6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R03-OAR-2017-0290; FRL-9993-36-Region 3]

Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Regulatory Amendments Addressing Reasonably Available Control Technology Requirements under the 1997 and 2008 8-Hour Ozone National Ambient Air Quality Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking action on a state implementation plan (SIP) revision submitted by the Commonwealth of Pennsylvania (Pennsylvania). This revision consists of regulatory amendments intended to meet certain reasonably available control technology (RACT) requirements under the 1997 and 2008 8-hour ozone national ambient air quality standards (NAAQS). EPA is approving most parts of the Pennsylvania SIP revision as meeting RACT requirements under the Clean Air Act (CAA), while conditionally approving certain provisions, based upon Pennsylvania's commitment to submit additional enforceable measures that meet RACT. This action is being taken in accordance with the requirements of the CAA.

DATES: This final rule is effective on June 10, 2019. Pennsylvania must meet the conditions of this approval by May 9, 2020.

ADDRESSES: EPA has established a docket for this action under Docket ID Number EPA-R03-OAR-2017-0290. All documents in the docket are listed on the https://www.regulations.gov website. Although listed in the index, some information is not

publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available through https://www.regulations.gov, or please contact the person identified in the "For Further Information Contact" section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Mr. Joseph Schulingkamp, Planning and Implementation Branch (3AD30), Air and Radiation Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814-2021. Mr. Schulingkamp can also be reached via electronic mail at or by e-mail at schulingkamp.joseph@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On March 14, 2018 (83 FR 11155), EPA published a notice of proposed rulemaking (NPRM) for a SIP revision from the Commonwealth of Pennsylvania. In the NPRM, EPA proposed to partially conditionally approve and partially approve a Pennsylvania RACT SIP revision for the 1997 and 2008 8-hour ozone NAAQS. The formal SIP revision was submitted by the Pennsylvania Department of Environmental Protection (PADEP) on May 16, 2016.

RACT requirements apply to any ozone nonattainment areas classified as Moderate or higher (Serious, Severe or Extreme) under CAA sections 182(b)(2) and 182(f). Section 184(b)(1)(B) of the CAA also applies RACT to all areas located within ozone transport regions established pursuant to section 184 of the CAA. The entire Commonwealth of Pennsylvania is part of the Ozone Transport Region (OTR) established under section 184 of the CAA and thus is subject

statewide to the RACT requirements of CAA sections 182(b)(2) and 182(f), pursuant to section 184(b). The May 16, 2016 SIP submittal intends to satisfy sections 182(b)(2)(C), 182(f), and 184 of the CAA for both the 1997 and 2008 8-hour ozone NAAQS for all major nitrogen oxides (NOx) and volatile organic compound (VOC) sources in Pennsylvania not subject to control technique guidelines (CTG) (i.e., VOC non-CTG sources), except glass melting furnaces, ethylene production plants, surface active agents manufacturing, and mobile equipment repair and refinishing.

II. Summary of SIP Revision and EPA's Proposed Actions

The May 16, 2016 Pennsylvania SIP revision includes the Pennsylvania regulations in 25 Pa. Code sections 129.96-129.100 titled "Additional RACT Requirements for Major Sources of NOx and VOCs" (the RACT II Rule) and amendments to 25 Pa. Code section 121.1, including related definitions, to be incorporated into the Pennsylvania SIP. These regulatory amendments were adopted by PADEP on April 23, 2016 and effective on the same date upon publication in the Pennsylvania Bulletin. The May 16, 2016 SIP revision was submitted to satisfy certain CAA RACT requirements under both the 1997 and 2008 8-hour ozone NAAQS for specific source categories.

The RACT II Rule applies statewide to existing major NO_X and/or VOC sources in Pennsylvania, except those subject to other Pennsylvania regulations, as specified in 25 Pa. Code 129.96(a)-(b).[1] The RACT II Rule exempts all VOC source categories for which PADEP had adopted CTG RACT regulations at the time the RACT II Rule was finalized, as well as three non-CTG VOC source categories: (1) ethylene production plants, (2) surface active agents

[1] In the context of the RACT II Rule, the terms "major NO_X emitting facility" and "major VOC emitting facility," as defined in 25 Pa Code section 121.1, are used to refer to major stationary sources.

manufacturing, and (3) mobile equipment repair and refinishing; and glass melting furnaces as major NOx sources. In the NPRM, EPA proposed to find that the applicability requirements of 25 Pa. Code section 129.96 are necessary to implement the RACT requirements within the RACT II Rule.

The RACT II Rule requirements apply to any emissions unit or process at an affected major source having a potential to emit (PTE) of 1 ton per year (TPY) or more of NO_X and/or VOC. In the context of the rule, existing major sources are those already in existence as of July 20, 2012 or any major sources installed or modified after July 20, 2012, which became a major source before January 1, 2017. The RACT II Rule establishes a compliance date of January 1, 2017, as provided in paragraphs in 129.97(a) and 129.99(d)(4), with some exceptions.

Section 129.97 of the RACT II Rule establishes NO_X and VOC emission limits or operational requirements on certain types of emissions units in the affected major sources which Pennsylvania presumes to meet RACT, thus referred to in the rule as presumptive RACT. Affected emissions units include combustion units, process heaters, combustion turbines, stationary internal combustion engines, cement kilns, municipal waste combustors, and municipal solid waste landfills. In the NPRM, EPA proposed to find that the presumptive requirements of 25 Pa. Code section 129.97 represent RACT for the NO_X and VOC source categories affected by these provisions.

Affected major sources subject to the presumptive requirements of 25 Pa. Code section 129.97 that cannot comply with the applicable presumptive NO_X limits for any given emissions units, may choose one of two alternative compliance options to establish RACT. Such sources may either propose an alternative NO_X emissions limit based on averaging NO_X emissions from

multiple sources, under 25 Pa. Code section 129.98, or else propose an alternative source-specific emission NO_X or VOC limit or RACT requirement, under 25 Pa. Code section 129.99. In the NPRM, EPA proposed to find that 25 Pa. Code section 129.98 is not sufficient to address RACT for sources seeking averaging, without the specific NO_X averaging provisions for any affected sources being submitted to EPA for SIP approval. Also, in the NPRM, EPA proposed to find that 25 Pa. Code section 129.99 is not approvable by itself without further information on specific sources, along with the source-specific limits being submitted to EPA for SIP approval. By letter dated September 22, 2017, PADEP committed to address the problems with sections 129.98 and 129.99, as later identified in the NPRM, by submitting any facility-specific terms and conditions regarding emissions averaging to EPA as a source specific SIP revision and submitting all source-specific RACT determinations under section 129.99 to EPA as SIP revisions within 12 months of EPA's final approval. Therefore, EPA proposed to conditionally approve the provisions in 25 Pa. Code sections 129.98 and 129.99.

25 Pa. Code section 129.100 of the RACT II Rule establishes compliance demonstration and recordkeeping requirements for affected sources. Specific monitoring and testing requirements are established for sources complying with presumptive RACT requirements under section 129.97. Recordkeeping requirements are established under section 129.100(d) for any affected sources under the RACT II Rule. In the NPRM, EPA proposed to find that the compliance demonstration requirements of 25 Pa. Code section 129.100 are necessary to implement the RACT requirements of section 129.97. Also, additional compliance demonstration requirements for NO_X averaging or source-specific RACT alternative limits will be established by PADEP or the local permitting agency on a source-specific basis, in accordance with sections 129.98 and 129.99, respectively, and consistent with section 129.100.

Any definitions related to the RACT II Rule are codified in 25 Pa. Code section 121.1. The definitional changes in 25 Pa. Code section 121.1 are consistent with requirements in the RACT II Rule and thus we proposed to approve under CAA section 110. EPA proposed that the amended provisions in 25 Pa. Code section 121.1 and the adopted provisions in 25 Pa. Code sections 129.96, 129.97, 129.100 of the RACT II Rule are approvable, in accordance with requirements in CAA sections 110, 172, 182, and 184, and meet RACT for the affected major sources of non-CTG VOC and major sources of NO_X for both the 1997 and 2008 8-hour ozone NAAQS. EPA proposed conditional approval of 25 Pa. Code sections 129.98 and 129.99 for the reasons stated in this section and in the NPRM in more detail.

III. Public Comments and EPA's Reponses

During the comment period, EPA received relevant comments from eight separate entities: The Connecticut Department of Energy and Environmental Protection (CTDEEP), Friends of Pennsylvania (FOP), GenOn Energy, Inc. (GenOn), the Maryland Department of Environment (MDE), the State of New Jersey Department of Environmental Protection (NJDEP), the New York State Department of Environmental Conservation (NYDEC), Olympus Power, LLC (Olympus Power), and Sierra Club (SC). EPA also received twelve irrelevant or non-adverse comments from anonymous sources which will not be addressed here. The relevant comments and EPA's response are discussed in this section of this rulemaking action.

A. Presumptive RACT

Comment 1: Several commenters argue that PADEP's presumptive limits for certain source categories do not represent RACT. The commenters state that more stringent NO_X RACT limits have been adopted by other states for coal-fired utility boilers, such as in New York and

Connecticut's rules. Commenters also suggest there are more stringent limits adopted for combustion turbines and stationary internal combustion turbines.

Response 1: EPA disagrees with the commenters that PADEP's presumptive NO_X RACT limits are not adequate as RACT. In making RACT determinations, EPA has encouraged states to rely on current EPA guidance, including CTGs and Alternative Control Techniques (ACTs)[2], and any other information available at the time of development of the RACT SIP. *See* 78 FR 34178 at 34192. States have the discretion to adopt more stringent limits as RACT for similar sources when considering what emissions reductions of NO_X and VOC are necessary for timely attainment of the ozone NAAQS (i.e., beyond RACT reductions).

Based on existing EPA guidance, EPA determined that the RACT II Rule's presumptive requirements generally represent emission limitations achievable through implementation of reasonably available control technologies considering technical and economic feasibility. In addition, EPA reviewed NO_X emissions limits in effect in adjacent OTR states for certain source categories addressed by Pennsylvania's rule for comparison purposes. EPA concluded that PADEP's presumptive limits are comparable to other states' limits, denoting that while some states may have adopted more stringent limits for similar categories, other states have also adopted less stringent controls. However, nothing in the CAA requires Pennsylvania's RACT limits to be as stringent as neighboring states' limits.

Some states may have adopted more stringent controls for similar source categories given needs for ozone reduction to achieve attainment within their particular state or to go "beyond RACT"

[2] EPA uses CTGs to presumptively define VOC RACT while ACTs describe available control technologies and their respective cost effectiveness.

for the state's internal reasons. For instance, it is also worth noting that Connecticut's 22a-174-22e rule established NO_X presumptive limits that would become effective in two phases on June 1, 2018 for 2008 RACT requirements and June 1, 2022; and EPA only considered the June 1, 2018 control requirements under this regulation to be adequate and needed to meet 2008 ozone RACT.[3] EPA continues to find that Pennsylvania's presumptive NO_X limits are reasonable for the source categories evaluated for the reasons described in detail in our NPRM and TSD. EPA's determination considered for each source category the emission rates achieved by different NO_X control technologies as discussed in the guidance documents and summarized in the TSD, and limits that other states have adopted to meet RACT.

In addition, PADEP received similar comments from Connecticut and New Jersey on its proposed RACT II Rule, asserting that each state had adopted more stringent presumptive NO_X limits for coal-fired boilers than Pennsylvania. In its response, PADEP asserted that it "reviewed and considered RACT regulations from various states when evaluating what constitutes reasonably available control technology for the types of sources affected by the final rulemaking." PADEP stated that "[s]ource categories in Pennsylvania are diverse, with numerous sources having varying characteristics differing from those of the other Mid-Atlantic States," and that it "evaluated its source categories and determined the presumptive RACT requirements to be adequate." Further, after considering comments received, PADEP determined that the NO_X limits for coal-fired boilers with a rated heat input equal to or greater than 250 million British Thermal Units (MMBTU) per hour (MMBTU/hr) could be revised to reflect more stringent RACT. PADEP revised the presumptive NO_X limit from coal-fired boilers that are circulating

[3] *See* 82 FR 16776. In addition, EPA notes that Connecticut has areas in more severe nonattainment with the ozone NAAQS than Pennsylvania and as such may need more NO_X reductions.

fluidized bed combustion units (CFBs) from 0.20 pounds per MMBTU (lbs/MMBTU) to 0.16 lbs/MMBTU. PADEP also adopted additional presumptive RACT requirements for coal-fired boilers with selective non-catalytic reduction (SNCR) and selective catalytic reduction (SCR), established in subparagraph 129.97(g)(1)(vii) and 129.97(g)(1)(viii). *See* PADEP's Response to Comments Document, Comments #61 and #75.[4] Thus, EPA believes that PADEP considered and addressed technically and economically feasible rates for RACT as well as considered rates established for RACT in neighboring states in its development of the presumptive limits for the RACT II Rule.

