

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[EPA–R05–OAR–2016–0138; FRL–9968–84–Region 5]

### Air Plan Approval; Illinois; Nonattainment Plans for the Lemont and Pekin SO<sub>2</sub> Nonattainment Areas

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to approve State Implementation Plan (SIP) revisions, which Illinois submitted to EPA on March 2, 2016, and supplemented on August 8, 2016 and May 4, 2017, for attaining the 2010 1-hour sulfur dioxide (SO<sub>2</sub>) national ambient air quality standard (NAAQS) for the Lemont and Pekin areas. These revisions (herein called the nonattainment plans or plans) include Illinois' attainment demonstration and other elements required under Clean Air Act (CAA) for the two areas. In addition to an attainment demonstration, the plans address: The requirement for meeting reasonable further progress (RFP) toward attainment of the NAAQS; reasonably available control measures and reasonably available control technology (RACT/RACM); emission inventories; and contingency measures. EPA further proposes to conclude that Illinois has demonstrated that the plans' provisions provide for attainment of the 2010 1-hour primary SO<sub>2</sub> NAAQS in the Lemont and Pekin areas by the attainment date of October 4, 2018.

**DATES:** Comments must be received on or before November 6, 2017.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA–R05–OAR–2016–0138 at <http://www.regulations.gov>, or via email to [aburano.douglas@epa.gov](mailto:aburano.douglas@epa.gov). For comments submitted at [Regulations.gov](http://Regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [Regulations.gov](http://Regulations.gov). For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider

comments or comment contents located outside of the primary submission (*i.e.* on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

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#### SUPPLEMENTARY INFORMATION:

This supplementary information section is arranged as follows:

- I. Why was Illinois required to submit SO<sub>2</sub> plans for the Lemont and Pekin areas?
- II. Requirements for SO<sub>2</sub> Nonattainment Area Plans
- III. Modeled Attainment Plans
- IV. Review of Residual and Distillate Fuel Oil Sulfur Content Limits
- V. Review of Other Plan Requirements
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#### I. Why was Illinois required to submit SO<sub>2</sub> plans for the Lemont and Pekin areas?

On June 22, 2010, EPA promulgated a new 1-hour primary SO<sub>2</sub> NAAQS of 75 parts per billion (ppb), which is met at an ambient air quality monitoring site when the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations does not exceed 75 ppb, as determined in accordance with appendix T of 40 CFR part 50. See 75 FR 35520, codified at 40 CFR 50.17(a)–(b). On August 5, 2013, EPA designated a first set of 29 areas of the country as nonattainment for the 2010 SO<sub>2</sub> NAAQS, including the Lemont and Pekin areas within Illinois. See 78 FR 47191, codified at 40 CFR part 81, subpart C. These area designations were effective October 4, 2013. Section 191 of the CAA directs states to submit SIPs for areas designated as nonattainment (also referred to as nonattainment plans or plans) for the SO<sub>2</sub> 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. These plans are required to demonstrate that their respective areas will attain the NAAQS as expeditiously as practicable, but no later than five years from the effective

date of designation, which in this case is October 4, 2018.

For a number of areas, EPA published notice on March 18, 2016, that the pertinent states had failed to submit the required SO<sub>2</sub> nonattainment plan by the 18-month submittal deadline. See 81 FR 14736. However, because Illinois had submitted its SO<sub>2</sub> nonattainment plans before that date, EPA did not make such a finding with respect to the Lemont and Pekin areas.

Illinois submitted nonattainment plans for the Lemont and Pekin areas on March 2, 2016 and submitted supplemental information on August 8, 2016 and May 4, 2017.<sup>1</sup> The remainder of this proposed rule describes the requirements that nonattainment plans must meet in order to obtain EPA approval, provides a review of the state's plan with respect to these requirements, and describes EPA's proposed action on the state's plans.

#### II. Requirements for SO<sub>2</sub> Nonattainment Area Plans

Nonattainment plans must meet the applicable requirements of the CAA, specifically CAA sections 172, 191 and 192. On April 23, 2014, EPA issued guidance for meeting these statutory requirements, in a document entitled, "Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions," (2014 SO<sub>2</sub> Guidance) available at [https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance\\_nonattainment\\_sip.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance_nonattainment_sip.pdf). In the 2014 SO<sub>2</sub> Guidance, EPA described the statutory requirements for a complete nonattainment area SIP under the 2010 SO<sub>2</sub> NAAQS, which includes: An accurate emissions inventory of current emissions for all sources of SO<sub>2</sub> within the nonattainment area; an attainment demonstration; demonstration of RFP; implementation of RACT (including RACT); a new source review (NSR) permit program; and adequate contingency measures for the affected area.

In order for EPA to fully approve a SIP as meeting the requirements of CAA sections 172, 191 and 192, the SIP for the affected area must demonstrate, to EPA's satisfaction, that each of the aforementioned requirements are met. In addition, the SIP must meet the applicable regulatory procedural and substantive requirements set forth in EPA's regulations at 40 CFR part 51. Under CAA sections 110(l) and 193,

<sup>1</sup> Illinois' final rule amended other state regulations that are not part of Illinois' nonattainment plans for the 2010 SO<sub>2</sub> NAAQS and were not submitted to EPA as part of this action.

EPA may not approve a SIP that would interfere with any applicable requirement concerning NAAQS attainment and RFP, or any other applicable requirement, and no requirement in effect (or required to be adopted by an order, settlement, agreement, or plan in effect before November 15, 1990) in any area that is a nonattainment area for any air pollutant may be modified in any manner unless it insures equivalent or greater emission reductions of such air pollutant.

#### A. Emissions Inventory

As required under CAA section 172(c)(3), the state must develop and submit a comprehensive, accurate and current inventory of actual emissions from all sources of SO<sub>2</sub> emissions in each nonattainment area. This inventory should be consistent with EPA's most recent emissions inventory data requirements as codified at 40 CFR part 51, subpart A. The emissions inventory serves as the foundation for modeling and other analyses that enable states to: (1) Estimate the degree to which different sources within a nonattainment area contribute to violations within the affected area; (2) assess the expected improvement in air quality within the nonattainment area due to the adoption and implementation of control measures; and ultimately 3) demonstrate that the adopted control measures provide for attainment of the SO<sub>2</sub> standard by the attainment date.

