Demonstration
SUMMARY:
ACTION:
AGENCY:

The Environmental Protection Agency (EPA) is approving two State Implementation Plan (SIP) revisions, submitted by the State of Florida, through the Florida Department of Environmental Protection (FL DEP), to EPA on April 3, 2015, for the purpose of providing for attainment of the 2010 primary Sulfur Dioxide (SO\textsubscript{2}) National Ambient Air Quality Standard (NAAQS) in the Hillsborough County and Nassau County SO\textsubscript{2} nonattainment areas (hereafter referred to as the “Hillsborough Area,” “Nassau Area,” or “Areas”). The Hillsborough Area is comprised of the portion of Hillsborough County in Florida surrounding the Mosaic Fertilizer facility (hereafter referred to as “Mosaic”). The Nassau Area comprises the portion of Nassau County in Florida surrounding the Rayonier Performance Fibers, LLC sulfite pulp mill (hereafter referred to as “Rayonier”). EPA concludes that Florida has appropriately demonstrated that attainment with the 2010 1-hour primary SO\textsubscript{2} NAAQS will occur in the Nassau and Hillsborough Areas by the applicable attainment dates, and that the plans meet the other applicable requirements under the Clean Air Act (CAA or Act). As a part of approving the attainment demonstrations, EPA is taking final action to approve into the Florida SIP the SO\textsubscript{2} emissions limits and associated compliance parameters for both Areas.

DATES: This rule will be effective August 2, 2017.

ADDRESSSES: EPA has established a docket for this action under Docket Identification Nos. EPA–R04–OAR–
Section 191 of the CAA directs states to submit SIPs for areas designated as nonattainment for the SO₂ NAAQS to EPA within 18 months of the effective date of the designation. i.e., by no later than April 4, 2015, in this case. Section 192 requires that such plans shall provide for NAAQS attainment as expeditiously as practicable, but no later than 5 years from the effective date of the nonattainment designation. Section 172(c) of part D of the CAA lists the required components of a nonattainment plan submittal. The base year emissions inventory (section 172(c)(3)) is required to show a “comprehensive, accurate, current inventory” of all relevant pollutants in the nonattainment area. The nonattainment plan must identify and quantify any expected emissions from the construction of new sources to account for emissions in the area that might affect reasonable further progress (RFP) toward attainment, or that might interfere with attainment and maintenance of the NAAQS, and it must provide for a nonattainment new source review (NSNR) program (section 172(c)(5)). The attainment demonstration must include a modeling analysis showing that the enforceable emissions limitations and other control measures taken by the state will provide for reasonable further progress (RFP) and expeditious attainment of the NAAQS (section 172(c)(2), (4), (6) and (7)). The nonattainment plan must include an analysis of the reasonably available control measures (RACM) considered, including reasonably available control technology (RACT) (section 172(c)(1)). Finally, the nonattainment plan must provide for contingency measures (section 172(c)(9)) to be implemented either in the case that RFP toward attainment is not made, or in the case that the area fails to attain the NAAQS by the attainment date.

On April 23, 2014, EPA issued a guidance document entitled, “Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions” (SO₂ Nonattainment Guidance). The SO₂ Nonattainment Guidance provides recommendations for the development of SO₂ nonattainment SIPs to satisfy CAA requirements (see, e.g., section 172 and 191–192). An attainment demonstration must also meet the requirements of 40 CFR 51.112 and part 51, appendix W, and include inventory data, modeling results, and emissions reduction analyses on which the state has based its projection of attainment. The SO₂ Nonattainment Guidance also provides states with the option to utilize emission limits with longer averaging times of up to 30 days so long as the state meets various suggested criteria to ensure attainment of the SO₂ NAAQS.

Florida submitted attainment demonstrations for both Areas on April 3, 2015. On August 23, 2016, EPA proposed to approve Florida’s April 3, 2015, SO₂ attainment demonstrations, which included all the specific attainment elements mentioned above and new SO₂ emission limits with averaging times longer than the 1-hour form of the primary SO₂ NAAQS for the Mosaic-Riverview fertilizer plant and the Tampa Electric Company’s (TECO’s) Big Bend electric generating source impacting the Hillsborough Area, and for Rayonier sulfite pulp mill and WestRock CP, LLC kraft pulp mill sources impacting the Nassau Area in accordance with the SO₂ NAAQS. See 81 FR 57522 and 81 FR 57535. Comments on the proposed rulemakings were due on or before September 23, 2016. EPA received three sets of comments on the proposed approval of Florida’s SO₂ SIP revision for the Hillsborough Area, and one set of comments on the proposed approval of Florida’s SO₂ SIP for the Nassau Area. The comments are available in the docket for this final rulemaking action. EPA’s summary of the comments and responses are provided below. For a comprehensive discussion of Florida’s SO₂ attainment SIP and EPA’s analysis and rationale for approval for both Areas, please refer to the August 23, 2016, proposed rulemakings. The remainder of this preamble summarizes EPA’s final approval of Florida’s SO₂ attainment demonstrations for both areas and response to comments.