EPA recognizes that other states have adopted more stringent RACT standards for source categories similar to those in Pennsylvania. However, that fact alone is not sufficient to conclude that PADEP's presumptive limits are not acceptable or reasonable as RACT. States have the discretion to adopt more stringent limits as RACT for similar sources when considering the emissions reductions of NO_X and VOC necessary for timely attainment of the ozone NAAQS, or to adopt "beyond RACT" limits for their own internal reasons. RACT requirements for ozone do not require Pennsylvania to adopt the same level of control as the most stringent state in the OTR or country; what is instead required is emission limitations reflecting what is the lowest achievable rate considering technological and economic feasibility.[5] Each state should set RACT limits considering what it determines reasonable for its sources. In general, the actual cost, emission reduction, and cost-effectiveness levels that an individual source will experience

[4] PADEP's Response to Comments Document is available in the docket for this rulemaking action at www.regulations.gov, Docket #EPA-R03-OAR-2017-0290, document #EPA-R03-OAR-2017-0290-0004 (hereafter referred to as Docket item #0004).

[5] *See* December 9, 1976 memorandum from Roger Strelow, Assistant Administrator for Air and Waste Management, to Regional Administrators, "Guidance for Determining Acceptability of SIP Regulations in Non-Attainment Areas," and also 44 FR 53762; September 17, 1979

in meeting the RACT requirements will vary from unit to unit and from area to area. These factors will differ from unit to unit because the sources themselves vary in age, condition, and size, among other considerations and, in many cases, will differ from state to state.[6] EPA believes that PADEP determined presumptive limits based on its evaluation of technical and economic feasibility of controls and determination of what is reasonable for each source category.[7]

Comment 2: One commenter argues that PADEP's presumptive limits for municipal waste combustors (MWCs) do not represent RACT for several reasons. The commenter argues that for mass burn waterwall type MWCs using SNCR as a control, states have adopted more stringent NO_X limits of 150 parts per million by volume, dry basis (ppmvd). Also, the commenter states that neither PADEP nor EPA considered the NO_X RACT limit of 150 ppmvd that was adopted by NJDEP. The commenter argues that Pennsylvania should have established NO_X presumptive limits for MWCs for each type of combustor technology, which is how states and EPA typically regulate MWCs considering that NO_X emissions vary by each technology.

Response 2: EPA disagrees with commenter's assertion that PADEP's presumptive NO_X RACT limit of 180 ppmvd for MWC is not adequate as RACT. PADEP's NOx presumptive limit of 180 ppmvd at 7 percent (%) oxygen (O_2) for MWC is reasonable as RACT, based on NO_X emission rates established by other states' regulations and in EPA's New Source Performance Standards (NSPS) at 40 CFR part 60, subparts Cb and Eb. In the NSPS, EPA has established NO_X limits for MWCs ranging from 150 to 250 ppmvd at 7% O_2 after considering the best

[6] *See* EPA's March 16, 1994 Memorandum "Cost-Effective Nitrogen Oxides (NO_X) Reasonably Available Control Technology (RACT)"
[7] *See* 46 PaB 2037.

system of emissions reduction (BSER). Also, as noted in the TSD, OTR states have adopted NO_X limits for MWCs ranging from 120 to 372 ppmvd at 7% O_2, with different averaging periods. PADEP's presumptive RACT limit for MWCs is comparable to EPA's most stringent NO_X limit for MWCs in the NSPS and is comparable to the most stringent limits adopted by other states given that factual scenarios regarding technical and economic feasibility for controls for MWCs can vary amongst states. EPA has no reason to believe that Pennsylvania did not consider the existing controls at the MWCs, such as SNCR, when determining RACT. For large MWCs with SNCR, other states have established average daily NO_X limits as high as 250 ppmvd; thus, Pennsylvania's limit of 180 ppmvd is more stringent for sources with SNCR than some states. Finally, EPA does not believe that MWCs must be exclusively regulated by type of combustor. In EPA's MWC regulations for NO_X emission limits, EPA set limits according to the type of combustor and also set a single NO_X limit that applies regardless of combustor type. *See* 40 CFR part 60, subparts Cb and Eb.

In determining RACT, states should also consider any information received during the public comments. EPA reviewed the comments received by PADEP during the state's public comment period on the RACT II Rule. PADEP initially proposed that MWCs meet RACT by complying with the limits EPA established in the NSPS at 40 CFR part 60, subpart Cb or Subpart Eb, which range from 180 to 250 ppmvd at 7% O_2. In response to comments, PADEP re-evaluated NO_X emissions data from its MWCs and concluded that a NO_X emission limit of 180 ppmvd at 7% O_2, the lowest limit in the NSPS, was more representative of actual emissions achieved across the fleet of MWCs in Pennsylvania, and therefore revised the final rule to adopt this NO_X limit as presumptive RACT. *See* PADEP's Response to Comments Document, Docket item #0004, Comments #121. Thus, EPA believes Pennsylvania considered for MWCs technical and

economic feasibility in setting lowest achievable emission rate for MWCs by considering what was achieved by MWCs within the Commonwealth and thus EPA finds the presumptive RACT rate reasonable.

Finally, while EPA recognizes that other states have adopted more stringent RACT standards for MWCs, that fact alone is not sufficient to conclude that PADEP's presumptive limits are not acceptable or reasonable as RACT as previously discussed. States have the discretion to adopt more stringent limits as RACT for similar sources considering the level of emissions reductions of NO_X and VOC necessary to timely attain the ozone NAAQS (i.e., beyond RACT reductions). Requiring Pennsylvania to adopt the same level of control as the most stringent state is not always necessary to satisfy the statutory mandate for RACT. EPA continues to find that Pennsylvania's presumptive NO_X limit for MWCs is reasonable and represents RACT.

Comment 3: Several commenters state that coal-fired boilers with SCR in Pennsylvania are capable of achieving lower rates than 0.12 lbs/MMBTU. One commenter recommends that EPA disapprove the presumptive limit for coal-fired boilers with SCR and impose a limit of 0.09 lbs/MMBTU, while another commenter proposes a limit of 0.07 lbs/MMBTU. Both commenters reference NO_X actual emissions data included as part of the comments and assert that NO_x emission rates lower than 0.12 lbs/MMBTU have been historically achieved by units in Pennsylvania. One commenter included NO_X emissions data that represents the "best performing ozone season emissions rate" (in lbs/MMBTU) for 13 coal-fired boilers in Pennsylvania equipped with SCR during 2005 to 2017. The second commenter provided NO_X emissions data for monthly average NO_X rates lower than 0.017 lbs/MMBTU during 2005 to 2017 for 10 coal-fired boilers in Pennsylvania equipped with SCR.

Response 3: EPA disagrees that a more stringent NO_X RACT limit than 0.12 lbs/MMBTU is needed for Pennsylvania to meet RACT for coal-fired boilers with SCR, based on the data provided and absent any other technical justification to support a more stringent limit. The NO_X emissions data sets provided by the commenter are not sufficient to conclude that a lower NO_X emissions rate, such as 0.07 or 0.09 lbs/MMBTU, is consistently achievable or sustainable to make Pennsylvania's conclusions unreasonable. RACT involves an evaluation of what is technically and economically feasible for sources; thus, consideration of whether emission limits are consistently achievable with controls that are cost effective and under consideration is a reasonable consideration for Pennsylvania. EPA acknowledges that historically, some individual coal-fired electric generating units (EGUs) with SCR in Pennsylvania have been able to achieve lower rates than 0.12 lbs/MMBTU as indicated in the commenters' data. However, in evaluating fleet-wide NO_X emissions and determining an adequate achievable NO_X RACT emissions limit for all units in Pennsylvania, the lowest historical rate at any particular unit at a specific point in time may not be a rate that can be consistently achieved by other units. EPA does not require RACT limits to be the lowest achievable emissions rate, but the lowest achievable emission rates considering technical and economical limitations.

In previous RACT guidance to states, EPA estimated that coal-fired boilers with SCR are expected to generate NO_X emissions rates ranging from 0.10 to 0.25 lbs/MMBTU, depending on the type of boiler and whether the boiler is equipped or not with additional combustion controls.[8] Also, as part of the 2016 Cross-State Air Pollution Rule (CSAPR) Update, EPA determined that

[8] EPA's ACT Document "NOx Emissions Document "NOx Emissions from Utility Boilers" (EPA-453/R-94-023; March 1994). It is possible that further technological advancements may have been proven to result in lower NO_X emissions levels than those reported in EPA's ACT.

0.10 lbs/MMBTU is an achievable NO_X emissions rate *during ozone season* for coal-fired electric generating units (EGUs) with SCR.[9] As part of the CSAPR Update, EPA analyzed NO_X reduction potential and corresponding NO_X ozone season emissions budgets at utility boilers (i.e., EGUs) based on NO_X emissions rates that can be consistently achieved for the units with SCRs that were not currently being optimized or which were currently idled at the time of EPA's analysis (i.e., 2016). To determine the NO_X emissions rate that could be consistently achieved, EPA evaluated coal-fired NO_X ozone season emission data for EGUs from 2009 through 2015 and calculated an average NO_X ozone season emissions rate across the fleet of coal-fired EGUs with SCR for each of these seven years. The 0.1 rate represents the third lowest fleet-wide average coal-fired EGU NO_X ozone season emissions rate for coal-fired EGUs with SCR. It is worth noting that EPA considered and rejected the lowest or second lowest ozone season NO_X rates, because it determined that these rates may reflect new SCR systems and/or existing SCR systems with all new components (e.g., due to simultaneous replacement of multiple layers of catalyst rather than routine replacement of a single layer).[10] Therefore, reliance alone on the lowest historical emissions rate to evaluate the feasibility and cost effectiveness of controls would likely overestimate the emissions reductions and, consequently, underestimate the costs to restart idled or unoptimized controls because some EGUs have significantly curtailed their hours of operation, for various reasons, since the time when the low levels of NOx emissions were achieved. Furthermore, SCR controls can become less effective at NOx removal as they age and may not be as efficient as when first installed, so the lowest historically achieved rate is not always technically feasible. It is not unreasonable for Pennsylvania to have considered a slightly

[9] *See* 81 FR 74504, 74543 (October 26, 2016) (addressing interstate transport of ozone for 2008 ozone NAAQS).
[10] Data from these new systems are not representative of ongoing achievable NO_X rates considering that some SCR systems may have some broken-in components and routine maintenance schedules entailing replacement of individual components.

different NO_X emission rate for RACT considering such technological and economic feasibility issues than what EPA has deemed achievable as an ozone season-only NO_X rate (0.10 lbs/MMBTU), when averaging over a shorter time period such as 30 days.

Even when considering lowest achievable rates, the data sets provided by the commenters are not sufficient to support the assertion that a NO_X rate of 0.07 or 0.09 lbs/MMBTU, respectively, or in fact any other rate lower than 0.12 lbs/MMBTU, is consistently achievable in Pennsylvania. The first commenter, the Sierra Club, only considered data for the limited instances where the lowest NO_X rates have been achieved and did not consider any other periods during the 2003 to 2012 timeframe.[11] For example, in Table 2 of Sierra Club's comments, the commenter presented the data from multiple units at multiple facilities on a monthly basis. The commenter then appeared to sort the data in terms of average NO_X rate from the lowest rate to the highest rate but limited the data to those units and months where the average NO_X rate was less than or equal to 0.07 lbs/MMBTU. By doing this, the commenter does not take into account the months where a unit is operating at a rate above 0.07 lbs/MMBTU skewing the data in a way that tends to show these units are able to comply with a lower emissions limit at all times. Furthermore, by sorting the data in this way, the commenter obscures important information such as which facilities and units were evaluated, and the range of years or months evaluated; thus, the incomplete data set submitted by the commenter was not sufficient for EPA to determine that Pennsylvania's RACT is not permissibly or reasonably set at 0.12 lb/MMBtu.

The second commenter, the MDE, provided the best performing ozone season NO_X emissions rates during 2005 to 2017, but only considered emissions rates of certain facilities and certain

[11] *See* Tables 2 and 3 of Sierra Club's comments, dated April 13, 2018.

units that were specifically lower than 0.09 lbs/MMBTU. The NO_X rates provided by the commenter were ozone season averages, not 30-day rolling averages. PADEP's coal-fired emission limit of 0.12 lbs/MMBTU is required on a 30-day rolling basis and is applicable on a continuous basis throughout the year (not just during ozone season). Therefore, the data provided by MDE is not comparable to the form of Pennsylvania's RACT emission limitation.

Finally, states must establish presumptive NO_X emission limits for RACT that are reasonably achievable for the entire fleet of units within any source category. Both commenters only included data below certain thresholds, so only some of the data from these units was shown, making it hard to judge the overall representativeness of the data. In its SIP revision, PADEP confirmed that the presumptive RACT NO_X limits for coal-fired boilers "are achievable and sustainable during the expected life of the affected unit using technologies that are both technically and economically feasible."[12] Absent any conflicting technical information, EPA continues to believe that a NO_X emissions rate of 0.12 lbs/MMBTU on a 30-day rolling average, year-round, is reasonable and consistently achievable by Pennsylvania's coal-fired boilers with SCR, representative of SCR operation, and adequate for representing RACT for these units based on Pennsylvania's analysis.

