ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[EPA–HQ–OAR–2013–0711; FRL–9903–61–OAR]

RIN 2060–AR19

Data Requirements Rule for the 1-Hour Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard (NAAQS)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing a rule directing state and tribal air agencies (air agencies) to provide data to characterize current air quality in areas with large sources of sulfur dioxide (SO_2) emissions if such areas do not have sufficient air quality monitoring in place to identify maximum 1-hour SO_2 concentrations. The proposed rule describes criteria for identifying the sources around which air agencies would need to characterize SO_2 air quality. It also describes a process and timetables by which air agencies would characterize air quality around sources through ambient monitoring and/or air quality modeling techniques and submit such data to the EPA. The EPA has issued separate non-binding draft technical assistance documents on how air agencies can conduct such monitoring or modeling. The air quality data developed by the states in accordance with this rulemaking would be used by the EPA in future rounds of area designations for the 1-hour SO_2 National Ambient Air Quality Standards (NAAQS).

DATES:

Comments. Comments must be received on or before July 14, 2014.

Information Collection Request. Under the Paperwork Reduction Act, comments on the information collection provisions must be received by the Office of Management and Budget (OMB) on or before July 14, 2014.

Public Hearings. If anyone contacts the EPA requesting the opportunity to speak at a public hearing concerning the proposed regulation by May 23, 2014, the EPA will hold a public hearing approximately 30 days after publication of this proposed regulation in the **Federal Register**. Additional information about the hearing would be published in a subsequent **Federal Register** notice.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2013–0711, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *Email: a-and-r-docket@epa.gov.*
- *Mail:* Attention Docket ID No. EPA–HQ–OAR–2013–0711, U.S. Environmental Protection Agency, 1301 Constitution Ave. NW., Washington, DC 20460. Mail Code: 2822T. Please include two copies if possible. In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Attn: Desk Officer for the EPA, 725 17th St. NW., Washington, DC 20503.
- *Hand Delivery:* U.S. Environmental Protection Agency, EPA West (Air Docket), William Jefferson Clinton West Building, 1301 Constitution Avenue Northwest, Room 3334, Washington, DC 20004, Attention Docket ID No. EPA–HQ–OAR–2013–0711, EPA Headquarters Library, The EPA/DC Public Reading Room is open from 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday, Air and Radiation Docket and Information Center.

Instructions. Direct your comments to Docket ID No. EPA–HQ–OAR–2013–0711. The EPA's policy is that all comments received will be included in the public docket without change and may be made available on-line at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any CD you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.* For additional instructions on submitting comments, go to the **SUPPLEMENTARY INFORMATION** section of this document.

Docket. All documents in the docket are listed in *www.regulations.gov.* Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at the Air and Radiation Docket and Information Center in the EPA Headquarters Library, Room Number 3334 in the William Jefferson Clinton West Building, located at 1301 Constitution Ave. NW., Washington, DC The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744.

FOR FURTHER INFORMATION CONTACT: For further general information on this rulemaking, contact Mr. Rich Damberg, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, by phone at (919) 54l-5592, or by email at *damberg.rich@epa.gov;* or Ms. Rhonda Wright, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, by phone at (919) 54l-1087, or by email at *wright.rhonda@epa.gov.* To request a public hearing or information pertaining to a public hearing on this document, contact Ms. Pamela Long, Air Quality Policy Division, Office of Air Quality Planning and Standards (C504–01), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number (919) 541–0641; fax number (919) 541–5509; email address: *long.pam@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

Entities potentially affected directly by this proposal include state, local and tribal governments. Entities potentially affected indirectly by this proposal include owners and operators of sources of SO_2 emissions (such as coal-fired power plants, refineries, smelters, pulp and paper related facilities, chemical

manufacturing and facilities with industrial boilers for power generation) that contribute to ambient SO_2 concentrations, as well as people whose air quality is affected by these facilities.

B. What should I consider as I prepare my comments for the EPA?

1. Submitting CBI. Do not submit this information to the EPA through *www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on a disk or CD–ROM that you mail to the EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed to be CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. Tips for Preparing Your Comments. When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

C. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this notice will be posted at *http://www.epa.gov/air/sulfurdioxide/implement.html.*

D. What information should I know about possible public hearings?

To request a public hearing or information pertaining to a public hearing on this document, contact Ms. Pamela Long, Air Quality Policy Division, Office of Air Quality Planning and Standards (C504–03), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number (919) 541–0641; fax number (919) 541–5509; email address: *long.pam@epa.gov.*

E. How is this document organized?

The information presented in this document is organized as follows:

II. Background for Proposal

A. The 2010 SO_2 NAAQS

On June 2, 2010, the EPA Administrator signed a final rule that revised the primary SO_2 NAAQS under section 109 of the Clean Air Act (CAA or Act) to provide requisite protection of public health with an adequate margin of safety (75 FR 35520, June 22, 2010). Specifically, the EPA promulgated a new 1-hour daily maximum primary SO_2 standard at a level of 75 parts per billion, based on the 3-year average of the annual 99th percentile of 1-hour

daily maximum concentrations.[1] The revised SO_2 NAAQS will improve public health protection, especially for children, the elderly and people with asthma. These individuals are more susceptible to the health problems associated with breathing SO_2 than individuals from the general population.

The reaction of SO_2 with other pollutants in the atmosphere and the resulting long-range contribution of SO_2 to regional air pollution problems such as fine particle formation and acidic deposition are well-understood effects of SO_2 emissions. However, SO_2 as a directly emitted pollutant can also cause relatively localized health impacts. For example, in previous guidance, the EPA has indicated a general guideline that the distance between a source and the maximum ground level concentration of SO_2 is generally 10 times the stack height in flat terrain.[2] This means that maximum concentrations can be expected to be observed within 1–2 miles of some large power plants and other facilities. It is important to recognize, however, that conditions such as unique terrain features and associated meteorological conditions can impact the location and magnitudes of significant concentration gradients.

The SO_2 standard was established with a 1-hour averaging time particularly to protect sensitive individuals from respiratory effects associated with short-term exposures to SO_2. Thus, from an air quality management perspective, the SO_2 NAAQS can be considered to be a largely ''source-oriented'' NAAQS rather than a ''regional'' one (i.e., more similar to the lead NAAQS than to the ozone NAAQS). Strategies to attain the SO_2 NAAQS are expected to be focused on key point sources. The largest sources of SO_2 include coal-fired electric utilities, industrial boilers, refineries, pulp and paper-related industries and chemical manufacturing.

[1] The standard is defined in 40 CFR 50.17(a)-(b). The 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations is referred to as the ''design value.'' The design value is compared to the level of the standard to determine whether air quality at that location meets the standard.

[2] *See* March 1, 2011, memorandum from Tyler Fox, EPA Office of Air Quality Planning and Standards, ''Additional Clarification Regarding the Application of Appendix W Modeling Guidance for the 1-hr NO_2 NAAQS.'' Research Triangle Park, North Carolina 27711. This memo is available at: *http://www.epa.gov/ttn/scram/Additional_Clarifications_AppendixW_Hourly-NO_2-NAAQS_FINAL_03–01–2011.pdf.* See also the December 2013 ''Draft SO_2 NAAQS Designations Modeling Technical Assistance Document,'' issued by EPA Office of Air Quality Planning and Standards, available at *http://www.epa.gov/airquality/sulfurdioxide/pdfs/SO_2 ModelingTAD.pdf.*

B. The Area Designations Process

When a NAAQS is revised, CAA provisions trigger various actions and implementation responsibilities for air agencies [3] and the EPA. Two important milestones are: (1) The area designations process under CAA section 107 and subsequent nonattainment area plan development under CAA sections 172 and 191–192, and (2) submittal of ''infrastructure'' plans by air agencies within 3 years of NAAQS promulgation under section 110(a)(1)–(2) of the CAA.

The area designations process typically relies on air quality concentrations characterized by ambient monitoring data collected by the air agency to identify areas that are either meeting or violating the relevant standard. Air agencies are required to provide the EPA with area recommendations and supporting technical information within 1 year after a standard is revised. The EPA considers this information and commonly sends a letter to the air agency (at least 120 days prior to finalizing the designation) that describes its intended designation and boundaries of the nonattainment areas and other areas in the state.

During this 120-day period, the air agency has the opportunity to demonstrate why an EPA-intended modification to its recommendation would be inappropriate. The EPA then finalizes the area designations process by sending letters to each governor and publishing the NAAQS designations for each state (and tribal area, as appropriate) in the **Federal Register**. The final designations are listed in 40 CFR part 81.

Once an area is designated as nonattainment for the SO_2 NAAQS, CAA section 191 directs the air agency to submit to the EPA within 18 months of designation a NAAQS attainment plan that demonstrates, typically through air quality dispersion modeling, how the area would attain the standard as expeditiously as practicable, but no later than 5 years after designation as provided by section 192. CAA section 172 lists additional elements that NAAQS attainment plans are to contain. The air quality modeling for an attainment demonstration needs to ensure that the area would attain even if all contributing sources emitted at ''permitted allowable'' levels. The specifications of attainment demonstration modeling techniques are described in 40 CFR part 50, Appendix W.

[3] ''Air agency'' refers to the air quality management agency of the relevant state government or tribal nation.

C. History of Designations for the SO_2 NAAQS

The original SO_2 NAAQS [4] were established in 1971, and the EPA originally designated nonattainment areas for the prior SO_2 NAAQS in March 1978.[5] The **Federal Register** final rule for this action noted that certain areas were designated on the basis of modeling data: ''In the absence of sufficient monitored air quality data, other evaluation methods were used, including air quality dispersion modeling.'' In a September 11, 1978, supplement to the March 3, 1978, final rule, the EPA responded to commenters and upheld certain designations based on modeling information.[6] A second supplement to the March 1978 designations notice affirmed the use of modeling for SO_2 designations and determining air quality status, stating that, ''the EPA's policy related to designations for SO_2 permit the use of either modeling or monitoring to determine attainment status.'' [7]

Five years later, in 1983, the EPA conducted a review of all section 107 NAAQS designations made to date. A related EPA memo, ''Section 107 Designation Policy Summary,'' identified the importance of modeling information for source-oriented pollutants in cases where existing monitors did not adequately characterize peak concentrations: ''In general, all available information relative to the attainment status of the area should be reviewed. These data should include the most recent eight consecutive quarters of quality-assured, representative ambient air quality data plus evidence of an implemented control strategy that the EPA had fully approved. Supplemental information, including air quality modeling, emissions data, etc., should be used to determine if the monitoring data accurately characterize the worst case air quality in the area.'' [8]

D. Use of Air Quality Modeling Information in Area Designations for the SO_2 NAAQS

Past area designations processes for most NAAQS (such as for ozone) having violations caused and contributed to by multiple sources over a broad region have relied primarily on air quality monitoring data to identify areas that

[4] *See* 36 FR 8186 (April 30, 1971).

[5] *See* 43 FR 8962 (March 3, 1978).

[6] *See* 43 FR 40416 (September 11, 1978).

[7] *See* 43 FR 40502 (September 12, 1978).

[8] Memorandum From Sheldon Myers, Director, EPA Office of Air Quality Planning and Standards, to Regional Office Air Division Directors. ''Section 107 Designation Policy Summary.'' April 21, 1983.

violate the standard. However, it is important to note, as the EPA explained in the final 2010 SO_2 NAAQS preamble, that there is a long history of also using dispersion modeling information to inform area designations for the SO_2 NAAQS. *See,* e.g., 75 FR at 35551–3. The EPA and the air quality management community have recognized over many years that peak concentrations of SO_2 are commonly caused by one or a few major point sources in an area and peak concentrations are typically observed relatively close to the source. Many factors influence the observed SO_2 concentrations around emissions sources, including the sulfur content of fuel that is combusted, the sulfur content of material being heated as part of an industrial process, the rate of SO_2 emissions per hour, stack height, topography, meteorology, monitor location and source operating schedule. But because ambient SO_2 concentrations are not the result of complex chemical reactions (unlike ozone or $PM_{2.5}$), they can be modeled accurately using well-understood air quality modeling tools, especially in areas where one or only a few sources exist. In the 1970's, when the original SO_2 NAAQS were established, there were significantly more SO_2 monitors in operation nationally than today. Even then, the EPA and air agencies acknowledged the utility of modeling in order to inform area designations under the SO_2 NAAQS. *See* e.g., 43 FR 45993, 45994–46002 (Oct. 5, 1978).

Over time, air agencies have operated monitoring networks to characterize SO_2 concentrations as effectively as possible. However, the ambient SO_2 monitoring network has declined in number since its peak of approximately 1,500 monitors in 1980 to its current size of approximately 450 monitors (as of June 2013), due to improving air quality and, more recently, due to increasingly limited resources at the local, state and federal levels. As part of the 2010 SO_2 NAAQS review, the EPA conducted an analysis of the existing monitoring network to inform potential updates to SO_2 minimum monitoring requirements that might accompany a revised NAAQS. The study concluded that only up to a third of the SO_2 monitors in operation at the time were sited to characterize peak 1-hour ambient SO_2 concentrations. The EPA acknowledged this in the SO_2 NAAQS final preamble: ''In preparation for the SO_2 NAAQS proposal, the EPA conducted an analysis of the approximately 488 SO_2 monitoring sites operating during calendar year 2008 (Watkins and Thompson, 2009). This analysis indicated that approximately 35 percent of the sites in the monitoring network were addressing locations of maximum (highest) concentrations, likely linked to a specific source or group of sources. Meanwhile, just under half (~46 percent) of the sites were reported to be for the assessment of concentrations for general population exposure. These data led the EPA to conclude that the network was not properly focused to support the revised NAAQS, given the EPA's belief at the time that source-oriented monitoring data would be a primary tool for assessing compliance with the NAAQS.'' [9] While the current ambient SO_2 monitoring network does serve multiple monitoring objectives (which includes some source-oriented monitoring), on the whole, the network is not appropriately positioned or of adequate size for purposes of the 2010 SO_2 standard to characterize the air quality around many of the nation's larger SO_2 sources in operation today.

In implementation of the prior SO_2 NAAQS, the EPA thus relied upon both modeling and monitoring to inform decisions regarding whether areas were violating the NAAQS. *See* e.g., 67 FR 22168, 22170–71 (May 2, 2002). This historical use of modeling along with monitoring has been affirmed as technically valid and lawful under the CAA by reviewing courts. *See* e.g., *Montana Sulphur & Chemical Co.* v. *the EPA,* 666 F.3d 1174, 1185 (9th Cir. 2012); *PPG Industries, Inc.* v. *Costle,* 630 F.2d 462, 467 (6th Cir. 1980). Because of the inherent challenges in characterizing peak SO_2 ambient air quality strictly through monitoring techniques, past EPA SO_2-related designations actions, state implementation plan (SIP) approval and disapproval rulemakings, federal implementation plan rulemakings and non-binding guidance have recognized that air quality modeling can be appropriately used to identify areas that are meeting or violating the SO_2 NAAQS, and can be used to confirm air quality monitoring data when an area is seeking redesignation to attainment.

The EPA believes that existing air quality modeling tools are technically sound and historically have been used when monitoring data were not available; therefore, the EPA considers these modeling tools appropriate for use in combination with ambient monitoring data for assessing air quality impacts from SO_2 emissions. The EPA has recently issued a draft modeling technical assistance document (TAD) [10] suggesting an approach that could be used by states to characterize SO_2 concentrations around SO_2 sources using the AERMOD [11] model with actual emissions data, actual meteorological data and actual stack height information. More details on the EPA's modeling TAD are provided in section V, Technical Considerations.