II. Response to Comments

The three sets of comments for the proposed approval of the SIP revision for the Hillsborough Area were from the Arizona Mining Association (AMA), Florida Electric Power Coordinating Group, INC. (FCG), and Tampa Electric Company (TECO). The single set of comments for the proposed approval of the SIP revision for the Nassau Area was received from the AMA. EPA will refer to theAMA, FCG, and TECO. Commenters collectively as “the Commenter(s).” Notably, the Commenters expressed support for EPA’s proposed approvals of Florida’s SO₂ SIP revisions for the Hillsborough and Nassau Areas. Additionally, the Commenters also provided other related comments for which EPA is taking the opportunity to respond in this final rulemaking. To review the complete sets of comments received, refer to the docket for this rulemaking as identified.
above. A summary of the comments received and EPA’s responses are provided below:

Comment 1: The Commenter references a revised study conducted by the Indiana Department of Environmental Management (IDEM) dated January 2016 which asserts that AERMOD over-predicts at the level of the standard when compared to actual monitored data. IDEM’s study compared predicted and observed SO\textsubscript{2} concentrations at the Gibson Power Plant in southwestern Indiana. The Commenter claims that the IDEM’s study showed AERMOD may “grossly over-estimate site specific monitoring data.” The Commenter states that the study assessed model-predicted ambient concentrations at the monitor receptor points and compared it to actual hourly monitor concentrations. The Commenter argues that the study showed that when the projected SO\textsubscript{2} concentrations were 35 ppb or higher, AERMOD over-predicted ambient impacts by more than a factor of two in nearly 84 percent of the cases based on onsite meteorological conditions and in nearly 25 percent of the cases when onsite meteorology was considered. The Commenter also asserts that AERMOD under-predicted the actual site monitored data in less than 1 percent of the cases. The Commenter concludes that the IDEM study suggests that TECO’s modeled allowable limit at Big Bend station is likely over-estimated.

Response 1: First, EPA believes that the Commenter’s objection is not germane to our proposed approval of the Florida SIP, and raises objections that are both outside the scope of our approval action and not averse to it. Second, EPA notes that the IDEM modeling study is a seriously flawed analysis and disagrees that it indicates poor model performance by AERMOD as a general matter. Most notably, the report compares modeled SO\textsubscript{2} levels expressed in μg/m\textsuperscript{3} against monitored values expressed in ppb. EPA made IDEM aware of the discrepancy in concentration units in fall 2015. A more appropriate assessment of this model-monitor comparison, as discussed, for example, in an article in the Journal of the Air and Waste Management Association by Kali Frost of IDEM, published April 9, 2014, shows that AERMOD results match monitoring data relatively closely. Also, as part of the proposed revisions to The Guideline on Air Quality Modeling in 2015 and finalized in 2016, EPA performed an evaluation on the use of prognostic meteorological data for input into AERMOD. Part of this evaluation included the same Gibson study as in the Frost 2014 paper and the IDEM study. As with the Frost 2014 paper, the results of the EPA evaluation indicated good model performance for AERMOD. The evaluation can be found in the EPA Technical Support Document, Evaluation of Prognostic Meteorological Data in AERMOD Applications (EPA–454/R–16–004). Additionally, the Commenter does not offer any specific technical evidence or documentation that the attainment modeling for the Hillsborough Area over predicts estimated site monitoring concentration nor explains how the SO\textsubscript{2} characterization of the area in the IDEM study applies to the Hillsborough Area. Furthermore, notwithstanding stated concerns about the model, the Commenter concludes that the SO\textsubscript{2} emission limits established for the TECO Big Bend Station are “appropriate to ensure attainment with SO\textsubscript{2} NAAQS and provides the operational flexibility to ensure a reliable power supply to the Tampa Bay area.” EPA agrees that the modeling conducted for Florida’s attainment plan submission provided results that support the emission limitations developed by the state for the particular sources at issue in this action.

Comment 2: The Commenters state that EPA did not explicitly clarify its legal authority to approve the Florida attainment plan SIP submissions with longer-term averaging times for emission limits for the Rayonier and WestRock sources in the Nassau Area; and Mosaic and TECO facilities in the Hillsborough Area. The Commenter suggests EPA clearly explain the legal authority under which it can approve the longer term emission limitations contained in the proposed attainment SIPs for each respective area as well as update the 2014 nonattainment guidance with additional analysis to support the “probabilistic” approach to developing such emission limits. The Commenters argue with EPA that it is appropriate to approve SO\textsubscript{2} emission limitations with a 30-day averaging period and a 24-hour averaging period for the TECO and Mosaic facilities, respectively, as part of the Hillsborough Area 1-hour SO\textsubscript{2} attainment SIP. The Commenters also agree with EPA that it is appropriate to approve SO\textsubscript{2} emission limitations with a 3-hour averaging period for both the Rayonier and WestRock facilities as part of the Nassau Area 1-hour SO\textsubscript{2} attainment SIP. The Commenters state that EPA’s approval of Florida’s attainment plan with emission limitations that have longer-term averaging periods is a “reasonable and technically justified approach that is consistent with the purposes of the CAA.” The Commenters maintain that EPA’s approach is “scientifically defensible and reflects EPA’s sound judgment regarding how to calculate a longer-term emissions limit that is comparably stringent to the critical emission value.” The Commenters believe that the longer-term limits are no more likely to cause a NAAQS exceedance than an hourly limit set at the critical emission value because both are determined by the same air modeling approach and calculated to be comparably stringent and provide for operational flexibility to ensure a reliable production of electricity.

Response 2: EPA appreciates the Commenter’s observation regarding the appropriateness of approving attainment plans with emission limitations that apply over a longer time period than the 1-hour form of the 2010 SO\textsubscript{2} NAAQS. As mentioned above, CAA section 172(c) directs states with areas designated as nonattainment to demonstrate that the submitted attainment plan provides for attainment of the NAAQS. 40 CFR part 51, subpart G further delineates the control strategy requirements that SIPs must meet, and EPA has long required that all control strategies in attainment plans reflect four fundamental principles of quantification, enforceability, replicability, and accountability. See “State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990; Proposed Rule,” 57 FR 13498 (April 16, 1992) (General Preamble), at 13567–68. Additional guidance is provided in the SO\textsubscript{2} Nonattainment Guidance. For SO\textsubscript{2}, there are generally two components needed to support an attainment determination submitted under section 172(c): (1) Emission limitations and other control measures that assure implementation of permanent, enforceable and necessary emission controls, and (2) a modeling analysis that meets the requirements of 40 CFR part 51, appendix W which demonstrates that these emission limitations and control measures provide for timely attainment of the primary SO\textsubscript{2} NAAQS as expeditiously as practicable, but by no later than the applicable attainment date for the affected area. In all cases, the emission limitations and control measures must be accompanied by appropriate methods and conditions to determine compliance with the respective emission limitations and control measures and must be quantifiable (i.e., a specific amount of emission reduction can be ascribed to
the measures, fully enforceable (specifying clear, unambiguous and measurable requirements for which compliance can be practically determined), replicable (the procedures for determining compliance are sufficiently specific and non-subjective so that two independent entities applying the procedures would obtain the same result), and accountable (source specific limitations must be permanent and must reflect the assumptions used in the SIP demonstrations).