#### B. Attainment Plan

CAA section 172(c)(1) directs states with areas designated as nonattainment to demonstrate that the submitted plan provides for attainment of the NAAQS. 40 CFR part 51, subpart G further delineates the control strategy requirements that SIPs must meet. SO<sub>2</sub> nonattainment plans must consist of two components: (1) Emission limits 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 limits and control measures provide for timely attainment of the SO<sub>2</sub> NAAQS as expeditiously as practicable, but by no later than the attainment date for the affected area. The 2014 SO<sub>2</sub> Guidance advises that compliance deadlines for these emission limits should be by, or before, January 1, 2017, in order to provide for air quality data at or below the level of the standard for at least one full calendar year before the attainment deadline. In cases where the necessary

emission limits have not previously been made a part of the SIP, or have not otherwise become federally enforceable, the plan needs to include the necessary enforceable limits in adopted form suitable for incorporation into the SIP in order for it to be approved by EPA. In all cases, the emission limits and control measures must be accompanied by appropriate methods and conditions to determine compliance with the respective emission limits and control measures, and must be fully enforceable.

The 2014 SO<sub>2</sub> Guidance recommends that the emission limits be expressed as short-term average limits not to exceed the averaging time for the applicable NAAQS that the limit is intended to help maintain (e.g., addressing emissions averaged over one or three hours), but also describes the option to utilize emission limits with longer averaging times of up to 30 days so long as the state meets various suggested criteria. See 2014 SO<sub>2</sub> guidance, pp. 22 to 39. The guidance recommends that—should states utilize longer averaging times for certain sources—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.

The 2014 SO<sub>2</sub> 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 SO<sub>2</sub> NAAQS. In evaluating this conclusion, EPA considered the nature of the standard, conducted detailed analyses of the impact of 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 plan provides for attainment. *Id.* at pp. 22 to 39, and Appendices B, C and D.

As specified in 40 CFR 50.17(b), the 1-hour primary SO<sub>2</sub> 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<sub>2</sub> NAAQS, including this form of determining compliance with the standard, was upheld by the U.S. Court of Appeals for the District of Columbia Circuit in *Nat'l Env't'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 does not create 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 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 determine 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 SO<sub>2</sub> nonattainment plans 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.*, the emission rate at which an "average year"<sup>2</sup> shows only three, not four days with maximum hourly levels exceeding 75 ppb) is labeled the "critical emission value." The modeling process for identifying the critical emissions value inherently considers the numerous variables that affect ambient concentrations of SO<sub>2</sub>, 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 limit at this critical emission value.

EPA recognizes that some sources have highly variable emissions due to, for example, 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 may allow short periods with emissions above the critical emissions value, which in turn would create the possibility of a NAAQS exceedance occurring when it otherwise would not if emissions were continuously controlled at the level corresponding to the critical emission value. However, for several reasons, EPA believes that the approach set forth in the 2014 SO<sub>2</sub> Guidance addresses this concern. First,

<sup>2</sup> 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 maximum daily 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.

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 the Agency 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 emissions 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 when the guidance is followed.

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 if the source were emitting as allowed with a 1-hour limit.

As a hypothetical example to illustrate these points, suppose a source always emits 1000 pounds of SO<sub>2</sub> per hour, which causes air quality to be at the level of the NAAQS (*i.e.*, causes a design value of 75 ppb). Suppose further that in an "average year," these

emissions cause the five 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 on these 5 days are 800 pounds per 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 maximum 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 not 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 EPA's 2014 SO<sub>2</sub> 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 of the 2014 SO<sub>2</sub> Guidance, EPA has concluded 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.

EPA must then evaluate 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 section 110(a)(1) and 172(c)(1) for state implementation plans to "provide for attainment" of the NAAQS. For SO<sub>2</sub>, 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 determine 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 emissions value. Additional policy considerations, such as the desirability of accommodating real world emissions variability without significant risk of violations as in this case, are also appropriate factors for EPA to weigh in determining whether there is a reasonable degree of confidence that the plan will lead to attainment. Based on these considerations, especially given the high likelihood that a limit averaged over as long as 30 days, determined in accordance with EPA's guidance, should result in attainment, EPA believes as a general matter that such limits, if appropriately determined, can reasonably be considered to provide for attainment of the 2010 SO<sub>2</sub> NAAQS.

The 2014 SO<sub>2</sub> 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, calculated 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.<sup>3</sup> 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).<sup>4</sup> In 2005, EPA promulgated AERMOD as the Agency's preferred near-field dispersion modeling for a wide range of regulatory applications addressing stationary sources (including estimating SO<sub>2</sub> concentrations) in all types of terrain based on extensive developmental and performance evaluation. Supplemental guidance on modeling for purposes of demonstrating attainment of the SO<sub>2</sub> standard is provided in appendix A to the 2014 SO<sub>2</sub> Guidance. 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 SO<sub>2</sub> 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 SO<sub>2</sub> 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 SO<sub>2</sub>.

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, follow the form of the standard, and 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 SO<sub>2</sub> National Ambient Air Quality Standard" (EPA, 2010).

#### C. RACM/RACT

To be approved by EPA, the SIP must provide for attainment of the standard based on SO<sub>2</sub> emission reductions from control measures that are permanent and enforceable.<sup>5</sup> At a minimum, states must consider all RACM and RACT measures that can be implemented in light of the attainment needs for the affected area(s), and include all necessary measures in order to attain the NAAQS.<sup>6</sup> *See* "General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990; Proposed Rule," 57 FR 13498, 13547 (Apr. 16, 1992) ("General Preamble").

#### D. New Source Review (NSR)

Part D of title I of the CAA prescribes the procedures and conditions under which a new major stationary source or major modification may obtain a preconstruction permit in an area

designated nonattainment for any criteria pollutant. The nonattainment NSR permitting requirements in section 172(c)(5) and 173 of the CAA are among "the requirements of this part" to be submitted to EPA as part of a revised SIP for a nonattainment area within 18 months of the effective date of a designation or redesignation to nonattainment. Air agencies that already have a nonattainment NSR permitting program applicable to areas previously designated nonattainment on the basis of the previous SO<sub>2</sub> NAAQS (annual, 24-hour or 3-hour averaging periods) may be able to use that existing program to authorize the construction and modification of major stationary sources of SO<sub>2</sub> that would locate in a new 2010 SO<sub>2</sub> nonattainment area.<sup>7</sup> However, because of the limited number of nonattainment areas designated under the previous SO<sub>2</sub> NAAQS, and since nonattainment NSR rules in some states may not automatically address areas designated nonattainment for newly promulgated air quality standards, some air agencies may not have nonattainment NSR rules that apply when new nonattainment areas for the 1-hour primary SO<sub>2</sub> standard are designated. In such cases, within 18 months of designation, such agencies would need either to revise their existing nonattainment NSR programs or to develop new programs to enable the permitting of any major stationary source of SO<sub>2</sub> locating in a nonattainment area under the 2010 SO<sub>2</sub> NAAQS.