Comment 4: One commenter contends that EPA cannot approve the provision in 25 Pa Code section 129.97(g)(1)(viii) applicable to coal-fired boilers with SCR, because there is no adequate basis for the minimum SCR operating temperature and the minimum operating temperature of 600°F is contradicted by facts concerning SCR operation and inlet temperature. The commenter argues that neither EPA nor Pennsylvania have justified that a temperature-based exemption is

[12] *See* PADEP's Response to Comments Document, Docket item #0004, Comment #10, Page 23.

necessary or that 600°F is the correct threshold for such exception. The commenter states that EPA did not mention this "loophole" in its proposal. The commenter also argues that EPA's allowance of a temperature exemption is in direct contrast to prior actions by EPA, in which EPA recognized that a minimum SCR operating temperature varies significantly between EGUs and required utilities to supply more technical data to support any accommodation of this parameter. *See* 81 FR 21735 (April 13, 2016).

Response 4: EPA recognizes that neither Pennsylvania nor EPA explained in detail why the minimum SCR temperature exemption in 127.97(g)(1)(viii) for coal-fired boilers is adequate for RACT. However, EPA disagrees that our determination to accept this exemption as part of Pennsylvania's presumptive limits for coal-fired combustion units is arbitrary or capricious. As proposed in the NPRM, EPA finds that Pennsylvania's determination to limit the application of the SCR limit when inlet temperature is less than 600ºF is consistent with the optimum operating temperature of SCRs used generally by coal-fired boilers and reasonable as part of the presumptive RACT limitation. The temperature at the inlet to the SCR provides a good indication of catalytic reduction performance, because it indicates that the gas stream is at sufficient temperature to initiate reduction of NO_X on the catalyst. EPA finds that the NO_X reduction reaction of an SCR is effective only within a given temperature range. If the inlet temperature (i.e., of the process gas stream) is too high, it may cause NO_X generation in the SCR rather than NO_X reductions. (*Reference:* https://www3.epa.gov/ttnchie1/mkb/documents/B_15a.pdf). The use of a catalyst in the SCR process lowers the temperature range required to maximize the NO_X reduction reaction. At temperatures below the specified range, the reaction kinetics decrease, and ammonia passes through the SCR (ammonia slip), but there is little effect on nitrous oxide (N_2O) formation. At

temperatures above the specified range, nitrous oxide (N_2O) formation increases and catalyst sintering and deactivation occurs, but little ammonia slip occurs. It has been proven that for the majority of commercial catalysts (metal oxides), the typical operating temperatures for the SCR process range from 480°F to 800°F (250–430°C). The rate of NO_X removal increases with temperature up to a maximum between 700°F and 750°F (370–400°C). (*Reference:* https://www.epa.gov/sites/production/files/2017-12/documents/scrcostmanualchapter7thedition_2016revisions2017.pdf*; see* Reference [46].)

In addition, EPA noted in its response to comments on the May 2016 updates to the Cost Control Manual for the SCR chapter that, while the temperature of 480º to 800°F is a fairly wide range and is dependent on catalyst type, this range is not reflective of general optimum range. EPA concluded that 480º to 800°F is an "operating" range and that 700º to 750°F was an optimum temperature range.[13] It has been proven that the NO_X removal efficiency decreases more drastically when temperatures are lower than the optimal operating range; at 600ºF, the expected NO_X removal efficiency of an SCR has already decreased to 77% and at 550ºF the removal efficiency drops to 63%. Therefore, even if Pennsylvania were to lower the temperature at which a SCR was to begin operating by 50°F, the reductions achieved would be only slightly better than those achieved with Low NO_X burners with Overfired Air (40-60% reduction) which is already required to be installed by the existing Pennsylvania SIP. Thus, EPA finds Pennsylvania's selection of 600ºF requirement for coal-fired boiler RACT reasonable based on noted efficiencies with SCRs at such temperatures and based on technical and economic considerations from use of additional catalyst to achieve diminishing NO_X removal.

[13] *See* EPA, Air Pollution Cost Control Manual, Section 4 – NO_X Controls, Chapter 2 at section 2.2.2. May 2016, updated November 2017.

In the NPRM, EPA recognized that the SCR limit is not applicable at all times, given the temperature condition provided. Nevertheless, EPA disagrees that this qualifies as a "loophole" of the regulation. As discussed in the TSD in support of our proposed action, any affected boiler with SCR or SNCR is also required to comply at all times with the boiler type limits in section 129.97(g)(1)(vi), which in practice would be applicable in any instances where the SCR or SNCR is not in operation. For instance, a coal-fired boiler that has an SCR in place would be subject in practice to two sets of RACT NO_X limits: (1) The SCR limit of 0.12 lbs/MMBTU when the inlet temperature to the control is equal to or greater than 600ºF; and (2) the boiler type limit (0.16, 0.35, or 0.40 lbs/MMBTU depending on type of boiler) at any other times when the inlet temperature to the control is less than 600ºF. EPA finds that this control approach is practical and acceptable to satisfy RACT for boilers with SCR and SNCR, as it ensures applicability of RACT year-round, while requiring the lowest NO_X emissions limit considering the technical feasibility of existing NO_X controls. As stated in our TSD for the NPRM, in our engineering judgment and based upon acknowledged technical limitations of SCR and SNCR, EPA agrees with PADEP's determination that SCR or SNCR cannot result in lower NO_X emission rates at those lower operating temperatures. *See* page 21 of the TSD.

Comment 5: The commenter claims that section 129.97(g)(1)(viii) of the RACT II Rule has allowed Pennsylvania utilities since 2017 to use the minimum temperature-exemption for coal-fired boilers with SCR to intentionally avoid operating controls at night. The commenter provides NO_X emissions and heat input rating from one particular EGU coal-fired boiler, Cheswick, and alleges that it depicts a typical practice and typical emission rate from the coal-fired EGU boilers with SCR in Pennsylvania subject to the RACT II Rule.

Response 5: As discussed in the prior response, the RACT II Rule's temperature exception in section 129.97(g)(1)(viii) does not allow coal-fired boilers equipped with SCR to avoid all NO_X controls. Although any coal-fired boiler with SCR is not subject to the 0.12 lbs/MMBTU RACT emission limitation when inlet temperature is below 600ºF, these boilers must still comply at all times with the presumptive limits in section 129.97(g)(1)(vi), which vary based upon the furnace configuration or boiler type.

The Cheswick unit is a tangentially coal-fired boiler equipped with low NO_X burners (LNB) with separated overfire air (SOFA) and SCR. As such, the unit is required to comply with two presumptive NO_X limits under the RACT II Rule: 0.12 lbs/MMBTU when inlet temperature to the SCR is above 600°F, and 0.35 lbs/MMBTU at all other times. *See* section 129.97(g)(1)(vii) and (vi)(B). EPA notes that a reduction of heat input at night for Cheswick is not unusual for a coal-fired EGU boiler as the reduction in heat input can be driven by lower demand for electricity; thus reduced heat input could lead to temperatures below 600°F and below what is optimal for SCR operation.

Comment 6: One commenter claims Pennsylvania's rule does not require a reporting requirement for the exhaust temperature of units equipped with SCR, and that without this information the public will not be able to know whether or not such units are complying with the applicable emission limits. The commenter claims the lack of this reporting requirement renders calculating compliance with the 30-day average difficult and, overall, violates the CAA's requirement that RACT be enforceable.

Response 6: EPA disagrees with the commenter. Although PADEP's RACT II Rule does not

establish RACT-specific reporting requirements for each source category, Pennsylvania has the generic recordkeeping requirements at section 129.100(d) requiring that a source subject to sections 129.96 -129.99 "keep records to demonstrate compliance with § § 129.96 – 129.99 that include sufficient data and calculations to demonstrate that the requirements of § § 129.96 – 129.99 are met." *See* 25 Pa Code 129.100(d). EPA finds that the compliance demonstration requirements of 129.100(d) require sources to keep sufficient records to demonstrate meeting RACT limits. PADEP may establish more specific requirements for individual sources, as needed, through the operating permit process.

Comment 7: One commenter argues that EPA should disapprove the PA RACT II Rule's provision in section 129.97(g)(1)(ix) concerning coal-fired boilers with SNCR, based on the inadequate information provided as part of the "illegal and improperly submitted" supplemental documentation. The commenter asserts that PADEP's supplemental documentation does not justify why PADEP did not impose an emission limitation for coal-fired boilers in Pennsylvania, but simply identifies the six Circulating Fluidized Bed (CFB) boilers with SNCR in Pennsylvania subject to this requirement. Commenter asserts that in an attempt to support that the 0.16 lbs/MMBTU presumptive limit for any coal-fired CFB boiler is also adequate for coal-fired boilers with SNCR, PADEP argues that CFB boilers without SCR have been able to achieve lower NO_X emission reductions than CFBs with SNCR. Commenter also points to several EPA guidance documents supporting that additional reductions can be achieved at EGU boilers through operation of SNCR.

Response 7: EPA disagrees with the commenter regarding the RACT emission limitation for coal-fired boilers with SNCR. As explained in the NPRM and TSD, such boilers are subject to

emission limitations (including a numeric limitation and a requirement to operate SNCR) that Pennsylvania set considering technical and economic feasibility. Thus, EPA finds these emission limitations reasonable as explained in more detail in the NPRM and TSD. Sufficient information is available to support this conclusion – all coal-fired boilers with SNCR are required to comply with both the numeric emission limitations of section 129.97(g)(1)(vi) and the work practice standard under 129.97(g)(1)(ix). In addition, Pennsylvania considered limits from other states and the current limits in place at these sources. Furthermore, EPA does not agree that the supplemental September 2017 submittal from PADEP is illegal or was improperly submitted. PADEP's September 26, 2017 submittal included Pennsylvania's commitment to submit any facility-wide or system-wide NO_X averaging plans to EPA for SIP approval and to submit to EPA for SIP approval any permits issued under section 129.99 to support the conditional approval of 129.98 and 129.99 for the SIP. This commitment in Pennsylvania's supplement meets requirements for a commitment under CAA section 110(k)(4). The commenter has not provided sufficient information as to why Pennsylvania's supplemental information is "illegal." *See* Response to Comment #34. Nevertheless, EPA has sufficient information in the TSD and in the docket generally to support our conclusion that Pennsylvania's RACT II Rule is reasonable including the RACT limitation for coal-fired boilers with SNCR as the Rule includes a work practice requirement as an emission limitation (as the Rule requires operation of the SNCR) as well as a numeric restriction on emissions as an emission limitation in section 129.97(g)(1)(vi). *See also* Response to Comment #8.

Comment 8: Commenters allege that EPA cannot approve the presumptive provision contained in 129.97(g)(1)(ix) for coal-fired boilers with SNCR because the provision lacks a numeric emission limit. One commenter added the rule also failed to have a requirement to optimize the

existing SNCR control. Another commenter argued that Pennsylvania should have been able to set a numeric emission limit because such limits exist for other similar units with SNCR in place and a numeric emission limit is required to meet EPA's definition of "RACT."

Response 8: RACT generally requires the establishment of "emission limitations." Since the 1970's, EPA has consistently defined "RACT" as the lowest emission limit that a particular source is capable of meeting by the application of the control technology that is reasonably available considering technological and economic feasibility.[14] However, EPA disagrees that an emission limitation is required to be *numeric* to meet RACT for all source categories. CAA section 302(k) defines an emissions limitation as "a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter." The requirement of 25 Pa. Code 129.97(g)(1)(ix), to operate the system (i.e., coal-fired boilers with SNCR) with the injection of reagents, qualifies as a work practice standard or an operational requirement; thus, the provision meets the definition of "emission limitation" under CAA section 307. Thus, Pennsylvania has established a RACT emission limitation for coal-fired boilers with SNCR. In addition, these boilers are also subject to boiler type presumptive RACT limits (0.16, 0.35, 0.40, or 0.45 lbs/MMBTU) in 129.97(g)(v) and (vi). Thus, coal-fired units are subject to both numerical limits and work practice standards which reasonably establish RACT as an "emission limitation" considering technical and economic feasibility. EPA also disagrees with the commenter's

[14] *See* December 9, 1976 memorandum from Roger Strelow, Assistant Administrator for Air and Waste Management, to Regional Administrators, "Guidance for Determining Acceptability of SIP Regulations in Non-Attainment Areas," and also 44 FR 53762; September 17, 1979.

assertion that EPA should require language to ensure optimum operation of SNCR controls because this is not required for RACT-level control. EGUs are required to optimize emission control for NOx (including SCR and SNCR) for interstate ozone transport requirements for the 2008 ozone NAAQS. *See* 83 FR 50444 (October 5, 2018) (Response to Clean Air Act Section 126(b) Petitions from Delaware and Maryland) (stating EGU sources would have already optimized emission controls like SCR and SNCR when EPA finalized the CSAPR Update in 2016 to address interstate transport of ozone (81 FR 745504 (October 26, 2016)).

B. NO_X Averaging

Comment 9: The commenter asserts that Pennsylvania's NO_X averaging formula in section 129.98(e) does not adequately set an alternative emissions limit, as required by this provision in 129.98. The commenter argues that the allowable NO_X mass emissions defined by the formula ($E_{iallowable}$) in 129.98 should be "fixed," rather than changing with operating scenarios. The commenter further requests that EPA disapprove section 129.98 because this formula is unenforceable due to the unspecified method of calculation, and because PADEP's interpretation of these provisions provided as part of the supplemental document is clearly different from the plain language of the rule.

