



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 52 and 81**

**[EPA-R04-OAR-2020-0003; FRL-10009-11-Region 4]**

**Air Plan Approval and Designation of Areas; KY; Redesignation of the Jefferson County  
2010 1-Hour Sulfur Dioxide Nonattainment Area to Attainment**

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

**ACTION:** Proposed rule.

**SUMMARY:** In a letter dated December 9, 2019, the Commonwealth of Kentucky, through the Kentucky Division of Air Quality (KDAQ) on behalf of the Louisville Metro Air Pollution Control District (LMAPCD), submitted a request for the Environmental Protection Agency (EPA) to redesignate the Jefferson County sulfur dioxide (SO<sub>2</sub>) nonattainment area (hereinafter referred to as the “Jefferson County Area” or “Area”) to attainment for the 2010 1-hour SO<sub>2</sub> primary national ambient air quality standard (NAAQS) and to approve an accompanying state implementation plan (SIP) revision containing a maintenance plan for the Area. EPA is proposing to determine that the Jefferson County Area has attained the 2010 1-hour SO<sub>2</sub> NAAQS; to approve the SIP revision containing the Commonwealth’s plan for maintaining attainment of the 2010 1-hour SO<sub>2</sub> standard and to incorporate the maintenance plan into the SIP; and to redesignate the Jefferson County Area to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS.

**DATES:** Comments must be received on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**].

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R04-OAR-2020-0003 at <http://www.regulations.gov>. Follow the online instructions for submitting comments.

Once submitted, comments cannot be edited or removed from Regulations.gov. 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, 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>.

**FOR FURTHER INFORMATION CONTACT:** Madolyn Sanchez, Air Regulatory Management Section, Air Planning and Implementation Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Ms. Sanchez may be reached by phone at (404) 562-9644 or via electronic mail at [sanchez.madolyn@epa.gov](mailto:sanchez.madolyn@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. What are the Actions EPA is Proposing to Take?**

EPA is proposing to take the following three separate but related actions: (1) to determine that the Jefferson County Area has attained the 2010 1-hour SO<sub>2</sub> NAAQS; (2) to approve Kentucky's plan for maintaining the 2010 1-hour SO<sub>2</sub> NAAQS in the Area through 2032 and incorporate it into the SIP; and (3) to redesignate the Jefferson County Area to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS. The Jefferson County Area is comprised of the portion of Jefferson

County encompassed by the polygon with the vertices using Universal Traverse Mercator (UTM) coordinates in UTM zone 16 with datum NAD83 as follows: (1) Ethan Allen Way extended to the Ohio River at UTM Easting (m) 595738, UTM Northing 4214086 and Dixie Highway (US60 and US31W) at UTM Easting (m) 597515, UTM Northing 4212946; (2) Along Dixie Highway from UTM Easting (m) 597515, UTM Northing 4212946 to UTM Easting (m) 595859, UTM Northing 4210678; (3) Near the adjacent property lines of Louisville Gas and Electric-Mill Creek Electric Generating Station and Kosmos Cement where they join Dixie Highway at UTM Easting (m) 595859, UTM Northing 4210678 and the Ohio River at UTM Easting (m) 595326, UTM Northing 4211014; (4) Along the Ohio River from UTM Easting (m) 595326, UTM Northing 4211014 to UTM Easting (m) 595738, UTM Northing 4214086. The Area consists primarily of the Louisville Gas & Electric (LG&E) Mill Creek Generating Station (Mill Creek) and the area surrounding the monitor immediately north of that facility. Mill Creek is the only point source of SO<sub>2</sub> emissions within the Jefferson County Area.

EPA is proposing to determine that the Jefferson County Area has attained the 2010 1-hour SO<sub>2</sub> NAAQS. EPA is also proposing to approve Kentucky's SIP revision containing the maintenance plan for the Jefferson County Area in accordance with the requirements of section 175A of the Clean Air Act (CAA or Act). The maintenance plan submitted with Kentucky's request for redesignation is intended to help keep the Jefferson County Area in attainment of the 2010 1-hour SO<sub>2</sub> NAAQS through the year 2032.

EPA is also proposing to determine that the Jefferson County Area has met the requirements for redesignation under section 107(d)(3)(E) of the CAA. Accordingly, EPA is

proposing to approve a request to change the legal designation of the portion of Jefferson County that is designated nonattainment to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS.

## **II. Background**

On June 2, 2010, EPA revised the primary SO<sub>2</sub> NAAQS, establishing a new 1-hour SO<sub>2</sub> standard of 75 parts per billion (ppb). *See* 75 FR 35520 (June 22, 2010).<sup>1</sup> Under EPA's regulations at 40 CFR part 50, the 2010 1-hour SO<sub>2</sub> NAAQS is met at a monitoring site when the 3-year average of the annual 99th percentile of daily maximum 1-hour average concentrations is less than or equal to 75 ppb (based on the rounding convention in 40 CFR part 50, appendix T). *See* 40 CFR 50.17. Ambient air quality monitoring data for the 3-year period must meet a data completeness requirement. A year meets data completeness requirements when all four quarters are complete, and a quarter is complete when at least 75 percent of the sampling days for each quarter have complete data. A sampling day has complete data if 75 percent of the hourly concentration values, including state-flagged data affected by exceptional events which have been approved for exclusion by the Administrator, are reported.<sup>2</sup>

Upon promulgation of a new or revised NAAQS, the CAA requires EPA to designate as nonattainment any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the NAAQS. EPA designated the Jefferson County Area as nonattainment for the 2010 1-hour SO<sub>2</sub> NAAQS, effective on October 4, 2013, based on 2009-2011 complete, quality assured, and certified ambient air quality data. *See* 78 FR 47191 (August 5, 2013). Under the CAA, nonattainment areas must attain the NAAQS as expeditiously as

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<sup>1</sup> On February 25, 2019, EPA retained the existing 2010 primary NAAQS for SO<sub>2</sub> of 75 parts per billion (ppb) based on the 3-year average of the 99th percentile of the annual distribution of 1-hour daily maximum concentrations. *See* 84 FR 9866.

<sup>2</sup> *See* 40 CFR part 50, appendix T, section 3(b).

practicable but not later than five years after the October 4, 2013, effective date of the designation. *See* CAA section 192(a). Therefore, the Jefferson County Area’s applicable attainment date was no later than October 4, 2018.

