rule"), published in the *Federal Register* on December 3, 2015 (80 FR 75706). In the CSAPR Update Rule EPA proposes to update CSAPR to address the interstate transport of NO_x emissions with respect to the 2008 Ozone NAAQS. EPA's proposal also responds to the July 28, 2015, remand by the U.S. Court of Appeals for the District of Columbia Circuit of certain states' ozone season nitrogen oxides (NO_x) emissions budgets established by CSAPR. In addition, the proposal for the electric generation sector would provide a partial remedy to address the failure of certain states including Pennsylvania to submit a Good Neighbor State Implementation Plan (SIP) revision under section 110(a)(2)(D)(i) of the Clean Air Act (CAA), 42 U.S.C. 7410(a)(2)(D)(i).

Use of EPA's 4-Step Analytical Process

EPA in its analysis of the CSAPR Update Rule uses a 4-step process to address the requirements of the "good neighbor" provision, found in CAA § 110, for ozone or PM_{2.5} standards. In the proposed CSAPR Update Rule, the EPA applies this 4-step process to update CSAPR with respect to the 2008 Ozone NAAQS. EPA explains in the preamble to the proposal that application of this process with respect to the 2008 Ozone NAAQS provides the analytic basis for proposing to further limit ozone season electric generating unit (EGU) NO_x emissions in 23 eastern states. EPA seeks comment on the use of this approach with regard to the proposed rulemaking. The PA DEP continues to support this approach for addressing transported pollution. However, EPA must use the most recent quality-assured air quality data in its assessments to avoid the creation of ozone season NO_x budgets under the CSAPR Rule Update for Pennsylvania and certain other states that would "over-control" with respect to ozone nonattainment and maintenance problems at receptors in downwind areas. In recent years, Pennsylvania has made significant improvements in air quality—the entire Commonwealth is monitoring attainment of the 2008 ozone NAAQS. Most importantly, the aggressive 72 percent

Secretary

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reduction proposed for Pennsylvania's ozone season NOx budget in the CSAPR Update Rule is not achievable by the 2017 ozone season.

The EPA's Evaluation of Cost Thresholds

The EPA evaluated NOx reduction potential, cost, and downwind air quality improvements available at several cost thresholds in the 4-step process. For existing Selective Catalytic Reduction (SCR) and Selective Non-Catalytic Reduction (SNCR) controls that are operating to some extent, but not at their full pollution control capability, the EPA's analysis determined that \$500 per ton represents the costs reflective of fully operating these systems. As further detailed in the EGU NOx Mitigation Strategies Technical Support Document (TSD), which is found in the docket for the proposed rule, the EPA explains that it performed an in-depth cost assessment for all coal-fired units with SCRs, finding that 90 percent of the units had total SCR operation costs of \$1,300 per ton of NOx removed, or less. Based on this assessment, the EPA proposes that turning on and fully operating idled SCRs is widely available at a uniform cost of \$1,300 per ton of NOx removed. The EPA indicates that it has not identified a discrete NOx pollution control measure that would achieve sufficient emission reductions to address relevant air quality impacts at an estimated cost of less than \$500 per ton. As a result, EPA has not included a representation of such a cost level in the proposal's analyses. The EPA identified cost thresholds at which control technologies are widely available and, thereby, at which the most significant incremental emission reduction potential is expected. The EPA states that it does not expect that analyzing costs between these cost thresholds will reveal significant incremental emission reduction potential that isn't already anticipated at the analyzed cost thresholds. The EPA provides a summary of the evaluation for the \$500 per ton, \$1,300 per ton, and \$3,400 per ton uniform cost thresholds because, as described in its analysis, the EPA is proposing to use the \$1,300 per ton level and is taking comment on using the \$500 per ton level or \$3,400 per ton level to quantify ozone season EGU NOx requirements to reduce interstate ozone transport for the 2008 Ozone NAAQS.

The EPA has requested comment on its evaluation of the cost thresholds from \$500 to \$10,000 per ton. The EPA has determined the correct cost threshold with regard to emission reductions to be \$1,300 per ton of reduction. This cost level in EPA's evaluation of cost thresholds is the cost level at which EPA assumes that existing EGUs can obtain the most significant reductions while optimally operating and restarting their existing SCRs, using SNCR, shifting generation, and fuel switching to achieve NOx emission reductions. Based upon the \$1,300 per ton cost threshold, EPA anticipates that Pennsylvania will achieve a statewide average of 0.057 pounds of NOx per million British Thermal Units (mmBtu) of heat input.

While the PA DEP strongly supports the operation of existing NOx controls when it is technologically feasible, the Department objects to the EPA assumptions used in the cost threshold analysis for the CSAPR Update Rule. A \$1,300 per ton of NOx removed threshold is overly optimistic and not realistically achievable for the purpose of setting Pennsylvania's NOx ozone season budget. EPA has used flawed technical assumptions and has not considered that SCRs are not technically feasible for use and cannot operate at optimal levels when an EGU operates below 50-60 percent of its capacity. When EGUs operate at lower capacities, the SCR's catalyst does not reach the temperature required for the control device to operate properly. The cost threshold, when this capacity limitation is considered, is much higher. The PA DEP

addressed load issues in the development of Pennsylvania's NOx RACT regulation (*Additional RACT Requirements for Major Sources of NOx and VOCs*), which DEP anticipates will be promulgated as a final rulemaking this spring. The EPA's proposed Pennsylvania NOx ozone season trading budget (14,387 tons for 2017 and each year thereafter) would require an additional 33 percent reduction in NOx emissions below the anticipated NOx emission levels to be achieved year round under Pennsylvania's NOx RACT regulation for the 8-hour Ozone NAAQS. To this end, PA DEP urges EPA to consider the NOx emission limitations for the EGU sector in the Pennsylvania final-form RACT regulation when establishing the final NOx ozone season trading budget for this Commonwealth in the CSAPR Update Rule. The final-form RACT rulemaking, adopted by the Environmental Quality Board on November 17, 2015, is scheduled for consideration by the Independent Regulatory Review Commission in March 2016. Following the Office of Attorney General's review and approval as to "form and legality," the final RACT rulemaking will take effect upon publication in the *Pennsylvania Bulletin*. The PA DEP anticipates that the final RACT rulemaking will take effect no later than April 2016; compliance is required by January 1, 2017 (see enclosure).

A more realistic cost threshold analysis upon which to base Pennsylvania's ozone season NOx budget and other state budgets would be to assume a cost reduction threshold of \$800-\$1,000 per ton of NOx reduction related only to the cost of operating existing SCRs. The EPA's \$1,300 per ton cost threshold underestimates the cost of upgrading and optimizing controls and would result in state budgets that are likely much too low for the benefits achieved. Therefore, the PA DEP disagrees with the assumptions in Table V1.C-1 below and EPA's selection of the \$1,300 per ton EGU NOx cost threshold assuming the "widespread availability of restarting idled SCRs and state of the art combustion controls." The cost of redeploying idled SCRs will be impacted by the length of the idling period, which EPA acknowledges that in some cases, the "controls have been idled for years" (80 FR 75737).