Response 9: As discussed in the NPRM and TSD, EPA identified deficiencies in the NO_X averaging provisions of the RACT II Rule including the need for enforceable conditions. As previously discussed, Pennsylvania committed in the September 26, 2017 letter ". . . to submit the terms and conditions dealing with emission averaging to EPA as facility specific SIP revisions to address EPA's concerns." September 26, 2017 submittal, p. 2. EPA is conditionally approving 129.98 under CAA 110(k) based on this commitment. Thus, EPA agrees to a limited

extent with the comment regarding whether 129.98 adequately established how to compute the alternative NO_X limit. The submission of alternative NO_X limits and relevant compliance demonstration requirements for approval into the SIP would allow EPA to determine if each NO_X averaging plan and underlying alternative NO_X limit is adequate for RACT. In addition, any alternative limits provided by PADEP would need to be enforceable to obtain EPA approval into the SIP.

EPA does not agree with commenter that for the alternative NO_X emissions limit to be adequate and/or enforceable, it must necessarily be a "fixed" limit. EPA has, in the past, approved emission limitations based on equations where certain variables within the equation change based on various aspects, such as type of fuel being used, operating modes, or other specific conditions.[15, 16] EPA believes that, as long as all possible variables to be used are properly identified and the equation is sufficiently constrained, the equation can be used to establish an alternative emission limit and that limit can be enforceable.

Regarding the comment that Pennsylvania's interpretation of the enforceability of averaging provisions in 129.98 is somehow different in the September 2017 letter to EPA than what is in the terms of 25 Pa. Code 129.98, EPA has addressed the enforceability issues relating to averaging in 129.98 through the conditional approval and through Pennsylvania's commitment to submit all such plans to EPA for SIP approval. Pennsylvania's interpretation in the September 2017 letter regarding terms in 129.98 is not germane as EPA is conditionally approving 129.98

[15] *See* Air Plan Approval; Georgia; Miscellaneous Revisions, July 28, 2017 (82 FR 35106); specifically, Rule 391-3-1-.02(2)(e) which establishes allowable particulate matter emission limits for sources based on process input weight.

[16] *See* Approval and Promulgation of Air Quality Implementation Plans; Montana; Regional Haze Federal Implementation Plan, September 12, 2017 (82 FR 42738); specifically, the best available retrofit technology (BART) particulate matter emission rate for the Trident cement kiln which is based on the concentration of particulate matter, volumetric flow rate of the effluent gas, and total kiln clinker production.

based on Pennsylvania's commitment to submit averaging plans to EPA for SIP approval in response to EPA's identified deficiencies in the NPRM regarding averaging.

Comment 10: The commenter identified various concerns with the equation provided in section 129.98(e) to estimate an alternative limit for NO_X emissions averaging. First, the commenter argues that the equation is unenforceable because it does not properly explain how to calculate allowable NO_X mass emissions for each affected emission unit. The commenter also indicates that if PADEP allows the use of actual heat input to calculate both actual NO_X emissions ($E_{iactual}$) and allowable NO_X emissions ($E_{iallowable}$), the source will never be found in violation of the NO_X averaging plan, as mathematically both sides of the equation would increase proportionally.

Response 10: EPA agrees with the commenter to the extent that EPA already identified concerns with the equation provided in 129.98(e) given its lack of specificity. These concerns led to our conditionally approving 129.98 based upon Pennsylvania's commitment to submit to EPA for inclusion in the SIP permits which will employ these NO_X averaging provisions. In order for section 129.98 to become fully approved, PADEP must provide to EPA for approval into the SIP the alternative emission limits adopted under section 129.98 and related compliance demonstration requirements.

EPA does not have sufficient information to assess if actual heat input will in fact be used in calculating both actual and allowable NO_X emissions. $E_{iactual}$ is defined in section 129.98(e) as "the *actual* NOx mass emissions, including emissions during start-ups, shutdowns and malfunctions, for air contamination source i on a 30-day rolling basis." (italics added). $E_{iactual}$ cannot represent the "actual NOx mass emissions" if the actual heat input is not used in the calculation, so using *allowable* heat input in calculating actual emissions would be illogical.

EPA also believes that PADEP intends to use actual heat inputs when calculating $E_{iallowable}$, along with the presumptive RACT emission rate (or more stringent emission rate applicable to the source). PADEP's September 26, 2017 commitment submittal states that "[t]he allowable mass emissions are calculated each hour using the presumptive NOx RACT emission limit (or more-stringent limit, if applicable) and the *actual heat input* from the Department certified CEMS." P. 1 (italics added). However, the RACT regulations do not expressly specify whether actual heat input or allowable heat input will be used in calculating $E_{iallowable}$. This is one of several identified concerns which led to EPA's conditional approval of section 129.98, and Pennsylvania's commitment to submit NO_X averaging plans for approval into the SIP, with each plan including an enforceable alternative emissions limit and compliance demonstration requirements.

Comment 11: One commenter requests EPA require that NO_X averaging emissions limitations established under 25 Pa. Code section 129.98(e) be based on emissions rates (lbs/MMBTU), instead of mass emissions (lbs).

Response 11: EPA disagrees with commenter's request because there is no requirement in the CAA that RACT emission limitations for NO_X averaging be based on emissions rates, as opposed to NO_X mass emissions. Although EPA allows the use of NO_X averaging to meet RACT for NO_X sources, no specific additional regulatory requirements concerning how to implement a NO_X averaging scheme were adopted by EPA. Therefore, EPA believes that PADEP should have flexibility in choosing how to express the NO_X averaging limits, as long as PADEP can demonstrate that the same level of RACT emission reductions will be achieved.[17]

[17] *See* 80 FR 12279.

Comment 12: The commenter asserts that the system-wide and facility-wide averaging equations do not set an "alternative limitation," which commenter claims is required by the plain language of the RACT II Rule. Commenter asserts that the Rule requires facilities to "calculate the alternative facility-wide or system-wide NOx RACT emission limit . . .." Commenter further states that only the equation in 129.98(e) characterizes averaging as a method for demonstrating compliance, while this is not the plain reading of the remainder of section 129.98.

Response 12: Because the Commenter did not cite to the particular section or sentence of the RACT II Rule which is being interpreted or quoted, EPA can only use its best judgment to surmise that the language in section 129.98(e) is the source of the quoted language. Section 129.98(e) states "[t]he owner or operator shall calculate the alternative facility-wide or system-wide NOx RACT emissions limitation using a 30-day rolling average for the air contamination sources included in the application for the operating permit or plan approval, …." There is no other language in section 129.98 which is similar to the Commenter's quote. EPA believes that the term "emission limitation" in section 129.98(e) should be interpreted as "$E_{iallowable}$," and that the calculation of $E_{iallowable}$ results in a total NOx mass emission limitation for all of the sources included in the averaging plan, while commenter is expecting the averaging plan to have an overall emission rate limit, expressed as lbs NOx/million Btu heat input, for the sources. When section 128.98(e) is considered in its entirety, rather than considering just a portion of one sentence, there is no conflict between the equations in 129.98(e) and the language of Section 129.98 overall. As discussed in the March 14, 2018 NPRM, EPA proposed to conditionally approve the NO_X averaging provisions in section 129.98 given concerns about the specificity of the equation in 129.98(e) and the compliance demonstration requirements within the rule. In this

action, EPA is finalizing that conditional approval based on Pennsylvania's commitment to submit permits with NO_X averaging to EPA for SIP approval. Section 129.98(e) states that an alternative limit calculated by the owner or operator must be in the operating permit modification or plan approval, and section 129.98(g) requires that the application for such an averaging plan should contain, "…methods for demonstrating compliance…." The SIP submittal should therefore address the emission limitation and the compliance demonstration issues.

Comment 13: One commenter states that an averaging plan is a method of demonstrating compliance with presumptive NO_X limits in section 129.97, allowing sources to demonstrate compliance as a group of emissions sources rather than as individual emissions sources.

Response 13: EPA agrees that sources can use section 129.98 to apply for an averaging plan covering multiple units or sources. However, EPA does not agree that the averaging plan or equation in section 129.98 will directly show compliance with the presumptive RACT limits applicable to each source in the plan. The averaging plan or equation in section 129.98 is instead intended to demonstrate that the resulting NO_X emissions using a 30-day rolling average would not be greater than NO_X emissions from the group of included sources if they each complied with the applicable presumptive NO_X RACT emissions limit in section 129.97. Section 129.98(g) requires that the application for such an averaging plan should contain, "methods for demonstrating compliance…." The fact that the application must have a method for determining compliance shows that section 129.98 does not, in its text, have a method for determining compliance with section 129.97. The presumptive limits in section 129.97 otherwise applicable to each source must be used as a factor in the $E_{iallowable}$ equation (unless a lower emission limit applies to a source) in 129.98 but will not be used on the $E_{iactual}$ side of the equation. Instead,

actual mass emissions from each source in the plan, as determined by CEMS or other means, on any given day will be added together on the $E_{iactual}$ side of the equation. Thirty days of $E_{iactual}$ daily mass emissions will be added together and divided by 30, and 30 days of daily $E_{iallowable}$ mass emissions will be added together and divided by 30. The resultant 30-day average of $E_{iactual}$ emissions on any given day must be less than or equal to the 30-day average of $E_{iallowable}$ emissions on the same day. It will not be possible under this averaging scheme to determine whether the individual hourly emission rate of each source/unit met the presumptive RACT limit in section 129.97 for that source. Thus, the provisions of 129.98 provide the formula to set the alternative NOx emission limitation for sources who will comply with the alternative NOx emission limitation in lieu of the presumptive rates in 129.97.

As previously discussed, EPA is concerned that section 129.98 lacks a definitive method for demonstrating how the 30-day rolling average mass NOx emission limitation allowed by 129.98 will be less than or equal to the NOx emissions that would have been emitted if all the sources complied with the source specific RACT limits of 129.97, so PADEP has committed to submit these averaging plans to EPA for approval into the SIP. The adequacy of the compliance demonstration provisions will be assessed through both the state public notice process and EPA's review of such SIP revisions. Thus, EPA disagrees with the commenter that any of the assertions prevent EPA from conditionally approving 129.98 as part of Pennsylvania's RACT.

Comment 14: One commenter asserts that PADEP's NO_X averaging provisions in section 129.98 do not require the establishment of an alternative NO_X emissions limit; and therefore, there is no need to submit averaging plans as separate SIP revisions to EPA.

Response 14: EPA disagrees that Pennsylvania's NO_X averaging provisions do not require

establishment of an alternative NO_X emission limit. As discussed in the March 14, 2018 NPRM, EPA proposed to determine that the NO_X averaging equation in section 129.98(e) does " . . . not clearly specify how to properly establish an alternative RACT limit." 83 FR 11160. To do so, EPA would need to know, at the least, what facilities and units are involved in each plan, the applicable limits in each plan, if multiple fuels are used, or any other information necessary to calculate "$E_{iallowable}$." EPA also expressed concerns about the lack of compliance demonstration requirements in the rule. In addressing these deficiencies, PADEP committed to submit as SIP revisions any alternative emissions limits and compliance demonstration requirements approved under section 129.98. EPA has proposed approval of section 129.98 with the condition that PADEP meets this commitment to submit additional enforceable provisions for approval into the SIP during which time the alternative NOx emissions limit will be clearly established.

Comment 15: Two commenters allege that Pennsylvania's rule provides system-wide or facility-wide NO_X averaging as a means of demonstrating compliance with the applicable emission limits included in the rule; and requests EPA to review the averaging provisions contained in EPA's Acid Rain Program (at 40 CFR 76.11) and the Mercury and Air Toxics Rule (MATS rule) (at 40 CFR 63.10009) that allow averaging as a means of demonstrating compliance.

Response 15: EPA disagrees with the commenters that Pennsylvania's rule provides averaging as a means of determining compliance. As previously stated, Pennsylvania's rule specifically directs the owner or operator to determine the "alternative facility-wide or system-wide NO_X RACT emission limitation." This language requiring the owner/operator to determine an alternative emission limitation shows that the provisions of 25 Pa. Code 129.98 are not a means

of demonstrating compliance but rather a means to determine an alternative emission limitation applicable to the corresponding facility or system.

Furthermore, section 76.11(a)(3) of the Acid Rain Program regulations require that each unit in an averaging plan must have a contemporaneous annual emission limitation, and, also requires that specific information be submitted that is not specified in section 129.98, such as annual heat input limits and an alternative annual emission limitation for each unit. The equation is only one part of the Acid Rain Program provisions, and if PADEP's section 129.98 regulation included the additional information and other requirements of the Acid Rain Program regulations, the equation might present an acceptable option.

Regarding the MATS rule equation at 40 CFR section 63.10009, EPA notes there are many additional limitations in that section which are not present in section 129.98, such as groupings of similar sources, as well as multiple equations (6) specifically geared toward each grouping. In the absence of further explanation by the commenter as to how these equations can be usefully applied to the section 129.98 averaging program, EPA does not see the MATS rule averaging scheme as useful to resolving EPA's concerns.