In the SO\textsubscript{2} Nonattainment Guidance EPA notes that past Agency guidance has recommended that averaging times in SIP emissions limitations should not exceed the averaging time of the applicable NAAQS that the limit is intended to help attain (e.g., addressing emissions averaged over one or three hours), but also describes the option to utilize emission limitations with longer averaging times of up to 30 days, so long as the state meets various suggested criteria. See SO\textsubscript{2} Nonattainment Guidance pp. 22 to 39. The guidance recommends that—should states elect to use longer averaging times—the longer term average limit should be set at an adjusted level that reflects a stringency comparable to the 1-hour average limit at the critical emission value shown to provide for attainment that the plan otherwise would have set.

The SO\textsubscript{2} Nonattainment Guidance provides an extensive discussion of EPA’s rationale for concluding that appropriately set comparably stringent limitations based on averaging times as long as 30 days can be found to provide for attainment of the 2010 primary SO\textsubscript{2} NAAQS. In evaluating this option, EPA considered the nature of the standard, conducted detailed analyses of the impact of the use of 30-day average limits on the prospects for attaining the standard, and carefully reviewed how best to achieve an appropriate balance among the various factors that warrant consideration in judging whether a state’s attainment plan provides for attainment. Id. at pp. 22 to 39. See also id. at Appendices B, C and D.

As specified in 40 CFR 50.17(b), the 1-hour primary SO\textsubscript{2} NAAQS is met at an ambient air quality monitoring site when the 3-year average of the annual 99th percentile of daily maximum 1-hour concentrations is less than or equal to 75 ppb. In a year with 365 days of valid monitoring data, the 99th percentile would be the fourth highest daily maximum 1-hour value. The 2010 SO\textsubscript{2} NAAQS, including this form of determination, concurs with the standard, was upheld by the U.S. Court of Appeals for the District of Columbia Circuit in Nat’l Envt’l Dev. Ass’n’s Clean Air Project v. EPA, 686 F.3d 803 (D.C. Cir. 2012). Because the standard has this form, a single exceedance of the numerical limit of 75 ppb does not constitute a violation of the standard. Instead, at issue is whether a source operating in compliance with a properly set longer term average could cause exceedances, and if so the resulting frequency and magnitude of such exceedances, and in particular whether EPA can have reasonable confidence that a properly set longer term average limit will provide that the average fourth highest daily maximum value will be at or below 75 ppb. A synopsis of EPA’s review of how to judge whether such plans “provide for attainment,” based on modeling of projected allowable emissions and in light of the NAAQS’ form for determining attainment at monitoring sites, follows.

For plans for SO\textsubscript{2} attainment based on 1-hour emission limits, the standard approach is to conduct modeling using fixed emission rates. The maximum emission rate that would be modeled to result in attainment (i.e., in an “average year”\textsuperscript{1} shows three, not four days with maximum hourly levels exceeding 75 ppb) is labeled the “critical emission value.” The modeling process for identifying this critical emission value inherently considers the numerous variables that affect ambient concentrations of SO\textsubscript{2}, such as meteorological data, background concentrations, and topography. In the standard approach, the state would then provide for attainment by setting a continuously applicable 1-hour emission limitation at this critical emission value.

EPA recognizes that some sources may have highly variable emissions, for example due to variations in fuel sulfur content and operating rate, that can make it extremely difficult, even with a well-designed control strategy, to ensure in practice that emissions for any given hour do not exceed the critical emission value. EPA also acknowledges the concern that longer term emission limits can allow short periods with emissions above the critical emission value, which, if coincident with meteorological conditions conducive to high SO\textsubscript{2} concentrations, could in turn create the possibility of a NAAQS exceedance occurring on a day when an exceedance would not have occurred if emissions were continuously controlled at the level corresponding to the critical emission value. However, for several reasons, EPA believes that the approach recommended in its guidance document suitably addresses this concern. First, from a practical perspective, EPA expects the actual emission profile of a source subject to an appropriately set longer term average limit to be similar to the emission profile of a source subject to an analogous 1-hour average limit. EPA expects this similarity because it has recommended that the longer term average limit be set at a level that is comparably stringent to the otherwise applicable 1-hour limit (reflecting a downward adjustment from the critical emission value) and that takes the source’s emissions profile into account. As a result, EPA expects either form of emission limit to yield comparable air quality.

Second, from a more theoretical perspective, EPA has compared the likely air quality with a source having maximum allowable emissions under an appropriately set longer term limit, as compared to the likely air quality with the source having maximum allowable emissions under the comparable 1-hour limit. In this comparison, in the 1-hour average limit scenario, the source is presumed at all times to emit at the critical emission level, and in the longer term average limit scenario, the source is presumed occasionally to emit more than the critical emission value but on average, and presumably at most times, to emit well below the critical emission value. In an “average year,” compliance with the 1-hour limit is expected to result in three exceedance days (i.e., three days with hourly values above 75 ppb) and a fourth day with a maximum hourly value at 75 ppb. By comparison, with the source complying with a longer term limit, it is possible that additional exceedances would occur that would not occur in the 1-hour limit scenario (if emissions exceed the critical emission value at times when meteorology is conducive to poor air quality). However, this comparison must also factor in the likelihood that exceedances that would be expected in the 1-hour limit scenario would not occur in the longer term limit scenario. This result arises because the longer term limit requires lower emissions most of the time (because the limit is set well below the critical emission value), so a source complying with an appropriately set longer term limit is likely to have lower emissions at critical times than would be the case.