#### E. RFP

Section 171(1) of the CAA defines RFP as "such annual incremental reductions in emissions of the relevant air pollutant as are required by part D or may reasonably be required by EPA for the purpose of ensuring attainment of the applicable NAAQS by the applicable attainment date." As EPA has previously explained, this definition is most appropriate for pollutants that are emitted by numerous and diverse sources, where the relationship between any individual source and the overall air quality is not explicitly quantified, and where the emission reductions necessary to attain the NAAQS are inventory-wide. General Preamble, at 13547. EPA has also previously

<sup>5</sup> See section 110(a)(2)(A) of the CAA.

<sup>6</sup> Section 172(c)(1) of the CAA provides that "Such plan shall provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards."

<sup>7</sup> The annual and 24-hour primary SO<sub>2</sub> NAAQS generally will remain in effect for 1 year following the effective date of the initial area designations for the new 1-hour 2010 SO<sub>2</sub> NAAQS. However, the annual and/or 24-hour SO<sub>2</sub> NAAQS will remain in place for a longer period of time for any current nonattainment area for the annual or 24-hour SO<sub>2</sub> NAAQS, and any area for which a state has not fulfilled the requirements for a SIP call. *See* 40 CFR 50.4(e).

<sup>3</sup> For example, if the critical emission value is 1000 pounds of SO<sub>2</sub> 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.

<sup>4</sup> EPA published revisions to the *Guideline on Air Quality Models* on January 17, 2017.

explained that the definition is generally less pertinent to pollutants like SO<sub>2</sub> that usually have a limited number of sources affecting areas of air quality that are relatively well defined, and emissions control measures for such sources result in swift and dramatic improvement in air quality. *Id.* For SO<sub>2</sub>, there is usually a single “step” between pre-control nonattainment and post-control attainment. Therefore, for SO<sub>2</sub>, with its discernible relationship between emissions and air quality, and significant and immediate air quality improvements, RFP is best construed as “adherence to an ambitious compliance schedule.” *Id.* This means that the state must ensure that affected sources implement appropriate control measures as expeditiously as practicable in order to ensure attainment of the standard by the applicable attainment date.

#### F. Contingency Measures

In accordance with section 172(c)(9) of the CAA, SO<sub>2</sub> nonattainment plans must include contingency measures in order to obtain EPA approval. These measures must be fully adopted and should contain trigger mechanisms and an implementation schedule. In addition, they should be included in the SIP as measures that will take effect without further action by the state or EPA. Contingency measures are implemented if RFP targets are not achieved, or if the nonattainment area has not reached attainment by the applicable attainment date. Where an area has already achieved attainment by the attainment date, it has no need to rely on contingency measures to come into attainment or to make further progress to attainment.

EPA has explained that planning for SO<sub>2</sub> poses special considerations. SO<sub>2</sub> control measures are based on what is directly and quantifiably necessary to attain the NAAQS, and it would be unlikely for an area to implement the necessary emissions control yet fail to attain the NAAQS. General Preamble at 13547. Therefore, for SO<sub>2</sub> nonattainment plans, EPA guidance also observes that the contingency measures requirement can be satisfied by the air agency having a comprehensive program to identify sources of violations of the SO<sub>2</sub> NAAQS and to undertake an ‘aggressive’ follow-up for compliance and enforcement.” *Id.* The 2014 SO<sub>2</sub> Guidance provides further explanation of the context in which such an approach may be appropriate for addressing section 172(c)(9) contingency measure requirements for SO<sub>2</sub>. This approach for meeting contingency measure requirements does not preclude a state

from requiring additional contingency measures that are enforceable and appropriate for a particular source or source category. General Preamble at 13547.

### III. Modeled Attainment Plans

The following discussion evaluates various features of the modeling and other elements of Illinois’ nonattainment plans for the Lemont and Pekin areas.

#### A. Model Selection

Illinois’ attainment demonstrations used AERMOD, the preferred model for these applications. Illinois used version 14134 of this model, using regulatory default mode, with no beta options. This version of AERMOD was the recommended version at the time the state conducted its nonattainment planning, and in any case the results of this version are likely to be similar to those that more recent versions would provide, so EPA finds use of this version of AERMOD to be acceptable.

Illinois performed an Auer’s land use analysis which indicates that the Lemont area is approximately 79 percent rural, and the Pekin area is approximately 88 percent rural. A technical support document provides figures, taken from Illinois’ submittal, that show the land use in the Lemont and Pekin areas, respectively, illustrating the areas that are characterized as rural, not urban, in the Auer classification system. EPA finds it appropriate to model these areas as rural areas.

#### B. Meteorological Data

Illinois chose the Chicago O’Hare surface station (WBAN #94846) and the Davenport, Iowa upper air station (WBAN #94982) as the most representative meteorological stations for the Lemont area. Illinois chose the Peoria surface station (WBAN #14842) and Lincoln upper air station (WBAN #048233) as the most representative meteorological stations for the Pekin area. These are the closest National Weather Service surface stations to each respective area. The State determined these stations to be the most representative for the respective modeling domains. The upper air stations were chosen on the basis of regional representativeness. EPA finds Illinois’ choices of surface and upper air meteorological stations appropriate based on: (1) The suitability of meteorological data for the study area; and (2) the actual similarity of surface conditions and surroundings at the emissions source/receptor impact area

compared to the locations of the meteorological instrumentation towers.

#### C. Emissions Data

Illinois chose to include emissions data from all permitted sources within each modeling domain, which consists of a 50 kilometer radius circumscribing an area centered on the violating monitor. Illinois chose not to evaluate which sources would “cause a significant concentration gradient” (40 CFR part 51, appendix W), because that analysis would result in a greater modeling burden, along with significant subjectivity. The inclusion of all permitted sources assures that Illinois’ modeled concentrations are conservative, in that it adds impacts that may also be represented in the background concentration.