E. SO_2 NAAQS Preamble: Suggested Implementation Approach

The preamble to the final SO_2 NAAQS issued in 2010 noted that although the current SO_2 ambient monitoring network included 400+ monitors nationwide, the scope of the network had certain limitations and approximately two-thirds of the monitors were not located to characterize maximum concentration, source-oriented impacts. In order to address potential public health impacts in areas without adequate monitoring that could be experiencing SO_2 concentrations that violate the NAAQS, in the June 2010 SO_2 NAAQS preamble the EPA recommended, but did not require, that air agencies characterize air quality in these areas with limited monitoring through the use of air quality modeling, and adopt substantive emission limitations to ensure attainment of the SO_2 NAAQS where the modeling indicated a violation. The preamble stated that the EPA expected that such analyses and emission limitations would be submitted as part of the section 110(a)(1) infrastructure plans due in June 2013 in order to demonstrate how areas with sources emitting over 100 tons of SO_2 per year would attain and maintain the NAAQS in the future. The EPA subsequently issued draft implementation guidance in September 2011, which further described this suggested approach and requested comments from the public.[12]

A number of commenters on the draft guidance expressed concern with the suggested implementation approach and some challenged this approach in court

[9] *See* 75 FR 35557 (June 22, 2010). *See* also Watkins and Thompson. (2009). SO_2 Network Review and Background; OAQPS; Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC. Sulfur Dioxide NAAQS Review Docket (OAR–2007–0352–0037). Available at *http://www.regulations.gov.*

[10] The Draft SO_2 NAAQS Designations Modeling Technical Assistance Document can be found at *http://www.epa.gov/airquality/sulfurdioxide/pdfs/SO2ModelingTAD.pdf.*

[11] ''AERMOD'' stands for the American Meteorological Society/EPA Regulatory Model.

[12] The draft guidance for 1-Hour SO_2 NAAQS SIP Submissions can be found at *http://www.epa.gov/oaqps001/sulfurdioxide/pdfs/DraftSO2Guidance_9-22-11.pdf.*

as part of the final SO_2 NAAQS rule.[13] Many commenters maintained that areas should be designated as nonattainment first, before they are expected to provide technical analyses and adopt enforceable emission limitations demonstrating attainment. They claimed that the recommended approach in effect bypassed the designation process for areas without adequate monitoring, frustrating the preferred sequence in implementing NAAQS under the CAA. A number of commenters were concerned about the level of effort and resources needed to develop plans that essentially required modeling for all sources with annual SO_2 emissions exceeding 100 tons. (There were more than 1,680 sources across the country exceeding 100 tons of actual emissions based on 2008 national emissions inventory data. Based on data from the 2011 National Emissions Inventory, there are about 1500 sources exceeding 100 tons of annual SO_2 emissions.) It was also pointed out that the statutory due date of June 2013 for the section 110 infrastructure plans (which would have included control requirements based primarily on modeling information under the EPA's then-suggested approach) would come well before the attainment plan submittal due date for areas to be designated as nonattainment. (At the time the draft guidance was issued in September 2011, the EPA was planning to issue final designations in June 2012, meaning that nonattainment area plans would have been due 18 months from the effective date of designations, or approximately in February 2014.)[14]

F. The EPA White Paper and Stakeholder Input

1. Background

In response to the comments received on the draft implementation guidance issued in September 2011, the EPA Assistant Administrator for Air and Radiation, Gina McCarthy, sent letters to state Environmental Commissioners on April 12, 2012, indicating that the EPA wanted to further consult with stakeholders regarding how to best implement this standard and protect public health in an effective manner. The letters also stated that the EPA would not expect air agencies to submit substantive attainment demonstrations and emission limitations by June 2013 (as part of section 110(a) infrastructure plans) for areas not designated as ''nonattainment,'' but would expect those submittals to resemble more traditional infrastructure SIPs.

The EPA then issued a May 2012 paper titled, ''Implementation of the 2010 Primary 1-Hour SO_2 NAAQS: Draft White Paper for Discussion'' (White Paper) on possible alternative approaches for implementing the SO_2 standard.[15] The EPA convened 3 stakeholder meetings to discuss the White Paper in May and June of 2012 with, respectively, environmental group representatives; state, local and tribal air agency representatives; and industry representatives. The EPA also accepted written comments on the White Paper from interested parties through the end of June.

In the White Paper and during the stakeholder meetings, the EPA framed the basic challenge of how to more broadly characterize 1-hour SO_2 concentrations in priority locations across the country such that these data could inform future area designations for the SO_2 NAAQS, while taking into consideration limited EPA and air agency resources. The paper noted that peak 1-hour concentrations of SO_2 are most commonly observed in relatively close proximity to emission sources, yet many monitors in the current SO_2 ambient monitoring network are not sited in appropriate locations to document these peak concentrations. Thus, many existing monitors are in effect ''under-reporting'' peak 1-hour concentrations.

The White Paper indicated that there are more than 20,000 SO_2 sources nationally and to add a significant number of ambient monitors to the national network to adequately characterize peak concentrations would take significant resources. The EPA estimates that the capital costs of siting a new monitor can be on the order of $50,000 to $100,000. Routine operations and maintenance costs would be in addition to those up-front capital costs.

Given this background, the White Paper described two monitoring-focused approaches and one modeling-focused approach for characterizing peak 1-hour SO_2 concentrations, and it outlined a range of policy, technical, and implementation issues and questions associated with each approach. The issues and questions highlighted in the White Paper were discussed in depth during the stakeholder meetings. The White Paper and high-level summaries of each meeting are available on the EPA's SO_2 implementation Web site.[16]

2. Monitoring and Modeling Approaches Described in White Paper

Two possible monitoring-focused approaches were described in the White Paper. The White Paper indicated that about 440 SO_2 monitors were operational as of April 2012, but only about a third of those monitors might be considered to be in ''source-oriented'' locations. Thus, if air agencies were to implement a monitoring-only approach without supplemental data from modeling, a number of monitors would either need to be moved within the existing network and/or a number of new monitoring sites would need to be established.

The first monitoring-based approach described in the White Paper would involve air agencies reallocating the monitors that are not source-oriented and otherwise not required to be in their current locations to be moved to source-oriented locations, and then adding additional monitors as necessary to address all areas warranting further characterization of air quality. For example, such a network might be designed to characterize air quality for about 550 sources with annual emissions greater than 2,000 tons, which in total would account for about 93 percent of nationwide SO_2 emissions (based on 2008 national emission inventory data). This option would identify source areas for monitoring based on a single emissions threshold. It would focus on providing air quality characterization around the largest sources and would not provide additional emphasis on sources located in highly populated areas.

The second monitoring-focused option presented in the White Paper was an extension of the Population Weighted Emissions Index (PWEI) concept that was included in the 2010 SO_2 NAAQS ambient monitoring requirements. The PWEI was established to define monitoring requirements for Core Based Statistical Areas (CBSAs) based on calculations using the total SO_2 emissions and total population in the area. This suggested option in the White Paper would require approximately 400 sources located in areas with a high PWEI and having SO_2

[13] On July 20, 2012, the D.C. Circuit Court of Appeals issued a decision upholding the 2010 SO_2 NAAQS. *See* National Environmental Development Association's *Clean Air Project* v. *EPA,* No. 10–1252 (D.C. Cir. July 20, 2012). The U.S. Supreme Court declined to hear an appeal of this decision.

[14] Note that on July 27, 2012, the EPA announced that it was extending the deadline for the initial round of SO_2 NAAQS area designations by an additional year, to June 3, 2013, which thus compounded this timing discrepancy in many commenters' views.

[15] The May 2012 White Paper and high-level summaries of stakeholder meetings are available at: *http://www.epa.gov/oaqps001/sulfurdioxide/implement.html.* These documents and written comments received from stakeholders are also included in the docket for this rulemaking.

[16] *See http://www.epa.gov/airquality/sulfurdioxide/implement.html.*

emissions over 750 tons per year (tpy) to have source-oriented monitoring; and an estimated 170 additional sources located outside those PWEI areas having emissions over 5,000 tpy to have source-oriented monitoring. This option also would account for more than 90 percent of nationwide SO_2 emissions (based on 2008 national emission inventory data).

Thus, both monitoring-only approaches, using the example cutoffs identified in the White Paper, were estimated to provide for the characterization of air quality for at least 500 sources that accounted for at least 90 percent of national emissions (based on 2008 emissions data).[17] One key difference between the 2 options was that the second option provided some additional emphasis on ensuring the characterization of air quality in areas with relatively higher populations.

The White Paper also included discussion of a modeling-based approach, in which air quality dispersion modeling with AERMOD would be used to characterize air quality for areas in which the largest SO_2 sources are located. The EPA presented this potential approach because air quality modeling has been used for SO_2 designations in the past, and conducting air quality modeling analyses for SO_2 would likely be less resource intensive than the full-scale expansion and operation of the ambient monitoring network described in the Paper. Under this approach, modeling would be required to characterize air quality in areas in which sources exceeding a specified emissions threshold are located.

3. Comments on Monitoring-Based Approaches

In the May–June 2012 stakeholder meetings and written comments received thereafter, a number of stakeholders, including several state and local air agency representatives, expressed a preference for the use of ambient monitoring alone to characterize air quality SO_2 concentrations. They indicated that, since the 1970s, ambient monitoring has been the traditional approach for characterizing air quality to assess compliance with all other NAAQS. They claimed that the expanded use of air quality modeling to characterize SO_2 concentrations, as described in the draft September 2011 guidance, would not be appropriate because they believed that modeling techniques inherently over-predict SO_2 concentrations by assuming a constant rate of peak emissions and worst-case meteorological conditions.

Commenters from some of the states with the greatest number of large SO_2 sources (such as Ohio, Indiana and Pennsylvania) indicated that for each source, as many as 3 monitors or more might be needed to adequately characterize 1-hour SO_2 concentrations around the source, in order to avoid monitoring that underestimates maximum SO_2 concentrations.[18] Some also recommended the addition of an onsite meteorological station near each source to aid monitoring data analysis.

Representatives from environmental organizations did not favor monitoring-based approaches. They emphasized the importance of characterizing air quality in priority areas expeditiously in order for such data to be used in the area designations process and monitoring approaches would take several years to site new monitors and collect 3 years of data. They pointed out that high 1-hour concentrations can occur in any direction around a source and that state air agencies would not have the resources to provide for multiple monitors around priority sources.

While some air agencies nevertheless maintained a preference for ambient monitoring, a number of them also expressed the concern that it would be difficult to expand their SO_2 networks with additional air quality monitors as needed because state budget resources are very limited today. Some commented that from a practical standpoint, if an expanded SO_2 monitoring network was to be established, it would need to be funded by the federal government, or by the source owners themselves. In contrast, a number of commenters representing sources of SO_2 emissions or industry associations maintained that ambient air quality monitoring to protect public health should be a governmental responsibility, rather than the responsibility of the emissions sources themselves. Some industry representatives indicated that they operate their own monitoring networks and could explore with corresponding air agencies the possibility of using data from such monitors under a monitor-based approach. Such monitors would need to meet the EPA's quality-assurance requirements, the data would need to be made publicly available and an agreement for long-term operation and funding would need to be considered.

Thus, while ambient monitoring appeared to be the favored methodology by a number of stakeholders, there were very pragmatic concerns expressed about the cost of expanding current networks sufficiently to ensure proper coverage and uncertainty about how many new monitors could be established in actuality. Some air agency representatives remarked that if modeling is also recognized as an acceptable approach for characterizing air quality, then they would be open to both approaches, as long as the state has the flexibility to use the analytical method that would make the most sense for each identified source area, considering the coverage of the state's existing monitoring network, various resource and staffing considerations, and other factors.

4. Comments on Modeling Approach

Environmental group representatives generally favored the use of modeling, citing the EPA's prior policy and various regulatory precedents in which modeling has been used to characterize SO_2 air quality. They emphasized that modeling can be done more quickly, with less expense and for more locations (including locations where physically siting a monitor would be very difficult) than monitoring. They indicated that the cost of modeling assessments for certain source areas could be done for less than $10,000.

Many air agency and industry commenters asserted that if the September 2011 draft modeling guidance for attainment plans (which, consistent with longstanding guidance and practice in SO_2 attainment planning, recommended the use of allowable, not actual, emissions rates) is maintained as the guidance for characterizing current air quality and is used for designations purposes, it would lead to significant over-predictions of 1-hour SO_2 concentrations. Some commenters opposed the use of modeling at all for this reason, without suggesting ways to correct this asserted over-prediction. Some commenters also cited specific technical issues with the AERMOD model (such as the treatment of low wind speed conditions and the treatment of building ''downwash'' conditions) which they believe contribute to the over-prediction of air quality concentrations.

A number of commenters did not oppose modeling outright, but suggested that if modeling is part of the EPA's overall approach, the EPA should allow air agencies to conduct modeling based on actual emissions, since modeling in this context in effect would serve as a surrogate to comprehensive ambient

[17] Based on 2008 emissions data, about 480 sources with actual emissions exceeding 2,800 tons per year accounted for 90 percent of national SO_2 emissions.

[18] *See,* for example, comments from Ohio EPA, docket number EPA–HQ–OAR–2010–1059–0123.

monitoring, while overcoming the current monitoring network's relative lack of coverage. For example, the Florida Department of Environmental Protection provided an example analysis in their comments which showed modeled air quality results using actual emissions inputs in close agreement with monitored air quality values near a large emission source in Florida.[19]

The EPA notes that the reason the draft modeling guidance issued in September 2011 recommended the use of the source's allowable emissions rate in the modeling analysis is because it was developed for predictive situations, such as when an air agency would be demonstrating attainment for the future, where use of allowable emissions rates is common for providing assurance that the prediction includes a full range of potential emissions scenarios. However, the EPA acknowledges that for the purpose of characterizing current[20] air quality, it is reasonable for modeling presumptively to use actual emissions data and/or actual 1-hour emission rates as an input in order to most closely represent ambient monitoring results. The EPA has concluded that using actual emissions data and meteorological data as inputs to AERMOD modeling can adequately characterize peak concentrations in multiple directions around a source. Note also that after considering the White Paper comments, the EPA developed the draft SO_2 NAAQS Designations Modeling TAD that recommends using AERMOD to estimate air quality concentrations near a large SO_2 source by using actual emissions data (such as 1-hour emissions rates from continuous emission monitors) and meteorological data from appropriate proximate nearby locations.[21]

In light of the practical concerns about the cost of adding new ambient monitors, the uncertainty (at the time of the stakeholder meetings) about whether actual emissions would be able to be used for air quality modeling for this purpose, and how accurate the predictive results of such modeling would be, many commenters suggested that air agencies should be provided the flexibility to choose whichever approach makes the most sense on a case-by-case basis for characterizing air quality around each priority source in the state. In addition, based on comments received on the White Paper regarding state resource concerns, it appears that some air agencies likely will need to rely primarily on air quality modeling techniques.

5. Comments on Emissions Threshold

While there was not consensus with respect to using a single approach for characterizing air quality from SO_2 sources, one issue that all parties involved in the stakeholder discussions generally agreed upon was the concept of having a ''threshold'' of some sort to identify the largest sources around which ambient air quality would need to be characterized to inform future rounds of area designations. A number of stakeholders commented that, given current budgetary and other constraints on resources for characterizing air quality through either monitoring or modeling, focusing on the largest sources of emissions would be a reasonable approach for prioritizing sources to be evaluated for purposes of assessing attainment with the 1-hour SO_2 NAAQS. Many stakeholders found the basic policy approach expressed in the White Paper (where air agencies would characterize air quality for sources accounting for 90 percent of national SO_2 emissions for use in future designations) to be reasonable and preferable to the approach in the September 2011 guidance (where air agencies were expected to demonstrate attainment around all sources in the state emitting more than 100 tons of SO_2 per year).

Some commenters offered recommendations for specific SO_2 thresholds based on annual emissions or other factors that would define which sources air agencies would be expected to characterize through monitoring or modeling in the future. Some commenters suggested single threshold levels ranging from 100 to 5,000 tons of SO_2 emissions per year. A few commenters suggested a phased approach, in which larger sources (e.g., 2,000 tpy and larger) would be addressed in an initial phase and smaller sources (e.g., 500–2,000 tpy) would be addressed in a second phase 2 or more years later.[22] Several commenters observed that because the SO_2 NAAQS is a 1-hour standard, a potentially more appropriate metric for a threshold would be one based on hourly emissions rates rather than tpy. Others recognized, however, that 1-hour emissions data are not readily available for many types of emissions sources other than electric generating units (EGUs) (which commonly operate continuous emissions monitors (CEMs)).

Some commenters stated that because protection of public health is the principal objective of the SO_2 NAAQS, a program to direct air agencies to characterize SO_2 concentrations around large SO_2 sources should include some specific emphasis on sources located in areas with higher populations. Some suggested that other factors such as the height of emissions stacks, proximity to sensitive receptors (*i.e.,* schools, hospitals, nursing homes), or source compliance record should also be considered in establishing a threshold-based approach.