TABLE V1. C-1

EGU NOx Control Threshold	
\$500/ton	CSAPR Ozone season NOx cost threshold; fully operating post-combustion controls that are already running.
\$1,300/ton	Widespread availability of restarting idled SCRs and state-of-the-art combustion controls.
\$3,400/ton	NOx SIP Call ozone season NOx cost threshold, adjusted to 2014\$; Widespread availability of restarting idled SNCRs.
\$5,000/ton	Widespread availability of new SCRs. ⁹⁶
\$6,400/ton	Widespread availability of new SNCRs. ⁹⁷
\$10,000/ton	Upper Bound

Note: See footnotes at 80 FR 75734.

Proposed EGU NOx Mitigation Strategies

The EPA's assessment of its proposed NOx mitigation strategies assumes that a 50 percent solution is used in removing an equivalent amount of NOx. EPA estimates that sufficient

reagent could be purchased at a cost of \$500 per ton of NO_x removed to achieve full operation for most SCR and SNCR controls. The details on this assessment refer to the EGU NO_x Mitigation Strategies TSD in the docket for the proposed rule. PA DEP believes that this scenario may only be the case when the unit is operating at a capacity that allows for the operation of the SCR system. Units operated at lower capacities may not reach the temperature necessary to operate the SCR system.

EPA proposes that turning on and fully operating idled SCRs is widely available at a uniform cost of \$1,300 per ton of NO_x removed. However, this scenario may only be the case when the unit operates at a capacity that allows it to run its SCR. Units operated at lower capacities may not reach the temperature necessary to operate the SCR. Also, many idled SCRs are not likely readily available for operation in the short timeframe and at a cost of \$1,300 per ton as EPA has estimated in its analysis. Permitting requirements for the installation or modification of control devices as well as modifications to the control equipment may increase the cost well beyond \$1,300 per ton of NO_x removed. EPA should review and revise the assumptions used in its mitigation strategies analysis.

The EPA evaluated the feasibility of turning on idled SCR and SNCR for the 2017 ozone season. Based on past practice and the possible effort to restart the controls (e.g., stockpiling reagent, bringing the system out of protective lay-up, performing inspections, etc.), EPA concluded that returning these idled controls to operation should be available in equal to or less than three months. The EPA seeks comment on its assessment. The PA DEP believes that idled controls will require upgrades and permit modifications, and it will take more than three months to make those controls available for the operation at the level necessary to meet the average NO_x emission reduction requirements in EPA's CSAPR Update Rule.

The EPA's analysis indicates that state-of-the-art combustion controls, such as low-NO_x burners (LNB) and over-fire air (OFA), are cost-effective, can be installed quickly, and can significantly reduce EGU NO_x emissions. It also indicates that the cost of state-of-the-art combustion controls per ton of NO_x reduced is dependent on the combustion control type and unit type. The EPA estimates the cost per ton of state-of-the-art combustion controls to be \$500 per ton to \$1,200 per ton of NO_x removed. To be conservative, the EPA is proposing that state-of-the-art NO_x combustion controls are widely available for installation at \$1,300 per ton of NO_x removed. The EPA revisited the analysis with data specific to the proposed rule and proposed that a 2017 compliance timeframe is feasible for this EGU NO_x mitigation strategy. The EPA also indicated that these controls are fully proven, widely used, and with a reasonable effort can be procured, designed, installed, tested and be in operation on any coal-steam EGU consistent with the compliance timeframe provided for this rulemaking. The EPA is proposing that operation of the NO_x controls will be feasible for the 2017 ozone season. The EPA has asked for comment on additional EGU NO_x mitigation strategies that may be feasible for the 2017 ozone season.

The PA DEP disagrees with EPA's assertion regarding the feasibility of operating certain idled EGU NO_x controls for the 2017 ozone season under the CSAPR Rule Update. The installation of new or modified controls will require planning, purchasing and permitting lead times. Existing controls may need additional upgrades and modifications, and any resulting physical or

operational changes may need to be addressed by permit modifications that would likely extend beyond 2016 if purchasing is delayed until the final rule is promulgated.

Technical Infeasibility of Meeting the Proposed Allocations

The basic premise of EPA's CSAPR proposal is that NO_x emission reductions by 2017 are readily available to EGUs through the operation of existing NO_x controls. EPA has proposed statewide budgets based upon this assumption of optimized operations of NO_x controls. Contrary to EPA's representations, the NO_x limits proposed for EGUs cannot be achieved by many units through the operation of existing controls. According to EPA's technical support document for the proposed rule, the affected EGUs in Pennsylvania would be required to achieve a statewide average of 0.057 pounds of NO_x per mmBtu of heat input. The coal-fired EGU operating with existing SCR cannot achieve these levels during the entire ozone season. Due to changing market conditions, these coal-fired EGUs do not operate at base loads during the entire ozone season. When they operate at low-load conditions, the units will be operating outside the optimal temperature for the operation of SCR. Moreover, EGUs burning waste coal in circulating fluidized bed combustors equipped with SNCR cannot achieve these low NO_x budgets presumed by EPA to meet the proposed allocations. Therefore, contrary to the claims stated in the proposal, it is impossible for the affected units in Pennsylvania to meet the proposed allocation at the presumed NO_x emission rates with advanced controls such as SCR and SNCR already in place. Pennsylvania's recently finalized RACT regulations require a NO_x emission rate of 0.12 pound per mmBtu and 0.16 pound per mmBtu for the coal-fired units when they operate with SCR and SNCR, respectively. We strongly urge EPA to revise allocations to reflect the realistic NO_x emission rates with optimized operation of SCR and SNCR.

Special Consideration for Coal Refuse-Fired Facilities

In Pennsylvania there are more than 5,000 abandoned un-reclaimed mining areas covering approximately 184,000 acres—and environmental liability for the Commonwealth and the broader Chesapeake, Delaware and Ohio River basins. Many of those areas consist of coal refuse piles that are sources of acid mine drainage which pollutes our streams. Additionally, those piles sometimes catch fire and emit many of the same pollutants that EPA and Pennsylvania air quality regulations are targeting for control. The 15 coal refuse-fired facilities in the Commonwealth consume approximately 12 million tons of coal refuse annually and in turn use the resultant ash to restore degraded areas back to environmentally productive and safe places. Since the emergence of this unique and innovative industry, more than 205 million tons of coal refuse have been removed from the landscape and thousands of acres have been restored, eliminating countless sources of pollution.

CSAPR should be tailored to recognize the multiple benefits the coal refuse-fired plants provide. While coal refuse-fired facilities do emit a small fraction of the NO_x emissions targeted by the CSAPR, the CSAPR Update Rule also needs to be holistic and recognize the many environmental benefits these facilities have provided and can continue to provide. Constructing a rule that results in the closure of these facilities will have significant impacts on Pennsylvania's ability to restore these mine-affected areas to benefit our state and downstream neighbors.