\textsuperscript{1} An “average year” is used to mean a year with average air quality. While 40 CFR 50 appendix T provides for averaging three years of 99th percentile daily maximum values (e.g., the fourth highest daily maximum concentration in a year with 365 days with valid data), this discussion and an example below uses a single “average year” in order to simplify the illustration of relevant principles.
if the source were emitting as allowed with a 1-hour limit.

As a hypothetical example to illustrate these points, suppose a source that always emits 1000 pounds of SO\textsubscript{2} per hour, which results in air quality at the level of the NAAQS (i.e., results in a design value of 75 ppb). Suppose further that in that an “average year,” these emissions cause the 5 highest maximum daily average 1-hour concentrations to be 100 ppb, 90 ppb, 80 ppb, 75 ppb, and 70 ppb. Then suppose that the source becomes subject to a 30-day average emission limit of 700 pounds per hour. It is theoretically possible for a source meeting this limit to have emissions that occasionally exceed 1000 pounds per hour, but with a typical emissions profile, emissions would much more commonly be between 600 and 800 pounds per hour. In this simplified example, assume a zero background concentration, which allows one to assume a linear relationship between emissions and air quality. (A nonzero background concentration would make the mathematics more difficult but would give similar results.) Air quality will depend on what emissions happen on what critical hours, but suppose that emissions at the relevant times on these 5 days are 800 pounds/hour, 1100 pounds per hour, 500 pounds per hour, 900 pounds per hour, and 1200 pounds per hour, respectively. (This is a conservative example because the average of these emissions, 900 pounds per hour, is well over the 30-day average emission limit.) These emissions would result in daily average 1-hour concentrations of 80 ppb, 99 ppb, 40 ppb, 67.5 ppb, and 84 ppb. In this example, the fifth day would have an exceedance that would not otherwise have occurred, but the third and fourth days would have exceedances that otherwise would have occurred. In this example, the fourth highest maximum daily concentration under the 30-day average would be 67.5 ppb.

This simplified example illustrates the findings of a more complicated statistical analysis that EPA conducted using a range of scenarios using actual plant data. As described in appendix B of the SO\textsubscript{2} Nonattainment Guidance, EPA found that the requirement for lower average emissions is highly likely to yield better air quality than is required with a comparably stringent 1-hour limit. Based on analyses described in appendix B, EPA expects that an emission profile with maximum allowable emissions under an appropriately set comparably stringent 30-day average limit is likely to have the net effect of having a lower number of exceedances and better air quality than an emission profile with maximum allowable emissions under a 1-hour emission limit at the critical emission value. This result provides a compelling policy rationale for allowing the use of a longer averaging period, in appropriate circumstances where the facts indicate this result can be expected to occur.

The question then becomes whether this approach—which is likely to produce a lower number of overall exceedances even though it may produce some unexpected exceedances above the critical emission value—meets the requirement in sections 110(a) and 172(c) for state implementation plans to “provide for attainment” of the NAAQS. For SO\textsubscript{2}, as for other pollutants, it is generally impossible to design a nonattainment plan in the present that will guarantee that attainment will occur in the future. A variety of factors can cause a well-designed attainment plan to fail and unexpectedly not result in attainment, for example if meteorology occurs that is more conducive to poor air quality than was anticipated in the plan. Therefore, in determining whether a plan meets the requirement to provide for attainment, EPA’s task is commonly to judge not whether the plan provides absolute certainty that attainment will in fact occur, but rather whether the plan provides an adequate level of confidence of prospective NAAQS attainment. From this perspective, in evaluating use of a 30-day average limit, EPA must weigh the likely net effect on air quality. Such an evaluation must consider the risk that occasions with meteorology conducive to high concentrations will have elevated emissions leading to exceedances that would not otherwise have occurred, and must also weigh the likelihood that the requirement for lower emissions on average will result in days not having exceedances that would have been expected with emissions at the critical emission value. Additional policy considerations, such as in this case the desirability of accommodating real-world emissions variability without significant risk of violations, are also appropriate factors for EPA to weigh in judging whether a plan provides a reasonable degree of confidence that the plan will lead to attainment. Based on these considerations, especially given the high likelihood that a continuously enforceable limit averaged over as long as 30 days, determined in accordance with EPA’s guidance, will result in attainment, it is a general matter that such limits, if appropriately determined, can reasonably be considered to provide for attainment of the 2010 SO\textsubscript{2} NAAQS.

For these reasons, the Commenter’s statement that “the longer-term limits are no more likely to cause a NAAQS exceedance than an hourly limit set at the critical emission value” is not perfectly consistent with the EPA’s position. Presuming that the Commenter means to speak of NAAQS violations rather than single exceedances of the level of the NAAQS, the use of longer-term limits creates an arguable (albeit minimal) risk of violations that nominally does not exist with short-term limits, even though compliance with an appropriately adjusted longer-term limit is likely to yield fewer exceedances of the level of the NAAQS than compliance with a short-term limit. Thus, the Commenter’s statement misrepresents EPA’s rationale for approving the longer-term average limits in Florida’s plans as providing for attainment.