EPA’s 2010 SO<sub>2</sub> nonattainment designation for the Area triggered an obligation for Kentucky to develop a nonattainment SIP revision addressing certain requirements under title I, part D, subpart 1 (hereinafter “Subpart 1”), and to submit that SIP revision to EPA in accordance with the deadlines in title I, part D, subpart 5 (hereinafter “Subpart 5”). Subpart 1 contains the general requirements for nonattainment areas for criteria pollutants, including requirements to develop a SIP that provides for the implementation of reasonably available control measures (RACM), requires reasonable further progress (RFP), includes base-year and attainment-year emissions inventories, a SIP-approved nonattainment new source review (NNSR) permitting program, enforceable emission limitations and other such control measures, and provides for the implementation of contingency measures. This SIP revision was due within 18 months following the October 4, 2013, effective date of designation (i.e., April 4, 2015). *See* CAA section 191(a). Kentucky submitted a nonattainment SIP revision to EPA on June 23, 2017.<sup>3</sup> On June 28, 2019 (84 FR 30920), EPA approved Kentucky’s June 23, 2017, SO<sub>2</sub> nonattainment SIP revision. EPA determined that the nonattainment SIP revision met the applicable requirements of sections 110, 172, 191, and 192 of the CAA and nonattainment regulatory requirements at 40 CFR part 51 (including Kentucky’s attainment modeling demonstration for

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<sup>3</sup> EPA published a notice on March 18, 2016 (81 FR 14736), announcing its finding that Kentucky (and other pertinent states) had failed to submit the required SO<sub>2</sub> nonattainment plan by the submittal deadline. The finding initiated a deadline under CAA section 179(a) for the potential imposition of NNSR offset and highway funding sanctions. However, pursuant to Kentucky’s submittal of June 23, 2017 (received by EPA on July 6, 2017), and EPA’s subsequent letter dated October 10, 2017, to Kentucky finding the submittal to be complete and noting the termination of these sanctions deadlines, the sanctions under section 179(a) were not and will not be imposed as a result of Kentucky having missed the April 4, 2015, submittal deadline.

the Jefferson County Area). As discussed in Section V below, the attainment modeling demonstration inputs included SO<sub>2</sub> emission limits and compliance parameters (monitoring, recordkeeping, and reporting) at Mill Creek established in the facility's title V permit 145-97-TV(R3) at Plant-wide Specific condition S1-Standards, S2-Monitoring and Record Keeping, and S3-Reporting. EPA incorporated these limits and parameters into the SIP as part of its final action on Kentucky's nonattainment SIP revision, thus making them permanent and enforceable controls.

### **III. What are the Criteria for Redesignation?**

The CAA provides the requirements for redesignating a nonattainment area to attainment. Specifically, section 107(d)(3)(E) of the CAA allows for redesignation provided that the following criteria are met: (1) the Administrator determines that the area has attained the applicable NAAQS; (2) the Administrator has fully approved the applicable implementation plan for the area under section 110(k); (3) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable SIP and applicable federal air pollutant control regulations, and other permanent and enforceable reductions; (4) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 175A; and (5) the state containing such area has met all requirements applicable to the area for purposes of redesignation under section 110 and part D of the CAA.

On April 16, 1992 (57 FR 13498), EPA provided guidance on redesignations in the General Preamble for the Implementation of title I of the CAA Amendments of 1990 and

supplemented this guidance on April 28, 1992 (57 FR 18070). EPA has provided further guidance on processing redesignation requests in the following documents:

1. “Procedures for Processing Requests to Redesignate Areas to Attainment,” Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992 (hereinafter referred to as the “Calcagni Memorandum”);
2. “State Implementation Plan (SIP) Actions Submitted in Response to Clean Air Act (CAA) Deadlines,” Memorandum from John Calcagni, Director, Air Quality Management Division, October 28, 1992;
3. “Part D New Source Review (Part D NSR) Requirements for Areas Requesting Redesignation to Attainment,” Memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, October 14, 1994; and
4. “Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions,” Memorandum from Stephen D. Page, April 23, 2014 (hereinafter referred to as the “SO<sub>2</sub> Nonattainment Area Guidance”).

EPA’s SO<sub>2</sub> Nonattainment Area Guidance discusses the CAA requirements that air agencies need to address when implementing the 2010 SO<sub>2</sub> NAAQS in areas designated as nonattainment for the standard. The guidance includes recommendations for air agencies to consider as they develop SIPs to satisfy the requirements of sections 110, 172, 175A, 191, and 192 of the CAA to show future attainment and maintenance of the 2010 SO<sub>2</sub> NAAQS. Additionally, the SO<sub>2</sub> nonattainment guidance provides recommendations for air agencies to consider as they develop redesignation requests and maintenance plans to satisfy the requirements of sections 107(d)(3)(E) and 175A.

#### **IV. Why is EPA Proposing These Actions?**

Through a letter dated December 9, 2019, Kentucky submitted a request for EPA to redesignate the Jefferson County Area to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS and submitted an associated SIP revision containing a maintenance plan. EPA's evaluation indicates that the Jefferson County Area meets the requirements for redesignation as set forth in section 107(d)(3)(E), including the maintenance plan requirements under section 175A of the CAA. As a result of this evaluation, EPA is proposing to determine that the Area has attained the 2010 1-hour SO<sub>2</sub> NAAQS based upon air monitoring data for 2016-2018 and air quality dispersion modeling analyses. EPA is also proposing to approve Kentucky's maintenance plan for maintaining the 2010 1-hour SO<sub>2</sub> NAAQS in the Area and incorporate it into the SIP and to redesignate the Jefferson County Area to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS.

#### **V. What is EPA's Analysis of the Redesignation Request and SIP Revision?**

The five redesignation criteria provided under CAA section 107(d)(3)(E) are discussed in greater detail for the Jefferson County Area in the following paragraphs.

##### ***Criterion (1) – The Administrator determines that the area has attained the NAAQS.***

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the area has attained the applicable NAAQS (CAA section 107(d)(3)(E)(i)). As discussed in section VIII.A of the SO<sub>2</sub> Nonattainment Area Guidance, there are generally two components needed to support an attainment determination for SO<sub>2</sub>, which should be considered interdependently. The first component relies on air quality monitoring data. For SO<sub>2</sub>, any available monitoring data would need to indicate that all monitors in the affected area are meeting the standard as stated in 40 CFR 50.17 using data analysis procedures specified in 40

CFR part 50, Appendix T. The second component relies on air quality modeling. If there are no air quality monitors located in the affected area, or there are air quality monitors located in the area, but analyses show that none of the monitors are located in the area of maximum ambient air SO<sub>2</sub> concentration,<sup>4</sup> then air quality dispersion modeling will generally be needed to estimate SO<sub>2</sub> concentrations in the area. Such dispersion modeling should be conducted to estimate SO<sub>2</sub> concentrations throughout the nonattainment area using actual emissions and meteorological information for the most recent three calendar years. However, EPA may also make determinations of attainment based on the modeling from the attainment demonstration for the applicable SIP for the affected area, eliminating the need for separate actuals-based modeling to support the determination that an area is currently attaining. If the air agency has previously submitted a modeled attainment demonstration using allowable emissions, no further modeling is needed as long as the source characteristics are still reasonably represented and so long as emissions are at or below allowable levels. In a case such as this, where both monitoring and modeling evidence are available, EPA will consider both types of evidence.