Except for the Powerton Generating Station (Powerton) located in the Pekin area, the emission limits for newly limited sources, as outlined in Illinois’ attainment demonstration, correspond to the revised sulfur limitations on a 1-hour basis and are found in 35 Illinois Administrative Code Part 214. The applicable emission limit for Powerton is established on a 30-day average basis and is lower than the modeled 1-hour attainment emission rate (the critical emission value) by virtue of application of an adjustment factor determined and applied in accordance with the 2014 SO<sub>2</sub> Guidance.

Specifically, as discussed further below, the 30-day average limit is about 58 percent of the modeled 1-hour emission rate, or, conversely, the modeled emission rate (the critical emission value) is about 74 percent higher than the 30-day average limit. The emission limits for sources in the Lemont area are all on a 1-hour average basis and equal the modeled emissions rate. EPA finds Illinois’ choice of included sources and modeled emissions appropriate.

#### D. Emission Limits

An important prerequisite for approval of an attainment plan is that the emission limits that provide for attainment be fully enforceable. The revised limits for significant contributing sources are codified in Illinois’ sulfur limitations rule at 35 Illinois Administrative Code Part 214, Subpart AA, titled “Requirements for Certain SO<sub>2</sub> Sources.” The rules also include associated monitoring, testing, and recordkeeping and reporting requirements. A summary of the limits, showing the sum of the allowable hourly emissions for each plant, is shown in Table 1. As shown in this table, the emission limit for Powerton is

expressed as a 30-day average limit. Other limits in the rule are expressed as 1-hour average limits. EPA’s review of Illinois’ nonattainment plan addresses

the use of these limits, both with respect to the general suitability of using such limits in attainment demonstrations, and whether Illinois has demonstrated

that the particular limits included in the plan provide for attainment.

TABLE 1—EMISSION LIMITS IN SUBMITTED ILLINOIS RULES

Facility	Sum of allowable emissions (pounds/hour)	Averaging time for limits
<b>Limits for Sources in or near Lemont Area</b>		
Ingredion .....	175.91	1-hour.
Midwest Generation Joliet .....	855.26	1-hour.
Midwest Generation Will County .....	5,145.14	1-hour.
Owens Corning .....	82.78	1-hour.
Oxbow Midwest Calcining .....	187.00	1-hour.
<b>Limits for Sources in or near Lemont Area</b>		
Aventine .....	26.80	1-hour.
Illinois Power E.D. Edwards .....	4,856	1-hour.
Midwest Generation Powerton .....	3,452	30-day.

Illinois also modeled a number of other sources in its attainment demonstration, basing allowable emissions on limits established in state permits. EPA addresses the enforceability of the limits in the plans and Illinois’ use of a 30-day average emission limit for Powerton below.

1. Enforceability

In preparing its plans, Illinois adopted revisions to a previously approved state regulation governing emissions of SO<sub>2</sub>. These rule revisions were adopted by the Illinois Pollution Control Board following established, appropriate public review procedures. In addition, the rule revisions provide unambiguous, permanent emission limits, expressed in pounds per hour of allowable SO<sub>2</sub> emissions, that, if exceeded by a source, would be clear grounds for an enforcement action.

In comments to the state, Sierra Club requested that the rule being adopted by Illinois “incorporate enforceable restrictions for all sources for which emissions reductions were included in the modeling that demonstrated attainment.” EPA’s 2014 SO<sub>2</sub> Guidance addresses the need for enforceability of the limits necessary to provide for attainment. The Guidance states, “An approvable attainment demonstration would . . . demonstrate that the emission limits in the plan will suffice to provide for timely attainment . . . In cases where the necessary emission limits have not previously been made a part of the SIP, or have not otherwise become federally enforceable, the plan needs to include the necessary enforceable limits in adopted form

suitable for incorporation into the SIP.” See 2014 SO<sub>2</sub> guidance, p. 9.

The most significant sources in and near the designated nonattainment areas are subject to new emission limits that Illinois adopted as part of its part 214 rules. In particular, all of the sources that needed to reduce emissions in order for the nonattainment areas to attain the standard or that needed a reduced allowable emission level in order for the areas to maintain attainment of the standard are subject to limits adopted as part of the rule. Thus, the sources that are most critical to the future success of the attainment plans (including all of the significant units at these sources) are subject to limitations adopted in Illinois’ rule. Illinois did not submit already federally enforceable permits for incorporation into the SIP, even if the modeling showing future attainment accounted for such limits. However, as previously discussed, all of the emission reductions that Illinois identified as necessary to bring the Lemont and Pekin areas into attainment are mandated by emission limits in the rule. Those sources for which Illinois’ modeled emissions were based on federally enforceable limits already established in permits rather than in the new rules are sources that are already required to meet emission levels that should, combined with the new rule limits, provide for attainment of the standard, so that no further emission reductions are necessary for these sources in order for the SIP to provide for NAAQS attainment.

EPA reviewed the basis of the existing emission limits for the most significant of those sources not needing to reduce emissions below existing levels. In

general, for these sources, the limits that underlie the allowable emission levels that Illinois modeled were established in federally enforceable construction permits. In some cases, these permits were to authorize major modifications or major new sources, in accordance with requirements for prevention of significant deterioration (PSD). In other cases, notably for the refineries, Illinois issued these limits in federally enforceable form in accordance with a federal-state consent decree. For example, the limits on emissions from the primary emission sources at CITGO, originally established by consent decree, have been incorporated into PSD permit number 05070003. The limits established in such permits are federally enforceable. In accordance with EPA’s guidance on the use of federally enforceable limits, EPA finds that these limits are an appropriate estimate of the maximum allowable emissions under the plans, and so EPA finds that these limits represent an appropriate basis for modeling to determine whether Illinois’ nonattainment plan provides for attainment.

Illinois has requested EPA to approve revisions to emission limits for significant sources within the Pekin and Lemont areas in 35 Illinois Administrative Code part 214, as part of the SIP, and EPA proposes to approve these new emission limits because they, in combination with permit limits that are already federally enforceable, provide adequate enforceability of the necessary emission limits for the purposes of Illinois’ nonattainment plans.

## 2. Longer Term Average Limits

As noted above, the 2014 SO<sub>2</sub> Guidance discusses the option to establish limits with averaging times up to 30 days in length that are comparably stringent to the 1-hour average limit that would otherwise have been set, and recommends a detailed procedure for determining such a comparably stringent limit. The Guidance also notes that it might be appropriate to establish supplemental limits in order to limit the magnitude and/or frequency of elevated emissions, as a means of further reducing the likelihood of elevated emissions occurring on those occasions when the meteorology is conducive to high concentrations of SO<sub>2</sub>.