6. Comments on Program Implementation

A number of stakeholders provided comments on the timing of implementation for any program requiring air agencies to further characterize peak 1-hour SO_2 concentrations. Many commenters stated that any new modeling or monitoring requirements should be established through a notice-and-comment rulemaking process. In addition, a number of air agency representatives indicated that the program needs to be structured in such a way that allows for sufficient time to conduct the necessary monitoring or modeling, citing the large number of sources to be addressed (even with a threshold), limited resources and the stringency of the 1-hour standard. The proposed timeline for implementation is discussed in more detail in section IV of this preamble.

The input received from stakeholders during these meetings and in written comments was invaluable to informing the EPA's refinement of its SO_2 implementation strategy, which was released in February 2013 and is discussed in the next section. Input from the stakeholder meetings and comments on the White Paper also informed the recent TADs on

[19] *See* Docket item the EPA–HQ–OAR–2010–1059–0172, June 29, 2012, letter from Florida Department of Environmental Protection with comments on the EPA's April 2012 SO_2 White Paper.

[20] ''Current'' air quality in this context refers to the air quality indicator that may be used by the EPA for various regulatory decisions in a future designations process (*e.g.,* the most recent 3 years of monitoring data).

[21] While the use of actual emissions data is recommended in the draft modeling TAD, there may be situations where the use of allowable emissions rates to characterize current air quality may be beneficial for the air agency or source to show that even with this type of conservative assumption, the source area would be expected to attain the standard. One benefit of an analysis demonstrating attainment of the 1-hour standard based on allowable emission rates is that it would avert the need for recurring review to determine whether emission increases have created new potential for NAAQS violations.

[22] Comments on the EPA White Paper from the Georgia Department of Natural Resources, EPA Docket ID No. EPA–HQ–OAR–2010–1059–0136, June 29, 2012.

monitoring [23] and modeling for designations.

G. The EPA's February 2013 SO_2 Implementation Strategy Paper

On February 13, 2013, as part of the initial area designations process, the EPA notified air agencies that we intended to designate 30 areas as nonattainment, based on monitored violations of the SO_2 NAAQS.[24] We also notified air agencies that the EPA was not yet prepared to propose designations for other areas without violating monitors. On the same day, the EPA also issued an implementation strategy paper titled, ''Next Steps for Area Designations and Implementation of the SO_2 NAAQS.'' [25] This Strategy Paper described the agency's plan for addressing public health concerns in areas other than the areas identified in initial designation. The Strategy Paper recognizes the need to further characterize current air quality across the country to address important public health impacts, noting that ''the current monitoring network provides relatively limited geographic coverage, and many monitors in the existing network are not sited with the objective of characterizing source-oriented maximum concentrations.'' The Paper also supports the long-standing approach in the CAA for the EPA to designate nonattainment areas through an orderly exchange of recommendations and technical information between state governments and the EPA.

The main elements of the implementation strategy include the following:

- The EPA would develop a rulemaking directing air agencies to characterize air quality in priority source areas through either air quality monitoring or air quality modeling and submit such data to the EPA. The present proposal is a key step in fulfilling this aspect of the strategy.
- The rule would identify priority sources as those sources exceeding specific thresholds based wholly or in part upon annual emissions. Some threshold options may be ''2-pronged,'' meaning they could include a lower threshold for sources located in metropolitan areas larger than a certain size and a higher threshold for sources located outside such metropolitan areas.
- Prior to proposal of the rulemaking, the EPA would issue draft TADs on siting ambient, on source-oriented SO_2 monitors at locations of expected maximum concentration and on the use of air quality modeling to characterize ''current'' air quality around an emission source for purposes of designations recommendations.
- To fulfill their requirements to characterize air quality, states would have flexibility to choose whether to use monitoring or modeling to characterize air quality around or in proximity to identified sources. Air agencies would follow the timeline provided in the rule, which would specify the dates by which they need to identify the method to be used to characterize air quality and the date for submitting these data to the EPA along with relevant designation recommendations.
- The EPA and air agencies would use these data to complete two additional rounds of area designations as soon as feasible after the data become available.
- The Strategy Paper noted that this approach provides an incentive for states and other air agencies to work with their sources to achieve early reductions to improve public health and potentially avoid a nonattainment designation for as many priority source areas as possible.

With regard to identifying priority sources through source threshold options, the Strategy Paper first discussed appropriate monitoring objectives for a NAAQS pollutant that can have localized impacts, such as SO_2 or lead. It indicated that important monitoring objectives should include (1) characterization of peak air quality concentrations in the area around the source (e.g., source-oriented and maximum concentration monitoring); and (2) characterization of air quality in populated areas, intended to represent ambient concentrations to which people in the area are exposed.

To meet these two objectives, the EPA suggested the establishment of a ''2-pronged'' emissions threshold for identifying sources for which the air agency would need to further characterize air quality. The paper states: ''Under such an approach, a lower threshold (e.g., 2,000–3,000 tpy) would apply to sources located in more heavily populated areas (e.g., CBSAs having 1,000,000 or more persons); and a higher threshold (e.g., 5,000–10,000 tpy) would apply to sources located in less populated areas outside of such CBSAs. To illustrate potential coverage of possible options, a 2-pronged threshold including 3,000+ ton sources located in CBSA's with a population of 1,000,000 and 10,000+ ton sources outside of these CBSA's, would cover 202 sources and 66 percent of national emissions. A 2-pronged threshold including 2,000+ ton sources located in CBSA's with a population of 1,000,000 and 5,000+ ton sources outside of these CBSA's, would cover 341 sources and 81 percent of national emissions.''

The Strategy Paper goes on to say, ''In a future rulemaking, factors to consider in selecting appropriate thresholds could include the comprehensiveness of the total emissions represented; the comparability of source coverage under this approach with typical source coverage of an ambient monitoring network; emission levels for sources in areas with monitored violations; and emission levels associated with 'well-controlled' sources. Upon analysis of such factors, the EPA would expect to propose a range of threshold options for a minimum level of coverage (preliminary estimates suggest that this range could cover sources accounting for 66 percent to 90 percent of national SO_2 emissions). In addition, the basis for the emissions that would be compared to the threshold (e.g., highest of the most recent 3 years of data) would need to be defined in the rulemaking.''

III. Source Coverage and Emission Threshold Options

A. Background

This section discusses the proposed ''threshold'' options for identifying source areas for future air quality characterization and the factors that the EPA considered in developing them. The EPA believes the key objective to be achieved by using SO_2 source emission thresholds would be to focus the limited available resources at the local, state and federal levels toward characterizing air quality in areas having the largest SO_2 emitting sources (and greater potential for relatively higher SO_2 concentrations) but may be lacking sufficient air quality data. In proposing source threshold options, the EPA seeks to collect additional air quality data intended to achieve protection of public health on a widespread basis from the adverse health effects of short-term exposure to high SO_2 concentrations. However, the EPA recognizes that for SO_2 and all other NAAQS, characterizing air quality in areas around all sources nationally is not feasible. Thus, just as NAAQS ambient monitoring networks are designed to

[23] The Draft SO_2 NAAQS Designations Source-Oriented Monitoring Technical Assistance Document can be found at *http://www.epa.gov/airquality/sulfurdioxide/pdfs/SO2MonitoringTAD.pdf.*

[24] The EPA finalized nonattainment designations for 29 of those 30 areas August 5, 2013 (78 FR 47191, 47205). The EPA took no designation-related action on the rest of the country. Estimated total stationary source SO_2 emissions (calendar year 2011) in these areas ranged from 562 tons (lowest area) to 144,267 tons (highest area) per year.

[25] The February 2013 SO_2 NAAQS implementation strategy paper can be found at: *http://www.epa.gov/oaqps001/sulfurdioxide/implement.html.*

measure air quality in areas where the public is likely to be exposed and violations may be likely, these SO_2 threshold options are designed to meet a similar objective. These options also provide for the characterization of air quality in a substantial number of source areas that account for a high percentage of the national SO_2 emissions inventory in a manner that provides flexibility to air agencies, given existing funding and resource constraints.

B. Proposed Source Emission Threshold Options

The purpose of establishing emission thresholds by rule will be to identify those SO_2 emissions sources for which air agencies will be directed to either: (1) Characterize air quality through either ambient monitoring or air quality modeling; or (2) demonstrate that there are adequate enforceable emission limits in place for the area's sources by January 2017 that will ensure attainment with the 1-hour SO_2 standard. We note that some commenters suggested that a number of sources are planning to shut down during the next few years and should not be subject to this rule. If sources have indeed shut down by January 2017, a demonstration to that effect would also be sufficient.

We note that air agencies may have other factors or reasons that lead them to evaluate 1-hour air quality concentrations for SO_2 source areas other than those that may be required to be characterized pursuant to this proposed rule. This proposed rule only presents a minimum set of sources for which surrounding ambient air quality would need to be characterized. As discussed in more detail in section IV, the air agency or the EPA Regional Administrator [26] may identify other sources that should be characterized beyond the minimum requirements of this proposed rule.

In developing the proposed source emission threshold options, the EPA considered two important preliminary questions: (1) What is an appropriate metric for defining a source threshold? and (2) should population centers be addressed by source threshold options? The EPA considers each of these questions first before discussing the three proposed source threshold options.

[26] Throughout this proposed rule the ''EPA Regional Administrator'' refers to the Regional Administrator or a delegated representative.

1. What are the appropriate emissions metrics for use in a threshold approach?

The EPA's 2012 White Paper and the 2013 Strategy Paper discuss appropriate metrics to use in establishing a threshold-based approach to characterize ambient air quality surrounding a subset of priority SO_2 sources. In these papers, the EPA described the source emission threshold concept in terms of the metric of annual tons of SO_2 emissions. Because the standard is expressed in terms of a 1-hour form, a potentially more appropriate metric to use for establishing a source threshold concept to identify priority sources may be the 1-hour emission rate. Many EGUs are already required to track and report 1-hour emission rates in accordance with existing requirements to operate CEMs for compliance with existing programs. However, most facilities in non-EGU sectors (e.g., pulp and paper facilities, Portland cement plants, petroleum refineries, etc.) do not currently operate CEMs nor do they collect emissions data on an hourly basis.

Commenters on the White Paper also identified some other factors that potentially could be used or incorporated into an approach to identify sources for air quality characterization. These factors include stack height, proximity to sensitive populations (e.g., schools, hospitals, nursing homes) and topography, among others. Some commenters suggested that the EPA develop a complex matrix of multiple factors for identifying sources.

The EPA recognizes that any source emission threshold approach needs to strike a reasonable balance between the robustness of the technical approach and the feasibility of implementing it. The EPA believes that inclusion of factors other than emissions data in a source threshold approach will be difficult for implementation because current databases do not provide comprehensive data for other factors for all SO_2 candidate sources nationally. In addition, we do not anticipate that the introduction of these multiple other potential factors would improve the source identification approach by such a degree that it would justify the complexity and additional administrative burden introduced by the inclusion of such factors.

The EPA therefore is proposing that the emissions-based component in the threshold options presented in this rulemaking be expressed in terms of annual emissions of SO_2. Annual emissions data are available for all SO_2 emissions sources over 100 tpy, whether EGU or non-EGU, and thus providing a stable and common metric for large sources. Requirements for the submittal of such data already are found in existing regulations for large SO_2 sources, whereas submittal of 1-hour emissions data is not currently required for all large sources of SO_2. Thus, an annual emissions-based approach would not impose substantial new reporting burdens on states and sources. This metric will also allow for program implementation based on a common and complete dataset; and importantly, many stakeholders in past meetings have expressed support for the use of annual emissions.

The EPA requests comment on the use of annual emissions (i.e., tons of SO_2 per year) as the metric to be used for an emissions and population-based threshold approach, or, alternatively, for a solely emissions-based threshold approach, to identify SO_2 sources for further ambient air quality characterization with respect to the 1-hour SO_2 NAAQS. The EPA also requests comment on any potential alternative factors that should be considered for defining emissions thresholds, along with any information about the availability of data related to this factor for all SO_2 sources nationally, the time and resources needed to develop a database for this additional factor, any associated technical analysis and rationale for using these other factors in defining source thresholds.

2. Should a tighter threshold apply in more populated areas?

In the 2012 White Paper, the EPA presented the issue of whether population exposure could have a role in the process of identifying where limited resources should be focused in creating new air quality data, as it historically has in designing ambient air quality networks. In feedback received during meetings with stakeholders, commenters varied in their opinions regarding whether there should be a population-based aspect to the source threshold concept or not. Some stakeholders supported a threshold based strictly on SO_2 emissions, while others supported an option with both a source-oriented component and a population-based component.

After considering these comments, the EPA in its February 2013 SO_2 Strategy Paper presented example options for establishing ''2-pronged'' source thresholds that would include a lower emissions threshold for sources located in areas with higher population and a higher emissions threshold for sources outside those higher population areas. One advantage of a 2-pronged option is that it directly addresses source-

oriented emissions and includes an element of population exposure. A lower threshold for urban sources can help increase public health protection because there are more people in an area that could be impacted by relatively smaller sources. At the same time, the higher threshold outside the populated areas allows resources spent on characterizing air quality around smaller sources to be more efficiently focused on the more populated areas.

Consistent with the February 2013 Strategy Paper, the EPA believes it would be most prudent to design this data requirements rule to include specific priority for characterizing air quality around sources located in areas of higher population and therefore the potential for greater population exposure to unsafe 1-hour SO_2 concentrations. The air quality data to be developed by air agencies will be used in protecting public health in these areas through the area designations process. The inclusion of population exposure as an objective in this program also would be generally consistent with the rationale behind the PWEI concept used in the monitoring requirements promulgated in the 2010 SO_2 NAAQS final rule.

The EPA believes that in defining the population exposure component of a source threshold approach, it is preferable to link the threshold to population data for CBSAs. As a precedent, the EPA has recently used the population threshold of CBSAs having 1,000,000 or more persons for certain minimum monitoring requirements for nitrogen dioxide (NO_2), carbon monoxide and particulate matter. Further, the recent 2013 Revision to Ambient Nitrogen Dioxide Monitoring Requirements rule modified the dates by which required near-road NO_2 monitors are to be operational, with the first phase of these monitors focused in CBSAs having 1,000,000 or more persons.

Based upon 2012 population estimates from the U.S. Census Bureau, areas meeting the 1,000,000 person CBSA threshold represent approximately 55 percent of the total U.S. population. The EPA believes this threshold is a reasonable metric to use when there is a need to more explicitly consider issues of concern in the nation's more urbanized areas. Due to the recent use of this particular population threshold, we again propose to use it as a means of demarking how a source threshold approach might be applied in the more populated areas of the country. The EPA requests comment on its proposed use of the 1 million person CBSA population threshold for representing the population exposure component of the source threshold options in this rule. The EPA also requests comment on whether to include a population exposure-based threshold at all, and on whether alternative or additional criteria would be appropriate to further focus resources on characterizing air quality in areas with a higher likelihood of population exposure. The EPA also recommends that commenters provide appropriate supplementary information to support their comments.

3. What are the proposed options for source emission and population thresholds?

The EPA is proposing a preferred source emission and population threshold option and we are requesting comment on two other alternative options. These options are summarized in Table 1 below. Data from the emissions year of 2011 were used to calculate the number of sources covered and the percent of national SO_2 emissions covered by each option. Total SO_2 emissions in 2011 were 5.8 million tons.

All of these options are in the form of a ''2-pronged'' approach using both source emissions and population data. Each has a lower annual SO_2 emissions tonnage threshold for sources located in urbanized areas (e.g., CBSAs) with a population greater than 1,000,000, and a higher annual emissions tonnage threshold for sources located outside of such areas. These options have been developed after taking into account comments from a number of stakeholders during previous discussions in 2012 as discussed in section II above.

The intent of the following proposed options is to identify a minimum set of sources meeting a common set of criteria for which additional monitoring or modeling would be conducted to characterize current ambient air quality in priority areas with the greatest potential for exposure to violations of the SO_2 NAAQS (such as may be used to inform future designations under the SO_2 NAAQS). However, we note that, while a state that meets these minimum requirements would satisfy the rule, there may still be a need to characterize air quality for other sources below the thresholds in this rule that the air agency or the EPA Regional Administrator deems may have the potential to violate the NAAQS. For any such source areas, the air agency could choose whether to characterize air quality through monitoring or modeling. In a modeling analysis, a source below the threshold could be accounted for directly as one of the sources included in the modeling assessment, or in some cases it could be sufficient to account for smaller stationary and area sources of SO_2 in how background emissions are characterized in the analysis.