Kentucky's pre- and post-modification attainment demonstration modeling indicates that the Watson Lane Elementary School (Watson Lane) monitor is not sited in the area of maximum concentration for Mill Creek, and therefore, the clean monitoring data at the monitor does not on its own demonstrate that the Area is attaining the standard. EPA's proposed determination that the Jefferson County Area is attaining the SO<sub>2</sub> NAAQS is also based on the modeled attainment demonstration that includes permanent and enforceable SO<sub>2</sub> emissions limits at Mill Creek showing attainment of the 2010 1-hour SO<sub>2</sub> NAAQS. The modeled attainment demonstration

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<sup>4</sup> See section VIII.A of the SO<sub>2</sub> Nonattainment Area Guidance.

accounts for more efficient wet flue gas desulfurization (FGD) control equipment at Mill Creek that became operational in stages from 2014 to 2016, as well as revised SO<sub>2</sub> emission limits.<sup>5</sup> EPA approved the attainment demonstration for the Jefferson County Area on June 28, 2019, and incorporated the new SO<sub>2</sub> emission limits including monitoring, recordkeeping, and reporting parameters into the SIP, making them permanent and enforceable. *See* 84 FR 30920. Monitoring data from the Watson Lane monitor and Kentucky's approved modeled attainment demonstration are discussed below.

#### Monitoring Data

For SO<sub>2</sub>, a monitoring site may be considered to be attaining the 2010 1-hour SO<sub>2</sub> NAAQS if it meets the NAAQS as determined in accordance with 40 CFR 50.17 and Appendix T of part 50, based on three complete, consecutive calendar years of quality-assured air quality monitoring data. Specifically, to attain the NAAQS at each monitoring site, the 3-year average of the annual 99th percentile (fourth highest value) of daily maximum 1-hour average concentrations measured at each monitor within an area must be less than or equal to 75 ppb. The data must be collected and quality-assured in accordance with 40 CFR part 58 and recorded in the EPA Air Quality System (AQS). The monitors should have remained at the same location for the duration of the monitoring period required for demonstrating attainment.

Kentucky currently operates one ambient SO<sub>2</sub> monitor in the Area, the Watson Lane SO<sub>2</sub> monitor (AQS ID: 21-111-0051). This monitor is located less than 2 kilometers (km) east of Mill Creek. The original nonattainment designation was based on the 2009-2011 design value of 112 ppb at this monitor. As shown in Table 1, the design values at this monitor have decreased

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<sup>5</sup> See the "Criterion (3)" section of this notice for additional information.

since the 2014-2016 design value, and the quality-assured, complete, and certified 2016-2018 3-year design value is 19 ppb, well below the 2010 1-hour SO<sub>2</sub> standard of 75 ppb. There have been no 1-hour values recorded above the standard since March 2015. The first three-year period for which the design value for the Area fell below the standard was 2015-2017.

**Table 1. Jefferson County Area SO<sub>2</sub> Monitored Design Values**

<b>Monitoring Station (AQS Site ID)</b>	<b>2009-2011 Design Value</b>	<b>2010-2012 Design Value</b>	<b>2011-2013 Design Value</b>	<b>2012-2014 Design Value</b>	<b>2013-2015 Design Value</b>	<b>2014-2016 Design Value</b>	<b>2015-2017 Design Value</b>	<b>2016-2018 Design Value<sup>6</sup></b>
Watson Lane Elementary School (21-111-0051)	112 ppb	123ppb	ND*	ND*	ND*	76 ppb	31 ppb	19 ppb

\* The Watson Lane monitor did not collect a valid design value during 2011-2013, 2012-2014, and 2013-2015 due to incomplete data in 2013.

Preliminary monitoring data from the Watson Lane monitor for 2019 indicates that the 2017-2019 preliminary design value is 15 ppb.<sup>7</sup> EPA is proposing to determine that the Jefferson County Area has attained the 2010 1-hour SO<sub>2</sub> NAAQS based on the modeling analysis discussed below, as well as the quality-assured, complete, and certified ambient air monitoring data for the 2016-2018 period that does not indicate a NAAQS violation. If, before EPA takes final action, monitoring data or other evidence causes EPA to conclude that the Area is not continuing to meet the standard, EPA will not go forward with the redesignation. As discussed in more detail below, Kentucky has committed to continue monitoring ambient SO<sub>2</sub> concentrations in this Area in accordance with 40 CFR part 58. Any future changes to the state

<sup>6</sup> The 2018 data is available at <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.

<sup>7</sup> Preliminary 2019 data is available at <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.

or local air monitoring station (SLAMS) network in the Area will be submitted to EPA for approval in Kentucky's annual ambient air monitoring network plan, as required by 40 CFR 58.10.

*Kentucky's EPA-Approved Modeling Analysis*

As discussed in Section VIII.A. of the SO<sub>2</sub> Nonattainment Area Guidance, air quality dispersion modeling will generally be needed to demonstrate attainment in addition to attaining air quality monitoring data (in accordance with 40 CFR 50.17 and Appendix T of part 50) if the existing monitor is not located in the area of maximum ambient air SO<sub>2</sub> concentration. The SO<sub>2</sub> attainment demonstration submitted by Kentucky on June 23, 2017, provided an air quality dispersion modeling analysis demonstrating that the control strategies chosen by the Commonwealth and LMAPCD to reduce SO<sub>2</sub> emissions at Mill Creek provide for attainment of the standard. The source characteristics in KDAQ's attainment demonstration still reflect current conditions. On June 28, 2019 (84 FR 30920), EPA approved this attainment demonstration along with LMAPCD's control strategies at the facility. Details regarding the control strategies and emissions reductions are provided in the *Criterion (3)* Section of this notice. Details regarding the modeling analysis are discussed in the following paragraphs.

Kentucky's modeling analysis was developed in accordance with EPA's Guideline on Air Quality Models (Modeling Guideline)<sup>8</sup> and the SO<sub>2</sub> Nonattainment Area Guidance, and was prepared using EPA's preferred dispersion modeling system, the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) consisting of the

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<sup>8</sup> See 40 CFR Part 51 Appendix W (EPA's Guideline on Air Quality Models) (January 17, 2017) located at [https://www3.epa.gov/ttn/scram/appendix\\_w/2016/AppendixW\\_2017.pdf](https://www3.epa.gov/ttn/scram/appendix_w/2016/AppendixW_2017.pdf).

AERMOD (version 15181)<sup>9</sup> model and multiple data input preprocessors as described below. Kentucky used regulatory default options and the rural land use designation in the AERMOD modeling. Appendix A in Kentucky's December 9, 2019, submittal provides a summary of the modeling procedures and options, including details explaining how they applied the Auer technique to determine that the rural dispersion coefficients were appropriate for the modeling.

The pre-processors AERMET (version 15181) and AERMINUTE (version 15272) were used to process five years (i.e., 2011-2015) of 1-minute meteorological data from the Louisville Muhammad Ali International Airport station in Louisville, Kentucky, located about 20 km to the northeast of Mill Creek. Twice daily upper-air meteorological information came from the Wilmington Air Park, Wilmington, Ohio station located about 240 km to the northeast. The surface characteristics surrounding the meteorological surface station were processed using AERSURFACE version 13016 following EPA-recommended procedures and were determined to be representative of the facility by the Commonwealth.

The AERMOD pre-processor AERMAP (version 11103) was used to generate terrain inputs for the receptors, based on a digital elevation mapping database from the National Elevation Dataset developed by the U.S. Geological Survey. Model receptors were located throughout the Area using a grid with 100-meter spacing between receptors.