Based on the variability of emissions at Powerton, Illinois opted to set the emission limit for this facility on a 30-day average basis. Illinois closely followed the recommendations of the 2014 SO<sub>2</sub> Guidance in determining an appropriate level for this limit. As a first step, Illinois conducted modeling which determined that the 1-hour emission limit that would provide for attainment (the critical emissions value) would be 6,000 pounds of SO<sub>2</sub> per hour. That is, Illinois conducted a series of modeling runs identifying baseline allowable air quality (in absence of emission reductions), evaluating the air quality consequences of feasible emission reductions, and ultimately identifying a set of reduced allowable emission levels that would provide for attainment. In this attaining set of “critical emission levels,” the “critical emission level” for Powerton was 6,000 pounds per hour.

Illinois then used a database of hourly SO<sub>2</sub> emissions data from a source comparable with Powerton to determine the historical and expected future relationship between 1-hour and 30-day average actual emission levels of a source using the control technology that Powerton will employ. Illinois’ submittal notes that Powerton (presumably for purposes of satisfying the Mercury and Air Toxics Standards) is expected to install “a trona injection dry FGD system for the control of SO<sub>2</sub> emissions before 2017, so historical data from the units at the source would not be appropriate” as a basis for determining the prospective relationship between 1-hour and 30-day average emissions once the control is installed. See Illinois submittal, Technical Support Document, page 9. “As a substitute, [Illinois used] a data set consisting of 42 months of emissions data from the Potomac River Generating Station, located in Alexandria, Virginia, [which] are similar to the Powerton units, and were operated with trona

injection systems during the time this data set was created.” *Id.* Using this data set, Illinois determined the 99th percentile of the historical 1-hour values in this data set to be 1,107 pounds per hour and the 99th percentile of the historical 30-day average values calculated from this data set to be 637 pounds per hour. Illinois used the ratio between these two 99th percentile values (*i.e.*, approximately 58 percent) as an adjustment factor to multiply by the critical emissions value (the otherwise applicable 1-hour emission limit) of 6,000 pounds per hour to determine a comparably stringent 30-day average limit of 3,452 pounds per hour. This adjustment factor is quite similar to, and slightly more conservative (*i.e.*, it reflects a more stringent long term limit) than, the average adjustment factor discussed in EPA’s 2014 SO<sub>2</sub> Guidance for facilities using dry scrubbers, an average adjustment factor of 63 percent. See appendix D of EPA’s 2014 Guidance.

As noted above, EPA’s 2014 SO<sub>2</sub> Guidance notes the benefit of supplementing long term average limits with additional limits to reduce the likelihood and/or the magnitude of emission levels above the 1-hour critical emission value. For this purpose, Illinois’ rules supplement the 30-day average limit for Powerton with a requirement that emissions not exceed 6,000 pounds per hour more than 5 percent of the hours (as a 1-hour average) during any 30-day averaging period. By constraining the likelihood of elevated emissions, and thereby reducing the likelihood that elevated emissions will occur at times when meteorology is conducive to high SO<sub>2</sub> concentrations, this supplemental limit further strengthens the degree of confidence that Illinois’ plan for the Pekin area should result in attainment.

Based on a review of the state’s submittal, the 3,452 pounds per hour 30-day average limit for Powerton, supplemented with a limit on the percentage of time that Powerton may exceed the 6,000 pounds per hour critical emission value, provides a suitable alternative to establishing a 6,000 pounds per hour 1-hour average emission limit for this source. The state used a suitable database and then applied an appropriate adjustment, yielding an emission limit that has comparable stringency to the 1-hour average limit that the state determined would otherwise have been necessary to provide for attainment. While the 30-day average limit allows for occasions in which emissions are higher than the level that would be allowed under the 1-hour limit, the state’s limit

compensates by requiring average emissions to be lower than the level that would otherwise have been required by a 1-hour average limit. Further, the supplemental limit adopted by Illinois ensures that elevated emissions will be infrequent. Thus, the 30-day average limit of 3,452 pounds per hour as supplemented is comparably as stringent as a 1-hour limit of 6,000 pounds per hour. Furthermore, Illinois’ modeling of 6,000 pounds per hour for Powerton is an appropriate means of assessing whether the 30-day average limit of 3,452 pounds per hour plus supplemental limit provides for attainment.

Based on EPA’s review of this information, the 30-day average limit for Powerton, in combination with other limitations in the state’s plan (most notably the limits summarized in Table 1 above), should provide for attainment.

## E. Background Concentrations

Illinois used seasonally varying hourly background data. These values were taken from an SO<sub>2</sub> monitor in Oglesby, Illinois, which is located approximately half way between the two areas. There were 24 hourly values for each season, for a total of 96 monitored concentration values. Each of these values represents a three-year average (2011–2013) of the second highest hourly concentration for each season.<sup>8</sup> The values that Illinois determined range from 1.54 to 12.22 micrograms per cubic meter (µg/m<sup>3</sup>). EPA has reviewed these background concentrations and finds these values appropriate as modeling inputs.

## F. Review of Modeling Concerns Addressed by Illinois

During preparation of its nonattainment plans, Illinois received and responded to a number of comments by, among others, the Sierra Club and the Environmental Law and Policy Center that EPA believes warrant further review and explanation. Sierra Club noted that the nonattainment plans provide only a relatively small margin of attainment, and Sierra Club commented (among other comments)

<sup>8</sup> Since this 3-year period has 1,096 days, and the data set for each hour of the day is divided into four seasons of data sets, the data set for the determination of each of the 96-hour and season-specific background concentration includes a maximum of about 274 values. The selection of the second highest value is considered to provide an appropriate degree of conservatism in determining the background concentration for each hour and season. AERMOD then reports results that reflect the addition of the appropriate background value; for example, concentrations reported for an 8 a.m. hour in springtime reflect the sum of the source impacts for that hour plus the springtime 8 a.m. background concentration.

that in this context, various types of emissions that Illinois does not account for could result in these areas violating the standard. EPA has reviewed the comments that Sierra Club provided to Illinois and the response that Illinois provided in a document dated August 28, 2015. (These comments and responses were included in Illinois' SIP submittal and thus are available in the docket for this action).

