

EXECUTIVE SUMMARY

Amendments to 25 Pa. Code Chapters 121 and 129 Additional RACT Requirements for Major Sources of NO_x and VOCs for the 2015 Ozone NAAQS

The Department of Environmental Protection (Department) recommends final-form amendments to Chapters 121 and 129 (relating to general provisions; and standards for sources) for consideration by the Environmental Quality Board (Board) in order to satisfy Federal Clean Air Act (CAA) obligations for reasonably available control technology (RACT) requirements Statewide for the National Ambient Air Quality Standards (NAAQS) for ground-level ozone. The final-form amendments add §§ 129.111—129.115 (relating to additional RACT requirements for major sources of NO_x and VOCs for the 2015 Ozone NAAQS) (RACT III) to establish RACT requirements for the owners and operators of certain types of stationary air contamination sources located at any major NO_x emitting facility or any major VOC emitting facility that was in existence in Pennsylvania on or before August 3, 2018. The final-form amendments also add terms and amend existing terms in § 121.1 (relating to definitions) to support the final-form amendments to Chapter 129.

This final-form rulemaking establishes presumptive RACT requirements and emission limitations for the owners and operators of certain categories of major stationary sources of NO_x and VOC emissions, including combustion units, boilers, process heaters, turbines, engines, municipal solid waste landfills, municipal waste combustors, cement kilns and other NO_x and VOC emission sources not regulated by RACT requirements elsewhere in Chapter 129. This final-form rulemaking also includes provisions establishing a petition process for approval of an alternative compliance schedule by the Department or approved local air pollution control programs in Allegheny and Philadelphia Counties, a facility-wide or system-wide NO_x emissions averaging plan provision, an alternative RACT proposal petition process, and compliance demonstration and recordkeeping requirements.

Purpose of the Final-Form Rulemaking

This final-form rulemaking is mandated by Federal law to meet the Commonwealth's RACT obligations for the 2015 ozone NAAQS. Section 109(b) of the CAA (42 U.S.C.A. § 7409(b)) provides that the Administrator of the U.S. Environmental Protection Agency (EPA) must establish NAAQS for criteria air pollutants at requisite levels that protect public health and public welfare. Section 110(a) of the CAA provides that each state shall adopt and submit to the EPA a state implementation plan (SIP) to implement measures to enforce the NAAQS or a revision to the NAAQS promulgated under section 109(b) of the CAA. The EPA previously set the ground-level ozone NAAQS in July 1997 at 0.08 part per million (ppm) averaged over 8 hours and lowered it in March 2008 to 0.075 ppm. See 62 FR 38855 (July 18, 1997) and 73 FR 16436 (March 27, 2008). On October 26, 2015, the EPA revised the ozone standard from 0.075 ppm to 0.070 ppm (80 FR 65292). On June 4, 2018, the EPA designated Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties as "marginal" nonattainment, with the rest of this Commonwealth designated attainment/unclassifiable, these designations became effective on August 3, 2018. See 83 FR 25776, 25828 (June 4, 2018). Based on the nonattainment

designation for the 5-county Philadelphia area and because Pennsylvania is located in the Ozone Transport Region established by Congress under section 184 of the CAA, the Commonwealth is required to adopt and implement RACT requirements Statewide for major stationary sources of nitrogen oxides (NO_x) and volatile organic compounds (VOCs) as part of a Federally-approvable SIP for the 2015 ozone standard. See 42 U.S.C.A. §§ 7511a and 7511c.

Under the EPA's 2015 ozone implementation rule (see 40 CFR 51.1316), the Commonwealth's RACT SIP submittal was due to the EPA no later than August 3, 2020, or 2 years after the effective date of the EPA's designations for the 2015 ozone standard. The EPA's 2015 ozone implementation rule established an implementation date of January 1, 2023, for sources subject to this final-form rulemaking. See 40 CFR 51.1316(b)(3).

This final-form rulemaking is reasonably necessary to attain and maintain the 2015 8-hour ozone NAAQS in the nonattainment areas to protect public health and welfare and the environment. This final-form rulemaking will be submitted to the EPA for approval as a revision to the Commonwealth's SIP following promulgation of the final-form regulation.