Comment 16: One commenter disagrees with EPA's interpretation that section 129.98 requires the establishment of alternative emissions limitations for *individual* sources. The commenter urges EPA to recognize that the presumptive limits of section 129.97 are being used to establish RACT compliance requirements, including the averaging provisions, and that therefore these requirements should meet RACT. The commenter asserts that the NO_X averaging provisions in section 129.98 should be adequate for approval into the SIP, because EPA has found that the multiple fuel presumptive provision of section 129.97(g)(4) is approvable. The commenter

contends that the multiple fuel presumptive provision is similar to the NO_X averaging provisions, as they both establish weighted averaged limits. The commenter also claims that EPA's proposed rulemaking action makes the RACT II Rule costlier to implement and comply with and less flexible.

Response 16: The fact that EPA has approved the source specific RACT limits in section 129.97 does not mean that an averaging plan which uses those limits to calculate an alternative limit is necessarily approvable. EPA must clarify that, as proposed in our NPRM, we do not expect new unit-specific emission limits (other than the unit-specific limit required by presumptive RACT) to be established for each unit covered under a system-wide or facility-wide NO_X averaging plan, but rather that an alternative limit must be determined for each plan, which would cover the non-complying unit and any other participating units. This is required by PADEP under 25 Pa. Code section 129.98(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 (…) by using the following equation to sum the emissions for all of the sources included in the NO_X emissions averaging plan."

EPA agrees with the commenter that the presumptive emission limits in section 129.97 are used in developing the alternative NO_X limit under an averaging plan, as required by section 129.98(e); however, EPA disagrees that they are used to establish RACT compliance requirements. As plainly stated in section 129.98(e), the owner or operator shall calculate an alternative facility-wide or system-wide NO_X emission limitation. Second, according to section 129.98(a), the averaging provisions of section 129.98 may only be utilized if one or more sources covered under such a plan are unable to meet the presumptive limits under section 129.97, and

this unit would be in violation of the applicable NO_X limit in section 129.97.

EPA disagrees with the commenter's assertion that the averaging provisions of section 129.98(e) are similar to those under the multiple fuel firing provisions in section 129.97(g)(4). The mathematical formula in section 129.97(g)(4) is a weighted average formula where a value is computed resulting from the multiplication of each component by a factor reflecting its frequency of use. The formula in section 129.98 computes an alternative limit that is not a weighted average or even a mathematical average, as the section's title may imply, but a summation of all NO_X mass emissions from each unit covered under the averaging plan. Thus, the two formulae described by the commenter are not similar in nature and are not comparable. Also, the most substantive difference between these two requirements is that the NO_X averaging provisions of section 129.98 require an owner or operator to establish an alternative limit covering multiple units, including any NO_X units unable to meet presumptive RACT and any other participating units under such averaging plan; whereas section 129.97(g)(4) establishes a presumptive RACT requirement for a single emissions unit. This need to establish an alternative limit under the variable "$E_{iallowable}$" in the equation of section 129.98(e) is one of the main differences between the two provisions.

Furthermore, EPA identified several deficiencies in the averaging provisions of section 129.98 that prevent its full approval, but those deficiencies were not present in the multiple fuel provisions of 129.97(g)(4). Namely, EPA found that the averaging provisions of section 129.98 do not clearly specify how to properly establish an alternative RACT limit (under the variable "$E_{iallowable}$") and do not specify sufficient compliance demonstration requirements for sources seeking to comply with these provisions. Therefore, these provisions were not found adequate to

meet RACT. EPA disagrees with the commenter's presumption that if section 129.97(g)(4) meets RACT, so should section 129.98.

Finally, although the commenter claims that EPA's proposed action raises the cost for affected sources with regard to implementation and compliance of the RACT II Rule, the commenter failed to specify how EPA's action would increase costs on facilities choosing system-wide or facility-wide averaging. Given the lack of specificity and lack of analysis on how EPA's action requiring Pennsylvania to submit plans for SIP approval raises costs on sources, EPA provides no further answer.

Comment 17: The commenter argues that NO_X averaging plans under section 129.98 must provide explicit emissions limits for individual emissions units consistent with the reasonably achievable controls, and further recommends using historical achievable NO_X rates as the basis for establishing these limits. Furthermore, the commenter asserts that the averaging plan must show that the resulting NO_X emission limits from the averaging plans are more stringent than the presumptive limits that would be in effect otherwise.

Response 17: EPA disagrees with the commenter on each of its assertions. First, EPA disagrees that averaging must provide explicit emissions limitations for *individual* sources. In fact, under its longstanding RACT policy, EPA has allowed NO_X averaging, recognizing that it would allow states the flexibility of establishing RACT without requiring the imposition of source-specific controls or consequently source-specific emissions limits. EPA has allowed averaging for RACT purposes, as long as the state can achieve NO_X reductions less than or equal to those that would be achieved if individual RACT emission rates were required for each individual source. Limitations on individual sources would restrict flexibility for meeting RACT requirements.

EPA disagrees that averaging must result in more stringent NO_X limitations than the presumptive limits, as this is not required under the longstanding EPA provisions permitting averaging. *See South Coast Air Quality Mgmt. Dist. v. EPA*, 882F.3d 1138, 1154 (D.C. Cir. 2018) (addressing averaging within EPA's ozone implementation rule). EPA finds that section 129.98 requires that the overall level of NO_X emissions from units participating in an averaging plan should be less than or equal to the total NO_X emissions which would have been emitted if each source complied with its applicable presumptive RACT limit. *See* 25 Pa. Code 129.98(e).

Comment 18: The commenter urges EPA to deny the approval of any NO_X averaging plan as a revision to the SIP, if the plan does not provide sufficient justification for demonstrating that an emissions unit cannot meet the applicable presumptive RACT limit.

Response 18: EPA concurs with commenter that section 129.98(a) requires PADEP to determine that the facility is not able to comply with presumptive RACT in order to allow a source to comply with the provisions in 129.98. Pennsylvania has committed to submitting permits with the NO_X averaging plans to EPA for SIP approval and EPA will review whether sources demonstrated compliance with requirements in 129.98 when such plans are before EPA for SIP approval.

Comment 19: One commenter asserts that although NO_X averaging applies to NO_X emitting units that cannot comply with the presumptive limits, section 129.98 does not impose any detailed requirements for showing that an affected NO_X emissions unit cannot comply with the presumptive NO_X RACT limits. Commenter argues that this lack of specific requirements allows the owner or operator of the affected emissions units to make this determination without

providing any justification. Commenter further suggests such demonstration should be based on the evaluation of past performance for the non-complying unit.

Response 19: EPA agrees that section 129.98 does not specifically describe how a source must demonstrate that it is unable to meet the applicable presumptive limit, in order to qualify for averaging under section 129.98. However, the inability to meet the limit remains a requirement within 129.98 for Pennsylvania to evaluate before granting the alternative NO_X plan. In addition, based on Pennsylvania's September 2017 commitment to "submit the terms and conditions dealing with emissions averaging to EPA as facility specific SIP revisions," EPA will review the terms of each plan and whether the provisions in 129.98 were met. *See* Pennsylvania's September 26, 2017 submittal, p .2.

Comment 20: One commenter states that PADEP's averaging provisions allow unbounded discretion to the owner or operator in choosing which units may be able to participate in an averaging plan, which then allows inappropriate averaging. The commenter also contends that such discretion would allow, for example, that coal-fired boilers with existing controls, such as SCR or SNCR, avoid fully optimizing existing controls; or that averaging occurs across different fuel types.

Response 20: EPA agrees in part with the commenter's statement that section 129.98 grants the owner or operator the ability to determine which units should be averaged together; however, EPA disagrees with commenter's proposition that such discretion should cause EPA to disapprove this SIP revision. EPA believes that such discretion is consistent with EPA's RACT policy, which allows states to use averaging for RACT purposes as long as the level of NO_X reductions due to averaging is equivalent to, or greater than, the level of reductions otherwise

achieved by individual application of RACT. As noted in EPA's responses above, Section 129.98(a) requires that an owner or operator seeking to use NO_X averaging must first show that one (or more) units to be included in the averaging plan cannot comply with the presumptive RACT limits applicable to the unit before an averaging plan can be considered. In addition, system-wide averaging is only allowed among sources under common control of the same owner or operator and located within the same ozone nonattainment area. Further, section 129.98(c) requires that the other sources participating in a NO_X averaging plan are subject to a NO_X emissions limitation under section 129.97. Provided these conditions are met, the owner or operator of an affected source (i.e., the source with a non-compliant unit) may select which and how many other emissions units would be included in the averaging plan. PADEP has also stated as part of the SIP submittal that an owner or operator of an affected source complying with a NO_X averaging plan must demonstrate that the NO_X emissions for other units included in the averaging plan are below the applicable limits in section 129.97 in order to provide the cushion for averaging the excess emissions of the noncomplying source.[18] Thus, the discretion provided under section 129.98 to choose which units participate in a NO_X averaging plan is not unbounded and would not allow "inadequate averaging," as the commenter proposes.

EPA recognizes that PADEP's NO_X averaging may allow units to avoid the installation of additional controls or optimization of existing controls. However, nothing in the CAA, its regulations or EPA guidance requires installation of additional controls or optimization of existing controls to meet ozone RACT requirements. By allowing states to use NO_X averaging, EPA intended to provide additional flexibility in establishing RACT, as long as RACT level reductions are achieved for the nonattainment area. EPA does not believe that averaging across

[18] *See* PADEP's Responses to Comments Document, Comments #137, #138, #142, and #194.

combustion units firing different fuels is inappropriate, nor does the commenter provide any analysis supporting this statement.

Comment 21: One commenter asserts that the RACT II Rule, as written, limits system-wide averaging to areas designated nonattainment under CAA section 107, but that PADEP appears to be considering the rest of the Commonwealth as one giant nonattainment area. The commenter argues that because the RACT II Rule does not have its own definition of "nonattainment area," Pennsylvania's general definition in section 121.1 applies. Section 121.1 defines "nonattainment area" as those areas designated by EPA under CAA section 107.

Response 21: Pennsylvania's RACT II Rule allows emissions averaging to take place under two specific scenarios. In response to comments submitted by EPA during the state rulemaking process, PADEP clarified its interpretation of section 129.98 in the preamble to the final regulations. *See* 46 PaB 2036. First, for areas formally designated as nonattainment under CAA section 107, PADEP intended to limit emissions averaging to sources under common control or ownership *within that formally designated nonattainment area*, as this comports with established caselaw. *See Nat. Res. Def. Council v. EPA*, 571 F.3d 1245 (D.C. Cir. 2009) (holding that the NO_X SIP call trading plan cannot be used for RACT averaging because emission reductions needed for a nonattainment area must come from same nonattainment area). Second, EPA believes PADEP intended to allow emissions averaging among sources under common control/ownership that were outside of those areas "formally designated" nonattainment, but inside the state boundaries (i.e., within the OTR attainment areas and *treated as Moderate nonattainment* for SIP planning purposes in accordance with CAA section 184). That is, sources within an area formally designated as nonattainment under CAA section 107 could use emissions

averaging with another source in the same area, and sources outside those formally designated nonattainment areas could use emissions averaging with other sources that are in similar attainment areas (but within the OTR area), but no emissions averaging is allowed between sources in an area formally designated as nonattainment under section 107 and sources in areas designated unclassifiable or attainment within the Commonwealth, but within the OTR.

C. Compliance Demonstration Requirements

Comment 22: The commenter notes that the provisions in section 129.98(g)(3) and 129.98(j) refer to the compliance demonstration requirements in section 129.100; however, the commenter states section 129.100 has no specific requirements for sources in an averaging plan.

Response 22: As noted in the NPRM, EPA identified its concerns regarding the provisions establishing compliance demonstration requirements for sources seeking to comply with NO_X averaging in sections 129.98 and 129.100 of the RACT II Rule. For this reason, EPA is requiring PADEP as part of our conditional approval to submit for approval into the SIP any compliance demonstration requirements for sources subject to section 129.98. This will ensure that the alternative NO_X limits under section 129.98 are practically and Federally enforceable, pursuant to CAA section 110(a)(2)(A).

Comment 23: The commenter contends that section 129.99(d)(6) refers to the compliance demonstration requirements in section 129.100; however, no specific requirements are specified for these affected sources under section 129.100. The commenter also contends that without existing compliance demonstration requirements, it is unclear how PADEP will be able to approve enforceable alternative RACT proposal, and that consequently EPA should disapprove section 129.99 of the regulation.

Response 23: EPA notes that section 129.99(d)(6) requires a source seeking to comply with source-specific RACT to "[i]nclude in the RACT proposal methods for demonstrating compliance *and* (emphasis added) 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." Section 129.100(d) and (i) establish recordkeeping and reporting requirements for all sources subject to the RACT II Rule. In addition, section 129.99(d)(1) requires the written RACT proposal to follow the procedures in 129.92(a)(1) – (5) and (7) – (10). Section 129.92(a)(7) requires a RACT proposal to include the "testing, monitoring, recordkeeping and reporting procedures proposed to demonstrate compliance with RACT." *See* 129.92(a)(7). As Pennsylvania has committed to submitting all additional source-specific RACT SIP provisions containing source-specific RACT limits approved by PADEP under 129.99 to EPA for approval into the Pennsylvania SIP, EPA can further evaluate compliance demonstration when such alternatives are submitted for SIP approval.