The SO\textsubscript{2} Nonattainment Guidance offers specific recommendations for determining an appropriate longer term average limit. The recommended method starts with determination of the 1-hour emission limit that would provide for attainment (i.e., the critical emission value), and applies an adjustment factor to determine the (lower) level of the longer term average emission limit that would be estimated to have a stringency comparable to the otherwise necessary 1-hour emission limit. This method uses a database of continuous emission data reflecting the type of control that the source will be using to comply with the SIP emission limits, which (if compliance requires new controls) may require use of an emission database from another source. The recommended method involves using these data to compute a complete set of emission averages, computed according to the averaging time and averaging procedures of the prospective emission limitation. In this recommended method, the ratio of the 99th percentile among these long term averages to the 99th percentile of the 1-hour values represents an adjustment factor that may be multiplied by the candidate 1-hour emission limit to determine a longer term average emission limit that may be considered comparably stringent.\footnote{For example, if the critical emission value is 1000 pounds of SO\textsubscript{2} per hour, and a suitable adjustment factor is determined to be 70 percent, the recommended longer term average limit would be 700 pounds per hour.} The guidance also addresses a variety of related topics, such as the potential utility of setting supplemental emission limits, such as mass-based limits, to reduce the...
likelihood and/or magnitude of elevated emission levels that might occur under the longer term emission rate limit.

Preferred air quality models for use in regulatory applications are described in appendix A of EPA’s Guideline on Air Quality Models (40 CFR part 51, appendix W). In 2005, EPA promulgated AERMOD as the Agency’s preferred near-field dispersion modeling for a wide range of regulatory applications addressing stationary sources (for example in estimating SO2 concentrations) in all types of terrain based on extensive developmental and performance evaluation. Supplemental guidance on modeling for purposes of demonstrating attainment of the SO2 standard is provided in appendix A to the SO2 Nonattainment Guidance document referenced above. Appendix A provides extensive guidance on the modeling domain, the source inputs, assorted types of meteorological data, and background concentrations.

Consistency with the recommendations in this guidance is generally necessary for the attainment demonstration to offer adequately reliable assurance that the plan provides for attainment. As stated previously, attainment demonstrations for the 2010 1-hour primary SO2 NAAQS must demonstrate future attainment and maintenance of the NAAQS in the entire area designated as nonattainment (i.e., not just at the violating monitor) by using air quality dispersion modeling (see appendix W to 40 CFR part 51) to show that the mix of sources and enforceable control measures and emission rates in an identified area will not lead to a violation of the SO2 NAAQS. For a short-term (i.e., 1-hour) standard, EPA believes that dispersion modeling, using allowable emissions and addressing stationary sources in the affected area (and in some cases those sources located outside the nonattainment area which may affect attainment in the area) is technically appropriate, efficient and effective in demonstrating attainment in nonattainment areas because it takes into consideration combinations of meteorological and emission source operating conditions that may contribute to peak ground-level concentrations of SO2.

The meteorological data used in the analysis should generally be processed with the most recent version of AERMET. Estimated concentrations should include ambient background concentrations, should follow the form of the standard, and should be calculated as described in section 2.6.1.2 of the August 23, 2010, clarification memo on “Applicability of appendix W Modeling Guidance for the 1-hr SO2 National Ambient Air Quality Standard” (U.S. EPA, 2010a).

The Commenter states that EPA’s approval of Florida’s attainment plans with emission limitations that have longer-term averaging periods is a “reasonable and technically justified approach that is consistent with the purposes of the CAA.” The Commenters maintain that EPA’s approach is “scientifically defensible and reflects EPA’s sound judgment regarding how to calculate a longer-term emissions limit that is comparably stringent to the critical emission value.”

Based on a review of the state’s submittal, the EPA believes that the longer average limits established for Rayonier and WestRock in the Nassau Area and Mosaic and TECO in the Hillsborough Area provide for a suitable alternative to the 1-hour average emission limit for these sources. Florida used a suitable data profile in an appropriate manner and has thereby applied an appropriate adjustment, yielding emission limits that have comparable stringency to the 1-hour average limit that the state determined would otherwise have been necessary to provide for attainment. While the longer-term averaging limits allow occasions in which emissions may be higher than the level that would be allowed with the 1-hour limit, the state’s limit calculated by requiring average emissions to be lower than the level that would otherwise have been required by a 1-hour average limit. See FL DEP’s April 4, 2015 attainment SIPs for both areas in the docket for this final action (EPA–R04–OAR–2015–0624 & EPA–R04–OAR–2015–0623).

Comment 3: The Commenter makes several statements regarding the use of emissions limitations with longer averaging periods as a means of addressing emissions from sources during startup, shutdown and malfunction (SSM) activities. The commenter states that during periods of operating variability, including startup and shutdown, there is a possibility of short periods of SO2 emissions that would be greater than the critical emission value, but the commenter claims that due to their relatively short duration, infrequent occurrence, and the low probability of such periods occurring simultaneously with unfavorable meteorological conditions, these emissions would be very unlikely to cause exceedances of the NAAQS.

The Commenter further asserts that of the 3 The most recent version of the Guideline on Air Quality Models (40 CFR part 51) was published in the Federal Register, 82 FR 5182, on January 17, 2017 with an effective date of May 22, 2017.

recent court decisions requiring continuous compliance with emission limitations, without exemptions for emissions during SSM events and without affirmative defenses for excess emissions during SSM events. do not affect EPA’s authority to allow emission limitations with longer averaging periods in attainment plans. The Commenter also argues that a single, continuous emission limitation that applies to the facility at all times, but with a longer term average as in this case, provides for “more coherent compliance procedures” than other approaches such as different emission limitations or work practice standards that apply only during startup and shutdown periods. The Commenter asserts that EPA’s approval of an emission limitation with a longer-term averaging period is the only practical way to implement the requirement for continuous compliance given the reality that sources vary in their operation during the course of a full year.