The EPA is proposing Option 1, which would require ambient air quality characterization around sources with emissions greater than 1,000 tpy which are located within any CBSA having 1,000,000 or more persons, and around sources with emissions greater than 2,000 tpy located outside CBSAs having 1,000,000 or more persons. Based upon 2011 emissions data and 2012 census estimates, Option 1 would identify 443 sources which account for 75 percent of the total SO_2 emissions inventory located in areas currently not designated. In addition to those sources, Table 1 also indicates that 53 sources exceeding these thresholds were included in areas designated nonattainment in 2013,[27] and, according to 2011 emissions data, they accounted for over 900,000 tons of SO_2. Thus, the total coverage of this option, including sources above the thresholds and sources included in designated nonattainment areas, would be 496 sources and 90 percent of national SO_2 emissions in 2011.

The EPA notes that the ''90 percent threshold'' concept embodied in the preferred Option 1 was first described in the May 2012 White Paper and discussed in the May-June 2012 stakeholder meetings. A number of stakeholders expressed general support for a threshold at this level because, while still addressing 90 percent of the inventory, it efficiently focused program requirements on a limited subset of the 20,000+ SO_2 sources nationally, and substantially fewer sources than the almost 1,700 100-ton sources targeted by the original strategy discussed in the final SO_2 NAAQS preamble and September 2011 draft and the EPA guidance. Under Option 1, it is estimated that no more than 32 sources from any one state would meet the minimum source threshold criteria. Option 1 also is generally consistent with the monitoring coverage provided by the lead NAAQS, which is a standard designed primarily to address source-oriented emissions impacts, similar to the SO_2 NAAQS.

Option 2 would require ambient air quality characterization around sources with emissions greater than 2,000 tpy that are located within any CBSA

[27] *See* EPA memorandum to the docket that identifies SO_2 emissions sources that would be covered by each proposed source emissions threshold option, and sources located in designated nonattainment areas.

having 1,000,000 or more persons, and around sources with emissions greater than 5,000 tpy located outside CBSAs having 1,000,000 or more persons. Based upon 2011 emission year data and 2012 census estimates, Option 2 would identify for characterization 270 sources that account for 66 percent of the total SO_2 emissions inventory located in areas currently not designated.[28] Therefore, the total coverage of this option, including sources above the thresholds and sources included in designated nonattainment areas, would be 323 sources and 82 percent of national SO_2 emissions in 2011.

Option 3 would require ambient air quality characterization around sources with emissions greater than 3,000 tpy that are located within any CBSA having 1,000,000 or more persons, and around sources with emissions greater than 10,000 tpy located outside CBSAs having 1,000,000 or more persons. Based upon 2011 emission year data and 2012 census data, Option 3 would identify for characterization 158 sources that account for 54 percent of the total SO_2 emissions inventory located in areas currently not designated. Thus, the total coverage of this option, including sources above the thresholds and sources included in designated nonattainment areas, would be 211 sources and 69 percent of national SO_2 emissions in 2011.

The preferred Option 1 and the other two options are summarized in Table 1 below with regard to emission thresholds, population thresholds, number of sources identified for characterization and percent of national inventory (before and after subtracting sources already in areas designated nonattainment).

TABLE 1—SUMMARY OF SOURCE THRESHOLD OPTIONS [a]

Option	Threshold for sources		Number of sources **	Percent of national emissions † (%)	Plus sources in 2013 desig. nonatt. areas ‡	Total source coverage	Total emissions coverage (%)
	Inside CBSAs greater than 1M	Outside CBSAs greater than 1M					
1*	1,000 TPY	2,000 TPY	443	75	53	496	90
2	2,000 TPY	5,000 TPY	270	66	53	323	82
3	3,000 TPY	10,000 TPY	158	54	53	211	69

[a] The emissions in this table are based on the 2011 National Emissions Inventory (NEI) and differ from the information in the February 2013 Strategy Paper, which was based on the 2008 NEI and preliminary 2011 data. These numbers are also based on the 2013 CBSA definitions.

* Preferred option.

** These do not include sources located in nonattainment areas designated in 2013.

† Total SO_2 emissions in 2011 were 5.8 million tons.

‡ There are 53 sources with annual emissions greater than 1,000 tpy in nonattainment areas designated in 2013.

The EPA proposes that states be required to characterize air quality around SO_2 emission sources identified by the thresholds presented in Option 1. The agency requests comment on the proposed option, and the other options described and presented here. Specifically, comment is requested on the emission threshold values (in tpy), the 1 million CBSA population thresholds, their combination as a means of determining how SO_2 sources would be identified and on any possible alternatives that might be appropriate for consideration. The EPA requests comment on the scope of sources for which we are requiring data through this proposed rulemaking. The EPA is also interested in commenters' preferences and clear explanation of the rationales for their positions. The EPA also requests any information identifying sources that would be included by these options but that have confirmed documentation to show that they will shut down in the next several years. A number of sources included in the source counts included in Table 1 have indicated their intent to shut down or repower, meaning that the number of sources around which air agencies would be directed to characterize air quality under this program is likely overestimated for all options in Table 1. An updated and more complete picture of which SO_2 sources are scheduled for modification or shutdown would be useful for refining the estimates in Table 1 of the number of sources that would be covered under each option.

IV. Data Requirements and Program Implementation Timeline

This section discusses the deadlines for air agency actions that would be required under this proposed rule. It also discusses, for informational purposes, additional anticipated implementation milestones that are important in the SO_2 designations and implementation process. These deadlines and milestones were initially suggested in the February 2013 SO_2 Strategy Paper. In the February 2013 SO_2 Strategy Paper, the EPA also indicated its intent to use these data (and any updated recommendations from the air agency) to inform future designations in a timely manner. The EPA believes that the implementation timeline proposed below is responsive to concerns raised in comments on the May 2012 White Paper requesting that air agencies have the flexibility and sufficient time to pursue either the monitoring or modeling pathway for identified sources within their jurisdiction. We also believe that this timeline represents a practical but expeditious schedule for developing information needed to determine SO_2 air quality data for purposes of designations. This schedule allows air agencies to account for SO_2 reductions that will occur over the next several years as a result of trends in industry and implementation of national and state level programs. EPA solicits comments on the feasibility of the proposed implementation timeline below.

Date	Action
From promulgation of this rulemaking to January 15, 2016.	From promulgation of this rulemaking to January 15, 2016: Air agency and the EPA Regional Office consult on list of SO_2 sources; air agency is required to submit its list of sources along with its election of monitoring or modeling for characterizing air quality to the EPA Regional Administrator.

[28] Options 2 and 3 were provided as examples in the February 2013 SO_2 implementation strategy paper and have been discussed with various stakeholders since that time.

Date	Action
January 15, 2016	Air agency is required to submit modeling protocols for sources that will be characterized with modeling.
July 2016	Annual Monitoring Network Plans due to the EPA Regional Administrator should include SO_2 monitoring network modifications intended to satisfy the Data Requirements Rule.
January 1, 2017	SO_2 monitors intended to satisfy the Data Requirements Rule are required to be operational.
January 13, 2017	States electing to model are required to provide modeling analyses to the EPA Regional Administrators.
August 2017	Expected date by which the EPA would notify states of intended designations.
December 2017	Intended date by which the EPA would issue final designations for a majority of the country.
August 2019	Anticipated due date for state attainment plans for areas designated nonattainment in 2017.
May 2020	Required certification of 2019 monitoring data; states have the opportunity to provide updated state recommendations to the EPA Regional Administrators.
August 2020	Expected date by which the EPA would notify states of intended designations for the remainder of the country not yet designated.
December 2020	Intended date by which the EPA would issue final designations for the remainder of the country.
August 2022	Anticipated due date for state attainment plans for areas designated nonattainment in 2020.

A. From Promulgation of This Rulemaking to January 15, 2016: Air Agency and the EPA Regional Office Consult on List of SO_2 Sources; Air Agency Is Required To Submit Its List of Sources Along With Its Election of Monitoring or Modeling for Characterizing Air Quality to the EPA Regional Administrator

The EPA strongly encourages each air agency to consult with its EPA Regional Office to identify sources exceeding the emission thresholds in the final rule (as described in section III) and any other areas near sources that do not exceed the emission thresholds but which would be appropriate for air quality characterization as well. It will be important for the air agency and the EPA to carry out this consultation process as soon as possible and to reach agreement on the list of sources quickly and efficiently.

As a starting point, the EPA has included in the docket to this proposed rule a preliminary list of sources that appear to meet the criteria described in the EPA's proposed source threshold approach.[29] This list was developed based on the most recent publicly available information found in national EPA databases, including the 2011 NEI as well as the most recent data submitted in accordance with the EPA Acid Rain Program and the Air Emissions Reporting Requirements (AERR) rule.[30] The EPA requests that air agencies provide in their comments on this proposed rule any relevant updated information that would support the addition or removal of a source area from this preliminary list, along with relevant rationale and supporting information.

Based on relevant information received during the comment period, the EPA will update this preliminary list of source areas identified for air quality characterization as warranted and issue a revised version of the list at the time this rulemaking is finalized (currently scheduled for late 2014). The EPA will also post the list on the EPA SO_2 designations Web site. We expect that in developing this revised version of the list, data for calendar year 2013 would be the most recently available information for EGU's subject to the Acid Rain Trading Program. Emissions for these sources are recorded with CEMs and the data for a particular calendar year are certified and publicly available early in the following year.[31] For non-EGUs, many of which do not operate CEMs, SO_2 emissions data for calendar year 2012 would be the most recently available data in late 2014.

Section 51.1203(a) of this rulemaking, as proposed, would then require each air agency to submit to its EPA Regional Administrator[32] by January 15, 2016, a final list identifying the specific sources in the state around which SO_2 air quality is to be characterized, and whether the air agency commits to conduct monitoring or modeling to characterize air quality around the source according to the process defined in this rulemaking. We note that, while a state may not have any sources that exceed the minimum source threshold requirements, there may still be a separate need (such as may arise in making future designations recommendations) for the air agency to characterize air quality for any other sources below the thresholds in this proposed rule that the air agency or the EPA Regional Administrator deems may have the potential to violate the NAAQS. For example, the air agency or the EPA Administrator may determine that the air quality should be characterized around multiple sources located in close proximity that individually are below the threshold but whose combined emissions may violate the NAAQS.

We expect that meeting this submittal requirement could be satisfied through a letter submitted to the EPA Regional Administrator. By January 15, 2016, the EPA would expect that 2014 data would be available for EGU sources and 2013 data would be available for non-EGU sources. By considering the most recent emissions data, the air agency and the EPA will be able to take into account any recent emissions increases or decreases that would cause a source to be subject to the requirements in this proposed rule or not.

The EPA believes that this proposed requirement for the air agency to submit a list of source areas identified for further air quality characterization, and the other data submittal requirements found in sections 51.1203 of the proposed rule, are appropriate steps needed to understand SO_2 air quality throughout the country prior to designations, and are consistent with section 110(a)(2)(B), section 110(a)(2)(K) and section 301(a)(1) of the CAA. Section 110(a)(2)(B) indicates that state SIPs are to ''provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to (i) monitor, compile and analyze data on ambient air quality and (ii) upon request, make such data available to the Administrator.'' Section 110(a)(2)(K) states that SIPs shall ''provide for (i) the performance of such air quality modeling as the Administrator may prescribe for the purpose of predicting the effect on ambient air quality of any emissions of

[29] *See* EPA memorandum to the docket that identifies SO_2 emissions sources that would be covered by each proposed source emissions threshold option, and sources located in designated nonattainment areas.

[30] Information on continuous emissions monitoring under the Acid Rain Program can be found at: *http://www.epa.gov/airmarkets/emissions/continuous-factsheet.html.* Information on the AERR can be found at: *http://www.epa.gov/ttnchie1/aerr/.*

[31] *See* acid rain program emissions reporting requirements at 40 CFR part 75.

[32] As stated previously, the term ''EPA Regional Administrator'' refers to the Regional Administrator or a delegated representative.

any air pollutant for which the Administrator has established a NAAQS and (ii) the submission, upon request, of data related to such air quality modeling to the Administrator.'' In this proposed rule, the EPA is requiring air agencies to submit such SO_2 monitoring and modeling data, as requested. Lastly, section 301(a)(1) provides the EPA with general authority to establish regulations as necessary to carry out the agency's functions, which in this case includes ensuring the attainment of the SO_2 NAAQS throughout each state. This section states that ''The Administrator is authorized to prescribe such regulations as are necessary to carry out his functions under this chapter. The Administrator may delegate to any officer or employee of the EPA such of his powers and duties under this chapter, except the making of regulations subject to section 7607(d) of this title, as he may deem necessary or expedient.''

Since the process proposed in this rulemaking will lead to the collection of additional air quality data to be used in the area designations process, the EPA intends to make publicly available on the EPA SO_2 designations Web site the air agency submittals required pursuant to this rule, any updated designation recommendations from the air agency and any designation-related correspondence from the EPA. Making this information readily available on the agency's Web site would be consistent with what has been done for other NAAQS designations processes.

We also are aware that due to a number of factors, there may be sources in the power industry and other sectors that are in operation as of January 15, 2016, but may be scheduled to shut down (e.g., due a consent decree or other legal agreement) prior to January 2017 (when the air agency should have ambient monitors operational and air quality modeling completed). The EPA would expect that any applicable source that intends to shut down but is still in operation on January 15, 2016, should be included on the air agency's list for SO_2 air quality characterization. However, if by January 1, 2017, the air agency can provide the EPA with a legal agreement or other detailed information confirming that the source has permanently shut down, then the air agency will have no further obligation regarding air quality characterization for this source pursuant to this rulemaking.

B. January 15, 2016: Air Agency Is Required To Submit Modeling Protocols for Sources That Will Be Characterized With Modeling

For source areas that the air agency identifies would be evaluated through air quality modeling, the EPA proposes that an air agency must also provide a modeling protocol to the EPA Regional Administrator by January 15, 2016. The modeling protocol would include information about such issues as the emissions input data, modeling domain, receptor grid, meteorological data and how to account for background concentrations. More details on the specific elements recommended to be included in the modeling protocol can be found in section V.B.2 of this proposed rule and in the draft modeling TAD,[33] but air agencies also have the option to use alternative elements on a case-by-case basis as appropriate. The EPA Regional Office staff would be available to consult with air agency officials to refine and agree upon the modeling protocol for each relevant source. The EPA Regional Offices would review the submitted information and follow-up with the states as expeditiously as practicable, either approving the submitted information in a similar manner to approval of annual monitoring plan updates, or following-up with the states if adjustments to modeling protocols are warranted.

C. July 2016: Annual Monitoring Network Plans Due to the EPA Regional Administrator Should Include SO_2 Monitoring Network Modifications Intended To Satisfy the Data Requirements Rule

Under this proposed rule, air agencies may elect to characterize air quality around some or all sources through ambient SO_2 monitoring, using existing and new monitoring sites. The EPA proposes that air agencies be required to submit relevant information about these monitoring sites to the EPA Regional Administrator by July 1, 2016, as part of their annual monitoring network plan, in accordance with the EPA's monitoring requirements specified in 40 CFR part 58. The EPA anticipates that states electing to monitor to satisfy this proposed rule will need to take explicit actions to identify, relocate and/or install new ambient SO_2 monitors that would characterize peak, 1-hour SO_2 concentrations in areas around or impacted by identified SO_2 sources. The EPA encourages states to work with the EPA Regional Offices in the development of an appropriate network plan to satisfy the intent of this rulemaking. In the annual monitoring network plan, the EPA encourages states to provide details on the adequacy of the SO_2 network, including rationale for why the proposed number of sites and their individual locations are appropriate. Considerations for siting these monitors are discussed in the draft monitoring TAD.[34]

D. January 1, 2017: SO_2 Monitors Intended To Satisfy the Data Requirements Rule Are Required To Be Operational

The EPA proposes that air agencies that have chosen to characterize air quality for certain SO_2 sources through ambient monitoring must have any relocated and/or new monitors operational by January 1, 2017. Under this approach, it is anticipated that the first 3 years of data would be collected from 2017 through 2019, allowing the first design value for each monitor to be calculated by May 2020. These new monitoring data could then inform the air agency's designation recommendation for the final round of designations (primarily for areas for which air quality is characterized through ambient monitoring).