Mill Creek is the only SO<sub>2</sub> emitting major point source in the Area and the only emission source that was explicitly modeled in the attainment modeling analysis for the Jefferson County Area. All minor area sources and other major point sources (located outside the nonattainment area boundary) were accounted for with the background concentration discussed below. Mill

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<sup>9</sup> Version 15181 of the AERMOD Modeling System was the current EPA-recommended regulatory version at the time the modeling was performed in 2016-2017, and therefore, was appropriate for the modeling analysis.

Creek operates four coal-fired boiler units (U1 thru U4) that emit from three stacks. Unit 1 and Unit 2 have a joint stack (S33) while Unit 3 and Unit 4 have separate stacks (S4 and S34, respectively). The Commonwealth evaluated the emissions from Mill Creek and derived a set of three SO<sub>2</sub> critical emission values (CEVs), one for each stack, from AERMOD modeling simulations to show compliance with the 2010 SO<sub>2</sub> NAAQS. The AERMOD modeling analysis resulted in the following CEVs: stack S33, which serves Units 1 and 2, was modeled at 225.4 grams/second (g/s) equivalent to 1,789 lb/hr; stack S4, which serves Unit 3, was modeled at 152.6 g/s equivalent to 1,211 lb/hr; and stack S34, which serves Unit 4, was modeled at 183.6 g/s equivalent to 1,457 lb/hr. In each case, the modeled emission rate corresponds to 0.29 pounds per million British thermal units (lb/MMBtu) times the maximum heat input capacity (MMBtu/hr) of the unit(s) associated with each stack. This form of an emission limit, in lb/MMBtu, is a frequent form of emission limit associated with electric generating units. The Commonwealth determined from these AERMOD modeling simulations that an hourly emission limit of 0.29 lb/MMBtu would suffice to ensure modeled attainment of the SO<sub>2</sub> NAAQS. However, the Commonwealth opted to apply a 30-day average limit, following EPA's SO<sub>2</sub> Nonattainment Area Guidance for setting longer term average limits. The Commonwealth determined that a 30-day average limit of 0.20 lb/MMBtu could be considered comparably stringent to a 1-hour limit of 0.29 lb/MMBtu. A comprehensive discussion of the procedures used by the Commonwealth to determine the longer-term average limit is contained in EPA's rulemaking notices associated with the approval of the nonattainment SIP revision for the Jefferson County Area. *See* 83 FR 56002 (November 9, 2018) and 84 FR 30920 (June 28, 2019).

Kentucky selected background SO<sub>2</sub> concentrations that vary by season and hour of day<sup>10</sup> using local SO<sub>2</sub> monitoring data from the Green Valley Road monitor (AQS ID: 18-043-1004) located in New Albany, Indiana, approximately 29 km north of the Mill Creek facility, for the period 2013-2015. The season-by-hour background values ranged from 2.13 ppb to 20.67 ppb. These background concentrations from the nearby ambient air monitor are used to account for SO<sub>2</sub> impacts from all sources that are not specifically included in the AERMOD modeling analysis. A comprehensive discussion of the background concentrations and how they are used to account for SO<sub>2</sub> emissions from all the sources not explicitly modeled is contained in EPA's notice of proposed rulemaking for the nonattainment SIP revision. *See* 83 FR 56002 (November 9, 2018).

The AERMOD modeling resulted in a maximum modeled design value of 190.1 micrograms per cubic meter or 72.6 ppb, including the background concentrations, which is below the 1-hour SO<sub>2</sub> NAAQS of 75 ppb. The modeling used hourly SO<sub>2</sub> emissions for each Mill Creek stack equivalent to the hourly SO<sub>2</sub> emission rate of 0.29 lb/MMBtu, which was used to derive the 30-day average emission limit for the four coal-fired boilers at Mill Creek. Mill Creek completed the phased installation of improved FGD SO<sub>2</sub> controls in 2016 and became subject to the new 30-day SO<sub>2</sub> emission limits on April 5, 2017, which reduced SO<sub>2</sub> emissions by approximately 89 percent from 2014 emission levels.<sup>11</sup> Furthermore, the Watson Lane monitoring data corroborate the significant SO<sub>2</sub> reductions from Mill Creek. EPA previously evaluated the modeling procedures, inputs, and results and finalized a determination that the

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<sup>10</sup> Use of 99<sup>th</sup> percentile background concentrations that vary by season and hour of the day is an acceptable approach that is described in Appendix A, Section 8, of EPA's SO<sub>2</sub> Nonattainment Area Guidance.

<sup>11</sup> Mill Creek's annual SO<sub>2</sub> emissions have dropped from 28,149 tons in 2014 to 3,752 tons in 2018. Additionally, Mill Creek emitted a total of 2,923 tons in 2019. *See* <https://ampd.epa.gov/ampd/>.

Commonwealth's modeling analysis demonstrates that the 30-day emissions limits on Mill Creek assure that there will be no violations of the NAAQS within the Area.

All emissions limits and related compliance parameters have been incorporated into the Jefferson County portion of the Kentucky SIP, making these changes permanent and federally enforceable. More details on the pre-construction and post-construction operations at Mill Creek are included in Kentucky's June 23, 2017, nonattainment SIP submission and in EPA's rulemaking on that submittal.<sup>12</sup>

On June 28, 2019, EPA approved the modeled attainment demonstration described above and concluded that it is consistent with CAA requirements, EPA's Modeling Guideline, and EPA's guidance for SO<sub>2</sub> attainment demonstration modeling. The modeled controls have been fully implemented as of June 8, 2016, when the last of the new FGD SO<sub>2</sub> controls began operation. Mill Creek became subject to the revised SO<sub>2</sub> emission limits in the Title V permit on April 5, 2017. Emissions and air quality are at or below the levels modeled in Kentucky's attainment demonstration.<sup>13</sup> Therefore, EPA proposes to find that air quality modeling supports the conclusion that the Area has attained the 2010 1-hour SO<sub>2</sub> NAAQS.

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<sup>12</sup> See 84 FR 30920 (June 28, 2019) (final rule), 83 FR 56002 (November 9, 2018) (proposed rule). Kentucky's 2017 SIP submittal is included in the Docket for this proposed rulemaking.

<sup>13</sup> A comparison of the Mill Creek unit-level potential to emit to the 2018 actual emissions indicate that SO<sub>2</sub> emissions at Mill Creek are below the levels modeled in the 2017 attainment demonstration modeling. See Kentucky's December 9, 2019, redesignation and maintenance submission and <https://ampd.epa.gov/ampd/>. Furthermore, the monitoring data trends corroborate the existence of the substantial air quality benefits from the SO<sub>2</sub> reductions at Mill Creek. The Watson Lane monitor has recorded decreasing SO<sub>2</sub> concentrations from an annual 99th percentile value of 148.6 ppb in 2014, 54.2 ppb in 2015, 26.1 ppb in 2016, 13.7 ppb in 2017, and 16.4 ppb in 2018. The quality-assured, complete, and certified 2016-2018 3-year design value for the Watson Lane monitor is 19 ppb, which is below the 1-hour SO<sub>2</sub> standard.