Comment 24: One commenter contends that section 129.100 does not prescribe specific recordkeeping requirements to determine compliance with the applicable RACT requirements in sections 129.96 to 129.99; and for that reason, urges EPA to disapprove this section of the RACT II Rule. Commenter argues that PADEP should have identified specific requirements for determining compliance with presumptive RACT and NO_X averaging, such as fuel monitoring and hours of operation, while for alternative source-specific limits, it should have specified that compliance methods would be determined on a case-by-case basis.

Response 24: Neither EPA's implementation rule for the 1997 ozone standard nor the implementation rule for the 2008 ozone standard specifically identify those parameters, measures, or data which a source must record in order to demonstrate compliance with RACT limits developed by the states. *See* 40 CFR part 51, subparts X and AA. EPA has issued general statements in preambles for rulemakings other than the ozone implementation rules mentioned above discussing the monitoring and recordkeeping requirements generally necessary for any SIP and for NO_X RACT SIPs, but these do not identify specific parameters that must be monitored/recorded for various types of sources in order to prove compliance, and instead directs the state to identify those parameters. *See* 57 FR 13498, 13502 (April 16, 1992) (General Preamble for the Implementation of Title I of the [CAA] Amendments of 1990); 57 FR 55620, 55624 - 55625 (Nov. 25, 1992) (Nitrogen Oxides Supplement to the General Preamble for the 1990 Amendments). The commenter cites two such parameters – fuel usage and/or hours of operation – which could have been specified in Pennsylvania's RACT regulations for NO_X averaging and presumptive RACT. While EPA agrees that for many sources these two parameters are useful to determine compliance, EPA does not expect that a state's RACT SIP regulation identify, for each type of source, each parameter which must or might be monitored by that source in order to show compliance with the RACT limit. EPA believes that the operating permits issued by the Commonwealth will specify the parameters that need to be monitored to show RACT compliance. The Pennsylvania SIP also has other recordkeeping requirements besides the RACT II Rule (25 Pa. Code sections 129.96 – 129.100) which require recordkeeping useful for determining compliance with the RACT limits. For example, Pennsylvania has emission reporting requirements, found at 25 Pa. Code 135.1 – 135.5, which require almost every stationary source of any size to maintain and make available records which

"…may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept, to provide the needed information by indirect means." 25 Pa. Code 135.5. In addition, Pennsylvania has special monitoring provisions for sources that have or are likely to have "substantial impacts" on the maintenance of ambient air quality standards. 25 Pa. Code 139.51 – 139.53. These requirements include regular testing for emissions or the installation of continuous emission monitoring systems (25 Pa. Code 139.52) and reporting of such testing to PADEP, including "…information regarding test methods, test conditions, operating conditions of the source or other information which may be necessary to properly evaluate the results of emissions monitoring performed at a source." 25 Pa. Code 139.53(b).

Pennsylvania's SIP also has permitting requirements (called Plan Applications and Plan Approvals) which require any "air contamination source" to obtain a plan approval from PADEP prior to constructing, modifying, reactivating, or installing an air pollution control device on such source. 25 Pa. Code 127.11. A plan application must, inter alia, "(3) Show that the source will be equipped with reasonable and adequate facilities to monitor and record the emissions of air contaminants and operating conditions which may affect the emissions of air contaminants and that the records are being and will continue to be maintained…" 25 Pa. Code 127.12(a)(3). The permit (plan approval) must contain the monitoring, recordkeeping and reporting requirements in 25 Pa. Code 139, any such requirements in Article III (Pennsylvania's Air regulations), and any other CAA monitoring, recordkeeping and reporting requirements required. 25 Pa. Code 127.12b(c). Finally, the operating permit requirements for major sources in 25 Pa. Code 127.401

– 127.406 also contain similar monitoring, recordkeeping, and reporting requirements. *See* 25 Pa. Code 127.411(a)(4), 127.441(c), and 127.442.

EPA believes that given the lack of specific requirements in EPA's RACT regulations for the 1997 or 2008 ozone NAAQS, the recordkeeping and reporting requirements of Pennsylvania's RACT II Rule in 25 Pa. Code 129.100 are sufficient for approval of the RACT SIP. Also, Pennsylvania has many other monitoring and recordkeeping requirements potentially applicable to RACT sources that provide ample authority to Pennsylvania, through various mechanisms, to obtain any information necessary to show compliance with the RACT limits. Thus, EPA does not believe Pennsylvania's RACT regulations must be disapproved, in whole or in part, for lack of specificity concerning monitoring and recordkeeping to show RACT compliance.

D. Averaging Time for Compliance Demonstration

Comment 25: Commenters allege that EPA failed to consider the averaging times of Pennsylvania's NO_X presumptive emission limits. Commenters contend that a 30-day averaging period is too lenient and inconsistent with RACT in other OTR states, which use averaging periods as short as 1-hour or 24-hours averages. Commenters also allege that 30-day NO_X averaging may allow sources to emit more NO_X on days when conditions are conducive to ozone formation that might lead to an exceedance of the NAAQS.

Response 25: EPA disagrees with the commenters. During EPA's review of Pennsylvania's RACT II Rule, EPA compared Pennsylvania's presumptive limits with those of other OTR states. In Appendix B of EPA's TSD, EPA provided the emission limits for other OTR states while noting the difference between those states' rules and Pennsylvania's rule below each table in the TSD.

PADEP determined that a 30-day rolling average limit addresses problems faced by certain owners and operators, including variability in fuel source, emission spikes during start-ups, shutdowns, and malfunctions, and other unavoidable circumstances. PADEP determined that these situations are not indicative of normal operations and so it would not be appropriate to require facilities to show compliance with the presumptive NO_X RACT emission limit over a 1-hour or 8-hour averaging period as such variability would affect technical and economic feasibility of sources to meet the presumptive limits making compliance either technically infeasible or cost ineffective. PADEP selected the 30-day rolling average to ensure technical and economic feasibility for Pennsylvania sources to meet RACT. PADEP reasons that to maintain compliance with a 30-day rolling average, sources will have to operate below the allowable standard on some days in order to account for potential days of higher emissions. PADEP also notes that EPA has approved 30-day rolling averages as "short-term" RACT limitations in SIP revisions submitted by New York and Wisconsin. *See* 75 FR 64155 (October 19, 2010) for Wisconsin and 78 FR 41846 (July 12, 2013) for New York.

E. Cost Effectiveness

Comment 26: One commenter contends that PADEP did not perform any cost effectiveness evaluation while setting the presumptive limits and argues that EPA cannot supplement a state's faulty or deficient SIP. The commenter alleges that EPA's performance of a cost-effective analysis in the second TSD shows both the necessity for such an analysis and that PADEP did not perform a cost-effectiveness analysis and therefore Pennsylvania's SIP revisions lacked an adequate RACT evaluation.

Response 26: EPA disagrees that PADEP did not perform any cost-effectiveness evaluation

when establishing presumptive limits under the RACT II Rule. PADEP relied on a cost-effectiveness of $2,800 per ton of NO_X controlled and $5,500 per ton of VOC controlled for the presumptive limits in the RACT II Rule.[19] As mentioned in PADEP's final rulemaking, Pennsylvania's Environmental Quality Board (EQB) stated that the Regulatory Analysis Form (RAF) was "replete with substantive information regarding emissions data, cost-effectiveness numbers, public health information, statutory requirements, small business information and other types of analyses to demonstrate that the regulations are legally required, in the public interest, economically and technologically feasible, and will reduce emissions." The EQB also stated "[t]he presumptive RACT emission limitations were established based on cost-effectiveness of available control technology…." Thus, EPA believes that PADEP did in fact perform a cost-effectiveness evaluation in order to determine what emission limitations and control technologies were technologically and economically feasible.

Also, EPA disagrees that it "supplemented" the state's SIP submission by performing and referring to its own analysis of cost for very large coal-fired boilers with SCR and SNCR in the second TSD. EPA performed this analysis in support of our evaluation of the reasonableness of PADEP's cost-effectiveness threshold of $2,800 per ton of NOx controlled and the resulting emission limits derived for coal-fired boilers in the RACT II Rule. EPA focused its evaluation on this source category because it is the largest NO_X emitting sector in Pennsylvania. EPA's evaluation in the TSD supported our conclusion that Pennsylvania's RACT was reasonable and does not indicate that Pennsylvania's SIP was therefore inadequate or lacking information.

Comment 27: Two commenters claimed that Pennsylvania's cost effectiveness thresholds for

[19] *See* PADEP's Responses to Comments Document, Docket item #0004 Comments #13 and #111.

NO_X and/or VOC were too low compared to adjoining states (New York, New Jersey, and Delaware) in the OTR and states sharing nonattainment areas with Pennsylvania. One commenter referred to New York's threshold of $5,000 to $5,500 per ton of NO_X for coal-fired units and pointed to New Jersey's and Delaware's consideration of best available control technology (BACT) as cost effective controls to meet RACT, even when not using specific cost-effectiveness benchmarks.

Response 27: EPA is aware that Pennsylvania considered cost-effectiveness levels that are lower than other states in the OTR when developing the RACT II Rule; however, states have the discretion to determine what costs are considered reasonable when establishing RACT for its sources. For these reasons, EPA has not set a single cost, emission reduction, or cost-effectiveness figure to fully define cost-effectiveness in meeting the NO_X RACT requirement. Therefore, each state must make and defend its own determination on how to weigh these values in establishing RACT.

PADEP relied on a cost-effectiveness of $2,800 per ton of NO_X controlled and $5,500 per ton of VOC controlled for the presumptive limits in the RACT II Rule.[20] In considering similar comments received during its proposal of the rule concerning cost-effectiveness, PADEP determined that "[e]ven with an additional 25% margin, the upper bound cost-effectiveness threshold would not be any greater than $3,500 per ton NO_X controlled" and "$7,000 per ton VOC controlled," and that "[a]pplying these new thresholds does not have an effect on the add-on control technology decisions for the presumptive RACT requirements established in the final rulemaking." PADEP concluded that the RACT presumptive limits included in final form of the

[20] *See* PADEP's Responses to Comments Document, Docket item #0004, Comments # 13 and #111.

RACT II Rule "are comparable to emission limits included in other states' RACT regulations as well."[21]

Further, while cost effectiveness is an important consideration, it must be noted that other factors should be integrated into a RACT analysis, such as emission reductions and environmental impact. As stated above, Pennsylvania determined higher cost thresholds did not impact feasible add on control technology. And, as discussed earlier, EPA believes that PADEP's presumptive limits are reasonable as they reflect control levels achieved by the application and consideration of available control technologies, after considering both the economic and technological circumstances of Pennsylvania's own sources. EPA also finds that Pennsylvania's presumptive limits are comparable to those adopted in other states for similar sources.[22]

F. Alternative Compliance Schedules

Comment 28: One commenter argues that sources petitioning for alternative compliance schedules, as allowed under section 129.97 and 129.99, should be required to submit the alternative compliance dates and interim emissions limits to EPA for inclusion in the SIP. Commenter further argues that without incorporating these into the SIP, facilities would be liable for violating the SIP-approved compliance deadline of Jan 1, 2017 and the applicable presumptive limits.

Response 28: Regarding section 129.99, section 129.99(h) explicitly states that alternative RACT requirements or emission limitations requested under subparts 129.99(a), (b) and (c) and approved under 129.99(f) will be submitted to EPA for approval into the SIP. Pennsylvania has

[21] *See* PADEP's Responses to Comments Document, Docket item #0004, Comment # 13
[22] *See* EPA's TSD, section IV.C.

also committed to submitting to EPA all source-specific RACT determinations under section 129.99 for approval as a SIP revision within 12 months of EPA's final rulemaking. Therefore, the commenter's concern that alternative compliance schedules issued under section 129.99 should be submitted to EPA for approval as part of the SIP is already being addressed by the language of section 129.99(h) and Pennsylvania's September 26, 2017 committal to submit permits with schedules under 129.99 to EPA for inclusion in the SIP; PADEP will be submitting any section 129.99 alternative compliance schedule and the emission limits to EPA as a formal SIP revision. EPA will evaluate and act accordingly on any SIP revision submitted with alternative compliance schedules in a future rulemaking action.

For alternative compliance schedules in section 129.97(k), EPA believes that PADEP intends to submit all such alternative compliance schedules to EPA for approval into the SIP. EPA finds the schedules discussed in section 129.97(k) are also included within the scope of section 129.99 (and thus within Pennsylvania's September 26, 2017 commitment) because section 129.99(i) addresses how sources can get an alternative RACT requirement or alternative RACT emission limit when installing an air cleaning device and section 129.99(i) provides the process and details needed for sources to petition PADEP for an alternative. Section 129.97(k) provides one such alternative RACT requirement within the meaning of section 129.99(i) as it provides that sources which cannot meet presumptive limits without installing an air cleaning device may petition PADEP for additional time to comply. Thus, any source seeking an alternative under section 129.97(k) (because it needs to install an air cleaning device) is also subject to section 129.99 (via 129.99(i) as a source seeking an alternative RACT requirement due to installation of an air cleaning device), and PADEP has committed in its September 26, 2017 letter to sending all such alternative RACT proposals to EPA for SIP approval.