Shifting Generation to Lower NOx-emitting EGUs

According to EPA, shifting generation to lower NOx-emitting EGUs, similar to operating existing post-combustion controls, uses investments that have already been made, can be done quickly, and can significantly reduce EGU NOx emissions. EPA asserts that shifting generation within a state is a conservative approach and does not capture emission reductions that would occur if generation was shifted more broadly among units in different states, which the EPA believes is feasible over time but which may be subject to out-of-merit order dispatch constraints in the near term. The EPA indicates that limiting such generation-shifting potential to units within each state is not a reflection of how generation-shifting works in practice (given that the grid crosses state boundaries); instead, EPA states that it is an analytic proxy designed to respect the feasibility of near-term generation-shifting in light of these potential near-term, out-of-merit order dispatch constraints. The EPA is seeking comment on this assessment and on the limitation in quantifying EGU NOx reduction potential for the 2017 ozone season.

The PA DEP is concerned that shifting electricity to other regulated lower-emitting sources during the ozone season within or outside of a state is not the only possible outcome that can be expected under EPA's assumptions. The generation is just as likely to shift to smaller local but higher-emitting units that are below the CSAPR applicability thresholds, especially during peak periods of electric demand. These periods of peak demand tend to occur on the worst ozone days. The EPA continues to underestimate the emission impact of EGUs that are rated below 25 megawatts (MW). The impact of very small NOx budgets in a state may actually shift generation to high-emitting non-CSAPR units that only operate on high electric demand days when ozone tends to be at its worst. EPA's tighter trading budgets actually increase the cost of electricity generation on days without ozone issues or almost on every day of the year with no real reduction of emissions on the high ozone days that occur during each ozone season.

Banking and Retirement of Banked Allowances

The EPA states its belief that a surrender ratio approach provides a means for the existing CSAPR EGU NOx ozone season allowances to retain some value, while appropriately mitigating the potential adverse impact of the allowance bank on the emission-reducing actions needed from affected units in states with obligations to address interstate transport for the 2008 ozone NAAQS. The EPA seeks comment on a surrender ratio approach and on the use of a ratio, such as two-for-one or four-for-one, and whether an alternative ratio would be appropriate.

The PA DEP believes that the NOx allowance banking provisions in the CSAPR trading program allow EGU owners and operators to adjust their operations to address variability. The high retirement ratios of two-for-one or four-for-one proposed by EPA in the CSAPR Update Rule for banked NOx allowances would create a requirement that could cause serious compliance issues and cost spikes as the NOx allowance bank expands during low electric demand summers and contracts during high electric demand summers. This impact would become more problematic if there were multiple years of contraction or multiple years of expansion of the bank. Therefore, PA DEP recommends that rather than applying retirement ratios to the NOx allowances used from the bank, that EPA set up provisions that would cap or reduce the bank or limit the banking of allowances.

The EPA is seeking comment on a proposed alternative approach to lower the allowances in the bank by giving out fewer allocated allowances up front, and it seeks comment on what percentage (below 100 percent) of allowances to issue, and over what number of years, under this alternative approach. As a specific example, EPA seeks comment on implementing this approach in a manner such that the EPA would issue allowances to sources within each of the 23 states with updated budgets at a level of 85 percent of the proposed emissions budgets for the first three years that the new budgets are effective. The EPA is also seeking comment on what other percentages of the budget and timeframes could be appropriately used to implement this alternative approach. As in the specific example above, EPA would seek a combination of time and recordation percentage such that the ultimate influence of the anticipated allowance bank is limited to approximately the regional variability limit (i.e., the difference between the collective emissions budgets and the collective assurance levels). The PA DEP disagrees with this alternative approach as emission budgets are too low to accommodate this approach.

The EPA is seeking comment on less and more restrictive approaches to address use of the CSAPR EGU NO_x ozone allowance bank. Specifically, EPA seeks comment on: (1) allowing banked 2015 and 2016 CSAPR NO_x ozone allowances to be used for compliance with the proposed budgets for the 2008 Ozone NAAQS starting in 2017 at a 1-to-1 ratio; or (2) completely disallowing the use of banked 2015 and 2016 CSAPR NO_x ozone allowances for compliance with the proposed NO_x emission budgets for the 2008 Ozone NAAQS, starting in 2017.

The PA DEP believes that both of EPA's proposed approaches to address the ozone season NO_x allowance bank would have adverse consequences. At a 1-to-1 ratio the bank would grow and allowance prices would fall; at higher ratios the bank could become too small and cause price spikes and uncertainty. The PA DEP recommends that if EPA wants to establish and maintain a healthy NO_x allowance bank, it should cap the bank and require old vintage-year allowances to expire or take some similar actions to limit the size of the bank. It should not institute allowance retirement ratios higher than a 1-to-1 ratio in an attempt to limit or reduce the number of allowances in the bank.

Non-EGU NO_x Mitigation Strategies

The EPA indicates that it will continue to evaluate whether non-EGU emission reductions can be achieved on a longer timeframe at a future date. However, as explained later in the preamble, EPA seeks comment on a preliminary evaluation of stationary non-EGU NO_x mitigation potential and on allowing a state to include legacy NO_x SIP Call non-EGUs in the CSAPR trading program. This strategy would be implemented by developing a SIP revision that the EPA would approve as modifying the CSAPR trading program provisions with regard to that state. The PA DEP acknowledges that EPA is obligated to issue "Good Neighbor" Federal Implementation Plans (FIPs) by June 2, 2016. However, the PA DEP believes that the FIPs cannot provide a partial remedy—NO_x emissions from all source categories that contribute to downwind nonattainment, including the contributing NO_x emissions from non-EGU source categories, must be reduced. Failure to reduce these emissions seems contrary to the requirements of the CAA's "good neighbor" provision. The CSAPR Update Rule may result in relying too heavily on costly EGU emission reductions when cost-effective NO_x reductions in other sectors have not been evaluated and identified. Emissions from the EGU sector are not the

only source of emissions within a state to be transported, and that can interfere with the attainment and maintenance of the 2008 ozone NAAQS in downwind areas. The EPA should address emissions from all sources that are found to be contributing to another state's nonattainment of the NAAQS. Pennsylvania has existing cost-effective programs in place that allow the owners and operators of non-EGUs and other small sources of NOx emissions to purchase and retire NOx allowances from the CSAPR program for compliance purposes. This type of program, with appropriate modifications, could provide the foundation to address NOx emissions from all non-EGUs on a larger multistate basis as a way to address transport issues from non-EGU sources without expanding the EGU budgets for each state.

The EPA has indicated that it is seeking comment on possible future steps that may be necessary to resolve the remainder of the "good neighbor" obligation for the 2008 Ozone NAAQS. The PA DEP recommends that existing NOx emissions in each sector for each state be capped by applying achievable emission rates in each sector. This approach would allow the owners and operators subject to state emission rates to buy and retire allowances in the CSAPR program to cover excess emissions. Consequently, the NOx ozone season banks would be reduced and the higher cost of NOx allowance prices would be stabilized.

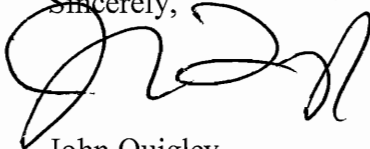
The EPA is seeking comment on methods it can use to ensure that any non-EGU reductions are incremental to the base case, permanent, and enforceable. As stated above, states can reduce their base case non-EGU emissions by establishing emission rates and bringing their excess emissions under the CSAPR cap.