E. January 13, 2017: States Electing To Model Are Required To Provide Modeling Analyses to the EPA Regional Administrators

The EPA proposes that air agencies choosing modeling to characterize ambient air quality around identified SO_2 sources be required to submit modeling analyses to the EPA Regional Office by January 13, 2017, for all source areas they had previously declared would be characterized through air quality modeling. These modeling analyses should be conducted in accordance with the recommendations in the EPA's modeling TAD or as otherwise approved on a case-by-case basis. (Section V provides more information on the technical details of these analyses.) The EPA believes that 2 years from promulgation of the final rule is a reasonable amount of time for air agencies to prepare the necessary data inputs and conduct such modeling for all subject sources.

The EPA intends to conduct a second phase of designations during 2017, relying on modeling analyses and other related information and to notify the

[33] The Draft SO_2 NAAQS Designations Modeling Technical Assistance Document can be found at *http://www.epa.gov/airquality/sulfurdioxide/pdfs/SO2ModelingTAD.pdf.*

[34] The Draft SO_2 NAAQS Designations Source-Oriented Monitoring Technical Assistance Document can be found at *http://www.epa.gov/airquality/sulfurdioxide/pdfs/SO2MonitoringTAD.pdf.*

states of intended designations by August 2017. The EPA therefore encourages states to submit with their modeling analyses updated designation recommendations. In developing any updated designation recommendations, the air agency should follow the EPA's most recent SO_2 designation guidance.[35] We recommend that any such updates to designation recommendations be submitted to the EPA Regional Office at the same time the modeling analysis is due, by January 13, 2017.

The EPA Regional Office and the air agency should engage actively in consultation to understand the inputs, assumptions and findings associated with each air quality modeling analysis. The air agency should submit thorough documentation of its modeling analysis and should provide the EPA with supplemental information about the analysis upon request, as the analysis will provide the basic technical supporting information used by the EPA in developing the designation for the area.

The EPA received a number of comments on the White Paper and in subsequent policy discussions with stakeholders requesting that in the next round of SO_2 designations in 2017, the EPA should designate areas as unclassifiable/attainment if it can be demonstrated that such areas do not violate the SO_2 NAAQS. Some commenters provided examples of states having large areas with very few SO_2 sources, or no SO_2 sources at all and indicated that such areas would be candidates for an unclassifiable/attainment designation.

The EPA finds merit in such examples and suggests that for this next round of SO_2 designations, the air agencies should consider providing the EPA with any recommended boundaries and supporting information for parts of their states for which they recommend an ''unclassifiable/attainment'' designation (e.g., an area without SO_2 sources or that is not impacted by sources in other areas). If the air agency recommends such a designation, the boundary of the area would need to be developed carefully, keeping in mind the fact that an additional set of source areas may be designated 3 years later based on monitoring data. Since the EPA expects to designate the majority of the country in 2017, the only areas the EPA would not be ready to take action on in 2017 are the areas for which states have elected to install new monitors. The EPA's initial thinking is that the state should not recommend a designation for any county that includes a source area with new monitoring under way. The EPA could designate as unclassifiable/attainment any area for which the state has submitted sufficient appropriate modeling or monitoring data to support such designation. The EPA may consider providing additional designation boundary guidance, including guidance for areas without sources, for this round of boundary recommendations at a later date.

In January 2017, there also may be undesignated areas with existing ambient air quality monitors that have data for the most recent 3 years (e.g., 2013–2015) that indicate a violation of the standard. The EPA intends to designate any area that has newly monitored violations as nonattainment in this next round of designations.

In other cases, air agencies may demonstrate that the existing monitoring network suffices to evaluate the air quality status of particular areas, such that monitoring data available by January 2017 are sufficient to justify designating the areas as attainment. For such areas, the governors may wish to update their designation recommendations and provide suggested boundaries for the areas, based on their analysis of sources and source regions contributing to air quality at the applicable monitor(s). Submittal of such recommendations should be supplemented with a thorough network analysis as described in the monitoring section of this rule, demonstrating that the network is sufficient to assess peak concentrations in the area.

F. By August 2017: Expected Date by Which the EPA Would Notify States of Intended Designations

Under CAA section 107(d)(1)(B)(ii), the EPA is authorized to promulgate designations that differ from the designations recommended by the state, but the EPA must notify the state of any such modifications at least 120 days before promulgating modified designations, providing the state an opportunity to provide further input on the designations and boundaries for the affected areas. For any areas being addressed in this round of designations, the EPA intends to notify the states of intended designations by August 2017. As with the previous SO_2 designation process completed in 2013, these letters would indicate the EPA's intended designation and boundary information for these areas and the states would have an opportunity to provide comments and suggest modifications as appropriate.

G. December 2017: Intended date by Which the EPA Would Issue Final Designations for a Majority of the Country

Under the anticipated schedule, the EPA expects to finalize designations by the end of 2017 for the following areas: (1) Those with modeled violations, (2) any previously undesignated area with ambient monitoring data from 2014–2016 indicating a violation, and (3) any unclassifiable/attainment areas as appropriate. EPA anticipates that this round of designations would address many areas across the country. Areas that would not be designated at this time would include (but not necessarily be limited to) those areas conducting new monitoring. For purposes of further outlining the timeline for submitting attainment plans and demonstrations, we will assume there will be a 60-day period between publication of the final designations in the **Federal Register** and the effective date of the designations, meaning that new nonattainment designations are anticipated to become effective in February 2018.

H. August 2019: Anticipated Due Date for State Attainment Plans for Areas Designated Nonattainment in 2017

Areas that are newly designated as nonattainment would have a new SIP obligation due 18 months from the effective date of the designation.[36] Thus, areas with an effective date of designation in February 2018 would have attainment SIPs due in August 2019. These plans would need to demonstrate how the area would attain the standard as expeditiously as practicable, but no later than 5 years from the effective date of the designation, or by February 2023.[37]

I. May 2020: Required Certification of 2019 Monitoring Data; States Have the Opportunity To Provide Updated State Recommendations to the EPA Regional Administrators

As noted in paragraph D above, air agencies electing to use monitoring to satisfy this data requirements rule will be required to have relocated and/or new monitors operational by January 1, 2017. In early 2020, the air agency

[35] The EPA issued guidance on the SO_2 area designations process on March 24, 2011. *See: http://www.epa.gov/air/sulfurdioxide/pdfs/20110411so2designationsguidance.pdf.* However, the EPA may provide updated SO_2 designations guidance, as appropriate, in advance of the January 2017 submittal date.

[36] SO_2 SIPs are due within 18 months, per CAA section 191(a).

[37] The attainment date for SO_2 nonattainment areas is as expeditiously as practicable, but not later than 5 years from the date of designation, per CAA section 192(a). The SO_2 implementation guidance can be found at: *http://www.epa.gov/oaqps001/sulfurdioxide/implement.html.*

would be able to certify data collected during 2019, thereby providing a complete, quality-assured data set for 2017–2019 for each ambient monitor.

In this scenario, in the event that the new monitoring data result in changes to designation recommendations previously submitted, the state would also have the opportunity to submit revised designation and boundary recommendations to the EPA by May 1, 2020, for all parts of the state that have not yet been designated. The EPA expects that the state would recommend nonattainment boundaries that include any nearby contributing sources, in the same manner as discussed in the EPA's SO_2 designations guidance. Presumably, at the completion of this round of the designations process, any areas not designated as nonattainment would be designated as unclassifiable/attainment.

J. August 2020: Expected Date by Which the EPA Would Notify States of Intended Designations for the Remainder of the Country Not Yet Designated

As noted above, CAA section 107(d)(1)(B)(ii) authorizes the EPA to promulgate designations that differ from the designations recommended by the state but requires the EPA to notify the state of any such modifications at least 120 days before promulgating modified designations. For the areas identified in paragraph I above, the EPA expects to notify the states of intended designations in August 2020. The letters would include the EPA's intended designation and boundary information for these areas and the states would have the opportunity to provide comments and suggest modifications as appropriate.

K. December 2020: Intended Date by Which the EPA Would Issue Final Designations for the Remainder of the Country

Under its anticipated designations schedule, the EPA would finalize designations for the remaining undesignated areas in each state in the December 2020 time frame. The timeline below for submitting attainment plans and demonstrations assumes there will be a 60-day period between publication of the final designations in the **Federal Register** and the effective date of the designations, meaning that any new nonattainment designations are anticipated to become effective in February 2021.

L. August 2022: Anticipated Due Date for State Attainment Plans for Areas Designated Nonattainment in 2020

Areas that are newly designated as nonattainment would have a new SIP obligation due 18 months from the effective date of the designation.[38] Thus, nonattainment areas with an effective date in February 2021 would have attainment SIPs due in August 2022. These plans would need to demonstrate how the area would attain the standard as expeditiously as practicable, but not later than 5 years from the effective date of the designation, or by February 2026.[39]

V. Technical Considerations

Section III of this preamble presents detailed discussion of the threshold-based air quality characterization approach that will focus limited resources most efficiently to implement the SO_2 NAAQS in areas that contain sources with larger SO_2 emissions and higher numbers of people, in order to address areas where there may be higher potential for NAAQS violations that adversely affect public health. This section discusses the different opportunities air agencies may use to provide the necessary air quality information to the EPA for areas around those identified sources. Based on this information, the EPA proposes taking an approach that allows for the use of air quality monitoring or modeling information, or a combination of both, for designations.

An approach using monitoring or modeling for designations actions would be consistent with the EPA's historic practices for SO_2 NAAQS implementation, where both monitoring and modeling have been used as appropriate in the designations process. Air agencies would have the flexibility to assess whether their SO_2 sources above the thresholds are violating the SO_2 NAAQS by employing either ambient air quality monitoring or air quality modeling. An air agency would not be limited to employ only one method within its jurisdiction.

When considering whether monitoring or modeling may be most appropriate for the area around each identified source, air agencies are encouraged to consider a number of factors. One key factor is whether or not the location or characteristics of an identified source or facility are conducive to modeling. The EPA strongly encourages air agencies to consider using monitoring to characterize air quality near those sources that are not easily characterized through dispersion modeling. Sources that may not be easily characterized through dispersion modeling include a source situated in an area of complex terrain and/or situated in a complex meteorological regime and areas that have multiple, relatively small sources with overlapping plumes.

States would need to consider each area around a source on a case-by-case basis to determine whether the modeling or monitoring pathway is most appropriate for characterizing air quality around that source. For areas with multiple sources that a state could recommend be included in a common area, the EPA suggests that a common analytical approach for assessing air quality be followed for all of the sources in the common area. For situations where multiple sources are located in proximity across state boundaries, the EPA recommends that the relevant air agencies work together to determine a common analytical approach for assessing air quality in that area. In these types of situations, it would not be appropriate to choose monitoring for some sources and modeling for others, since under this proposed rule areas with sources using these pathways would be designated on different time frames. In general, however, the determination of whether to use monitoring or modeling to characterize air quality around a source should be done on a case-by-case basis.

To assist states in the implementation of this rulemaking, the EPA has produced draft, non-binding technical assistance documents that discuss options and suggested approaches, and methods on how monitoring or modeling efforts to characterize air quality around an identified source might be conducted. The monitoring TAD provides potential options and recommendations on different approaches that can be used to site source-oriented SO_2 monitors in locations of expected maximum 1-hour concentrations. Modeling is generally a less costly and less resource intensive option for providing reliable information for use in designations. In addition, refined dispersion models are able to characterize SO_2 air quality impacts from the modeled sources across the domain of interest on an hourly basis with a high degree of spatial resolution. The modeling TAD provides recommendations for states planning to model source areas in their state.

[38] SO_2 SIPs are due within 18 months of area designation per CAA section 191(a).

[39] The attainment date for SO_2 nonattainment areas is as expeditiously as practicable, but not later than 5 years from the date of designation, per CAA section 192(a).

A. Monitoring

States that identify monitoring as the pathway to assess air quality around a particular SO_2 source would have the option to identify, relocate and/or install new monitors around the source by January 1, 2017, to provide data for use in designations in 2020. These monitors are expected to be source-oriented and sited to characterize location(s) of expected maximum 1-hour concentrations.

The monitoring TAD provides different approaches describing how source-oriented monitoring networks might be designed or augmented. The TAD discusses information that would be most useful to collect at the outset of formulating or evaluating a source-oriented network design, with an eye toward identifying sites at which maximum 1-hour concentrations can be expected. Examples include considering data about the source itself (emissions rate info, CEM data, stack height, stack temperature, permit requirements, control technology, etc.); similar information about any nearby SO_2 sources; existing air quality data from any nearby ambient monitors; any existing modeling data for the source, such as from past prevention of significant deterioration permits revision; meteorological data; and information about the local geographic setting of the source and surrounding area. The TAD presents options on using this information to feed into one or more siting approaches, including modeling, exploratory monitoring, or other analysis, such as a ''weight of evidence'' approach, to inform an appropriate monitoring network design to characterize the air quality around an identified SO_2 source.

As noted above, the EPA estimates that up to a third of the existing SO_2 monitoring network (as of 2013) may be considered to be source-oriented and/or characterizing maximum concentrations. The agency recognizes that using and leveraging existing infrastructure is a logical consideration in developing a network design and, in some cases, there may be a limited number of existing monitors appropriately situated in a way that might satisfy this rule. Air agencies that choose to identify, relocate, or install new monitors in an effort to satisfy this rule may use these monitors to satisfy the existing PWEI minimum monitoring requirements (promulgated in the 2010 SO_2 NAAQS revision [40 CFR part 58, Appendix D, Section 4.4.2]), if applicable to an area. However, those existing monitors currently in use to satisfy the PWEI-induced minimum monitoring requirements are not automatically eligible to satisfy the data requirements rule, as they may not be appropriately sited (e.g., they might not be source-oriented, maximum concentration sites). The EPA notes that PWEI monitors and other existing monitors (both regulatory and non-regulatory) may be helpful in providing information to help states determine appropriate locations for relocated or new monitors.

As discussed in section IV, this rulemaking proposes that in January 2016, states will submit to their EPA Regional Administrator the list of sources for which they will collect additional information for initial designations. This list would include all the sources that are above the annual emissions threshold that is ultimately finalized, as well as those sources that either the state or the EPA Regional Administrator has also identified as needing additional information on local air quality. As discussed above, the state would also commit at that time to the particular pathway (monitoring or modeling) it would employ to characterize air quality around each source. The EPA believes that the proposed requirement for the air agency to submit a list of sources identified for further air quality characterization, and the other associated data submittal requirements found in sections 51.1203 of the proposed rule, are appropriate steps needed to characterize SO_2 air quality throughout the country prior to designations, and are consistent with section 110(a)(2)(B) and section 110(a)(2)(K) of the CAA.

This rulemaking also proposes that in their annual monitoring network plans submitted in July 2016, air agencies must identify the new monitoring sites they have elected to deploy to assess air quality around selected sources to satisfy this data requirements rule. The EPA expects that states would provide analyses supporting the network design approach to characterize air quality around each relevant source (i.e., number of monitors for each SO_2 source, information demonstrating that the monitors would be placed in the area/areas of maximum concentrations, etc.). The EPA proposes that any relocated or new monitors must be installed and operational by January 1, 2017, and, thus, allowing for data collection during the 2017–2019 timeframe and for use of these data for designations expected in 2020. The EPA also proposes to require that any relocated or new monitors be operated in a manner equivalent to those monitors operated elsewhere in the State and Local Air Monitoring Stations (SLAMS) network; they do not, however, have to be designated as SLAMS. Specifically, the monitors should use Federal Reference Methods (FRMs) or Federal Equivalent Methods and meet the requirements of 40 CFR part 58 Appendices A, C and E. Further, the resulting data should be reported to the Air Quality System (AQS) and would be subject to annual data reporting and certification requirements listed in 40 CFR parts 58.15 and 58.16. When the data are reported to AQS, the data will be available to the public through this system.