*Criterion (2) – The Administrator has fully approved the applicable implementation plan for the area under section 110(k); and Criterion (5) – Kentucky has met all applicable requirements under section 110 and part D of title I of the CAA.*

To redesignate a nonattainment area to attainment, the CAA requires EPA to determine that the state has met all applicable requirements under section 110 and part D of title I of the CAA (CAA section 107(d)(3)(E)(v)) and that the state has a fully approved SIP under section 110(k) for the area (CAA section 107(d)(3)(E)(ii)). EPA proposes to find that Kentucky has met all applicable SIP requirements for the Jefferson County Area under section 110 of the CAA (general SIP requirements) for purposes of redesignation. Additionally, EPA proposes to find that the Kentucky SIP satisfies the criterion that it meets applicable SIP requirements for purposes of redesignation under part D of title I of the CAA in accordance with section 107(d)(3)(E)(v). Further, EPA proposes to determine that the SIP is fully approved with respect to all requirements applicable for purposes of redesignation in accordance with section 107(d)(3)(E)(ii). In making these proposed determinations, EPA ascertained which requirements are applicable to the Area and, if applicable, that they are fully approved under section 110(k). SIPs must be fully approved only with respect to requirements that were due prior to submittal of the complete redesignation request.

A. *The Jefferson County Area has met all applicable requirements under section 110 and part D of the CAA.*

1. *General SIP requirements.*

General SIP elements and requirements are delineated in section 110(a)(2) of title I, part A of the CAA. These requirements include, but are not limited to, the following: submittal of a

SIP that has been adopted by the state after reasonable public notice and hearing; provisions for establishment and operation of appropriate procedures needed to monitor ambient air quality; implementation of a source permit program; provisions for the implementation of part C requirements (Prevention of Significant Deterioration (PSD)) and provisions for the implementation of part D requirements (NNSR permit programs); provisions for air pollution modeling; and provisions for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) requires that SIPs contain certain measures to prevent sources in a state from significantly contributing to air quality problems in another state. To implement this provision, EPA has required certain states to establish programs to address the interstate transport of air pollutants. The section 110(a)(2)(D) requirements for a state are not linked with a particular nonattainment area's designation and classification in that state. EPA believes that the requirements linked with a particular nonattainment area's designation and classifications are the relevant measures to evaluate in reviewing a redesignation request. The transport SIP submittal requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area in the state. Thus, EPA does not believe that the CAA's interstate transport requirements should be construed to be applicable requirements for purposes of redesignation.

In addition, EPA interprets the other section 110(a)(2) elements that are neither connected with nonattainment plan submissions nor linked with an area's attainment status not to be "applicable" requirements for purposes of redesignation. The area will still be subject to these requirements after the area is redesignated. The section 110(a)(2) and part D requirements which

are linked with a particular area's designation and classification are the relevant measures to evaluate in reviewing a redesignation request. This approach is consistent with EPA's existing policy on applicability (i.e., for redesignations) of conformity and oxygenated fuels requirements, as well as with section 184 ozone transport requirements. *See* Reading, Pennsylvania, proposed and final rulemakings (61 FR 53174-53176, October 10, 1996), (62 FR 24826, May 7, 2008); Cleveland-Akron-Loraine, Ohio, final rulemaking (61 FR 20458, May 7, 1996); and Tampa, Kentucky, final rulemaking (60 FR 62748, December 7, 1995). *See also* the discussion on this issue in the Cincinnati, Ohio, redesignation (65 FR 37890, June 19, 2000), and in the Pittsburgh, Pennsylvania, redesignation (66 FR 50399, October 19, 2001). Nonetheless, EPA has approved Kentucky's SIP revisions related to the section 110 requirements for the 2010 SO<sub>2</sub> NAAQS, with the exception of the interstate transport elements at section 110(a)(2)(D)(i)(I). *See* 81 FR 87817 (December 6, 2016), 84 FR 11652 (March 28, 2019), and 84 FR 13800 (April 8, 2019).

2. *Title I, Part D, applicable SIP requirements.*

Subpart 1 of part D, comprised of CAA sections 171-179B, sets forth the basic nonattainment requirements applicable to all nonattainment areas. All areas that were designated nonattainment for the SO<sub>2</sub> NAAQS were designated under Subpart 1 of the CAA in accordance with the deadlines in Subpart 5. For purposes of evaluating this redesignation request, the applicable Subpart 1 SIP requirements are contained in section 172(c)(1)-(9), section 176, and sections 191 and 192. A thorough discussion of the requirements contained in sections 172(c) can be found in the General Preamble for Implementation of Title I. *See* 57 FR 13498 (April 16, 1992).

a. *Subpart 1 Section 172 Requirements.*

Section 172 requires states with nonattainment areas to submit plans providing for timely attainment and meeting a variety of other requirements. As discussed in section V.A, above, EPA’s longstanding interpretation of the attainment-related nonattainment planning requirements of section 172 is that once an area is attaining the NAAQS, those requirements are not “applicable” for purposes of CAA section 107(d)(3)(E)(ii) and therefore need not be approved into the SIP before EPA can redesignate the area. In the 1992 General Preamble for Implementation of Title I, EPA set forth its interpretation of applicable requirements for purposes of evaluating redesignation requests when an area is attaining a standard. *See* 57 FR 13498, 13564 (April 16, 1992). EPA noted that the requirements for RFP and other measures designed to provide for attainment do not apply in evaluating redesignation requests because those nonattainment planning requirements “have no meaning” for an area that has already attained the standard. *Id.* This interpretation was also set forth in the Calcagni Memorandum.

As discussed above, EPA previously approved Kentucky’s nonattainment SIP for the Jefferson County Area. *See* 84 FR 30920 (June 28, 2019). The nonattainment SIP for the Area satisfied the section 172(c)(1) requirements for RACT/RACM; 172(c)(2) requirements related to RFP; 172(c)(3) requirements for a comprehensive and accurate emissions inventory; 172(c)(6) requirements for permanent and enforceable control measures necessary to provide for attainment of the NAAQS by the attainment date; and section 172(c)(9) requirements for contingency measures.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified stationary sources to be allowed in an area, and section 172(c)(5)

requires source permits for the construction and operation of new and modified major stationary sources anywhere in the nonattainment area. EPA has a longstanding interpretation that because NNSR is replaced by PSD upon redesignation, nonattainment areas seeking redesignation to attainment need not have a fully approved part D NNSR program in order to be redesignated. See memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled “Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment.” However, LMAPCD currently has a fully-approved part D NNSR program in place in Regulation 2.04 (*Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)*) of the Louisville Air Pollution Control District Regulations. LMAPCD’s PSD program will become effective in the Area upon redesignation to attainment.

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, EPA believes that Kentucky’s SIP meets the requirements of section 110(a)(2) applicable for purposes of redesignation.

Finally, section 172(c)(8) allows a state to use equivalent modeling, emission inventory, and planning procedures if such use is requested by the state and approved by EPA. Kentucky has not requested the use of equivalent techniques under section 172(c)(8).