Conclusion

The final CSAPR Update Rule should provide cost-effective measures to address transported pollution impacting Pennsylvania and downwind areas. To ensure the integrity of the final rulemaking, flawed assumptions and analyses must be addressed. We strongly recommend that EPA cap the NOx allowance bank and allow NOx allowances to expire to prevent large NOx banks, and revise its assumptions with regard to its cost analysis for the operation of SCR and SNCR controls. In light of the June 2016 FIP deadline, we recommend that EPA address NOx emissions from non-EGU source categories in a separate CSAPR rulemaking.

Thank you for the opportunity to comment on the proposed rule to address the interstate transport of NOx emissions. We look forward to working closely with EPA to address Pennsylvania's "good neighbor" obligations under the CAA. Should you have any questions or need additional information, please contact Joyce E. Epps, Director, Bureau of Air Quality, by e-mail at jeepps@pa.gov or by telephone at 717.787.9702.

Sincerely,



John Quigley
Secretary

Enclosure

Final-form Rulemaking
Annex A
TITLE 25. ENVIRONMENTAL PROTECTION
PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION
Subpart C. PROTECTION OF NATURAL RESOURCES
ARTICLE III. AIR RESOURCES
CHAPTER 121. GENERAL PROVISIONS

§ 121.1. Definitions.

The definitions in section 3 of the act (35 P. S. § 4003) apply to this article. In addition, the following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

CEMS—Continuous emissions monitoring system—**[For purposes of Chapter 127, Subchapter E, all] All** of the equipment that may be required to meet the data acquisition and availability requirements **[of Chapter 127, Subchapter E to] established under the act or Clean Air Act to monitor, measure, calculate,** sample, condition, analyze and provide a **[permanent]** record of emissions **from an affected unit** on a continuous basis.

* * * * *

Major NO_x emitting facility—A facility which emits or has the potential to emit NO_x from the processes located at the site or on contiguous properties under the common control of the same person at a rate greater than one of the following:

(i) Ten TPY in an ozone nonattainment area designated as extreme under section 182(e) and (f) of the Clean Air Act (42 U.S.C.A. § 7511a(e) and (f)).

(ii) Twenty-five TPY in an ozone nonattainment area designated as severe under section 182(d) and (f) of the Clean Air Act.

(iii) Fifty TPY in an area designated as serious under section 182(c) and (f) of the Clean Air Act.

(iv) One hundred TPY in an area included in an ozone transport region established under section 184 of the Clean Air Act (42 U.S.C.A. § 7511c).

(v) Twenty-five TPY and is located in Bucks, Chester, Delaware, Montgomery or Philadelphia County. **THIS THRESHOLD DOES NOT APPLY TO §§ 129.96-129.100 (RELATING TO ADDITIONAL RACT REQUIREMENTS FOR MAJOR SOURCES OF NO_x AND VOCs).**

Major VOC emitting facility—A facility which emits or has the potential to emit VOCs from processes located at the site or on contiguous properties under the common control of the same person at a rate greater than one of the following:

(i) Ten TPY in an ozone nonattainment area designated as extreme under section 182(e) of the Clean Air Act.

(ii) Twenty-five TPY in an ozone nonattainment area designated as severe under section 182(d) of the Clean Air Act.

(iii) Fifty TPY in an area included in an ozone transport region established under section 184 of the Clean Air Act.

(iv) Twenty-five TPY and is located in Bucks, Chester, Delaware, Montgomery or Philadelphia County. **THIS THRESHOLD DOES NOT APPLY TO §§ 129.96-129.100.**

* * * * *

Process—A method, reaction or operation in which materials are handled or whereby materials undergo physical change—that is, the size, shape, appearance, temperature, state or other physical property of the material is altered—or chemical change—that is, a substance with different chemical composition or properties is formed or created. The term includes all of the equipment, operations and facilities necessary for the completion of the transformation of the materials to produce a physical or chemical change. There may be several processes in series or parallel necessary to the manufacture of a product.

Process heater—

(i) An enclosed device using controlled flame, that is not a boiler, the primary purpose of which is to transfer heat to a process material or to a heat transfer material for use in a process unit.

(ii) The term does not include an enclosed device that meets either of the following circumstances:

(A) Has the primary purpose of generating steam.

(B) In which the material being heated is in direct contact with the products of combustion, including:

(I) A furnace.

(II) A kiln.

(III) An unfired waste heat recovery heater.

(IV) A unit used for comfort heat, space heat or food preparation for onsite consumption.

(V) An autoclave.

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

* * * * *

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—

- (i) NO_x or VOCs.
- (ii) A pollutant for which the EPA has promulgated a NAAQS.
- (iii) A pollutant that is a constituent or precursor of a pollutant listed under subparagraph (i) or (ii), if the constituent or precursor pollutant may only be regulated under NSR as part of regulation of the pollutant listed under subparagraph (i) or (ii). Precursors identified by the Administrator of the EPA for purposes of NSR are the following:
 - (A) VOCs and NO_x are precursors to ozone in all ozone nonattainment areas.
 - (B) SO₂ is a precursor to PM_{2.5} in all PM_{2.5} nonattainment areas.
 - (C) Nitrogen oxides are presumed to be precursors to PM_{2.5} in PM_{2.5} nonattainment areas unless the Department demonstrates to the satisfaction of the Administrator of the EPA or the Administrator of the EPA determines that NO_x emissions from a source in a specific area are not a significant contributor to that area's ambient PM_{2.5} concentrations.
- (iv) PM_{2.5} and PM-10 emissions, including gaseous emissions from a facility or activity that condense to form particulate matter at ambient temperatures, as specified in § 127.201(g) (relating to general requirements).

* * * * *

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.

* * * * *

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 SUB-COMPONENTS 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**—[For purposes of § 129.203 (relating to stationary internal combustion engines), an] **An internal combustion engine [of the reciprocating type that is either attached to a foundation at a facility or is designed to be capable of being carried or moved from one location to another and is not a mobile air contamination source] WHICH USES RECIPROCATING MOTION TO CONVERT HEAT ENERGY INTO MECHANICAL WORK AND WHICH IS NOT MOBILE. THE TERM DOES NOT INCLUDE THE FOLLOWING:**

- (i) A COMBUSTION TURBINE.**
- (ii) A NONROAD ENGINE AS DEFINED AT 40 CFR 1068.30 (EXCLUDING PARAGRAPH (2)(ii) OF THAT DEFINITION).**
- (iii) AN ENGINE USED TO PROPEL A MOTOR VEHICLE, AN AIRCRAFT OR A VEHICLE USED SOLELY FOR COMPETITION.**
- (iv) A PORTABLE TEMPORARY SOURCE SUCH AS AN AIR COMPRESSOR OR GENERATOR.**

* * * * *

CHAPTER 129. STANDARDS FOR SOURCES

ADDITIONAL RACT REQUIREMENTS FOR MAJOR SOURCES OF NO_x AND VOCs

(Editor's Note: Sections 129.96—129.100 are new and printed in regular type to enhance readability.)

§ 129.96. Applicability.