Response 3: EPA agrees with the Commenter that the Agency can approve emission limitations that are based on averaging times that are longer than the 1-hour form of the SO2 NAAQS, provided that they have been demonstrated to ensure attainment and maintenance of the NAAQS and that they meet other requirements for valid SIP provisions. As explained in the SO2 Nonattainment Guidance, if periods of hourly emissions above the critical emissions value are a rare occurrence at a source, and particularly if the magnitude of the emissions, in terms of the emissions rate for each hour in that period, is not substantially higher than the critical emissions value, those periods would be unlikely to have a significant impact on air quality, insofar as they would be very unlikely to occur repeatedly at the times when the meteorology is conducive to high ambient concentrations of SO2. EPA also notes that the Agency has provided the SO2 Nonattainment Guidance to assist states and tribes specifically in the development of attainment plans to address specific issues and challenges relevant to the 2010 1-hour primary SO2 NAAQS. In this final action, EPA is approving SIP provisions that impose emission limitations with longer term averaging periods because SO2 is a pollutant having characteristics that allow this approach to ensuring attainment of the primary 1-hour standard, as discussed above. EPA continues to believe that the use of

4 Sierra Club v. EPA, 551 F.3d 1019 (D.C. Cir. 2008).

5 NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).
longer term averages will not be necessary for sources whose emissions exhibit a low degree of variability and also notes that the approach is not necessarily transferable to other sources, pollutants, or NAAQS with different forms. EPA also notes that the appropriate duration of an averaging period in a SIP provision must take into consideration factors such as the nature of the regulated sources, the purpose of the emission limitation in the SIP provision, and the adequacy of the recordkeeping, reporting, and monitoring requirements necessary to make the emission limitation practically and legally enforceable. For example, a longer averaging period may require continuous emissions monitoring (CEMs) in order to provide adequate monitoring of emissions, as is the case in the SO₂ emission limitations at issue in this action.

However, the issue of whether the use of a longer term average limit is the only way under which sources could meet the 2010 1-hour NAAQS and account for variability during startup and shutdown periods is not raised by Florida’s SIP submittals, and EPA need not reach a conclusion on that issue here in approving Florida’s SIP submittals.

III. What action is EPA taking?

Pursuant to CAA sections 110, 172, 191 and 192, EPA is taking final action to approve Florida’s attainment plan SIP revisions for the Hillsborough and Nassau Areas, as submitted through FL DEP to EPA on April 3, 2015, for the purpose of demonstrating attainment of the 2010 1-hour SO₂ NAAQS.

Specifically, EPA is approving SO₂ emission limitations and compliance parameters established by the state applicable to the Mosaic Fertilizer, LLC Riverview plant and TECO’s Big Bend electric generating facility for the Hillsborough Area; and the Rayonier sulfite pulp mill and WestRock CP, LLC kraft pulp mill for the Nassau Area. The state determined that controls for SO₂ emissions at Rayonier (i.e., increasing the stack height from the existing level of 110 feet to at least 165 feet for vent gas scrubber EU 005) are appropriate in the Nassau Area for purposes of attaining the 2010 SO₂ NAAQS and asserted that these controls represent RACM/RACT. Florida also proposed a supplemental control strategy for the WestRock facility including physical and operational changes to the three sulfuric acid plants (SAP) at the Mosaic facility including increased stack heights and upgrades to the SAP catalyst to meet the SO₂ emission limit caps. Additionally, Mosaic is required to eliminate fuel oil use by January 1, 2018 except for periods of natural gas curtailment or disruption. For TECO, FL DEP required by permit that the facility undergo an operational change to increase the SO₂ removal efficiencies of the existing flue gas desulfurization system or its furnaces to fuel-fired steam generators to meet the collective enforceable emission limit.

In accordance with section 172(c) of the CAA, the Florida attainment plan for both the Hillsborough and Nassau Areas includes: An emissions inventory for SO₂ for the plan’s base year (2011) and a 2018 projected emissions inventory; and an attainment demonstration. The attainment demonstration for each Area includes: Technical analyses that locate, identify, and quantify sources of emissions contributing to violations of the 2010 1-hour SO₂ NAAQS; a declaration that FL DEP is unaware of any future growth in the area that would be subject to CAA 173, and the assertion that the NNSR program approved in the SIP at Section 62–252.500, Florida Administrative Code (F.A.C.) would account for any such growth; a modeling analysis utilizing an emissions control strategy for Mosaic and TECO in the Hillsborough Area, and Rayonier and WestRock in Nassau Area, that shows attainment of the 1-hour SO₂ NAAQS by the October 4, 2018, attainment date; a determination that control strategies for the primary SO₂ sources within the nonattainment area constitute RACM/RACT; adherence to a construction schedule to ensure emissions reductions are achieved as expeditiously as practicable; a request from FL DEP that emissions reduction measures including system upgrades and/or emissions limitations with schedules for implementation and compliance parameters be incorporated into the SIP; demonstration that the requirements are enforceable, and final action in the event the two Areas fail to make reasonable further progress or do not attain the SO₂ NAAQS by the attainment date. Lastly, FL DEP established new SO₂ emission limits for the SO₂ sources impacting the Hillsborough Area (i.e., Mosaic and TECO), and Nassau Area (i.e., Rayonier and WestRock), in accordance with EPA’s SO₂ Nonattainment Guidance. For the Nassau Area, FL DEP established new SO₂ emission limitations for all three primary controlled units (EU 005, 006 and 022) based on a 3-hour rolling average. Pursuant to the conditions of the construction permit (No. 0890004–036–AC), Rayonier will increase the stack height from the existing level of 110 ft to at least 165 ft for vent gas scrubber EU 005 and comply with specific SO₂ emission limits based on a 3-hour rolling average as determined by CEMS data. SO₂ emissions and ambient impacts from the facility by Rayonier’s allowable SO₂ emissions (total from sum of all three controlled units) will be reduced from 836.5 lb/hr to 502.3 lb/hr, representing a 40 percent decrease. The Rayonier emission limitations for all three controlled units were established in a federally-enforceable air quality construction permit (No. 0890004–036–AC) and incorporated into the title V operating permit (No. 0890004–042–AV). These source specific requirements are also being incorporated into the SIP with this final action.