First, Sierra Club expressed concerns about emissions from modeled sources that are not subject to Illinois Administrative Code section 214.603. Section 214.603 includes the following sources: Aventine Renewable Energy; Illinois Power Holdings E.D. Edwards; Ingredient Bedford Park; Midwest Generation Joliet; Midwest Generation Powerton; Midwest Generation Will County; Owens Corning; and Oxbow Midwest Calcining. Sierra Club commented that emissions from start-up, shutdown, and malfunction that represent noncompliance could lead to a violation of the NAAQS. Illinois responded that maximum allowable emissions for the sources were used, and that these allowable emissions are enforceable through emission limitations in other regulations or permit conditions. EPA agrees with Illinois' response, finding that while emissions above allowable levels may occasionally occur, excess emissions that are prohibited by applicable requirements (whether they are occurring during start-up, shutdown, or malfunctions or at other times) need not be considered in evaluating whether a plan provides for attainment. That is, if a plan requires emissions to be sufficiently low to achieve attainment, EPA considers the plan to satisfy the requirement to provide for attainment, and the possibility of noncompliance that causes violations is an enforcement concern and not an indication that the plan has failed to provide for attainment.

Second, Sierra Club expressed concern regarding emissions from minor sources. Sierra Club expressed particular concern about minor sources being authorized by "permits by rule" that exempt the sources from review of their impact on SO<sub>2</sub> air quality. In expressing this concern, Sierra Club did not identify any permits by rule that had been issued or that were under consideration, or levels of emissions that might arise from such authorizations that may cause concern about maintaining attainment of the standard. Furthermore, Sierra Club did not identify examples of source types that might be minor enough to be authorized by a permit by rule and yet

significant enough to cause the potential for violations of the SO<sub>2</sub> standard. Illinois responded that no such "permits by rule" exist that exempt minor sources with SO<sub>2</sub> emissions from review of air quality impacts. Illinois further noted that, even in the hypothetical situation that such a permit by rule existed, new minor sources, and minor modifications at major sources, in general contribute very little to SO<sub>2</sub> ambient concentrations, but in any case that Illinois conducts additional modeling in cases where the potential for air quality problems exists. Illinois' minor source permitting program provides adequate protection against minor sources and minor modifications causing violations of the SO<sub>2</sub> standard.

Third, Sierra Club contended that while Illinois claims more than 99 percent emission reduction at many sources, presumably based on the requirement that Illinois has now adopted rules requiring industrial sources that burn diesel fuel or residual oil to burn ultra-low sulfur fuel, these requirements cannot achieve the 99 percent reduction at modeled sources that Illinois claimed. It appears that Illinois is claiming that the rules reduced allowable emissions by more than 99 percent, while Sierra Club is asserting that there will be no such percent reduction in actual emissions. Illinois responded that the relevant issue is whether the emission level required by the rules is an appropriate level consistent with attaining the standard, not the percent reduction in relation to prior actual or allowable emissions. That is, the percent reduction that results from Illinois' rules, and whether it is calculated on the basis of actual or allowable emissions, is not germane to the attainment demonstration, which is designed to demonstrate that allowable emissions are sufficiently low to provide for attainment. EPA agrees that, irrespective of the precise relationship between current and required future emissions, *i.e.*, irrespective of what emission reduction percentage the rule requires relative to current emission levels, the rules require emissions to be at levels that provide for attainment.

Fourth, Sierra Club expressed concern that the flares modeled by Illinois will have "much higher" emissions during routine operations, such as flaring off gases during start-up, shutdown, and malfunction events when compared to pilot emissions, and that Illinois did not model these higher emission rates. Illinois responded that the flares have limits on their allowable emissions (which apply at all times, including during the events of concern to the

Sierra Club), and the flares were modeled at their maximum allowable emission rates. The most significant flares in the Lemont area are at the CITGO and Exxon-Mobil refineries; these flares were addressed in a consent decree,<sup>9</sup> with terms and conditions subsequently incorporated into federally enforceable state permits requiring compliance with new source performance standards. The most significant flare in the Pekin area, at Aventine, is subject to emission limits in the state rules submitted in Illinois' plan. As noted above, these emission limits are practically enforceable, and the approach taken by Illinois in modeling maximum allowable emission rates is consistent with EPA recommendations for attainment demonstration modeling. EPA agrees with Illinois' rationale and conclusions regarding Sierra Club's concerns about Illinois' modeling analysis.

Finally, Sierra Club expressed concern regarding the impacts of possible emission "spikes" at Powerton, *i.e.*, occasions with elevated emissions that would be permissible under the 3,452 pound per hour 30-day average emission limit applicable to the facility. Sierra Club in particular urged the adoption of supplemental limits to restrict the magnitude and frequency of these emission spikes. As described earlier, Illinois responded by adopting a supplemental limit requiring that no more than 5 percent of the hours in any 30-day averaging period may have emissions in excess of 6,000 pounds per hour, which is the modeled critical emissions value. EPA believes this supplemental limit appropriately addresses Sierra Club's concern.

### G. Summary of Results

The final dispersion modeling results submitted by Illinois show design value concentrations of 190.9 and 196.2 µg/m<sup>3</sup> for the Lemont and Pekin nonattainment areas, respectively. Both of these design value concentrations are below 75 ppb, which corresponds to 196.4 µg/m<sup>3</sup>, and therefore Illinois' modeling analysis demonstrates attainment of the 2010 SO<sub>2</sub> NAAQS for the Lemont and Pekin areas. EPA has reviewed Illinois' attainment demonstrations, agrees with Illinois' submitted results, and proposes to determine that Illinois' plans provide for attainment of the 2010 primary SO<sub>2</sub> NAAQS in the Lemont and Pekin nonattainment areas.

<sup>9</sup>For example, for CITGO, see Civil Action Number H-04-3883 entered January 26, 2005 in the Southern District of Texas.

#### IV. Review of Residual and Distillate Fuel Oil Sulfur Content Limits

In conjunction with its adoption of SO<sub>2</sub> emission limits for major sources, Illinois adopted rule revisions to limit the sulfur content of distillate and residual fuel oil combusted at stationary sources throughout the state. Consistent with trends toward increasing availability and use of lower sulfur oil of all kinds, these limits were intended to assure that the considerable number of generally smaller boilers that burn these fuels use fuels with relatively low sulfur content. The new limits adopted by Illinois will help protect air quality in the entire state, including the Lemont and Pekin nonattainment areas. As a result, EPA proposes to approve these rule amendments as part of the SIP.