(a) ~~[This]~~ **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 ~~[or]~~ **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~~[, or both,]~~ that ~~[was]~~ **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) ~~[This]~~ **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 ~~[or]~~ **AND THE VOC REQUIREMENTS OF THIS SECTION AND §§ 129.97–129.100 APPLY STATEWIDE TO THE OWNER AND OPERATOR OF A** VOC emitting facility~~[, or both,]~~ 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 ~~[, or both,]~~ 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 [~~or both,~~] subject to § 129.96 shall comply with the following:

(1) [~~Except as specified in paragraph (2), the~~] 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 [~~an annual adjustment to or~~] A BIENNIAL tune-up [~~of the combustion process~~] CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN 40 CFR 63.11223. The [~~adjustment~~] BIENNIAL TUNE-UP must include, at a minimum, the following:

(i) Inspection [~~adjustment,~~] AND cleaning or replacement of fuel-burning equipment, including the burners and [~~moving parts~~] COMPONENTS, AS necessary, for proper operation as specified by the manufacturer.

(ii) Inspection [~~and adjustment~~] of the flame pattern [~~or characteristics~~] AND ADJUSTMENT OF THE BURNER, AS necessary, TO OPTIMIZE THE FLAME PATTERN IN ORDER 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 [~~necessary~~] to ensure proper calibration and operation as specified by the manufacturer.

(2) [~~The presumptive RACT requirement for an oil-fired, gas-fired or combination oil-fired and gas-fired 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 all adjustments consistent with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-fired Boilers (EPA 340/1-83-023)," September 1983 or as amended.~~] 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 IN ORDER 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) ~~or~~ (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 ~~[, or both,]~~ subject to § 129.96 shall ~~[comply with the following presumptive RACT requirement, which is the installation, maintenance and operation of]~~ **INSTALL, MAINTAIN AND OPERATE** the source in accordance with the manufacturer's specifications and **WITH** good ~~[engineering]~~ **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.

~~(2)~~**(4) A combustion turbine with a rated output less than 1,000 bhp.**

~~(3)~~**(5) [An] A STATIONARY** internal combustion engine rated at less than 500 bhp (gross).

~~(4)~~**(6) An incinerator, thermal oxidizer or catalytic oxidizer used primarily for air pollution control.**

~~(5)~~**(7) A [unit of] fuel-burning [equipment, a gas turbine or an internal combustion engine] 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.

~~[(6)]~~(8) An emergency standby engine operating less than 500 hours in a 12-month rolling period.

(d) ~~[The]~~ **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 ~~[comply with the presumptive RACT requirement of]~~ **INSTALL, MAINTAIN AND OPERATE THE SOURCE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND WITH** good ~~[engineering]~~ **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 ~~[following applicable]~~ presumptive RACT requirement~~:]~~ **OF 180 PPMVD NO_x @ 7% OXYGEN.**

~~[(1) For a municipal waste combustor constructed on or before September 20, 1994, the emission guidelines and compliance times in 40 CFR Part 60, Subpart Cb (relating to emissions guidelines and compliance times for large municipal waste combustors that are constructed on or before September 20, 1994), which are adopted and incorporated by reference in § 122.3, and applicable Federal or state plans in 40 CFR Part 62.~~

~~—(2) For a municipal waste combustor constructed after September 20, 1994, or for a municipal waste combustor that commenced a modification or reconstruction after June 19, 1996, the new source performance standards in 40 CFR Part 60, Subpart Eb (relating to standards of performance for large municipal waste combustors for which construction is commenced after September 20, 1994 or for which modification or reconstruction is commenced after June 19, 1996), which are adopted and incorporated by reference in § 122.3.]~~

(g) ~~[The]~~ **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 [~~or both,~~] subject to § 129.96 may not cause, allow or permit NO_x or VOCs [~~or both,~~] to be emitted from the air contamination source **[for which the source is major]** 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, ~~0.08~~ **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, ~~0.20~~ **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) ~~[Another]~~ **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 NON-CATALYTIC REDUCTION SYSTEM, THE SELECTIVE NON-CATALYTIC 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 1600°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, ~~75~~ 96 ppmvd NO_x @ 15% oxygen.

(C) Natural gas or a noncommercial gaseous fuel, ~~2~~ 5 ppmvd VOC (as propane) @ 15% oxygen.

(D) Fuel oil, ~~2~~ 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.

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

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

(B) Fuel oil, ~~75~~ 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, ~~0.4~~ 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 simultaneously:

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

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

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 _____, (*Editor's Note:* The blank refers to the effective date of adoption of this final-form rulemaking.) 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 **[except to the extent the RACT] UNLESS THE** permit contains more stringent requirements or emission limitations, or both.

(j) The requirements and emission limitations of this section **[do not]** 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) **[except to the extent this section contains more stringent] UNLESS THE** requirements or emission limitations **[, or both, for the owner or operator of a major NO_x emitting facility subject to § 129.96 to control, reduce or minimize NO_x emissions from an air contamination source subject to] 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 [5 ~~or both~~] 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) _____, (*Editor's Note: The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.*) for a source subject to § 129.96(a).

(ii) _____, (*Editor's Note: The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.*) 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 _____ (*Editor's Note: The blank refers to the date 3 years after the effective date of adoption of this proposed rulemaking.*) 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 ~~[RACT operating permit modification]~~ PLAN general requirements.

(a) The owner or operator of a major NO_x emitting facility subject to § 129.96 (relating to applicability) that includes ~~[an]~~ **AT LEAST ONE** air contamination source subject to a ~~[NO_x RACT requirement or]~~ 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 requirement or]~~ NO_x RACT emission limitation may elect to meet the applicable ~~[NO_x RACT requirement or]~~ 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** ~~[that incorporates]~~. **THE APPLICATION INCORPORATING** the requirements of this section ~~[for averaging NO_x emissions on either a facility-wide or system-wide basis using a 30-day rolling average to the Department or appropriate approved local air pollution control agency]~~ **SHALL BE SUBMITTED** by the applicable date as follows:

(1) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) for a source subject to § 129.96(a).

(2) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) 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 ~~[emitting]~~ **AIR CONTAMINATION** source included in the **APPLICATION FOR AN** operating permit modification **OR A PLAN APPROVAL, IF OTHERWISE REQUIRED,** for averaging NO_x emissions on either a facility-wide or system-wide basis using a 30-day rolling average submitted under subsection (b) must be an air contamination source subject to a NO_x RACT emission limitation in § 129.97.

(d) The **APPLICATION FOR THE** operating permit modification **OR THE PLAN APPROVAL, IF OTHERWISE REQUIRED,** for averaging NO_x emissions on either a facility-wide or system-wide basis using a 30-day rolling average submitted under subsection (b) must demonstrate that the aggregate NO_x emissions emitted by the air contamination sources included in the facility-wide or system-wide NO_x emissions averaging ~~[RACT operating permit modification]~~ **PLAN** using a 30-day rolling average are not greater than **90% of the sum of]** the NO_x emissions that would be emitted by the group of included sources if each source complied with the applicable ~~[NO_x RACT requirement or]~~ NO_x RACT emission limitation in § 129.97 on a source-specific basis.