The EPA recognizes that in some cases the deployment of a monitoring site might be delayed for a short period of time due to certain factors not directly under the air agency's control (e.g., obtaining permits or access to power for the site) and could cause the air agency to miss the January 1, 2017 deadline. In the event that a state has chosen the monitoring pathway for air quality assessment for a particular source and it does not have the monitor(s) installed and operational by the January 1, 2017, deadline such that the monitor would not have complete data for the first quarter, this would be a reason for concern for the EPA because the state would not be in a position to collect 3 complete calendar years of monitoring data (2017–19) as would be required for all other new monitoring sites established by other states pursuant to this rulemaking.[40] In those situations where it is evident that sufficient and appropriate monitoring will not be conducted in a timely manner, the EPA proposes that the source would be ''moved'' to the modeling pathway and would be included in the designations process intended to be conducted in 2017, based on appropriate information the EPA has obtained at that time. In this situation, if the state fails to provide modeling information for the source, the EPA would make decisions for designations based on the modeling and monitoring information available to the EPA at the time of designations. Therefore, the EPA strongly encourages states to only choose the monitoring option for a source if the state is confident in its ability to install and begin operation of any new monitors in a timely manner and to follow through with continued operation of the monitoring network as required by this rulemaking. The EPA requests comment on the approach proposed above. The EPA also requests

[40] Data completeness requirements for the 1-hour SO_2 NAAQS are described in 40 CFR part 50, Appendix T. A quarter is considered to have complete data when at least 75 percent of the sampling days have complete data.

comments on any alternative approaches that could most effectively address a situation where an air agency is acting in good faith to deploy monitors on time but experiences a delay outside of its control.

The potential use of third party SO_2 monitors was raised in past stakeholder discussions. In some cases, there may be industrial or other stakeholder monitoring sites in operation in an area around a source that a state chooses to monitor. If one or more of those sites is determined to be in an appropriate location to characterize peak 1-hour concentrations around the identified source, there is potential for such monitors to be leveraged to satisfy the requirements in this rule.[41] The use of such monitors, including details on how the monitors and monitoring data would be ensured to meet quality assurance and other criteria in 40 CFR part 58 Appendices A, C and E, would need to be documented and included in the annual monitoring network plan submitted to the EPA in July 2016. The EPA encourages air agencies to engage other stakeholders to pursue ambient monitoring partnerships wherever possible to use existing infrastructure, increase communication among parties and use available resources as efficiently as possible.

In other cases, air agencies may have limited budgets which would not allow for the funding of additional monitors, but affected sources may wish to fund the deployment of additional monitors as indicated in comments previously received on the White Paper. Any new monitoring sites funded by the regulated community also would need to be operated in manner equivalent to SLAMS, meeting quality assurance and other criteria in 40 CFR part 58 Appendices A, C and E, subject to data reporting and certification requirements, and there would need to meet applicable requirements for continued operation into the future if ambient concentrations exceed NAAQS levels. These sites would need to be documented and included in the annual monitoring network plan submitted to the EPA in July 2016.

In comments on the 2012 White Paper and on the 2013 draft monitoring TAD, the EPA received feedback from states and industry to consider a pathway to allow the shut-down of monitors operated to satisfy this proposed rule if no NAAQS violations are discovered. Specifically, due to current state and local resource constraints and in consideration of the potential collaboration that could occur between states and industry to operate some source-oriented SO_2 monitoring sites, commenters suggested that monitoring operations should be allowed to cease if no NAAQS violations are found.

As proposed, states electing to monitor around identified SO_2 facilities would be expected to have SO_2 monitors that are intended to satisfy this proposed rule to be operational by January 1, 2017. In a majority of those cases, the EPA believes that states will have to install new monitors, relocate existing monitors and/or work with industry to install new monitors or leverage existing industrially operated SO_2 monitors to satisfy the data requirements rule. In any case, the monitors operated to satisfy this proposed rule would be expected to have 3 years of complete data (spanning 2017 through 2019) available for design value calculations in early 2020.

In consideration of recent feedback received on this issue in comments on the monitoring TAD and SO_2 White Paper, the EPA is proposing that a monitor that has been deployed pursuant to this rule and is located in an area that is designated attainment in the anticipated third round of initial designations in 2020 may be eligible for shutdown provided the monitor meets certain criteria. Any SO_2 monitor identified in an approved state annual monitoring network plan to satisfy this proposed data requirements rule may be eligible for shut-down in 2021 or later if the following criteria are met: (1) The monitor is not also satisfying other minimum SO_2 monitoring requirements listed in 40 CFR part 58 Appendix D; (2) the monitor is not otherwise required to meet requirements in a SIP or permit; and (3) the monitor has recorded a 3-year design value that is no greater than 50 percent of the 1-hour SO_2 NAAQS. The EPA also proposes that any SO_2 monitor eligible for shutting down would need to be approved by the EPA Regional Administrator before monitoring operations could cease. This policy is similar to the provision allowing the EPA Regional Administrators to waive Lead NAAQS monitoring requirements if data indicate that the design value of the lead monitor has not exceeded 50 percent of the Lead NAAQS, as listed in 40 CFR part 58 Appendix D, Section 4.5(ii). The EPA proposes the 50 percent criterion for SO_2 monitors because such a precedent was established in the lead monitoring regulations and because SO_2 is a ''source-oriented'' pollutant similar to lead. As an alternative, the EPA is also proposing an option in which the same criteria noted above would need to be met, except that the monitor would be eligible to cease operations if it recorded a design value in 2018–2020 or a later 3-year period that is no greater than 80 percent of the 1-hour SO_2 NAAQS. This 80 percent criterion is indirectly derived from existing language in 40 CFR part 58.14(c)(1) describing one of several pathways to for states to shutdown existing SLAMS monitors, and it was also a criterion suggested by a state air agency in comments on the monitoring TAD. The EPA requests comment on the two proposed options for design value criteria for SO_2 monitor shutdowns, as well as other values within the 50–80 percent range. EPA requests that commenters provide specific technical rationale supporting any approach they recommend.

The EPA proposes these options to cease monitor operations in response to stakeholder concerns, but also believes it is important for air agencies to assess whether, even after monitoring data indicate low ambient SO_2 concentrations, the areas around these sources that are required to be characterized under this rulemaking continue to attain the standard in the future. To address this need, the EPA proposes that the air agency be required to assess SO_2 emissions changes annually, beginning in the year after the monitor ceases operation. Emissions data for large SO_2 sources would be available from annual reporting required for various emissions trading programs, the AERR rule, and other regulations. The AERR rule requires states to report SO_2 emissions data annually for large SO_2 sources. Every 3 years states must report data on SO_2 sources with potential to emit more than 100 tons per year. In other years, the AERR rule requires states to report data on SO_2 sources with potential to emit more than 2,500 tons per year. In addition, under the Acid Rain Program and other emission trading programs, many large combustion sources of SO_2 are required to continuously measure and record emissions of SO_2. These sources report hourly emissions data to the EPA on a quarterly basis. These requirements would be expected to cover the vast majority of sources subject to the SO_2 data requirements rule. States would need to work with any other source not subject to an annual SO_2 emissions reporting requirement under existing regulations to ensure that annual SO_2 emissions can be reported for the source under this data requirements rule. For areas around these sources in which total SO_2 emissions increase over the

[41] Monitors operated by third parties have been used for certain regulatory purposes in the past, provided they met certain quality assurance and oversight requirements.

emissions for the previous year, the air agency would be required to submit to the EPA an assessment of the cause of the increase and provide an initial determination of whether or not the air quality around that source should be further re-assessed. The air agency could choose to reinstate the operation of the air monitor or complete air quality modeling for the source area to verify that the area continues to attain the standard. Factors that the air agency should consider in making this determination include: The magnitude of the emissions increase and information about changes in the emissions profile, hourly emission rate, or operating schedule of the source.

The EPA proposes two options for how the air agency would submit this report and how the EPA would review and act on it. Under the first procedural option, we propose that the air agency would submit a report to the EPA annually as an appendix to the air agency's annual monitoring plan. The annual monitoring plan is required to be submitted to the EPA Regional Administrator by July 1 each year. A primary objective of this approach would be to enable the air agency to save time and resources by providing a single process for the public review and opportunity for comment on the annual monitoring plan and annual reports to demonstrate ongoing attainment of previously monitored areas.

The inclusion of this verification report as an appendix to the annual monitoring plan would ensure that the report would be subject to the same opportunities for public review and comment that are to be provided for the monitoring plan pursuant to regulations at 40 CFR part 58.10. Those regulations specify that if the air agency modifies the monitoring plan from the previous year, then prior to taking final action to approve or disapprove the plan, the EPA would be required to provide an opportunity for public comment on its proposed action. The public would have the opportunity to comment on any plan by the state to cease operation of an existing monitor or to add any new monitor to the network. In addition, the public would also have the opportunity to comment on the state's annual report of emissions data for sources for which the state ceased the operation of nearby monitors. The regulations also indicate that if the state has already provided a public comment opportunity in developing its revised monitoring plan and has made no further changes to the plan after reviewing public comments that were received, then it could submit the public comments along with the revised plan to the EPA and the Regional Administrator would not need to provide a separate opportunity for comment before approving or disapproving the plan.

Under the second procedural option, the annual report of emissions data for sources for which the state ceased the operation of nearby monitors would not be submitted to the EPA as an appendix to the annual monitoring network plan. Instead, it would take the form of a separate, independent annual submittal from the state to the EPA Regional Administrator. However, we propose that this report would be due by the same July 1 date each year. This independent submittal would follow the general guidelines set forth in 40 CFR 58.10 regarding opportunities for public review and comment as described in Option 1 above, but the report would only include the annual assessments associated with sources in areas that were designated unclassifiable/attainment and for which the EPA granted approval to cease monitoring. The public would have the opportunity to comment on each report when it is submitted annually.

The EPA believes that the main advantage of the first option is that from a procedural standpoint, it would leverage the time and resources that are already devoted to the existing annual monitoring plan development and public review process. In contrast, the second option would require additional state and the EPA resources to provide for public review opportunities in parallel with the monitoring plan process. Regardless of which procedural approach is included in the final rule, we believe that it will be important for the EPA to communicate to each state the reasoning behind any action or decision the EPA makes with regard to the submitted ongoing verification of attainment report. This information should be provided in writing in a letter or **Federal Register** document, as appropriate.

The EPA solicits comments on the merits of the proposed monitor shutdown policy and the use of 50–80 percent of the NAAQS as a criterion for shut-down eligibility. The EPA also solicits comments on preferences regarding the approach for ongoing assessment of air quality after a monitor is shutdown either as an appendix to the annual monitoring network plan or as a separate document, as the means by which air agencies provide information to the EPA Regional Office. The EPA requests any suggested alternatives to these procedural options.

B. Modeling

This section explains how modeling should be conducted and submitted to the EPA for those sources for which a state chooses to characterize ambient SO_2 air quality conditions using air quality modeling. While the basic modeling tools to be used to assess air quality around these sources are the same tools often used for other modeling exercises, such as attainment demonstrations or permitting of new/modified sources, this rule and the associated modeling TAD describe significant differences in the way these modeling tools should be used that are unique to the area designations process.[42] When modeling to assess SO_2 air quality for the area designations process, it is appropriate to characterize *actual* air quality and it is not necessary to project *potential* air quality. Modeling conducted for the purposes of designations in effect is used as a surrogate for ambient monitoring of current actual air quality. Therefore, when modeling is used for SO_2 designations, the inputs to the models may be designed to more accurately represent actual air quality.

The EPA anticipates that states would use AERMOD to conduct this designations modeling, as AERMOD is the EPA's preferred near-field dispersion model and has been demonstrated to be a reliable predictor of SO_2 air quality given appropriate input data. As part of its development, AERMOD was evaluated using 17 field studies, several of which involved short-term measurements of SO_2, robust site-specific meteorology and accurate measurements of emissions. The EPA is confident that AERMOD can provide accurate predictions of actual SO_2 concentrations, given representative meteorology and accurate emissions inputs.

1. Inputs for Designations Modeling

There are 3 air quality modeling inputs used for designations modeling that would differ from the permit and implementation plan modeling requirements set forth in Appendix W of 40 CFR part 51. As noted above, the objective of this designations modeling approach is to assess actual, current air quality. The 3 modeling inputs that are required to reflect actual air quality are: emissions data, stack height and years of meteorological data.

[42] Air quality modeling that is conducted to demonstrate attainment for a nonattainment area or to project potential air quality impacts for the permitting of a new or modified source commonly uses allowable or permitted emissions levels rather than actual emissions levels.

(a) Emissions—General Issues

Dispersion modeling has typically been used to estimate the ambient impact of a source's allowable emissions for use in attainment demonstrations or in setting emission limits. In these situations, it is important to consider the full potential a source has to emit the relevant pollutant(s). In contrast, for the designations process it is important to understand what a source is actually emitting, or has actually emitted in the recent past. Traditionally, to characterize air quality for the designations process for other NAAQS pollutants, the EPA has exclusively used data from air quality monitoring networks. However, as noted above, due to the fact that SO_2 concentrations can vary substantially with distance and direction away from the source, given the limitations in the existing monitoring network in identifying peak SO_2 concentrations and given that modeling data has already been employed for past designations for the SO_2 NAAQS, the EPA believes that dispersion modeling is an appropriate option for representing current (or recent) SO_2 air quality.

Traditionally, when modeling is used for estimating future air quality, a source's allowable emission limits are used in the modeling application to assess whether the potential emissions from the source might cause violations. For designations, the EPA believes it is appropriate to use current actual emissions to obtain estimates of current actual air quality. Specifically, the EPA recommends that the air agency should use a source's most recent 3 years of actual emissions in the modeling analysis to estimate air quality for that 3-year period. There are a range of recommended options for determining these actual emissions which are discussed in the modeling TAD. While actual emissions would be the preferred choice to use for emissions inputs, states have the option of using a more conservative approach by inputting a source's most recent 3 years of allowable, or ''potential to emit,'' emissions. Further discussion below describes situations in which states may prefer to use allowable emissions in this analysis. Additional information and recommendations on this approach are discussed in the modeling TAD.

In addition to considering actual emissions from the principal source or sources in an area, the modeling analysis needs to take into consideration the relevant SO_2 ''background'' concentration for the area. When modeling is intended to assess current air quality (such as modeling for the designations process), the modeling also needs to consider the background concentrations of SO_2. The inclusion of ambient background concentrations to the model results is important in determining the modeled cumulative impacts of all nearby sources. In an area with an air quality monitor, the SO_2 concentrations recorded by the monitor might reflect the combination of local source impacts and any other ''background'' contribution to SO_2 concentrations from other sources. The inclusion of ambient background concentrations to the model results is important in determining the modeled cumulative impacts of all nearby sources. Thus, ambient background concentrations are determined on a case-by-case basis, depending on factors such as the proximity of other SO_2 sources to the source being modeled, and the distance and location of the closest ambient monitor to the source or sources being modeled. Please see the modeling TAD for additional suggestions on identifying background concentrations to be incorporated into this modeling.[43]

(b) Emissions—Accounting for Recent Emission Reductions in Modeling Analyses

The EPA seeks to provide an incentive to states to work with sources to install controls and reduce emissions prior to final designation in 2017. The EPA expects that in some cases, air quality modeling conducted well in advance of January 2017 may indicate a violation of the 1-hour SO_2 standard in some areas. To address such situations and potentially avoid a nonattainment designation, the air agency may wish to consult with the source and conduct additional analyses with the source to identify a control measure or an emission limit that would ensure attainment with the 1-hour SO_2 standard for the area around the source. The air agency could then take action to adopt enforceable emissions limitations as necessary prior to January 2017 and conduct modeling analyses based on these new emissions limits as explained below.

The EPA expects that a number of emissions sources may be candidates for this optional approach. Many EGUs will need to meet compliance deadlines for the Mercury and Air Toxics Standards (MATS) in 2015–2016 and EPA expects that many will become subject to Title V permits that require compliance with MATS SO_2 emission limits as the means of demonstrating compliance with the MATS requirements related to acid gas emissions. These EGUs may be able to adopt control technologies and enforceable emission limits to reduce emissions of SO_2 as well as mercury. Similarly, industrial boiler operators will have the incentive to adopt SO_2 emission limits as part of their strategy for complying with the Industrial Boiler Maximum Achievable Control Technology Standard.

As long as these controls are implemented and enforceable as of January 2017, the EPA believes it would be appropriate for the new lower allowable emission limit to be used in a modeling analysis in place of the old, higher, actual data from the last 3 years. The air quality impacts from such a source would, at worst, be characterized by the new enforceable allowable limit and could be used as a basis for future designations. Thus, for the purposes of meeting the data requirements rule where a source has adopted new enforceable emission limits, the state may use these new allowable emission limits when completing their modeling analyses due in January 2017. Instead of using the most recent 3 years of actual emissions data or previously allowable emissions limits, the air agency could use the new emissions information as the inputs for all 3 years of their designations modeling.