Sources that did not need to install equipment and/or modify permits to meet the presumptive RACT requirements in 25 Pa. Code 129.96 were required to comply with presumptive RACT by the January 1, 2017 deadline. Existing sources that could not meet presumptive RACT without installation of an air cleaning device were required to petition PADEP to request an alternative compliance schedule by October 24, 2016 and include a compliance schedule no longer than three years from the date of PADEP's approval of the petition, with interim emission limits and compliance dates. 25 Pa. Code 129.97(k). PADEP provided a list to EPA on March 22, 2019 of sources receiving alternative compliance schedules under 25 Pa. Code 127.97(k) or 127.99(i) showing that eight of the nine sources are presently complying with presumptive RACT requirements or more stringent emission limits known as "best available technology" limits to which new sources in Pennsylvania are subject. The ninth source will achieve full compliance with presumptive RACT by Fall of 2019. EPA has included the list from Pennsylvania in the docket for this rulemaking action available online at www.regulations.gov.

Given the relatively small number of sources seeking alternative compliance schedules under 25 Pa. Code 129.97(k), the majority of sources currently in compliance with presumptive RACT and the remaining source complying with presumptive RACT imminently, and given PADEP's commitment to have permits issued under 25 Pa. Code 127.99 (inclusive of 127.97(k)) included in the SIP, the extensions of time granted by PADEP's regulations after the January 1, 2017 RACT compliance deadline are not unreasonable as RACT is being implemented within the Commonwealth. Moreover, there is no ability for EPA to "turn back the clock" and have these sources comply by 2017 at this date. For these reasons, EPA believes that the provisions in 127.97 and 129.99 regarding compliance dates are reasonable and approvable (with the caveat

that 127.99 is subject to conditional approval for submission of permits for SIP approval) for RACT as compliance is complete or nearly complete. EPA will evaluate and act accordingly on any permits submitted to EPA for SIP-approval at a future time through a future rulemaking action.

Comment 29: Commenter argues that for sources receiving alternative compliance schedules under sections 129.97 or 129.99 extending beyond January 1, 2017, PADEP should be required to submit the alternative compliance dates and interim emissions limits to EPA for possible approval into the SIP. Commenter urges EPA to confirm that alternative compliance schedules or limits are not Federally enforceable, unless PADEP submits them to EPA and EPA approves them into the SIP.

Response 29: In 25 Pa. Code section 129.99(h), PADEP explicitly states that PADEP will submit the alternative RACT requirement or RACT emission limitation requested to EPA for approval into the SIP. In addition, PADEP has committed to submitting to EPA any alternative RACT schedules and proposals received under section 129.99, which includes those submitted under 25 Pa. Code 127.97(k) as discussed in response to prior comments. EPA will evaluate and act accordingly on any alternative compliance schedule or alternative RACT emission limit submitted for SIP-approval at a future time through a future rulemaking action. EPA will evaluate the reasonableness of any extension of time for RACT compliance beyond Pennsylvania's January 1, 2017 deadline when the SIP is submitted to EPA. In response to Comment #28, EPA addressed the timing of sources complying with alternative RACT. Regarding Federal enforceability, EPA agrees that any alternative RACT emission limits and/or alternative compliance schedules approved by PADEP which are not submitted to EPA for

approval into the SIP would not be Federally-enforceable under the SIP; however, these limits may be included in some other type of Federally-enforceable permit.

Comment 30: One commenter argues that EPA cannot approve section 129.99(i)(2)(v) for sources petitioning alternative compliance schedules, because it allows a compliance date later than January 1, 2017, as required by EPA's ozone implementation regulation in 40 CFR 51.1112(a)(3). Commenter states that EPA must disapprove this provision of the regulation, as it is in violation of EPA's own regulations.

Response 30: EPA issued the 2008 ozone attainment designations for numerous areas of the country, including designating five areas in Pennsylvania as Marginal nonattainment areas, on May 21, 2012. *See* 77 FR 30088 and 40 CFR 81.339. On March 6, 2015, EPA issued its final rule for implementation of the 2008 ozone NAAQS (the "2008 Ozone SIP Requirements Rule"). *See* 80 FR 12264 and 40 CFR 51.1100 – 51.1103. The 2008 Ozone SIP Requirements Rule set a deadline for submission of RACT SIP revisions for VOC and NO_X of two years after the designations effective date of July 20, 2012 or July 20, 2014 and a deadline for implementation of RACT of January 1, 2017. *See* 77 FR 30088 and 40 CFR 51.1112(a)(2). After EPA issued the 2008 Ozone SIP Requirements Rule, PADEP submitted its SIP revision on May 16, 2016 to implement the RACT requirements for the 1997 and 2008 ozone NAAQS. These regulations became final at the state level on April 23, 2016.

Sources in Pennsylvania subject to RACT for the 1997 and 2008 ozone NAAQS generally had slightly more than seven months from the state effective date of Pennsylvania's RACT regulations to meet the January 1, 2017 deadline. Advance planning by RACT sources in reliance upon Pennsylvania's proposed RACT limits before they became final at the state level

on April 23, 2016 would have been imprudent because Pennsylvania both lowered and raised the presumptive RACT limits for multiple types of sources following the public comment period, which illustrates the uncertainty sources faced while trying to plan for implementation of RACT standards. For a list of changes to the presumptive limits following Pennsylvania's proposal, see Table 1.

Table 1. Changes in Presumptive Limits from Proposal to Final

Presumptive Citation (129.97…)	Proposed limit	Final Limit
(g)(1)(i) – Natural gas unit, heat input ≥50 MMBTU/hr	0.08 lbs/MMBTU	0.10 lbs/MMBTU
(g)(1)(vi)(A) – coal fired CFB unit ≥250 MMBTU/hr	0.20 lbs/MMBTU	0.16 lbs/MMBTU
(g)(2)(i)(B) – combined cycle turbine ≥1,000 bhp, <180 MW; fuel oil	75 ppm_{vd} NO_x	96 ppm_{vd} NO_x
(g)(2)(i)(C) – combined cycle turbine ≥1,000 bhp, <180 MW; natural gas	2 ppm_{vd} VOC	5 ppm_{vd} VOC
(g)(2)(i)(D) – combined cycle turbine ≥1,000 bhp, <180 MW; fuel oil	2 ppm_{vd} VOC	9 ppm_{vd} VOC
(g)(2)(iv)(B) – simple cycle turbine ≥6,000 bhp; fuel oil	75 ppm_{vd} NO_x	96 ppm_{vd} NO_x
(g)(3)(i)(B) – lean burn stationary internal combustion engine, ≥500 bhp; Natural gas or noncommercial gaseous fuel	0.4 grams VOC/bhp-hr	1.0 grams VOC/bhp-hr
(g)(1)(vii) – new limit for solid fuel fired combustion units ≥50 MMBTU/hr	N/A	0.25 lbs/MMBTU
(g)(1)(viii) – new limit for coal fired units with SCR; when ≥ 600°F	N/A	0.12 lbs/MMBTU
(g)(1)(ix) – new work practice standard for coal fired units with SNCR	N/A	Inject ammonia
(g)(2)(iii)(A), (B), (C), and (D) – simple cycle turbine ≥1,000 bhp, <6,000 bhp; firing natural gas or fuel oil	N/A	150 ppm_{vd} NO_x 9 ppm_{vd} VOC

Pennsylvania sources relying on the presumptive limits in Pennsylvania's proposed RACT II Rule could find themselves ordering equipment to meet RACT limits that they didn't need because they could meet the increased limit in the final rule without additional equipment or

could find themselves ordering inadequate equipment to meet a NO_X limit that was lowered by the final rule.

On April 6, 2017, EPA proposed approval of revisions to Connecticut's RACT regulations for the 2008 ozone NAAQS. *See* 83 FR 16772. These revisions included new NO_X limits for MWCs with a compliance date of August 2, 2017, and new NO_X limits for boilers, turbines, and reciprocating internal combustion engines (RICE) with a compliance date of June 1, 2018. *See* 83 FR 16772, 16773 (April 6, 2017). Among other reasons, EPA justified these compliance deadlines beyond the January 1, 2017 Federal regulatory deadline because the sources subject to the new RACT limits were a small subset of all the facilities subject to RACT and were already subject to RACT controls in the SIP that would be further tightened by the new revisions. *See* 83 FR 16772, 16776. EPA also justified the post-January 2017 dates based on the fact that it was impossible for sources to retroactively meet the January 1, 2017 deadline, and agreed with Connecticut's determination that given the August 2, 2016 and December 22, 2016 state effective dates for the new MWC limits and combustor limits, respectively, it would not be reasonable to require immediate compliance. Likewise, for Pennsylvania, EPA finds it would be impossible for sources today to retroactively meet the January 1, 2017 deadline for implementation of RACT. Like Connecticut, Pennsylvania had also implemented in its SIP RACT requirements on all major sources of NOx and VOCs for the prior 1-hour ozone NAAQS. *See* 40 CFR 52.2020(d). In addition, for sources needing installation of controls to meet requirements of the RACT II Rule after the Rule became state effective in 2016, such sources needed time to select controls, apply for permits and implement, install and begin operating such controls to meet RACT II Rule limits.

For the above reasons, EPA finds the provisions in Pennsylvania's rules providing for additional time to comply in 25 Pa. Code section 127.97 and 127.99 allowed sources installing new emission controls to meet RACT a reasonable time to comply. Thus, EPA is approving the provisions in 129.97 and conditionally approving the provisions of 129.99.

G. Other Comments

Comment 31: The commenter asks whether section 129.96(d), which states that the requirements of sections 129.96-129.100 do not apply to the owner and operator of a facility which is not a major NO_X or major VOC emitting facility on or before January 1, 2017, would allow an otherwise major NO_X or VOC source to obtain a synthetic minor permit before 1/1/17 to avoid 2008 RACT, then "shed" its minor status after 1/1/17 and remain not subject to 2008 RACT. The commenter argues that facilities that become synthetic minor NO_X or VOC sources before January 1, 2017 to avoid RACT should take enforceable permit limits and that such limits should be submitted to EPA for approval into the SIP.

Response 31: EPA acknowledges that, generally, major sources may take enforceable restrictions to reduce their facility-wide potential emissions to avoid the definition of a major NO_X or VOC source. However, EPA interprets that because the RACT II Rule is only applicable to sources that met the "major NO_X/VOC source definition" by January 1, 2017, any major sources without Federally-enforceable restrictions by such date must be required to comply with the RACT II Rule.

Furthermore, if any facility which takes such restrictions seeks to later "shed" its minor source status after January 1, 2017, the facility would then become a major source through its "modification" and would then be subject to the RACT II Rule via 25 Pa Code 129.96(b). This

subsection requires facilities that become a major source to be subject to the RACT II Rule which has ongoing applicability. Thus, EPA believes it is unnecessary to require enforceable restrictions to be submitted to EPA for SIP approval as the facility would be subject to the RACT II Rule if it shed its minor limits and became a major source of NO_X or VOC.

Comment 32: The commenter argues that EPA's approval of section 129.97(b)(1)(i)-(iii), requiring biennial tune-up for units between 20 to 50 MMBTU/hr, would be backsliding as there are similar RACT provisions previously approved in the Pennsylvania SIP, in 25 Pa. Code sections 129.91-95, that are more stringent because they require annual tune-ups.

Response 32: EPA disagrees with the commenter's assertion that EPA is allowing "backsliding" by approving the provisions in section 129.97(b)(1). Commenter seems to be referring to the provisions in 129.92(b)(2)(i)-(iii), which also require tune-up for units between 20 to 50 MMBTU/hr, but on an annual basis. EPA acknowledges that the requirements in section 129.92(b)(2)(i)-(iii) require an annual tune-up, while section 129.97(b)(1)(i)-(iii) only requires a tune-up once every two years. However, EPA does not believe that relaxation of the SIP is occurring because section 129.97(i) requires sources to comply with section 129.97 unless a RACT permit issued prior to April 23, 2016 under 129.91-95 has more stringent requirements or limits. Based on the requirement in section 129.97(i), individual sources in Pennsylvania with RACT permits issued prior to April 23, 2016 would not be backsliding because they would remain subject to the more stringent annual tune-up requirements of 129.92(b)(2)(i)-(iii). Only relatively newer sources (not subject to the prior RACT requirement for annual tune up) would be subject to the biennial tune-up requirements of section 129.97(b)(1)(i)-(iii). Thus, EPA believes any relaxation concerns with respect to tune-up requirements for units between 20 to 50

MMBTU/hr are fully addressed by the provisions of section 129.97(i).

Comment 33: Commenter requests EPA to justify how the provisions in section 129.97(c) and (d), requiring owners or operators to install, maintain, and operate the source in accordance with the manufacturer's specifications and with good operating practices, are enforceable as a practical matter.