(e) The owner or operator shall calculate the alternative facility-wide or system-wide NO_x RACT emissions limitation using a 30-day rolling average for the air contamination sources included in the APPLICATION FOR THE operating permit modification OR PLAN APPROVAL, IF OTHERWISE REQUIRED, submitted under subsection (b) by using the following equation to sum the emissions for all of the sources included in the operating permit modification] NO_x EMISSIONS AVERAGING PLAN:

$$\left[\sum_{i=1}^n n R_{i\text{actual}} + H_i \right] \leq \left[\sum_{i=1}^n n R_{i\text{allowable}} + H_i \right] * 0.9$$

$$\left[\sum_{i=1}^n E_{i\text{actual}} \right] \leq \left[\sum_{i=1}^n E_{i\text{allowable}} \right]$$

[where] WHERE:

R_{iactual} = The daily actual NO_x emission rate for air contamination source i, lb/mmbtu, using a 30-day rolling average.

R_{iallowable} = The applicable NO_x emission rate limitation for air contamination source i, lb/mmbtu, specified in § 129.97.

H_i = The daily actual heat input for air contamination source i, lb/mmbtu, using a 30-day rolling average.]

E_{iactual} = THE ACTUAL NO_x MASS EMISSIONS, INCLUDING EMISSIONS DURING START-UPS, SHUTDOWNS AND MALFUNCTIONS, FOR AIR CONTAMINATION SOURCE i ON A 30-DAY ROLLING BASIS.

E_{iallowable} = THE ALLOWABLE NO_x MASS EMISSIONS COMPUTED USING THE ALLOWABLE EMISSION RATE LIMITATIONS FOR AIR CONTAMINATION SOURCE i ON A 30-DAY ROLLING BASIS SPECIFIED IN § 129.97. IF AN AIR CONTAMINATION SOURCE INCLUDED IN AN AVERAGING PLAN IS SUBJECT TO A NUMERICAL EMISSION RATE LIMIT THAT IS MORE STRINGENT THAN THE APPLICABLE ALLOWABLE EMISSION RATE LIMITATION SET FORTH IN § 129.97, THEN THE NUMERICAL EMISSION RATE LIMIT SHALL BE USED FOR THE CALCULATION OF THE ALLOWABLE NO_x MASS EMISSIONS.

n = The number of air contamination sources included in the operating permit modification] NO_x EMISSIONS AVERAGING PLAN.

[0.9 = The 90% limit specified under subsection (d).]

(f) The APPLICATION FOR THE operating permit modification OR A PLAN APPROVAL, IF OTHERWISE REQUIRED, specified in subsections (b)–(e) may include facility-wide or system-wide [averaging] NO_x emissions AVERAGING using a 30-day rolling average only for NO_x emitting sources or NO_x emitting facilities that are owned or operated [~~or~~ both,] by the applicant.

(g) The APPLICATION FOR THE operating permit modification OR A PLAN APPROVAL, IF OTHERWISE REQUIRED, specified in subsections (b)—(f) must include the following information:

(1) Identification of each air contamination source included in the NO_x emissions averaging [~~RACT operating permit modification~~] PLAN.

(2) Each air contamination source's applicable emission limitation in § 129.97.

(3) Methods for demonstrating compliance and recordkeeping and reporting requirements in accordance with § 129.100 (relating to compliance demonstration and recordkeeping requirements) for each source included in the NO_x emissions averaging [~~RACT operating permit modification~~] PLAN submitted under subsection (b).

(h) An air contamination source or facility [~~or both~~] included in the facility-wide or system-wide NO_x emissions averaging [~~RACT operating permit modification~~] PLAN submitted in accordance with subsections (b)—(g) may be included in only one facility-wide or system-wide NO_x emissions averaging [~~RACT proposal~~] PLAN.

(i) The Department or appropriate approved local air pollution control agency will issue a modification to the operating permit OR A PLAN APPROVAL AUTHORIZING THE NO_x EMISSIONS AVERAGING PLAN.

(j) The owner or operator of an air contamination source or facility [~~or both~~] included in the facility-wide or system-wide NO_x emissions averaging [~~RACT operating permit modification~~] PLAN submitted in accordance with subsections (b)—(h) shall submit the reports and records specified in subsection (g)(3) to the Department or appropriate approved local air pollution control agency on the schedule specified in subsection (g)(3) to demonstrate compliance with § 129.100.

(k) The owner or operator of an air contamination source or facility [~~or both~~] included in a facility-wide or system-wide NO_x emissions averaging [~~RACT operating permit modification~~] PLAN submitted in accordance with subsections (b)—(h) that achieves emission reductions in accordance with other emission limitations required under the act or the Clean Air Act, or regulations adopted under the act or the Clean Air Act, that are not NO_x RACT emission limitations may not substitute those emission reductions for the emission reductions required by the facility-wide or system-wide NO_x emissions averaging [~~RACT operating permit modification~~] PLAN submitted to the Department or appropriate approved local air pollution control agency under subsection (b).

(l) The owner or operator of an air contamination source subject to a NO_x RACT emission limitation in § 129.97 that is not included in a facility-wide or system-wide NO_x emissions averaging [~~RACT operating permit modification~~] PLAN submitted under subsection (b) shall operate the source in compliance with the applicable NO_x RACT emission limitation in § 129.97.

(m) The owner and operator of [~~an~~] THE air contamination [~~source~~] SOURCES included in a facility-wide or system-wide NO_x emissions averaging [~~RACT operating permit modification~~] PLAN

PLAN submitted under subsection (b) shall be liable for a violation of ~~[the operating permit modification or this section at that]~~ **AN APPLICABLE NO_x RACT EMISSION LIMITATION AT EACH** source ~~[or other source]~~ **INCLUDED** in the ~~[operating permit modification]~~ **NO_x EMISSIONS AVERAGING PLAN**.

§ 129.99. Alternative RACT proposal and petition for alternative compliance schedule.

(a) The owner or operator of an air contamination source subject to § 129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) located at a major NO_x emitting facility or major VOC emitting facility ~~[~~ **or both,** ~~]~~ subject to § 129.96 (relating to applicability) that cannot meet the applicable presumptive RACT requirement or RACT emission limitation of § 129.97 ~~[or participate in either a facility wide or system wide NO_x emissions averaging RACT operating permit modification under § 129.98 (relating to facility wide or system wide NO_x emissions averaging RACT operating permit modification general requirements)]~~ may propose an alternative ~~[NO_x RACT emission limitation or VOC]~~ **RACT REQUIREMENT OR RACT** emission limitation ~~[~~ **or both,** ~~]~~ in accordance with subsection (d).

(b) The owner or operator of a NO_x air contamination source with a potential emission rate equal to or greater than 5.0 tons of NO_x per year that is not subject to § 129.97 or §§ 129.201—129.205 (relating to additional NO_x requirements) located at a major NO_x emitting facility subject to § 129.96 shall propose a NO_x RACT **REQUIREMENT OR RACT** emission limitation in accordance with subsection (d).

(c) The owner or operator of a VOC air contamination source with a potential emission rate equal to or greater than 2.7 tons of VOC per year that is not subject to § 129.97 located at a major VOC emitting facility subject to § 129.96 shall propose a VOC RACT **REQUIREMENT OR RACT** emission limitation in accordance with subsection (d).