*b. Subpart 1 Section 176 - Conformity Requirements.*

Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that federally supported or funded projects conform to the air quality planning goals in the applicable SIP. The requirement to determine conformity applies to transportation plans, programs, and projects that are developed, funded, or approved under title 23 of the United

States Code (U.S.C.) and the Federal Transit Act (transportation conformity) as well as to all other federally supported or funded projects (general conformity). Because EPA does not consider SO<sub>2</sub> a transportation related pollutant, only the requirements related to general conformity apply to the Jefferson County Area. The Commonwealth of Kentucky adopted general conformity criteria and procedures as a revision to the Kentucky SIP. EPA approved Kentucky's general conformity SIP on July 27, 1998 (63 FR 40044). Thus, the requirements of CAA section 176 have been satisfied.

*B. The Jefferson County Area has a fully approved applicable SIP under section 110(k) of the CAA.*

EPA has fully approved the applicable Kentucky SIP for the Jefferson County Area under section 110(k) of the CAA for purposes of redesignation. EPA may rely on prior SIP approvals in approving a redesignation request (*see* Calcagni Memorandum at p. 3, *Southwestern Pennsylvania Growth Alliance v. Browner*, 144 F.3d 984, 989-90 (6th Cir. 1998); *Wall*, 265 F.3d 426) plus any additional measures it may approve in conjunction with a redesignation action. *See* 68 FR 25426 (May 12, 2003) and citations therein.

***Criterion (3) – The air quality improvement in the Jefferson County Area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and applicable Federal air pollution control regulations and other permanent and enforceable reductions.***

To redesignate a nonattainment area to attainment, the CAA requires EPA to determine that the air quality improvement in the area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP, applicable Federal air pollution control

regulations, and other permanent and enforceable reductions (CAA section 107(d)(3)(E)(iii)). EPA proposes to determine that Kentucky has demonstrated that the observed air quality improvement in the Jefferson County Area is due to permanent and enforceable reductions in SO<sub>2</sub> emissions resulting from implementation of the SIP, namely SO<sub>2</sub> control measures at Mill Creek since the nonattainment designation.

When EPA designated the Jefferson County Area as a nonattainment area for the 2010 1-hour SO<sub>2</sub> NAAQS, EPA determined that operations at Mill Creek were the primary cause of the 2010 1-hour SO<sub>2</sub> NAAQS violations in the Area. *See* 78 FR 47191.<sup>14</sup> The June 23, 2017, Jefferson County Area nonattainment SIP revision was based on this determination and successfully reduced ambient concentrations below the 1-hour SO<sub>2</sub> NAAQS by only requiring emissions reductions at Mill Creek.

Mill Creek consists of four coal-fired boilers (U1-U4). Kentucky's control strategy for the Jefferson County Area consists of replacing FGD control equipment with more efficient FGD controls at Mill Creek, addressing SO<sub>2</sub> emissions for all four units (U1, U2, U3 and U4). Unit 1 and Unit 2 share a common stack (S33) while Unit 3 and Unit 4 have separate stacks (S4 and S34, respectively). Unit 4's new FGD went into service on December 9, 2014; the new combined FGD for Units 1 and 2 went into service on May 27, 2015; and Unit 3's new FGD went into service on June 8, 2016.

Kentucky established an emission limit of 0.20 lb/MMBtu for each coal-fired unit at Mill Creek on a 30-day average basis in accordance with the SO<sub>2</sub> Nonattainment Area Guidance for

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<sup>14</sup> *See* Final Technical Support Document, July 2013, Kentucky First Round of Nonattainment Area Designations for the 2010 SO<sub>2</sub> Primary NAAQS, Prepared by EPA Region 4. This document is available at Docket ID: EPA-HQ-OAR-2012-0233-0308.

longer term averaging time for the purpose of demonstrating attainment for the 1-hour SO<sub>2</sub> standard.<sup>15</sup> These emission limits apply independently to each of the four coal-fired units (U1 thru U4), which emit SO<sub>2</sub> from three separate stacks (S33, S4, and S34). These SO<sub>2</sub> limits were established in a revised title V operating permit 145-97-TV(R3) for Mill Creek and became effective on April 5, 2017. Mill Creek demonstrates compliance with the 30-day emission limits through a continuous emission monitoring system on each stack as well as the monitoring of the heat input firing rate of each emission unit. The 30-day SO<sub>2</sub> emission limit was established to demonstrate modeled attainment of the 2010 1-hour SO<sub>2</sub> standard for the Jefferson County nonattainment area. Kentucky requested that EPA incorporate into the Jefferson County portion of the Commonwealth's SIP the 30-day SO<sub>2</sub> emission limits and operating and compliance parameters (monitoring, recordkeeping, and reporting) established at Plant-wide Specific condition S1-Standards, S2-Monitoring and Record Keeping and S3-Reporting in title V permit 145-97-TV(R3). On June 28, 2019, EPA took final action to incorporate the SO<sub>2</sub> emission limits and operating and compliance parameters into the SIP with the approval of Kentucky's June 23, 2017, SO<sub>2</sub> nonattainment SIP revision. *See* 84 FR 30920. The air quality improvement in the Jefferson County Area is due to permanent and enforceable reductions in SO<sub>2</sub> emissions resulting from the emission limits incorporated into the SIP.

***Criterion (4) – The Jefferson County Area has a fully approved maintenance plan pursuant to section 175A of the CAA.***

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the area has a fully approved maintenance plan pursuant to section 175A of the

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<sup>15</sup> See section IV.B.4.ii of the proposed attainment demonstration (83 FR 56002, November 9, 2018).

CAA. *See* CAA section 107(d)(3)(E)(iv). In conjunction with its request to redesignate the Jefferson County Area to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS, Kentucky submitted a SIP revision to provide for the maintenance of the 2010 1-hour SO<sub>2</sub> NAAQS for at least 10 years after the effective date of redesignation to attainment. EPA is proposing to determine that this maintenance plan meets the requirements for approval under section 175A of the CAA.

*a. What is required in a maintenance plan?*

Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least 10 years after the Administrator approves a redesignation to attainment. Eight years after the redesignation, the state must submit a revised maintenance plan demonstrating that attainment will continue to be maintained for the 10 years following the initial 10-year period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures as EPA deems necessary to assure prompt correction of any future 2010 1-hour SO<sub>2</sub> violations. The Calcagni Memorandum provides further guidance on the content of a maintenance plan, explaining that a maintenance plan should address five requirements: the attainment emissions inventory; maintenance demonstration; monitoring; verification of continued attainment; and a contingency plan. As is discussed more fully below, EPA is proposing to determine that Kentucky's maintenance plan includes all the necessary components and is thus proposing to approve it as a revision to the Kentucky SIP.