Summary of this Final-form Rulemaking

This final-form rulemaking revises § 121.1 to add the terms “combustion source” and “natural gas compression and transmission facility fugitive VOC air contamination source” and amends the definitions of the existing terms “major NO_x emitting facility” and “major VOC emitting facility” to support the final-form amendments to Chapter 129.

Final-form § 129.111 (relating to applicability) establishes applicability requirements for the owners and operators of major NO_x emitting or major VOC emitting facilities, or both, that commenced operation on or before August 3, 2018, for which no RACT requirements have otherwise been established in Chapter 129. Final-form § 129.111 establishes exemptions in subsection (c) and specifies in subsection (e) that non-major sources which commenced operation on or before August 3, 2018, that become major sources after this date due to source installation or modification are subject to the RACT III requirements.

Final-form § 129.112 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) establishes presumptive RACT requirements and RACT emission limitations for certain source categories of major NO_x emitting or VOC emitting facilities, or both, with which owners and operators shall comply with and provides a mechanism for requesting an alternative compliance schedule.

Final-form § 129.113 (relating to facility-wide or system-wide NO_x emissions averaging plan general requirements) establishes an alternative mechanism for demonstrating compliance when a major NO_x emitting facility that includes at least one air contamination source is unable to meet the applicable presumptive RACT emission limitation in final-form § 129.112. Owners and operators may average NO_x emissions on either a facility-wide or system-wide basis; 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.

Final-form § 129.114 (relating to alternative RACT proposal and petition for alternative compliance schedule) establishes that the owner and operator of an air contamination source that is subject to and unable to comply with an applicable presumptive RACT requirement or emission limitation in § 129.112 may propose an alternative RACT requirement or emission limitation. The Department has amended § 129.114(i) from the proposed rulemaking to this final-form rulemaking to establish requirements consistent with the EPA's comments clarifying their requirement for a robust analysis to be included in the administrative record where owners and operators seek to demonstrate that their applicable RACT II conditions remain RACT for the 2015 ozone standard. The Department believes that the final-form amendments to § 129.114(i) provide the conditions to support those instances where the Department may determine that the previously established RACT II controls and limits remain RACT for the 2015 8-hour ozone NAAQS. Final-form § 129.114 further establishes the process for the Department's review of these analyses and case-by-case proposals to meet public participation requirements for SIPs under section 110 of the CAA and 40 CFR 51.102 (relating to public hearings).

Final-form § 129.115 (relating to written notification, compliance demonstration and recordkeeping and reporting requirements) specifies notification, compliance demonstration, recordkeeping and reporting requirements for the owner and operator of an air contamination source subject to this final-form rulemaking.

Affected Parties

The requirements of final-form §§ 129.111—129.115 apply to the owners and operators of all sources in Pennsylvania that emit or have a potential to emit greater than 100 TPY of NO_x or 50 TPY of VOCs. See 42 U.S.C.A. §§ 7511a(b)(2) and (f)(1) and 42 U.S.C.A. 7511c(b)(2). There are approximately 500 Title V facility owners and operators in Pennsylvania that may be subject to this final-form rulemaking. The Department estimates that there are approximately 10-30 major facilities emitting greater than 100 TPY of NO_x or 50 TPY of VOCs considered to be small businesses. This final-form rulemaking includes the following flexibilities for compliance:

- The requirements 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.
- The requirements do not apply to the owner and operator of a facility that elects to take a Federally enforceable limit below 100 TPY of NO_x or 50 TPY of VOC.
- The case-by-case requirements do not apply to the owner and operator of a facility with a potential emission rate less than 5.0 tons of NO_x per year or 2.7 tons of VOC per year.
- Certain owners and operators seeking a case-by-case RACT determination may submit an administratively efficient and less resource intensive analysis demonstrating that RACT II conditions remain appropriate for RACT III.

The final-form compliance date is January 1, 2023. Compliance costs will vary for each facility depending on which compliance option is chosen by the owners and operators of a facility. The Department estimates that implementation of the final-form control measures could reduce NO_x emissions by as much as 9,800 TPY from engines, turbines and municipal waste combustors and could reduce VOC emissions by as much as 825 TPY from engines and turbines.