(d) The owner or operator proposing an alternative RACT **REQUIREMENT OR RACT** emission limitation under subsection (a), (b) or (c) shall:

(1) Submit a written RACT proposal in accordance with the procedures in § 129.92(a)(1)—(5), (7)—(10) and (b) (relating to RACT proposal requirements) to the Department or appropriate approved local air pollution control agency as soon as possible but not later than:

(i) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) for a source subject to § 129.96(a).

(ii) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) or 6 months after the date that the source meets the definition of a major NO_x emitting facility or major VOC emitting facility ~~[~~ **or both,** ~~]~~ whichever is later, for a source subject to § 129.96(b).

(2) Be in receipt of an approval issued by the Department or appropriate approved local air pollution control agency in writing through a plan approval or operating permit modification for a RACT proposal submitted under paragraph (1)(ii) prior to the installation, modification or change in the operation of the existing air contamination source that will result in the source or

facility meeting the definition of a major NO_x emitting facility or major VOC emitting facility [~~5~~
~~or both~~].

(3) Include in the RACT proposal the proposed alternative NO_x RACT **REQUIREMENT OR RACT** emission limitation or VOC RACT **REQUIREMENT OR RACT** emission limitation developed in accordance with the procedures in § 129.92(a)(1)—(5) and (b).

(4) Include in the RACT proposal a schedule for completing implementation of the RACT **REQUIREMENT OR RACT** emission limitation as soon as possible but not later than:

(i) **JANUARY 1, 2017**, for a source subject to § 129.96(a).

(ii) **JANUARY 1, 2017**, or 1 year after the date that the source meets the definition of a major NO_x emitting facility or major VOC emitting facility [~~5~~
~~or both~~], whichever is later, for a source subject to § 129.96(b).

(5) Include interim dates in the schedule required under paragraph (4) for the:

(i) Issuance of purchase orders.

(ii) Start and completion of process, technology and control technology changes.

(iii) Completion of compliance testing.

(6) Include in the RACT proposal methods for demonstrating compliance and recordkeeping and reporting requirements in accordance with § 129.100 (relating to compliance demonstration and recordkeeping requirements) for each air contamination source included in the RACT proposal.

(7) Demonstrate to the satisfaction of the Department or the appropriate approved local air pollution control agency that the proposed **REQUIREMENT OR RACT** emission limitation is RACT for the air contamination source.

(e) The Department or appropriate approved local air pollution control agency will:

(1) Review the timely and complete alternative RACT proposal submitted in accordance with subsection (d).

(2) Approve the alternative RACT proposal submitted under subsection (d), in writing, if the Department or appropriate approved local air pollution control agency is satisfied that the alternative RACT proposal complies with the requirements of subsection (d) and that the proposed alternative **REQUIREMENT OR RACT** emission limitation is RACT for the air contamination source.

(3) Deny or modify the alternative RACT proposal submitted under subsection (d), in writing, if the proposal does not comply with the requirements of subsection (d).

(f) The proposed alternative RACT **REQUIREMENT OR RACT** emission limitation and the implementation schedule submitted under subsection (d) will be approved, denied or modified by the Department or appropriate approved local air pollution control agency in accordance with subsection (e) in writing through the issuance of a plan approval or operating permit modification prior to the owner or operator implementing the alternative RACT **REQUIREMENT OR RACT** emission limitation.

(g) The emission limit and requirements specified in the plan approval or operating permit issued by the Department or appropriate approved local air pollution control agency under subsection (f) supersede the emission limit and requirements in the existing plan approval or operating permit issued to the owner or operator of the source prior to _____, (*Editor's Note:* The blank refers to the effective date of adoption of this final-form rulemaking.) on the date specified in the plan approval or operating permit issued by the Department or appropriate approved local air pollution control agency under subsection (f), except to the extent the existing plan approval or operating permit contains more stringent requirements.

(h) The Department will submit each alternative RACT **REQUIREMENT OR RACT** emission limitation approved under subsection (f) to the Administrator of the EPA for approval as a revision to the SIP. The owner and operator of the facility shall bear the costs of public hearings and **[notification] NOTIFICATIONS (INCLUDING NEWSPAPER NOTICES)** required for **[EPA] THE SIP [approval] SUBMITTAL.**

(i) The owner and operator of a facility proposing to comply with the applicable RACT **REQUIREMENT OR RACT** emission limitation under subsection (a), (b) or (c) through the 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 requesting an alternative compliance schedule shall be submitted to the Department or appropriate approved local air pollution control agency as soon as possible but not later than:

(i) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) for a source subject to § 129.96(a).

(ii) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) 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 air contamination source subject to a RACT requirement or RACT emission limitation in one or more of subsections (a)—(c).

(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 air contamination 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 [_____] **(Editor's Note: The blank refers to the date 3 years after the effective date of adoption of this proposed rulemaking.) 3 YEARS AFTER THE APPROVAL OF THE PETITION BY THE DEPARTMENT OR THE APPROPRIATE APPROVED LOCAL AIR POLLUTION CONTROL AGENCY. IF THE PETITION IS FOR THE REPLACEMENT OF AN EXISTING SOURCE, THE FINAL COMPLIANCE DATE WILL BE DETERMINED ON A CASE-BY-CASE BASIS. THE APPROVED PETITION SHALL BE INCORPORATED IN AN APPLICABLE OPERATING PERMIT OR PLAN APPROVAL.**

(j) 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 ~~(h)~~ (i) and approve or deny the petition in writing.

(k) The emission limit and requirements specified in the plan approval or operating permit issued by the Department or appropriate approved local air pollution control agency under subsection (j) supersede the emission limit and requirements in the existing plan approval or operating permit issued to the owner or operator of the source prior to _____, (Editor's Note: The blank refers to the effective date of adoption of this final-form rulemaking.) on the date specified in the plan approval or operating permit issued by the Department or appropriate approved local air pollution control agency under subsection (j), except to the extent the existing plan approval or operating permit contains more stringent requirements.

(l) Approval or denial under subsection (j) of the timely and complete petition for an alternative compliance schedule submitted under subsection (i) 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.

§ 129.100. Compliance demonstration and recordkeeping requirements.

(a) Except as provided in subsection (c), the owner and operator of an air contamination source subject to a NO_x **REQUIREMENT OR RACT** emission limitation or VOC **REQUIREMENT OR RACT** emission limitation, or both, listed in § 129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation by performing the following monitoring or testing procedures:

(1) For an air contamination source with a CEMS, monitoring and testing in accordance with the requirements of Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources) using a 30-day rolling average, **EXCEPT MUNICIPAL WASTE COMBUSTORS.**

(i) A 30-DAY ROLLING AVERAGE EMISSION RATE FOR AN AIR CONTAMINATION SOURCE THAT IS A COMBUSTION UNIT SHALL BE EXPRESSED IN POUNDS PER MILLION BTU AND CALCULATED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE:

(A) SUM THE TOTAL POUNDS OF POLLUTANT EMITTED FROM THE COMBUSTION UNIT FOR THE CURRENT OPERATING DAY AND THE PREVIOUS 29 OPERATING DAYS.