Based on the conditions of the construction permit (No. 0890003–046–AC), WestRock will reduce SO₂ emissions and ambient impacts from the facility by upgrading the combustion air system for recovery boilers, adding a white liquor scrubber system, and construction of a non-condensable gas pipeline to the No. 7 Power Boiler. WestRock’s allowable SO₂ emissions from EU 006, the power boiler No. 5, will be reduced from 550 lb/hr to 15 lb/hr representing a 97 percent decrease. These source specific requirements were included in a federally-enforceable permit and are being incorporated into the SIP through this final action.

Compliance with the new emission limitations for both sources will be demonstrated by certified CEMS data. Pursuant to the conditions of the construction permit No. 0570008–080–AC, Mosaic will reduce SO₂ emissions and ambient impacts from the facility by eliminating the use of fuel oil at the plant except during periods of natural gas curtailment or disruption, changing the catalysts in the converters in sulfuric acid plants Nos. 7, 8, and 9 (which will lower SO₂ emissions while not increasing sulfuric acid mist emissions; existing permitted production capacities of all sulfuric acid plants will remain unchanged), increase the stack height of each sulfuric...
acid plant to no lower than 65 meters (213.25 feet), which is equivalent to approximately a 60-foot increase per stack and comply with specific SO\textsubscript{2} emission caps based on a 24-hour average as determined by CEMs data. Mosaic’s new SO\textsubscript{2} emission limitations will reduce the allowable SO\textsubscript{2} emissions from all three sulfuric acid plants collectively from 1140 lb/hr to a maximum of 575 lb/hr as a block 24-hour average. These emission limits cover various operating scenarios, including individual unit emission limits, which remain unchanged from the current permit, along with two-unit and three-unit total limits. These new emission limitations were included in the federally-enforceable construction permit No. 0570008–080–AC and will be incorporated into the title V permit upon renewal. These requirements are also being incorporated into the SIP in this final action.

Pursuant to the conditions of the construction permit No. 0570039–074–AC, TECO will reduce SO\textsubscript{2} emissions and ambient impacts from the facility by replacing existing fuel igniters and associated equipment to allow specified units to burn natural gas instead of fuel oil during startup, shutdown, and flame stabilization and comply with an SO\textsubscript{2} emissions cap of 3,162 lbs/hour based on a 24-hour rolling average for all fossil-fuel-fired electrical generating units (Units 1–4 combined). TECO’s new combined allowable SO\textsubscript{2} emissions from TECO EUs 001–004 will be reduced from 6587.6 lb/hr (based on total individual unit emission limits) to 3,162 lb/hr, representing a 52 percent decrease. TECO’s new SO\textsubscript{2} emission limit became effective June 1, 2016, as required in the federally-enforceable air construction permit (No. 0570039–074–AC), and is also being incorporated into the SIP in this final action. Compliance with the new emission limitations for both sources will be demonstrated by certified CEMs data.

EPA has determined that the attainment plans for SO\textsubscript{2} for the Nassau and Hillsborough Areas meet the applicable requirements of sections 110, 172 and 191–192 of the CAA. Thus, EPA is taking final action to approve Florida’s attainment plans for both Areas including the specific SO\textsubscript{2} emission limits and compliance parameters established for the two SO\textsubscript{2} point sources impacting the Nassau Area (Rayonier and WestRock) and the two sources affecting the Hillsborough Area (Mosaic and TECO). EPA’s analysis of both attainment SIPs are discussed in detail in EPA’s August 23, 2016, proposed rulemakings. See 81 FR 57522 and 81 FR 57535.

EPA finds that appropriately set longer term average limits provide a reasonable basis by which nonattainment plans may provide for attainment. Based on its review of this general information as well as the particular information in Florida’s April 3, 2015, attainment SIP, the EPA believes that the 24-hour and 30-day average limits for Mosaic and TECO respectively for the Hillsborough Area and the 3-hour average limit for WestRock and Rayonier in the Nassau Area provide for attainment of the 1-hour SO\textsubscript{2} standard.

IV. Incorporation by Reference

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 283.51.5, EPA is finalizing the incorporation by reference into Florida’s SIP the specified, new operating parameters, SO\textsubscript{2} emission caps, compliance monitoring, recordkeeping and reporting requirements for emission units EU004, EU005 and EU006 at Mosaic (Permit No. 0570008–080–AC), EU001, EU002, EU003, EU004 at TECO (Permit No. 0570039–074–AC), EU005, EU006 and EU002 at Rayonier (Permit No. 0890004–036–AC) and EU006, EU015, EU007 and EU011 at WestRock (Permit No. 0890003–046–AC). The SO\textsubscript{2} emission standards specified in each permit are the basis for the SO\textsubscript{2} attainment demonstration in the SIP. 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 by the Director of the Federal Register in the next update to the SIP compilation.8 EPA has made, and will continue to make, these materials generally available through www.regulations.gov and/or at the EPA Region 4 Office (please contact the person identified in the FOR FURTHER INFORMATION CONTACT section of this preamble for more information).