This approach allows additional time in 2015 and 2016 for the sources to reduce their emissions and if the state is able to demonstrate attainment with the new controls or emission limits, the governor of the state has the opportunity to modify its designation recommendation accordingly. The EPA notes that this option to model recently adopted emissions limits to avoid a nonattainment designation provides an incentive for the air agency and facility to achieve emissions reductions that will result in health benefits sooner in the communities located near these sources (since local air quality would improve sooner than if the area were designated nonattainment in 2017 and attainment were required by no later than 2022).

(c) Stack Height

Air quality modeling that is used for projecting future air quality when setting emission limits must use ''good engineering practice'' (GEP)[44] stack height in order to not allow inappropriate credit in SIPs and federal implementation plans for techniques

[43] The Draft SO_2 NAAQS Designations Modeling Technical Assistance Document can be found at *http://www.epa.gov/airquality/sulfurdioxide/pdfs/SO2ModelingTAD.pdf.*

[44] For a complete definition of GEP stack height, *see* 40 CFR 51.100(ii).

that disperse rather than reduce or eliminate emissions, as required by CAA section 123 and the EPA's stack height rules.[45] This approach helps ensure the attainment of the NAAQS with the use of these emission limits.

As noted previously, the modeling approach described in this proposed rule for initial area designations is to be used for assessing actual air quality rather than for the development of future emissions limitations. Accordingly, it is more appropriate to use actual stack height in conjunction with actual emissions when using a modeling approach to characterize current air quality. The concern about giving inappropriate credit for dispersion techniques is not relevant in this situation as section 123 applies only to emission limitation controls. This situation is unique for these initial SO_2 designations because states would be assessing actual air quality and this is different from the situations subject to section 123 requirements, where GEP stack height is traditionally used to determine what emission limits are needed to ensure future attainment of a NAAQS. The combination of actual stack height with actual emissions would more effectively characterize the current air quality around a source.

As discussed in the previous section, there may be certain sources that states wish to model using allowable emissions. If a state chooses to use allowable emissions, then it should also use GEP stack height when the actual stack height exceeds the GEP height. In situations where the actual stack height exceeds the GEP height, the GEP stack height is more appropriate because the GEP height is used when calculating the allowable emission rates and using actual stack height in such a case would not reflect the true allowable emissions for the source. Stacks with actual stack heights below the GEP height would use the actual stack height because GEP stack height would not have been a relevant factor in determining the source's prior emissions limit, and use of GEP stack height in this case would not accurately reflect actual ambient impacts. Additional recommendations on the use of actual stack height can be found in the modeling TAD.

(d) Meteorological Data

In accordance with 40 CFR part 51, Appendix W, air agencies and sources conducting SO_2 modeling for permitting or SIP attainment demonstrations generally use either 5 years of National Weather Service meteorological data, or 1 year of on-site meteorological data. These data need to be representative of the area's meteorology, but do not necessarily need to be from the most recent years of data. In contrast, the modeling approach discussed in this proposed rule uses alternate meteorological inputs to characterize current air quality. For purposes of conducting modeling that better simulates what might be expected to be measured by an ambient monitor, this rule proposes the use of 3 years of meteorological data. Ideally, air agencies would use the most recent 3 years of meteorological data and the same 3 years of actual emissions data when modeling for designations. The modeling TAD has additional suggestions on these meteorological inputs.

2. Modeling Protocols and Analyses

As discussed previously, this rulemaking proposes that each state submit to its EPA Regional Administrator by January 15, 2016, a list identifying the sources for which it will characterize nearby air quality and the analytical approach (monitoring or modeling) to be used for each source. This list should include all sources in the state that are above the relevant emissions thresholds and those additional sources that either the state or the EPA Regional Administrator has also identified as needing additional information on local air quality.

In preparation for conducting modeling, the state would need to develop a modeling protocol for all the sources the state plans to model. This protocol can be source specific, or in some cases, the state may propose a standard protocol for all the sources in its state. Details on the suggested protocol elements and the recommended standard format of this protocol can be found in the modeling TAD. The state would submit this protocol to the Regional Administrator for review at the same time it submits its list of sources outlining its monitoring and modeling choices. The state is encouraged to work with its EPA Regional Office throughout 2015 while developing its modeling protocols.

3. State Recommendations for 2017

Under this rule, air agencies would be required to submit modeling analyses for selected source areas by January 13, 2017, and at the same time air agencies could submit revised designation and boundary recommendations for these areas based on these new modeling data. These recommendations could include modeling demonstrating that the source area is either attaining or violating the current SO_2 standard.

States could also assess recent data from their existing SO_2 monitoring networks and provide designations recommendations based on these data as well. If they have properly sited source-oriented monitors that are attaining the current SO_2 NAAQS with 3 years of quality assured data, they could submit a demonstration showing that those monitors are properly sited (following the suggested guidelines in the monitoring TAD), along with a recommendation for a designation of unclassifiable/attainment for the associated area. Likewise, if the state has an existing monitor that is violating the standard and the area has not yet been designated nonattainment, it should provide a nonattainment area boundary recommendation for the associated area at this time. Lastly, the state may wish to submit revised boundary recommendations for areas with low emissions that do not contain any sources above the threshold, or for areas with additional sources identified by the state or Regional Administrators for further characterization.

Thus, since the EPA expects to designate the majority of the country in 2017, the only areas the EPA would not be ready to take action on in 2017 are the areas for which states have elected to install new monitors. The EPA's initial thinking is that the state should not recommend a designation for any county that includes a source area with new monitoring under way. The EPA may consider providing additional designation boundary guidance for this round of boundary recommendations at a later date.

4. Ongoing Air Quality Characterization Requirements for Areas Designated Attainment Based on Modeling

Typically, in situations where ambient monitoring data alone are used to assess air quality to determine whether an area is attaining the NAAQS, these monitoring data continue to be collected by the air agency, made publicly available and used for a variety of regulatory and non-regulatory purposes. Ambient monitoring is commonly continued to verify ongoing maintenance of the standard, both for areas that were designated nonattainment and for areas that were designated unclassifiable/attainment alike.

(a) Options for Ongoing Verification

The use of modeling to characterize SO_2 NAAQS-related air quality and serve as a surrogate for monitoring raises the issue of how a state will

[45] *See* stack height regulations at 40 CFR 51.100(ff)–(kk); and 40 CFR 51.118.

continue to have data to assure ongoing attainment of the NAAQS. A monitoring network provides data on a continuous basis, but any modeling conducted pursuant to this rule to assess attainment of the SO_2 NAAQS for designations purposes would represent a discrete 3-year period (similar to determining a 3-year design value based on ambient monitoring data). A one-time modeling analysis using actual emissions information would not provide for ongoing verification of continued attainment.

For this reason, the EPA is proposing 3 policy options for how states that satisfy the requirements of this rulemaking by using the modeling option in a given area will need to conduct additional emissions and/or modeling analyses to demonstrate continued attainment for an area around a source. The EPA expects that such additional analyses will be needed for areas that are designated as ''unclassifiable/attainment'' based on modeling information and would be intended for the purpose of verifying that such areas continue to meet the standard, just as monitors do now in many areas. The EPA also presents 2 procedural options describing the process by which states would provide an opportunity for public review and comment and submit their report to the EPA and for the EPA to take action on the reports.

Before introducing the options for ongoing verification of attainment, we note that source areas would not be subject to these ongoing verification requirements if: (1) Modeling for the source was conducted using allowable emissions; or (2) the modeling for the source was conducted using actual emissions and the relevant sources then adopted enforceable emission limits consistent with the actual emissions rates used in the modeling. First, if an allowable emissions rate were used in the modeling, then an enforceable emission limit would already be in place to limit the source's emissions in the future, so emissions would not be expected to exceed what was modeled. Therefore, compliance with the emissions limit for areas associated with these sources should be sufficient to ensure air quality meets the standard and the EPA is not proposing additional means of verification for such areas. Indeed, since use of actual emissions requires recurring review to judge whether air quality may have worsened and compliance with allowable emissions can demonstrate that no such review would be necessary, states would have the incentive to use allowable emissions limits in their modeling if it would demonstrate that emissions at allowable levels would not cause violations of the NAAQS.

Second, for an area that was modeled as attaining the standard based on actual source emissions, the state always has the option to adopt for the source(s) in the area federally-enforceable emission limits at levels that are consistent with the actual emissions used in the modeling and that ensure attainment with the standard. These emission limits would ensure that the source's emissions would not increase in the future. Assuming the limits are adopted, enforceable and being met by the time designations are completed, this approach would require no additional submittal by the air agency after initial designations beyond the usual ongoing source compliance demonstrations. Under this approach, it would be assumed, subject to compliance monitoring, that the source would remain in compliance with its emission limits and the area would continue to attain the standard. If a state does not take either of the approaches described above, however, some mechanism for confirming that air quality continues to meet the standard must be in place. Descriptions of the 3 proposed options on which we request comment are presented below.

(1) Ongoing Verification Option 1

The first option would require the air agency to assess SO_2 emissions annually for sources that are located in areas designated unclassifiable/attainment based on modeling using actual emissions, and to conduct updated air quality modeling every 3 years. On an annual basis, beginning the year after designations are effective, the air agency will be required to provide an assessment of the most recent emissions data for each source and whether it has increased in emissions or changed its emissions profile (e.g., change in operating schedule). Emissions data for large SO_2 sources would be made available by the state from annual reporting required for the acid rain program, the air emissions reporting rule, or other regulations. For each source, the air agency also will be required to make a determination as to whether it finds that additional modeling is needed to assess if the area around the source(s) is still attaining the SO_2 NAAQS. Factors the air agency should consider in making this determination include: The estimated design value from the original modeling analysis and how close that value was from exceeding the standard; the magnitude of the emissions increase; and information about changes in the emissions profile (e.g., operating schedule of the source) or hourly emission rate. The EPA Regional Administrator will assess the information provided by the air agency and determine on a case-by-case basis if additional modeling will be requested from the state to assess potential changes in air quality. If the air agency determines that additional modeling is necessary, the EPA expects the air agency to conduct such modeling and provide the results of that assessment in a timely fashion.

In the third year after designations are effective and continuing every 3 years after that, the air agency would also be required to submit a modeling analysis assessing the air quality around each source(s) using actual annual emissions and meteorological data from the most recent 3 years. Based on this analysis, the air agency will need to determine whether the area is still attaining the SO_2 NAAQS. If any new modeling by the air agency indicates that an area is not attaining the SO_2 NAAQS, the EPA may take appropriate action, including, but not limited to, requiring adoption of enforceable emission limits to ensure continued attainment of the SO_2 NAAQS, redesignation to nonattainment, or issuance of a SIP Call. Air agencies may request that the EPA Regional Administrator approve a suspension of the triennial modeling requirement for an area if their most recent modeling design value is less than 50 percent of the NAAQS and if that modeling is not also required as part of a SIP or permit. Note that for such areas, the air agency will still be required to provide an annual assessment of the most recent emissions data for each source and whether it has increased in emissions or changed its emissions profile (e.g., change in operating schedule).

The EPA believes that this approach is appropriate for assessing ongoing attainment of the SO_2 NAAQS, as it follows a similar approach to what states would be required to do if there was a monitor near a source. The EPA believes that this approach would be a reasonable way to provide for an ongoing assessment of key sources. Recognizing state resource limitations, this approach does not require air agencies to conduct modeling for each source every year, and, in the years when modeling is required, much of the information from prior modeling will likely continue to be applicable (*e.g.,* stack parameters, terrain). Thus, compared to a situation in which the air agency would be required to operate and maintain an ambient monitor to ensure ongoing attainment, this

requirement to track emissions annually and conduct updated modeling every 3 years provides appropriate ongoing characterization of air quality while being less burdensome than monitoring for the air agency. The EPA is also proposing two alternative options for comment below.

(2) Ongoing Verification Option 2

The second option would also require the air agency to provide the EPA with an assessment of SO_2 emissions changes for each source annually, beginning in the year after the area is designated unclassifiable/attainment. This annual review of emissions would be similar to the requirement discussed in the first option. As noted above, emissions data for large SO_2 sources would be available from annual reporting required for the acid rain program, the air emissions reporting rule, or other regulations. However, instead of modeling every 3 years, EPA would require that, for each source in which total SO_2 emissions increase over the emissions for the previous year, the air agency would be required to submit to the EPA an assessment of the cause of the increase and provide an initial determination of whether or not air quality modeling would be needed to verify that the area around the source continues to attain the standard. Factors the air agency should consider in making this determination include: The estimated design value from the original modeling analysis and how close that value was from exceeding the standard; the magnitude of the emissions increase; and information about changes in the emissions profile or hourly emission rate.

For example, if the previous modeling of actual emissions in the area estimated the design value to be just below the level of the standard and 5 years later the area emissions increased by 15 percent, then this likely would be a sufficient reason for the air agency to conduct an updated modeling analysis.[46] On the other hand, if the initial modeling using actual emissions for the area indicated that the design value would be less than half the level of the standard and in a subsequent year indicated the area emissions increased by 5 percent, then this might be a sufficient reason for the air agency to recommend that it does not need to conduct an updated modeling analysis.

The Regional Administrator would consider the air agency recommendation for each area around a source on a case-by-case basis and may direct the air agency to conduct an updated modeling analysis using the SO_2 emissions from the most recent 3 years and to submit the results of such analysis to the EPA Regional Office by a specific date. If the air agency determines that additional modeling is necessary, the EPA expects the air agency to conduct such modeling and provide the results of that assessment in a timely fashion—within 12 months. The EPA will consider the results of any updated modeling analysis in order to determine whether the area continues to attain.

The EPA believes that this option strikes a balance between analytical burden and air quality protection because it provides a simple, easy-to-track benchmark for requiring further investigation of an emissions increase by the air agency, and it allows the Regional Administrator to first consider the air agency's analysis of each particular case before determining whether a more resource-intensive modeling analysis would be required. The EPA believes that this option would be a reasonable alternative to option 1 for requiring some further assessment of source areas, but a key difference is that it would not require modeling every 3 years. Because modeling likely would be required less frequently under this option, it would be less resource intensive than option 1, but the verification of ongoing attainment would not reflect the same degree of certainty as option 1.

(3) Ongoing Verification Option 3

Under the third option, the state would be required to perform periodic screening modeling every 3 years for all source areas that had been previously modeled and determined to be attaining the standard, and submit such modeling for review to the EPA. Screening modeling typically uses conservative assumptions to determine whether an area around a source(s) would still be expected to attain the standard, and it requires less work by the air agency in preparing model inputs as compared to preparing for a full-scale modeling analysis. The companion screening model for AERMOD is the AERSCREEN model. A complete, full-scale modeling analysis with updated emissions and meteorological inputs would only be required if the state performs screening modeling that indicates a potential violation.

If this new full-scale modeling by the air agency indicates that an area is not attaining the SO_2 NAAQS, the EPA may take appropriate action, including, but not limited to, requiring adoption of enforceable emission limits to ensure continued attainment of the SO_2 NAAQS, redesignation to nonattainment, or issuance of a SIP Call. The basic rationale behind this option is that since these areas were designated as unclassifiable/attainment based on modeling, then it would be appropriate to require periodic updated modeling to continue to verify attainment. Because the states will have already gone through the process of modeling these sources, it is expected that it will be less resource intensive to conduct this periodic screening modeling in subsequent years.

(b) Procedural Options for Ongoing Verification

As with the prior section regarding ongoing verification following removal of a monitor, the EPA also proposes two options regarding the procedure by which air agencies would submit ongoing verification reports to the EPA when a state elects to use the modeling option and the procedure by which the EPA would review and act on them. The contents of the verification report will depend on which of the above policy options is ultimately finalized.

(1) Procedural Option 1

Under the first procedural option, we propose that in order to demonstrate ongoing verification of attainment for sources that have been designated unclassifiable/attainment based on modeling analyses, the air agency would submit a report to the EPA annually as an appendix to its annual monitoring plan. The annual monitoring plan is required to be submitted to the EPA Regional Administrator by July 1 each year. This annual process for verifying ongoing attainment for areas designated attainment based on modeling in effect would be a surrogate for ongoing ambient monitoring (which would provide a new 3-year design value with each new year of air quality data). A primary objective of this approach would be to enable the air agency to save time and resources by providing a single process for the public review and comment on the annual monitoring plan and annual reports to demonstrate ongoing attainment of previously modeled areas.