(B) SUM THE TOTAL HEAT INPUT TO THE COMBUSTION UNIT IN MILLION BTU FOR THE CURRENT OPERATING DAY AND THE PREVIOUS 29 OPERATING DAYS.

(C) DIVIDE THE TOTAL NUMBER OF POUNDS OF POLLUTANT EMITTED BY THE COMBUSTION UNIT FOR THE 30 OPERATING DAYS BY THE TOTAL HEAT INPUT TO THE COMBUSTION UNIT FOR THE 30 OPERATING DAYS.

(ii) A 30-DAY ROLLING AVERAGE EMISSION RATE FOR EACH APPLICABLE RACT EMISSION LIMITATION SHALL BE CALCULATED FOR AN AFFECTED AIR CONTAMINATION SOURCE FOR EACH CONSECUTIVE OPERATING DAY.

(iii) EACH 30-DAY ROLLING AVERAGE EMISSION RATE FOR AN AFFECTED AIR CONTAMINATION SOURCE SHALL INCLUDE THE EMISSIONS THAT OCCUR DURING THE ENTIRE OPERATING DAY, INCLUDING EMISSIONS FROM START-UPS, SHUTDOWNS AND MALFUNCTIONS.

(2) FOR A PORTLAND CEMENT KILN WITH A CEMS, MONITORING OF CLINKER PRODUCTION RATES IN ACCORDANCE WITH 40 CFR 63.1350(d).

(3) FOR A MUNICIPAL WASTE COMBUSTOR WITH A CEMS, MONITORING AND TESTING IN ACCORDANCE WITH THE REQUIREMENTS IN CHAPTER 139, SUBCHAPTER C, USING A DAILY AVERAGE.

(4) For an air contamination source without a CEMS, monitoring and testing in accordance with a Department-approved emissions source test that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures). THE SOURCE TEST SHALL BE CONDUCTED ONE TIME IN EACH 5-YEAR CALENDAR PERIOD.

(b) [The] EXCEPT AS PROVIDED IN §§ 129.97(k) AND 129.99(i), THE owner and operator of an air contamination source subject to subsection (a) shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation in accordance with the procedures in subsection (a) not later than:

(1) JANUARY 1, 2017, for a source subject to § 129.96(a) (relating to applicability).

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

(c) An owner or operator of an air contamination source subject to this section, §§ 129.96 and 129.97 and § 129.98 (relating to facility-wide or system-wide NO_x emissions averaging **[RACT operating permit modification] PLAN** general requirements) may request a waiver from the requirement to demonstrate compliance with the applicable emission limitation listed in § 129.97 if the following requirements are met:

(1) The request for a waiver is submitted, in writing, to the Department not later than:

(i) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) for a source subject to § 129.96(a).

(ii) _____, (*Editor's Note:* The blank refers to the date 6 months after the effective date of adoption of this final-form rulemaking.) or 6 months after the date that the source meets the definition of a major NO_x emitting facility or major VOC emitting facility, **[or both]**, whichever is later, for a source subject to § 129.96(b).

(2) The request for a waiver demonstrates that a Department-approved emissions source test was performed in accordance with the requirements of Chapter 139, Subchapter A, on or after:

(i) _____, (*Editor's Note:* The blank refers to the date within 12 months prior to the effective date of adoption of this final-form rulemaking.) for a source subject to § 129.96(a).

(ii) _____, (*Editor's Note:* The blank refers to the date within 12 months prior to the effective date of adoption of this final-form rulemaking.) or within 12 months prior to the date that the source meets the definition of a major NO_x emitting facility or major VOC emitting facility, **[or both]**, whichever is later, for a source subject to § 129.96(b).

(3) The request for a waiver demonstrates to the satisfaction of the Department that the test results show that the source's rate of emissions is in compliance with the source's applicable NO_x emission limitation or VOC emission limitation **[, or both]**.

(4) The Department approves, in writing, the request for a waiver.

(d) The owner and operator of an air contamination source subject to this section, §§ 129.96—129.98 and § 129.99 (relating to alternative RACT proposal and petition for alternative compliance schedule) shall keep records to demonstrate compliance with §§ 129.96—129.99 in the following manner:

(1) The records shall include sufficient data and calculations to demonstrate that the requirements of §§ 129.96—129.99 are met.

(2) Data or information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

~~[(3) The records shall be retained for 5 years and made available to the Department or appropriate approved local air pollution control agency upon written request.]~~

(e) ~~[The] BEGINNING WITH THE COMPLIANCE DATE SPECIFIED IN § 129.97(a), THE~~ owner or operator of an air contamination source claiming that the air contamination source is exempt from the applicable NO_x emission rate threshold specified in § 129.99(b) and the requirements of § 129.97 based on the air contamination source's potential to emit shall maintain records that demonstrate to the Department or appropriate approved local air pollution control agency that the air contamination source is not subject to the specified emission rate threshold.

(f) ~~[The] BEGINNING WITH THE COMPLIANCE DATE SPECIFIED IN § 129.97(a), THE~~ owner or operator of an air contamination source claiming that the air contamination source is exempt from the applicable VOC emission rate threshold specified in § 129.99(c) and the requirements of § 129.97 based on the air contamination source's potential to emit shall maintain records that demonstrate to the Department or appropriate approved local air pollution control agency that the air contamination source is not subject to the specified emission rate threshold.

(g) The owner or operator of a combustion unit subject to § 129.97(b)~~[(1)]~~ shall record each adjustment conducted under the procedures in § 129.97(b)~~[(1)]~~ ~~[in a permanently bound log book or other method approved by the Department or appropriate approved local air pollution control agency].~~ This ~~[log book]~~ RECORD must contain, at a minimum:

- (1) The date of the tuning procedure.
- (2) The name of the service company and the technician performing the procedure.
- (3) The final operating rate or load.
- (4) The final NO_x and CO emission rates.
- (5) The final excess oxygen rate.
- (6) Other information required by the applicable operating permit.

~~[(h) The owner or operator of an oil fired, gas fired or combination oil fired and gas fired unit subject to § 129.97(b)(2) shall maintain records including a certification from the fuel supplier of the type of fuel. For each shipment of residual oil, the record must include:~~

~~—(1) A certification of the nitrogen content of the fuel.~~

~~—(2) Identification of the sampling method and sampling protocol used to determine the nitrogen content of the fuel.]~~

~~[(i)]~~ (h) The owner or operator of a Portland cement kiln subject to § 129.97(h) shall maintain a daily operating log for each Portland cement kiln. The record for each kiln must include:

- (1) The total hours of operation.
- (2) The type and quantity of fuel used.
- (3) The quantity of clinker produced.
- (4) The date, time and duration of a start-up, shutdown or malfunction of a Portland cement kiln or emissions monitoring system.

(i) THE RECORDS SHALL BE RETAINED BY THE OWNER OR OPERATOR FOR 5 YEARS AND MADE AVAILABLE TO THE DEPARTMENT OR APPROPRIATE APPROVED LOCAL AIR POLLUTION CONTROL AGENCY UPON RECEIPT OF A WRITTEN REQUEST FROM THE DEPARTMENT OR APPROPRIATE APPROVED LOCAL AIR POLLUTION CONTROL AGENCY.