*b. Attainment Emissions Inventory*

An attainment inventory identifies a level of emissions in the Area that is sufficient to attain the NAAQS. As discussed above, the last monitored exceedance of the NAAQS occurred in 2015. Phased installation of the new FGDs at Mill Creek began in 2013 and was completed in 2016, making 2017 the first full year with all of the new controls in operation. The design values at the Watson Lane monitor have decreased since the 2014-2016 design value with a quality-assured, complete, and certified 2016-2018 3-year design value of 19 ppb. In its maintenance plan, LMAPCD chose 2018 as the attainment inventory year which is one of the three years included in the current attaining 3-year design value. This design value reflects the permanent and enforceable Mill Creek SO<sub>2</sub> emission limits used in the attainment modeling.

Actual emissions from Mill Creek are used for point source emissions for the attainment inventory, as it is the only point source in the Area, and the only source specifically modeled in the attainment demonstration approved in 2019. SO<sub>2</sub> emissions data from Mill Creek is presented in Table 2. Kentucky interpolated emissions for all other sectors for 2018 from the 2011 and 2014 National Emissions Inventory (NEI) data for Jefferson County because the Commonwealth is only required to develop these inventories on a triennial period in accordance with the NEI and subpart A to 40 CFR part 51 and the final 2017 NEI is not yet available. The 2018 estimated emissions were then apportioned to the Area based on the Area's fraction of land area within the county. The complete attainment emissions inventory for the Area is presented in Table 3.

**Table 2. 2018 SO<sub>2</sub> Emissions Inventory for LG&E Mill Creek**

<b>Unit</b>	<b>Source</b>	<b>SO<sub>2</sub> Emissions (tpy)</b>
MC_U01	CEMS*	681.3
MC_U02	CEMS	571.1
MC_U03	CEMS	721.1

MC_U04	CEMS	1778.6
MC_Other	Calculated	0.06
<b>Total</b>		3,752.16

\*Continuous Emissions Monitoring System

**Table 3. 2018 Attainment Emissions Inventory for the Jefferson County Area**

Source Type	Point	Area	Non-Road	On-Road	Total
<b>2018 SO<sub>2</sub> Emissions (tpy)</b>	3,752.16	0.46	0.01	0.28	3,752.91

For additional information regarding the development of the attainment year inventory, please see Kentucky’s June 23, 2017, nonattainment SIP submission and EPA’s rulemakings on that submittal.<sup>16</sup>

*c. Maintenance Demonstration*

Maintenance of the SO<sub>2</sub> standard is demonstrated either by showing that future emissions will not exceed the level of the attainment emissions inventory year or by modeling to show that the future mix of sources and emission rates will not cause a violation of the NAAQS.

To evaluate maintenance through 2032 and satisfy the 10-year interval required in CAA section 175A, Kentucky prepared attainment year emissions (2018) and projected emissions inventories for years 2023, 2028, and 2032. The emissions inventories are composed of the following general source categories: point, area, non-road mobile, and on-road mobile. Projected point source emissions were based on Mill Creek’s 2018 attainment emissions of 3752.16 tons. Projected point source emissions were held constant because Kentucky does not anticipate any development within the Area and also does not anticipate any major changes at Mill Creek. The

<sup>16</sup> See 84 FR 30920 (June 28, 2019) (final rule), 83 FR 56002 (November 9, 2018) (proposed rule). Kentucky’s 2017 SIP submittal is included in the Docket for this proposed rulemaking.

projected emissions for area, non-road mobile, and on-road mobile emissions are from U.S. EPA’s 2011 v6.3 modeling platform and further apportioned for the Area. The emissions inventories were developed consistent with EPA guidance and are summarized in Table 4. Kentucky compared projected emissions for the final year of the maintenance plan (2032) to the attainment emissions inventory year (2018) and compared interim years (2023 & 2028) to the attainment emissions inventory year to demonstrate continued maintenance of the 2010 1-hour SO<sub>2</sub> standard. For additional information regarding the development of the projected inventories, please see Kentucky’s June 23, 2017, nonattainment SIP revision.

**Table 4 – Attainment & Projected Future Emissions Inventories for the Area (tpy)**

<b>Sector</b>	<b>Attainment 2018 SO<sub>2</sub> Emissions</b>	<b>Projected 2023 SO<sub>2</sub> Emissions</b>	<b>Projected 2028 SO<sub>2</sub> Emissions</b>	<b>Projected 2032 SO<sub>2</sub> Emissions</b>
Nonpoint	0.46	0.38	0.37	0.38
Nonroad	0.01	0.02	0.02	0.02
Onroad	0.28	0.09	0.08	0.09
Point	3752.16	3752.16	3752.16	3752.16
<b>Total</b>	<b>3752.91</b>	<b>3752.65</b>	<b>3752.64</b>	<b>3752.65</b>

In situations where local emissions are the primary contributor to nonattainment, such as the Jefferson County Area, if the future projected emissions in the nonattainment area remain at or below the baseline emissions in the nonattainment area, then the related ambient air quality standards should not be exceeded in the future. Kentucky has projected emissions as described previously, and these projections indicate that emissions in the Jefferson County Area will remain at nearly the same levels as those in the attainment year inventory for the duration of the maintenance plan. Any increases in actual emissions from Mill Creek must remain below permitted levels, which were made permanent and enforceable through incorporation into the SIP and demonstrate attainment of the 1-hour SO<sub>2</sub> NAAQS. Furthermore, any potential future

SO<sub>2</sub> emissions sources that may locate in or near the Area would be required to comply with the LMAPCD's approved PSD permitting programs to ensure that the Area will continue to meet the NAAQS.

As discussed in the SO<sub>2</sub> Nonattainment Area Guidance, an approved attainment plan that relies on air quality dispersion modeling using maximum allowable emissions, such as Kentucky's attainment plan for the Area, can generally be expected to demonstrate that the standard will be maintained for the requisite 10 years and beyond without regard to any changes in operation rate of the pertinent sources that do not involve increases in maximum allowable emissions.<sup>17</sup> EPA believes that the Area will continue to maintain the standard at least through the year 2032 because the air quality modeling in the approved attainment plan showed that the Area would attain the standard based on maximum allowable emissions limits at Mill Creek that are incorporated into the SIP, these sources have fully implemented the permanent and enforceable modeled limits and controls, and the emissions reductions from these measures are reflected in the attaining design values for the Area. Furthermore, the Watson Lane monitoring data trends substantiate the SO<sub>2</sub> reductions from Mill Creek facility.

*d. Monitoring Network*

The Watson Lane monitor (AQS ID: 21-111-0051) is the only SO<sub>2</sub> monitor located within the Jefferson County Area, and the 2010 1-hour SO<sub>2</sub> nonattainment designation was based on data collected from 2009-2011 at this monitor. In its maintenance plan, LMAPCD has committed to maintaining an appropriate, well-sited monitoring network in the Area, in accordance with 40 CFR part 58, through the maintenance plan period to verify the continued

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<sup>17</sup> See SO<sub>2</sub> Nonattainment Area Guidance at p.67.

maintenance of the 2010 SO<sub>2</sub> NAAQS. Therefore, Kentucky has addressed the requirement for monitoring. Kentucky's monitoring network plan was submitted on June 28, 2019, and approved by EPA on October 3, 2019.