V. Final Action

EPA is taking final action to approve Florida’s SO\textsubscript{2} attainment plans for the Hillsborough and Nassau Areas. EPA has determined that both attainment SIPs meet the applicable requirements of the CAA. Specifically, EPA is approving Florida’s April 3, 2015, SIP submissions, which include the base year emissions inventory, a modeling demonstration of SO\textsubscript{2} attainment, an analysis of RACM/RACT, a RFP plan, and contingency measures for both nonattainment Areas. Additionally, EPA is approving into the Florida SIP specific SO\textsubscript{2} emission limits with longer-term averaging times and operating and compliance parameters established for the two sets of SO\textsubscript{2} point sources impacting the Nassau and Hillsborough Areas. EPA has concluded that Florida has appropriately demonstrated that attainment with the 2010 1-hour primary SO\textsubscript{2} NAAQS will occur in the Hillsborough and Nassau Areas by the applicable attainment dates, and that the plans meet the applicable requirements under sections 110, 172, and 191–192 of the CAA.

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. See 42 U.S.C. 7410(k); 40 CFR 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);
• 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 (Pub. L. 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 19805, 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).

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

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 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).

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 September 1, 2017. 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 may not be challenged later in proceedings to enforce its requirements. See CAA section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

EPA APPROVED FLORIDA SOURCE-SPECIFIC REQUIREMENTS

<table>
<thead>
<tr>
<th>Name of source</th>
<th>Permit No.</th>
<th>State effective date</th>
<th>EPA approval date</th>
<th>Explanation</th>
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<tr>
<td>Mosaic Fertilizer, LLC</td>
<td>Air Permit No. 0570008–080–AC.</td>
<td>1/15/2015</td>
<td>7/3/2017 [Insert citation of publication].</td>
<td>Specific Conditions pertaining to: EU004; EU005; and EU006.</td>
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<td>Rayonier Performance Fibers, LLC.</td>
<td>Air Permit No. 0890004–036–AC.</td>
<td>4/12/2012</td>
<td>7/3/2017 [Insert citation of publication].</td>
<td>Specific Conditions pertaining to: EU005; EU006; and EU002.</td>
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<tr>
<td>Tampa Electric Company—Big Bend Station.</td>
<td>Air Permit No. 0570039–074–AC.</td>
<td>2/26/2015</td>
<td>7/3/2017 [Insert citation of publication].</td>
<td>Specific Conditions pertaining to: EU001; EU002; EU003 and EU004.</td>
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<tr>
<td>WestRock, LLC</td>
<td>Air Permit No. 0890003–046–AC.</td>
<td>1/9/2015</td>
<td>7/3/2017 [Insert citation of publication].</td>
<td>Specific Conditions pertaining to: EU006; EU015; EU007 and EU011.</td>
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(e) * * *

EPA APPROVED FLORIDA NON-REGULATORY PROVISIONS

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<th>Federal Register notice</th>
<th>Explanation</th>
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<tr>
<td>2010 1-hour SO2 Attainment Demonstration for the Hillsborough Area.</td>
<td>4/3/2015</td>
<td>7/3/2017</td>
<td>[Insert citation of publication]</td>
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## EPA Approved Florida Non-Regulatory Provisions—Continued

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<th>EPA approval date</th>
<th>Federal Register notice date</th>
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<tr>
<td>2010 1-hour SO₂ Attainment Demonstration for the Nassau Area.</td>
<td>4/3/2015</td>
<td>7/3/2017</td>
<td>[Insert citation of publication]</td>
<td></td>
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</tbody>
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FOR FURTHER INFORMATION CONTACT:

### SUPPLEMENTARY INFORMATION:

#### Table of Contents

I. Background

A. Description of a SIP

In accordance with Section 110 of the Clean Air Act (Act), 42 U.S.C. 7410, each state has a SIP containing the control measures and strategies to attain and maintain the National Ambient Air Quality Standards (NAAQS) established pursuant to Section 109 of the Act, 42 U.S.C. 7409. SIPs contain numerous elements such as air pollution control regulations, emission inventories, monitoring networks, attainment demonstrations, and enforcement mechanisms.

B. How EPA Enforces SIPs

Before formally adopting rules that contain required control measures and strategies as part of a SIP, each state must provide the public with an opportunity to comment on them. The states then submit these rules to EPA as requested SIP revisions, on which EPA must formally act. If and when these control measures and strategies are approved by EPA after notice and comment rulemaking, they become enforceable by EPA, and are incorporated into the federally approved SIP and identified in title 40 of the Code of Federal Regulations, part 52 (Approval and Promulgation of Implementation Plans) (40 CFR part 52). The actual state regulations approved by EPA are not reproduced in their entirety in 40 CFR part 52, but are “incorporated by reference,” which has the same effect as including the entire state regulation in part 52. Incorporation by reference indicates that EPA has approved a given state regulation with a specific effective date, and that EPA, in addition to the state, may enforce that regulation once it takes effect and is formally a part of the SIP. This format allows both EPA and the public to know which state measures are contained in a given SIP and are therefore federally enforceable. It also helps identify the specific requirements that the state is implementing to attain and maintain the NAAQS.

C. How the State and EPA Update the SIP

The SIP is periodically revised as necessary to address the specific or unique air pollution problems in the state. Therefore, EPA from time to time takes action on state SIP submissions containing new and/or revised regulations and other materials; if approved, they become part of the SIP. On May 22, 1997 (62 FR 27968), EPA revised the procedures for incorporating by reference federally approved SIPs, as a result of consultations between EPA and the Office of the Federal Register (OFR).

As a result, EPA began the process of developing the following: (1) A revised SIP document for each state that would be incorporated by reference under the provisions of title 1 CFR part 51; (2) a revised mechanism for announcing EPA approval of revisions to an applicable SIP and updating both the IBR document and the CFR; and (3) a revised format of the “Identification of plan” sections for each applicable subpart to reflect these revised IBR procedures. The description of the revised SIP document, IBR procedures, and “Identification of plan” format are discussed in further detail in the May 22, 1997, Federal Register document.