On and after January 1, 2017, the sulfur content of residual fuel oil combusted at stationary sources will be limited to 1,000 parts per million (ppm), and sulfur content of distillate fuel oil will be limited to 15 ppm. These limits apply to facilities that exclusively burn liquid fuel. These limits were adopted as part of Title 35 of Illinois Administrative Code part 215 subparts B and D, in sections 214.121, 214.122, and 214.161. Section 214.121(b) sets these limits for large sources (sources with actual heat input greater than 73.2 megawatts (MW)), and section 214.122(b) sets these limits for small sources (sources with actual heat input smaller than, or equal to, 73.2 MW).

Section 214.161(c) and (d) set exceptions from the sulfur content limitations mentioned above for specific sources. Section 214.161(c) lists exceptions for Midwest Generation Joliet, Powerton, Waukegan, and Will County power stations or electric generating units (EGUs). These sources must comply with the following limitations: (1) From January 1, 2016 through December 31, 2018, the sulfur content of all distillate fuel oil purchased for use by the listed EGUs must not exceed 15 ppm; (2) from January 1, 2017 through December 31, 2018, the sulfur content of all distillate fuel oil used by the listed EGUs must not exceed 500 ppm; and (3) on and after January 1, 2019, the sulfur content of all distillate fuel oil used by the listed EGUs must not exceed 15 ppm. Section 214.161(d) sets an exception for Caterpillar Montgomery, and sets the following limit: On and after January 1, 2016, the sulfur content of all distillate

fuel oil purchased for use by this source must not exceed 15 ppm, and the sulfur content of all distillate fuel oil used by this source must not exceed 500 ppm. These exemptions provide the listed sources with additional time to burn existing stocks of higher sulfur oils, but ultimately require these sources to meet the same sulfur content limits as apply to other sources in the state.

For the sources to which these alternate provisions apply that are in or near the Lemont or Pekin areas, the attainment modeling reflects the emissions that are allowable as of January 1, 2017, without regard to the tighter limits that apply two years thereafter. Thus, Illinois' modeling shows that these short term extensions of the deadline for complying with the generally applicable oil sulfur content limits do not prevent timely attainment. In addition, for the rest of the state, these limits strengthen the SIP and help improve air quality. For these reasons, EPA proposes to approve these rule amendments.

In the rulemaking adopting the above elements of its Part 214 rules, Illinois also adopted revisions to Part 225 and 217. However, Illinois' Lemont and Pekin nonattainment plans are not contingent on any of the provisions of these parts of Illinois administrative code, and these rules were not submitted as a part of this SIP revision request. Thus, EPA is taking no action with respect to those revisions as part of this action.

#### V. Review of Other Plan Requirements

##### A. Emissions Inventory

The emissions inventory and source emission rate data for an area serve as the foundation for air quality modeling and other analyses that enable states to: (1) Estimate the degree to which different sources within a nonattainment area contribute to violations within the affected area; and (2) assess the expected improvement in air quality within the nonattainment area due to the adoption and implementation of control measures. As noted above, the state must develop and submit to EPA a comprehensive, accurate and current inventory of actual emissions from all sources of SO<sub>2</sub> emissions in each nonattainment area, as well as any sources located outside the nonattainment area which may affect attainment in the area. See CAA section 172(c)(3).

Illinois provided a comprehensive, accurate, and current inventory of emissions of SO<sub>2</sub> in and within 50 kilometers of the Lemont and Pekin areas. By addressing sources to this distance from the nonattainment areas, Illinois has developed a thorough list of the sources with any potential to cause impacts that warrant including in the areas' attainment modeling. Illinois' initial submittal provided inventories of allowable emissions, and then Illinois supplemented this information on May 4, 2017 with a submittal of inventories of actual emissions.

As noted above, these inventories addressed sources within 50 kilometers of the Lemont and Pekin nonattainment areas. These inventories addressed 425 sources in and near Lemont and 48 sources in and near Pekin. Once Illinois compiled its inventory of current allowable emissions, Illinois conducted modeling to determine the degree to which the applicable emission limitations allowed violations of the SO<sub>2</sub> air quality standard. Illinois then conducted a series of additional modeling runs to determine a set of emission limits that would provide for attainment. In accordance with EPA guidance, Illinois' attainment demonstration is based on modeling using allowable emissions to demonstrate that its plans provide for attainment. This reflects Illinois' intent to ensure that emissions are required to be sufficiently low as to achieve attainment, *i.e.*, that allowable emissions will not cause violations. Similarly, Illinois' plans are designed to meet the other part D requirements on the basis of allowable emissions, for example by setting allowable emissions at a level that satisfy applicable requirements for RACT/RACM and RFP. Illinois did not use actual emissions in this planning process. Accordingly, Illinois initially provided an inventory of allowable emissions, which served the needs of the pertinent nonattainment planning requirements. Then, in its May 4, 2017, submittal, Illinois also submitted a comprehensive, accurate, current inventory of actual emissions. Tables 1 and 2 summarize actual emissions in 2014 for a subset of these sources, namely those sources that have actual SO<sub>2</sub> emissions of at least 100 tons per year. Therefore, Illinois has met the emission inventory requirement of CAA section 172(c)(3) for the Pekin and Lemont areas.

TABLE 2—ACTUAL 2014 SO<sub>2</sub> EMISSIONS IN LEMONT AREA EXCEEDING 100 TONS PER YEAR

Source name	Actual SO <sub>2</sub> (tpy)
Midwest Generations—Joliet Station 29 .....	12,800
Will County Generating Station .....	10,478
Ingredion Incorporated Argo Plant .....	1,671
Exxon Mobil Oil Corp .....	1,562
Koppers Inc .....	867
CITGO Petroleum Corp .....	346
Ardagh Glass Inc .....	145

TABLE 3—ACTUAL 2014 SO<sub>2</sub> EMISSIONS IN PEKIN AREA EXCEEDING 100 TONS PER YEAR

Source name	Actual SO <sub>2</sub> (tpy)
Midwest Generation LLC .....	16,717
Illinois Power Resources Generating LLC—Edwards Energy Ctr .....	8,278
Aventine Renewable Energy, Inc .....	7,292
Illinois Power Resources Generating LLC—Duck Creek Energy .....	240
Keystone Steel & Wire Co .....	129

### B. RACM/RACT

Illinois's plan reflects a number of strategies to reduce emissions at various facilities. In the Lemont area, the Joliet power plant and Unit 3 of the Will County power plant will cease burning coal and will instead either burn natural gas or ultra-low sulfur diesel. In the Pekin area, substantial emission reductions will result from conversion of the Aventine facility switching from burning coal to burning natural gas and from implementation of emission control equipment at the E.D. Edwards and Powerton power plants. Both areas will also benefit from statewide requirements for boilers burning fuel oil to burn low sulfur fuel.