Response 33: The requirement to "install, maintain and operate the source in accordance with the manufacturer's specifications" is a practically enforceable requirement as the manufacturer specifications for control equipment at any particular source are usually available and defined. A requirement to operate in line with "good operating practices" is practically enforceable because good operating practices can be defined within a source or industry. This is consistent with EPA's prior approval of similar RACT provisions for the Commonwealth.

Comment 34: One commenter alleges that EPA cannot rely on the document titled "PADEP's RACT II Supplemental Submittal" for its rulemaking action, as this document did not undergo adequate public participation as a SIP revision, as required in 40 CFR 51.102, 51.103, 51.104 and Appendix V.

Response 34: EPA is relying only on that portion of PADEP's September 26, 2017 submittal (titled "PADEP's RACT II Supplemental Submittal") that contains PADEP's commitments to further supplement the SIP within one year of EPA's final conditional approval. Information in PADEP's supplemental submittal that is not relevant to PADEP's commitment to address EPA's conditions is not needed nor relied upon in EPA's rulemaking herein. The nature of a conditional approval under CAA section 110(k)(4) is such that when EPA's review of a formal

SIP submission identifies a deficiency in the SIP that could be remedied by state action within one year of the final conditional approval, the NPRM sets forth the conditions the state must satisfy within one year to correct the deficiencies. The state must provide a committal letter to EPA stating that it will fulfill EPA's requirements for the commitment. The opportunity for public comment upon the adequacy of EPA's conditions and the ability of the state to meet those conditions occurs during the public comment period announced by the NPRM. EPA does not consider a state's conditional approval committal letter to be a SIP revision under 40 CFR 51.102(a), 51.103, 51.104, or the completeness criteria in Appendix V to Part 51. The provisions in Appendix V related to requirements for states to conduct public hearing and follow state administrative procedural requirements relate to the plan submitted by the state. Pennsylvania complied with requirements in 40 CFR part 51 and Appendix V relating to submission of its "plan" or SIP submittal (i.e., the May 16, 2016 SIP submittal which includes provisions in 25 Pa. Code 121.1, 129.96, 129.97, 129.98, 129.99 and 129.100). Pennsylvania's supplemental material from September 2017 was additional supportive information Pennsylvania had regarding its RACT provisions and was about Pennsylvania's commitment to submit alternative RACT requirements and emission limitations to EPA for SIP approval. Thus, EPA disagrees with the commenter that Pennsylvania's September 26, 2017 provision to EPA needed to undergo additional "public participation as a SIP revision."

Comment 35: The commenter claims EPA should better define the conditional nature of EPA's approval and EPA should fully develop methods and conditions which Pennsylvania would need to address for full approval.

Response 35: EPA disagrees with the commenter. EPA's NPRM clearly specified what PADEP

needed to do to correct the deficiencies identified in the NPRM relating to section 129.98 NO_X averaging provision and section 129.99 for alternative RACT requirements or emission limitations. *See* 83 FR 11155, 11160 – 62. EPA has also restated the conditions and deficiencies in this rulemaking. *See* Section II of this rulemaking action.

Comment 36: The commenter claims that section 129.98 and 129.99 do not conform with CAA section 110(a)(2)(A), as they are not practically and Federally enforceable, and recommends EPA to disapprove these provisions until Pennsylvania adopts specific enforceable measures.

Response 36: The commenter has not provided adequate argument, analysis, or specific information for EPA to account for this comment. Thus, no further response is needed. However, EPA will note that we are conditionally approving section 129.98 and 129.99 based on the deficiencies we identified in the NPRM and based on Pennsylvania's commitment to submit permits and plans to EPA for SIP approval. With respect to the issue of practical enforceability as it pertains to section 110(a)(2)(A), EPA finds that section 129.99 is practically enforceable, as the regulation lays out the process for sources to obtain source-specific RACT requirements for affected sources. PADEP would then subsequently submit to EPA such permits for approval into the SIP. EPA proposed conditional approval of section 129.99 because it lacked a date certain by which PADEP would submit the relevant source-specific RACT SIP revisions to EPA.

As discussed in detail in the NPRM and in this action, EPA did have concerns with enforceability of 129.98 and thus we are conditionally approving 129.98. EPA's conditional approval of these provisions will ensure that practical, enforceable RACT emissions limits are established under 25 Pa. Code sections 129.98 and 129.99, consistent with CAA section 110(a)(2)(A).

Comment 37: Commenter believes that the required elements of section 110(a)(2) of CAA have been fully addressed by PADEP's SIP submittal for the RACT II Rule, particularly referring to section 110(a)(2)(A), (C), and (F). The commenter asserts that a specific method of compliance is not required under section 110(a)(2), if the applicable emission limits and related requirements are already part of the rule.

Response 37: EPA identified deficiencies in 25 Pa. Code section 129.98 pertaining to the requirement in CAA section 110(a)(2)(A) for enforceable limits because 129.98 did not adequately establish how to compute an alternative NO_X emissions limitation and/or adequately specify the methods for demonstrating compliance and recordkeeping and reporting requirements for emissions averaging. EPA's conditional approval of 25 Pa. Code section 129.98 will ensure that practical enforceable emissions limits for CAA 110(a)(2) are established as RACT through SIP approval of each averaging plan.

IV. Terms of the Conditional Approval

On September 26, 2017, PADEP submitted a letter detailing its commitments to provide additional SIP revisions to correct various deficiencies identified by EPA as present in the May 16, 2016 SIP submittal. In that letter, PADEP committed to submitting to EPA, for approval into the SIP, any facility-wide or system-wide averaging plan approved under 25 Pa. Code section 129.98 and any source-specific RACT determinations under 25 Pa. Code section 129.99. PADEP committed to submitting these additional SIP revisions within 12 months of EPA's final conditional approval.

Therefore, as authorized in CAA section 110(k)(3) and (k)(4), Pennsylvania shall submit the

following as source-specific SIP revisions for EPA's approval as a condition of approval of 25 Pa. Code 128 and 129 in the May 16, 2016 SIP revision: (1) All facility-wide or system-wide averaging plans approved by PADEP under 25 Pa. Code section 129.98 including, but not limited to, any terms and conditions that ensure the enforceability of the averaging plan as a practical matter (e.g., any monitoring, reporting, recordkeeping, or testing requirements); and (2) all source-specific RACT determinations approved by PADEP under 25 Pa. Code section 129.99, including any alternative compliance schedules approved under section 129.97(k) and 129.99(i); the source-specific RACT determinations submitted to EPA for approval into the SIP should include any terms and conditions that ensure the enforceability of the source-specific RACT emission limitation as a practical matter (e.g., any monitoring, reporting, recordkeeping, or testing requirements).

V. Final Action

EPA is fully approving 25 Pa. Code sections 121.1, 129.96, 129.97, and 129.100 as meeting certain aspects of major stationary source RACT in CAA section 172, 182, and 184 for the 1997 and 2008 ozone NAAQS submitted May 16, 2016. EPA is also conditionally approving 25 Pa. Code sections 129.98 and 129.99 based on the commitment provided by Pennsylvania to submit additional SIP revisions to address the deficiencies identified by EPA in the May 16, 2016 SIP revision. Upon submission of all elements intended to meet the conditions identified in Section IV of this rulemaking action, Pennsylvania must submit a SIP revision certifying that it has met all conditions. Once EPA has determined that Pennsylvania has satisfied these conditions, EPA shall remove the conditional nature of this approval and Pennsylvania's 1997 and 2008 8-hour ozone RACT SIP revision will, at that time, receive a full approval status. Should Pennsylvania fail to meet the conditions specified in Section IV, the final conditional approval of 25 Pa. Code

sections 129.98 and 129.99 shall automatically convert to a disapproval and EPA will issue a finding of disapproval. A finding of disapproval would start an 18-month clock to apply sanctions under CAA section 179(b) and a two-year clock for a Federal implementation plan under CAA section 110(c)(1).

VI. Incorporation by Reference

In this document, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of the following sections of 25 Pa. Code with a state effective date of April 23, 2016: 25 Pa. Code section 121.1, 129.96, 129.97, 129.98, 129.99 and 129.100; the list of definitions contained in 121.1 and the changes being made can be found in the TSD for this rulemaking action. EPA has made, and will continue to make, these materials generally available through www.regulations.gov and at the EPA Region III Office (please contact the person identified in the "For Further Information Contact" section of this preamble for more information). Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated by reference by EPA into that plan, are fully Federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA's approval, and will be incorporated by reference in the next update to the SIP compilation.[23]

VII. Statutory and Executive Order Reviews

A. General Requirements

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR

[23] 62 FR 27968 (May 22, 1997).

52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866.
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

B. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

C. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in

the United States Court of Appeals for the appropriate circuit by **[Insert date 60 days after date of publication in the Federal Register]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed and shall not postpone the effectiveness of such rule or action. This action, on Pennsylvania's RACT II Rule, may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: April 25, 2019.

Cosmo Servidio,
Regional Administrator,
Region III.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq*.

Subpart NN—Pennsylvania

2. In § 52.2020, the table in paragraph (c)(1) is amended by adding:

a. Under "Chapter 121—General Provisions," an entry for "Section 121.1" after an existing entry for "Section 121.1"; and

b. Under "Chapter 129—Standards for Sources," after the entry for "129.95", a subheading entitled "Additional RACT Requirements for Major Sources of NO_x and VOCs" and the entries "Section 129.96" through "Section 129.100" in numerical order.

The additions read as follows:

§52.2020 Identification of plan.

* * * * *

(c) ***

(1) ***

State citation	**Title/subject**	**State effective date**	**EPA approval date**	**Additional explanation/ § 52.2063 citation**
Title 25—Environmental Protection Article III—Air Resources				
Chapter 121—General Provisions				
* * * * * * *				
Section 121.1	Definitions	4/23/16	**[insert date of publication in the Federal**	Revises the following definitions: "CEMS – Continuous

State citation	Title/subject	State effective date	EPA approval date	Additional explanation/ § 52.2063 citation
			Register], [insert Federal Register citation]	emission monitoring system," "Major NO_x emitting facility," "Major VOC emitting facility," and "Stationary internal combustion engine *or* stationary reciprocating internal combustion engine." Adds new definitions for the following terms: "Process heater," "Refinery gas," "Regenerative cycle combustion turbine," "Simple cycle combustion turbine," and "Stationary combustion turbine."
* * * * * * *				
Chapter 129—Standards for Sources				
* * * * * * *				
Additional RACT Requirements for Major Sources of NO_x and VOCs				
Section 129.96	Applicability	4/23/16	**[insert date of publication in the Federal Register], [insert**	New section

State citation	Title/subject	State effective date	EPA approval date	Additional explanation/ § 52.2063 citation
			Federal Register citation]	
Section 129.97	Presumptive RACT requirements, RACT emission limitations, and petition for alternative compliance schedule	4/23/16	**[insert date of publication in the Federal Register], [insert Federal Register citation]**	New section.
Section 129.98	Facility-wide or system-wide NO_X emissions averaging plan general requirements	4/23/16	**[insert date of publication in the Federal Register], [insert Federal Register citation]**	Conditionally approved. See 40 CFR 52.2023(m).
Section 129.99	Alternative RACT proposal and petition for alternative compliance schedule	4/23/16	**[insert date of publication in the Federal Register], [insert Federal Register citation]**	Conditionally approved. See 40 CFR 52.2023(m).
Section 129.100	Compliance demonstration and recordkeeping requirements	4/23/16	**[insert date of publication in the Federal Register], [insert**	New section

State citation	Title/subject	State effective date	EPA approval date	Additional explanation/ § 52.2063 citation
			Federal Register citation]	
* * * * * * *				

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3. Section 52.2023 is amended by adding reserved paragraph (l) and adding paragraph (m) to read as follows:

§ 52.2023 Approval status.

* * * * *

(m) EPA conditionally approves Pennsylvania's 25 Pa Code sections 129.98 and 129.99 submitted on May 16, 2016 to address the reasonably available control technology (RACT) requirements under CAA sections 182(b)(2)(C), 182(f), and 184 under the 1997 and 2008 8-hour ozone NAAQS. Pursuant to CAA section 110(k)(4), this conditional approval is based upon a September 26, 2017 letter from Pennsylvania to submit to EPA, no later than 12 months from EPA's final conditional approval, additional SIP revisions to address the deficiencies identified. The SIP revisions, to be submitted by Pennsylvania, include:

(1) All facility-wide or system-wide averaging plans approved by PADEP under 25 Pa Code 129.98 including but not limited to any terms and conditions that ensure the enforceability of the averaging plan as a practical matter, and

(2) All source-specific RACT determinations approved by PADEP under 25 Pa Code 129.99, including any alternative compliance schedules approved under §§ 129.97(k) and 129.99(i); the source-specific RACT determinations submitted to EPA for approval into the SIP shall include any terms and conditions that ensure the enforceability of the source-specific RACT emission

limitation as a practical matter.

[FR Doc. 2019-09478 Filed: 5/8/2019 8:45 am; Publication Date: 5/9/2019]