Advisory Groups

The Department presented the draft final-form Annex A to the Air Quality Technical Advisory Committee on April 7, 2022, and to the Small Business Compliance Advisory Committee on April 27, 2022. The Department briefed the Committees on the comments received on the proposed rulemaking. The Department presented the draft final-form Annex A to the Citizens Advisory Council's (CAC) Policy and Regulatory Oversight Committee on April 14, 2022, and to the CAC on April 19, 2022. At its meeting on May 18, 2022, the CAC voted to send a letter to the Bureau of Air Quality regarding implementation considerations of the rulemaking. Advisory committee meetings are advertised and open to the public.

Public Comments and Board Hearings

The Board approved publication of the proposed rulemaking at its meeting on May 19, 2021. On August 7, 2021, the Board published in the *Pennsylvania Bulletin* a notice of public hearing and comment period on the proposed rulemaking to amend Chapters 121 and 129. The Board held three public hearings for the purpose of accepting comments on the proposed rulemaking. The hearings were held as follows: September 7, 8 and 9, 2021, at 1 p.m., and no testimony was presented at the hearings. The 67-day public comment period closed on October 12, 2021. The Department received comments from 25 commentators, including the Independent Regulatory Review Commission (IRRC), the EPA, environmental advocacy groups, consultants, and the regulated community. The Department prepared a detailed comment and response document summarizing all comments received during the public comment period.

In their public comments, the EPA clarified that case-by-case determinations issued under §§ 129.96—129.100 for RACT II cannot be deemed to satisfy the case-by-case requirements for RACT III without additional documented review. Furthermore, EPA stated that the Department should clarify the implementation of the provision that allows compliance with RACT II case-by-case to assure compliance with RACT III case-by-case. While some commentators stated that compliance dates for the presumptive RACT requirements and RACT emission limitations should be extended, EPA reiterated that the RACT III compliance date cannot be later than the regulatory RACT implementation date established in 40 CFR 51.1312(a)(3)(i), which for Pennsylvania is January 1, 2023.

Some commentators asked for clarification of terms used in the regulatory annex. Commentators requested that the term “in existence” be defined with respect to the applicability date for RACT III of August 3, 2018. Additionally, commentators requested that the term “combustion source” be included with the presumptive category for direct-fired heaters and that the Department define “daily average” for the purpose of this rulemaking.

Some commentators expressed concerns with averaging requirements established by this rulemaking. Specifically, some commentators stated that daily averaging for combustion units does not allow any buffer for start-up, shutdown, and low load conditions. Other commentators stated that the combustion of waste coal, which has unpredictable characteristics, does not lend itself to daily emission averaging periods.

Some commentators provided input on specific RACT requirements established by this rulemaking. Various commentators stated that:

- The Department should include presumptive RACT for process heaters between 20 and 50 MMBtu/hr, steel facilities and flares.
- The rich-burn engine presumptive NO_x emission limit should be corrected from 0.6 gram/bhp-hr to 2.0 gram/bhp-hr consistent with the Technical Support Document.
- The Department should set a lower presumptive NO_x limit than the proposed 150 ppmvd @ 7% oxygen for municipal waste combustors (MWC).
- The proposed presumptive NO_x limit for MWCs is further weakened by allowing owners and operators to average emissions and request case-by-case RACT.
- The proposed presumptive NO_x limit is appropriate for MWCs.
- Presumptive NO_x RACT emission limits for turbines rated at less than 4,100 bhp should be revised from 85 ppmvd to 150 ppmvd as dry low-NO_x combustors do not exist for these small turbines.
- Glass melting furnaces should not be included in the RACT III rulemaking.
- The Department should use presumptive cost-effectiveness benchmarks when evaluating case-by-case RACT proposals.

The Department reviewed and considered all comments received in the development of this final-form rulemaking. While some comments directly conflicted with others, the Department incorporated changes based on feedback from EPA, IRRC, and the public where appropriate and feasible.

Recommendation to the Board

The Department recommends the Board adopt this final-form rulemaking.