In its August 8, 2016, supplemental submittal, Illinois explained its rationale for concluding that the plans meet the RACM/RACT requirement in accordance with EPA guidance. Specifically, following EPA's interpretation that RACT and RACM reflect "the level of emissions control that is necessary to provide for expeditious attainment of the NAAQS within a nonattainment area," Illinois noted that its nonattainment plans require permanent and enforceable control measures that provide for timely attainment. 35 Illinois Administrative Code section 214.603 lists the appropriate source-specific SO<sub>2</sub> emission limits by unit, in pounds per hour. Therefore, Illinois has satisfied the RACM/RACT requirements for the Lemont and Pekin areas.

### C. NSR

EPA approved Illinois' nonattainment new source review rules on December 17, 1992 (57 FR 59928); September 27,

1995 (60 FR 49780) and May 13, 2003 (68 FR 25504). These rules provide for appropriate new source review for SO<sub>2</sub> sources undergoing construction or major modification in the Lemont and Pekin areas without need for modification of the approved rules. Although these rules predated promulgation of the 2010 SO<sub>2</sub> standards, these rules are written in a manner such that new sources within areas that become designated nonattainment for this new standard, such as the Lemont and Pekin areas, become subject to these nonattainment new source review requirements. Therefore, this requirement has been met for these areas.

### D. RFP

In its August 8, 2016, supplemental submittal, Illinois explained its rationale for concluding that the plans meet the requirement for RFP in accordance with EPA guidance. Specifically, Illinois's rationale is based on EPA guidance interpreting the RFP requirement being satisfied for SO<sub>2</sub> if the plan requires "adherence to an ambitious compliance schedule" that "implement[s] appropriate control measures as expeditiously as practicable." Illinois noted that its nonattainment plans provide for attainment as expeditiously as practicable, *i.e.*, by January 1, 2017, and finds that the plans thereby satisfy the requirement for RFP. Therefore, Illinois has satisfied the RFP requirements for the Lemont and Pekin areas.

### E. Contingency Measures

In its August 8, 2016, supplemental submittal, Illinois explained its rationale for concluding that the plans

met the requirement for contingency measures in accordance with EPA guidance. Specifically, Illinois relies on EPA's guidance, noting the special circumstances that apply to SO<sub>2</sub> (as discussed above), and explaining on that basis why the contingency requirement in CAA section 172(c)(9) is met for SO<sub>2</sub> by having a comprehensive program to identify sources of violations of the SO<sub>2</sub> NAAQS and to undertake an aggressive follow-up for compliance and enforcement of applicable emissions limitations. Illinois stated that it has such an enforcement program pursuant to Section 31 of the Illinois Environmental Protection Act, identifying violators and taking prompt, appropriate enforcement action, and concludes that Illinois' nonattainment plans satisfy contingency measure requirements. Therefore, Illinois has satisfied the contingency measure requirements for the Lemont and Pekin areas.

### VI. EPA's Proposed Action

EPA is proposing to approve Illinois' submission as a SIP revision, which the state submitted to EPA on March 2, 2016, and supplemented on August 8, 2016, and May 4, 2017, for attaining the 2010 1-hour SO<sub>2</sub> NAAQS for the Lemont and Pekin SO<sub>2</sub> nonattainment areas.

These SO<sub>2</sub> nonattainment plans include Illinois' attainment demonstration for the Lemont and Pekin SO<sub>2</sub> nonattainment areas. These nonattainment plans also address requirements for emission inventories, RACT/RACM, RFP, and contingency measures. Illinois has previously addressed requirements regarding nonattainment area new source review. EPA has determined that Illinois' SO<sub>2</sub>

nonattainment plans meet the applicable requirements of CAA sections 172, 191, and 192. EPA is taking public comments for thirty days following the publication of this proposed action in the **Federal Register**. EPA will take all comments into consideration in our final action.

### VII. Incorporation by Reference

In this rule, EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference Illinois Administrative Code, Title 35, Subtitle B, Chapter I, Subchapter c, Part 214, Sections 214.121, 214.122, 214.161, 214.600, 214.601, 214.602, 214.603, 214.604, and 214.605, effective December 7, 2015. EPA has made, and will continue to make, these documents generally available through [www.regulations.gov](http://www.regulations.gov), and/or at the EPA Region 5 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

### VIII. Statutory and Executive Order Reviews

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 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 proposed 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 proposed 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 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 Clean Air Act; 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, 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 and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: September 17, 2017.

**Robert A. Kaplan,**

*Acting Regional Administrator, Region 5.*

[FR Doc. 2017-21371 Filed 10-4-17; 8:45 am]

**BILLING CODE 6560-50-P**

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[EPA-R09-OAR-2017-0377; FRL-9968-89-Region 9]

### Approval of Arizona Air Plan Revision; San Manuel, Arizona; Second 10-Year Sulfur Dioxide Maintenance Plan

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to approve the second 10-year maintenance plan for the San Manuel area in Arizona for the 1971 National Ambient Air Quality

Standards (NAAQS or "standards") for sulfur dioxide (SO<sub>2</sub>).

**DATES:** Any comments on this proposal must arrive by November 6, 2017.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R09-OAR-2017-0377 at <https://www.regulations.gov>, or via email to Ashley Graham, Air Planning Office at [graham.ashleyr@epa.gov](mailto:graham.ashleyr@epa.gov). For comments submitted at [Regulations.gov](http://Regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be removed or edited from [Regulations.gov](http://Regulations.gov). For either manner of submission, the EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (*e.g.*, audio or video) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

**Docket:** The index to the docket for this action is available electronically on the [www.regulations.gov](http://www.regulations.gov) Web site and in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California 94105. While all documents in the docket are listed in the index, some information may be publicly available only at the hard copy location (*e.g.*, copyrighted material), and some may not be publicly available at either location (*e.g.*, CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section below.

**FOR FURTHER INFORMATION CONTACT:** Ashley Graham, EPA Region IX, (415) 972-3877, [graham.ashleyr@epa.gov](mailto:graham.ashleyr@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document, the words "we," "us," or "our" mean the EPA.

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