*e. Verification of Continued Attainment*

LMAPCD has the legal authority to enforce and implement all measures necessary to attain and maintain the NAAQS. *See, e.g.*, Kentucky Revised Statutes (KRS) Chapter 77 (which provides LMAPCD with the authority to implement and enforce orders, rules, and regulations necessary or proper to accomplish the purposes of the chapter, including taking legal action and imposing fines for violations).

The sole point source within the nonattainment area, Mill Creek, is required to submit annual emissions statements to LMAPCD pursuant to LMAPCD Regulation 1.06. LMAPCD will use these statements, along with monitoring data collected as described in the previous section, to verify continued attainment. Monitoring data is regularly compared to the SO<sub>2</sub> NAAQS and reported to the Louisville Air Pollution Control Board. LMAPCD will compare Mill Creek's annual emissions statements with the attainment inventory and the permanent and enforceable SO<sub>2</sub> emissions limits for Mill Creek discussed above. Furthermore, any potential future SO<sub>2</sub> emissions sources that may locate in or near the Area would be required to comply with the LMAPCD's approved PSD permitting programs to ensure that the Area will continue to meet the NAAQS. In addition to assuring continued attainment in this manner, Kentucky will verify continued attainment through operation of the monitoring network.

*f. Contingency Measures in the Maintenance Plan*

Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to assure that the state will promptly correct a violation of the NAAQS that occurs after redesignation. The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation, and a time limit for action by the state. In cases where attainment revolves around compliance of a single source or a small set of sources with emissions limits shown to provide for attainment, EPA interprets “contingency measures” to mean that the state agency has a comprehensive program to identify sources of violations of the SO<sub>2</sub> NAAQS and to undertake aggressive follow-up for compliance and enforcement, including expedited procedures for establishing enforceable consent agreement pending the adoption of revised SIPs.<sup>18</sup> A state should also identify specific indicators to be used to determine when the contingency measures need to be implemented. The maintenance plan must include a requirement that a state will implement all measures with respect to control of the pollutant that were contained in the SIP before redesignation of the area to attainment in accordance with section 175A(d).

The contingency plan included in the maintenance plan contains triggers to determine when contingency measures are needed and what kind of measures should be used. In the event of a single monitored exceedance of the 1-hour 75ppb SO<sub>2</sub> NAAQS at the Watson Lane monitor, LMAPCD will expeditiously investigate and perform culpability analysis to determine the source that cause the exceedance and/or violation<sup>19</sup> and enforce any SIP or permit limit that is violated.

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<sup>18</sup> See SO<sub>2</sub> Nonattainment Area Guidance at p.69.

<sup>19</sup> Kentucky’s contingency measure trigger accounts for a possible exceedance or violation of the 1-hour SO<sub>2</sub> standard. 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 average

If all sources are found to be in compliance with applicable SIP and permit emission limits, LMAPCD shall determine the cause of the exceedance and determine what additional control measures are necessary to impose on the area's stationary sources to continue to maintain attainment of the SO<sub>2</sub> NAAQS. LMAPCD shall inform any affected stationary sources of the monitored SO<sub>2</sub> exceedance and the potential need for additional control measures. Within six months of notification, the source must submit a detailed plan of action specifying additional control measures to be implemented no later than 18 months after the notification, or 24 months from the initial exceedance, whichever comes first. The additional control measures will be submitted to EPA for approval and incorporation into the SIP. Such measures may require that Mill Creek reduce load. Additional contingency measures include the alternative RACT/RACM of switching to low-sulfur fuel. LMAPCD will continue to implement all measures with respect to the control of SO<sub>2</sub> which were contained in the SIP for the Area before redesignation.

EPA has preliminarily concluded that the maintenance plan adequately addresses the five basic components of a maintenance plan: the attainment emissions inventory; maintenance demonstration; monitoring; verification of continued attainment; and a contingency plan. Therefore, EPA proposes to determine that the maintenance plan for the Area meets the requirements of section 175A of the CAA and proposes to incorporate the maintenance plan into the Kentucky SIP.

## **VI. What is the Effect of EPA's Proposed Actions?**

Approval of Kentucky's redesignation request would change the legal designation of the portion of Jefferson County that is within the Jefferson County Area, as found at 40 CFR part 81,

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concentrations is less than or equal to 75 ppb. In a calendar year, four days with a maximum hourly value above 75 ppb is considered an exceedance.

section 81.310, from nonattainment to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS. Approval of Kentucky's associated SIP revision would also incorporate a plan for maintaining the 2010 1-hour SO<sub>2</sub> NAAQS in the Jefferson County Area through 2032 into the SIP.

## **VII. Proposed Actions.**

EPA is proposing to take three separate but related actions regarding the redesignation request and associated SIP revision for the Jefferson County Area.

First, EPA is proposing to determine that the Area has attained the 2010 1-hour SO<sub>2</sub> NAAQS.

Second, EPA is proposing to approve the maintenance plan for the Area and to incorporate it into the SIP. As described above, the maintenance plan demonstrates that the Area will continue to maintain the 2010 1-hour SO<sub>2</sub> NAAQS through 2032.

Third, EPA is proposing to approve Kentucky's request for redesignation of the Area from nonattainment to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS based on compliance with the redesignation criteria provided under CAA section 107(d)(3)(E). If finalized, approval of the redesignation request for the Jefferson County Area would change the official designation of the portion of Jefferson County encompassed by the polygon with the vertices using UTM coordinates in UTM zone 16 with datum NAD83 as follows: (1) Ethan Allen Way extended to the Ohio River at UTM Easting (m) 595738, UTM Northing 4214086 and Dixie Highway (US60 and US31W) at UTM Easting (m) 597515, UTM Northing 4212946; (2) Along Dixie Highway from UTM Easting (m) 597515, UTM Northing 4212946 to UTM Easting (m) 595859, UTM Northing 4210678; (3) Near the adjacent property lines of Louisville Gas and Electric-Mill Creek Electric Generating Station and Kosmos Cement where they join Dixie Highway at UTM

Easting (m) 595859, UTM Northing 4210678 and the Ohio River at UTM Easting (m) 595326, UTM Northing 4211014; (4) Along the Ohio River from UTM Easting (m) 595326, UTM Northing 4211014 to UTM Easting (m) 595738, UTM Northing 4214086, as found at 40 CFR part 81, from nonattainment to attainment for the 2010 1-hour SO<sub>2</sub> NAAQS.

### **VIII. Statutory and Executive Order Reviews**

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by state law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, 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, these proposed actions merely propose to approve state law as meeting Federal requirements and do not impose additional requirements beyond those imposed by state law. For these reasons, these proposed actions:

- Are not significant regulatory actions 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);

- Are not Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory actions because these actions are not significant regulatory actions under Executive Order 12866;
- Do not impose information collection burdens under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Are 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.*);
- Do not contain any unfunded mandates or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Are 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
- Will not have disproportionate human health or environmental effects under Executive Order 12898 (59 FR 7629, February 16, 1994).

This redesignation action 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.

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

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

**List of Subjects in 40 CFR Part 81**

Environmental protection, Air pollution control, National parks, Wilderness areas.

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

Dated: May 05, 2020

Mary Walker,  
Regional Administrator,  
Region 4.

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