The inclusion of this verification report as an appendix to the annual monitoring plan would ensure that the report would be subject to the same opportunities for public review and comment that are to be provided for the monitoring plan pursuant to regulations at 40 CFR Part 58.10. Those regulations specify that if the air agency modifies the monitoring plan from the previous

[46] Moreover, the prevention of significant deterioration program would likely require such an analysis if the emissions increase originated from a major modification to an existing source.

year, then prior to taking final action to approve or disapprove the plan, the EPA would be required to provide an opportunity for public comment on its proposed action. The regulations also indicate that if the state has already provided a public comment opportunity in developing its revised monitoring plan and has made no further changes to the plan after reviewing public comments that were received, then it could submit the public comments along with the revised plan to the EPA, and the Regional Administrator would not need to provide a separate opportunity for comment before approving or disapproving the plan.

(2) Procedural Option 2

Under the second procedural option, the ongoing verification of emissions report would not be submitted to the EPA as an appendix to the annual monitoring network plan. Instead, it would take the form of a separate, independent submittal from the state to the EPA Regional Administrator. However, we propose that this report would be due by the same July 1 date each year. This independent submittal would follow the general guidelines set forth in 40 CFR 58.10 regarding opportunities for public review as described in option 1 above, but the report would only include the annual assessments associated with sources in areas that were designated unclassifiable/attainment based on modeling of actual emissions.

The EPA believes that the main advantage of the first procedural option is that from a procedural standpoint, it would leverage the time and resources that are already devoted to the existing annual monitoring plan development and review process. In contrast, the second option would require additional state and the EPA resources to provide for public review opportunities in parallel with the monitoring plan process. The main advantage of the second option is that it would keep the information submitted to verify ongoing attainment for modeled areas separate from the annual monitoring plan. It may be considered advantageous from the perspective of managing workflow in an air quality management organization to not have the modeling verification reports be combined with the annual modeling plans.

Regardless of which procedural approach is included in the final rule, the EPA would communicate to each state the reasoning behind any action or decision the EPA makes with regard to the submitted ongoing verification of attainment report. For example, the EPA should describe the supporting rationale for a decision to require additional monitoring from the state, or for a decision to allow the state to suspend the periodic modeling requirement for a source because the latest modeled design value is below 50 percent of the NAAQS. This information should be provided in writing in a letter or **Federal Register** document, as appropriate. The EPA seeks to adopt an effective approach for verifying ongoing attainment for modeled source areas that can serve as a reasonable surrogate to ongoing ambient monitoring without creating undue burden for states.

The EPA requests comment on the 3 policy options presented above, and requests that each commenter provide a clear rationale for their position. The EPA also requests comments on the two procedural options presented above. For both sets of options, the EPA would be interested in any alternative ideas suggested by commenters. For any such recommendations, the EPA requests the commenter provide a detailed rationale and estimate of any associated costs.

VI. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a ''significant regulatory action'' because it raises novel policy issues. Accordingly, the EPA submitted this action to OMB for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. The Information Collection Request (ICR) document prepared by the EPA has been assigned the EPA ICR number 2495.01.

The EPA is proposing this SO_2 Data Requirements rule to require air agencies to more extensively characterize ambient SO_2 air quality concentrations, pursuant to section 110(a)(2)(B) and 110(a)(2)(K) of the CAA, to inform the area designations process for the 2010 SO_2 NAAQS. For purposes of analysis of the estimated paperwork burden, the EPA assumed that 47 states and tribes would take actions to characterize air quality through either air quality modeling or ambient monitoring in 443 areas across the country and such states would submit the results of these analyses to the EPA. Under this rule, the air agency will have the ability to choose, on an area-by-area basis, the analytical approach to follow for characterizing air quality around each qualifying source. For this reason, there is no way of determining exactly how many areas may be characterized through ambient monitoring versus air quality modeling approaches. Therefore, this section presents two sets of estimated costs, one that assumes all sources would be characterized through ambient monitoring, and the other that assumes that all sources would be characterized through air quality modeling.

Potential ambient air monitoring costs are estimated based on the assumption that air quality for each of the 443 SO_2 sources exceeding the Option 1 threshold would be characterized through a single newly deployed air monitor. (Note, however, that the Monitoring TAD discusses situations where more than one monitor may be appropriate or necessary to properly characterize peak 1-hour SO_2 concentrations in certain areas.) Estimates are provided for a 3 year period and include a calculation for equipment amortization over seven years (as is typically done in monitoring-related ICRs). For the period of 2016, 2017, and 2018 (the SO_2 requirement begins in 2016), the total approximate average annual monitoring cost, including a calculation for equipment amortization is $9,308,824 (total capital, and labor and non-labor operation and maintenance) with a total burden of 110,543 hours. The annual labor costs associated with these hours is $7,608,287. Included in the $9,308,824 total are other annual costs of non-labor operations and maintenance of $760,011 and equipment and contract costs of $940,526. For reference purposes, an estimate for initial establishment of a new SO_2 monitoring station is $92,614 (does not include equipment amortization). In addition to the costs that would be incurred by the state and local air agencies, there would be an estimated burden to the EPA of a total of 52,717 hours and $776,005. Burden is defined at 5 CFR 1320.3(b).

Potential air quality modeling costs are estimated based on the assumption that air quality for each of the 443 SO_2 sources exceeding the Option 1 threshold would be characterized through air quality modeling analyses. Based on market research, stakeholder feedback, and assumptions about the

procedures to follow when conducting modeling for designations purposes,[47] an estimate of modeling costs for a single modeling run centered on an identified source would be approximately $30,000. If states choose to characterize air quality through modeling analyses around all 443 sources identified under source threshold Option 1, then total national costs for modeling analyses would be estimated at $13,300,000. If these costs were incurred over the course of three years, then the approximate annual cost for each year over that period would be $4,433,333.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

To comment on the agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden, the EPA has established a public docket for this rulemaking, which includes this ICR, under Docket ID number EPA–HQ–OAR–2013–0711. Commenters should submit any comments related to the ICR to both the EPA and OMB. *See* the **ADDRESSES** section at the beginning of this notice for where to submit comments to the EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW., Washington, DC 20503, Attention: Desk Office for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after May 13, 2014, a comment to OMB is best assured of having its full effect if OMB receives it by June 12, 2014. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any regulation subject to notice and comment rulemaking requirements under the Administrative Procedures Act or any other statute unless the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations and small governmental jurisdictions.

For purposes of assessing the impacts of this proposed rule on small entities, small entity is defined as: (1) A small business as defined in the Small Business Administration's (SBA) regulations at 13 CFR 121.201;) (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any requirements directly on small entities. Entities potentially affected directly by this proposal include state, local and tribal governments and none of these governments are small governments. Other types of small entities are not directly subject to the requirements of this rulemaking. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This action contains no federal mandate under the provisions of title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local and tribal governments, in the aggregate, or the private sector. This action imposes no enforceable duty on any state, local or tribal governments or the private sector. Therefore, this action is not subject to the requirements of section 202 and 205 of the UMRA.

This action is also not subject to the requirements of section 203 of the UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. The CAA imposes the obligation for states to submit information to the EPA to characterize air quality in order for such data to inform the area designations process following the revision of a NAAQS. This rule interprets the requirements in section 110(a)(2)(B) and 110(a)(2)(K) in order for air agencies to more broadly characterize ambient SO_2 concentrations for the SO_2 NAAQS designations process.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The requirement to characterize air quality to inform the area designation process for a revised NAAQS is imposed by the CAA. This proposed rule, if made final, would interpret those requirements as they apply to the 2010 SO_2 NAAQS. Thus, Executive Order 13132 does not apply to these proposed regulations.

In the spirit of Executive Order 13132 and consistent with the EPA policy to promote communications between the EPA and state and local governments, the EPA specifically solicits comments on this proposed action from state and local officials. In addition, the EPA intends to meet with organizations representing state and local officials during the comment period for this action.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This proposed action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It would not have a substantial direct effect on one or more Indian tribes. Furthermore, these proposed regulation revisions do not affect the relationship or distribution of power and responsibilities between the federal government and Indian tribes. The CAA and the Tribal Air Rule establish the relationship of the federal government and tribes in characterizing air quality and developing plans to attain the NAAQS, and these revisions to the regulations do nothing to modify that relationship. Thus, Executive Order 13175 does not apply to this action.

Although Executive Order 13175 does not apply to this action, the EPA held several meetings with tribal environmental professionals to discuss issues associated with this rule, including discussions at the National Tribal Forum on May 1, 2013, and on National Tribal Air Association policy calls. These meetings discussed the SO_2 implementation White Paper. The EPA also provided an opportunity for tribes and stakeholders to provide written comments on the concepts discussed in the White Paper. Summaries of these meetings are included in the docket for this proposed rule. The EPA specifically solicits additional comment on this proposed action from tribal officials. The EPA also intends to offer to consult with any tribal government to discuss this proposal.

[47] The Draft SO_2 NAAQS Designations Modeling Technical Assistance Document can be found at *http://www.epa.gov/airquality/sulfurdioxide/pdfs/SO2ModelingTAD.pdf.*

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

The EPA interprets E.O. 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the E.O. has the potential to influence the regulation. This action is not subject to E.O. 13045 because it does not establish an environmental standard intended to mitigate health or safety risks. These proposed regulatory provisions are designed to help implement the already-established SO_2 NAAQS, which was promulgated in 2010 to protect the health and welfare of individuals, including children, who are susceptible to the adverse effects of exposure to unhealthy levels of ambient SO_2.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs the EPA to provide Congress, through OMB, explanations when the agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking does not involve technical standards. Therefore, the EPA is not considering the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order (E.O.) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority populations and low-income populations in the United States.

The EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. The proposed regulations would, if promulgated, require air agencies to characterize ambient SO_2 air quality levels more extensively throughout the country, particularly in areas near large emissions sources. The EPA has designed options in this proposed rule that would require air agencies to characterize air quality around smaller emissions sources, if such sources are located in more highly urbanized areas, because such areas would have the potential for a greater number of people to be exposed to adverse effects of ambient SO_2 concentrations. This aspect of the proposed rule can help to ultimately provide additional protection for minority, low income and other populations located in these urbanized areas. As such, the EPA finds that this proposed rule would not adversely affect the health or safety of minority or low-income populations, and that it is designed to protect and enhance the health and safety of these and other populations.

Statutory Authority

The statutory authority for this action is provided by 42 U.S.C. 7403, 7407, 7410 and 7601.

List of Subjects in 40 CFR Part 51

Environmental protection, Air pollution control, Intergovernmental relations, Sulfur oxides.

Dated: April 17, 2014.

Gina McCarthy,

Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 51 of the Code of Federal Regulations are proposed to be amended as follows:

PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION AND SUBMITTAL OF IMPLEMENTATION PLANS

■ 1. The authority citation for Part 51 continues to read as follows:

Authority: 23 U.S.C. 101; 42 U.S.C. 7401–7671q.

■ 2. Add Subpart BB to read as follows:

Subpart BB—Data Requirements for Characterizing Air Quality for the Primary SO_2 NAAQS

Sec.

Subpart BB—Data Requirements for Characterizing Air Quality for the Primary SO_2 NAAQS

§ 51.1200 Definitions.

The following definitions apply for the purposes of this subpart. All terms not defined herein will have the meaning given them in section 51.100 of this part or in the CAA. *2010 SO_2 NAAQS* means the primary NAAQS for SO_2 as codified at 40 CFR 50.17, as promulgated on June 2, 2010.

Air agency means the agency or organization responsible for air quality management within a state, local governmental jurisdiction, territory or area subject to tribal government.

Annual SO_2 emissions data means the quality-assured annual SO_2 emissions data for a stationary source as reported to the EPA in accordance with any existing regulatory requirement (such as the National Emissions Inventory, the Acid Rain Program database, or the Clean Air Interstate Rule database).

Applicable source means a stationary source that has annual SO_2 emissions of 2000 tons or more; has annual SO_2 emissions of 1000 tons or more and is located within a CBSA with a population equal to or greater than 1 million persons; or has been identified by the air agency or by the EPA Regional Administrator as requiring further air quality characterization.

CBSA means core based statistical area, as defined and maintained by the Office of Management and Budget (OMB) pursuant to OMB Bulletin 13–01 (February 28, 2013). The most recent revision to CBSA definitions were developed in accordance with OMB's ''Standards for Delineating Metropolitan and Micropolitan Statistical Areas,'' 75 FR 37246 (June 28, 2010).

§ 51.1201 Purpose.

The purpose of this subpart is to require air agencies to take actions to develop air quality data characterizing maximum 1-hour ambient concentrations of SO_2 more extensively across the United States through either additional ambient air quality

monitoring or air quality modeling analyses at the air agency's election. Such additional monitoring and modeling data may be used in future initial area designations by the EPA, or for other actions designed to ensure attainment of the 2010 SO_2 NAAQS and provide protection of the public from the short-term health effects associated with exposure to SO_2 concentrations that exceed the NAAQS.

§ 51.1202 Applicability.

This subpart applies to any air agency in whose jurisdiction is located one or more applicable sources of SO_2 emissions that has annual SO_2 emissions of 2,000 tons or more; has annual SO_2 emissions of 1,000 tons or more and is located within a CBSA with a population equal to or greater than 1 million persons; or has been identified by the air agency or by the EPA Regional Administrator as requiring further air quality characterization. The subject air agency shall identify applicable sources of SO_2 based on the most recent publicly available annual SO_2 emissions data for such sources.

§ 51.1203 Air agency requirements.

(a) The air agency shall submit a list of applicable sources located in its jurisdiction to the EPA by January 15, 2016. This list may be revised by the Regional Administrator after review based on available SO_2 emissions data.

(b) For each area containing an applicable source, the air agency shall state by January 15, 2016, whether it will characterize air quality through ambient air quality monitoring or through air quality modeling techniques. For any area with multiple applicable sources, the air agency (or air agencies if a multi-state area) shall use the same technique (monitoring or modeling) to characterize air quality for all sources in the area.

(c) Monitoring. For any area for which air quality will be characterized through ambient monitoring, the monitors shall be sited and operated in a manner equivalent to SLAMS, including, but not limited to being subject to reporting data to AQS, data certification and satisfying criteria in 40 CFR part 58 Appendices A, C and E. The air agency shall include relevant information about monitors used to characterize air quality in areas with applicable sources in the air agency's annual monitoring network plan required by 40 CFR 58.10. The air agency shall consult with the appropriate the EPA Regional Office in the development of plans to install, supplement, or maintain an appropriate ambient SO_2 monitoring network pursuant to the requirements of 40 CFR part 58 and this proposed rule. The air agency's annual monitoring network plan due on July 1, 2016 shall reflect such monitoring and ensure that such monitors will be operational by January 1, 2017.

(1) All existing, new or relocated ambient monitors intended to satisfy section 51.1203(b) must be operational by January 1, 2017.

(2) By no later than May 1, 2020, the air agency shall determine whether any new ambient monitoring sites deployed pursuant to this subpart indicate a violation of the 2010 SO_2 NAAQS based on ambient monitoring data from the most recent 3 calendar years.

(3) Any SO_2 monitor identified by an air agency in its approved Annual Monitoring Network Plan as having the purpose of satisfying section 51.1203(b) of this proposed rule and which is not in an SO_2 nonattainment area, and is not also being used to satisfy other ambient SO_2 minimum monitoring requirements listed in 40 CFR part 58 Appendix D, section 4.4, or which may otherwise be required as part of a SIP or permit, and that produces a design value of no greater than fifty percent of the 1-hour SO_2 NAAQS, may be eligible for shut-down. The air agency must receive the EPA Regional Administrator approval prior to the shut-down of any qualifying monitor.

(d) Modeling. For each area for which air quality will be characterized through air quality modeling, the air agency shall submit by January 15, 2016, a technical protocol for conducting such modeling to the Regional Administrator for review. The air agency shall consult with the appropriate the EPA Regional Office in developing these modeling protocols.

(1) The modeling protocol shall include information about the modeling approach to be followed, including but not limited to the model to be used, modeling domain, receptor grid, emissions dataset, meteorological dataset and how the state will account for background SO_2 concentrations.

(2) Modeling analyses shall characterize air quality based on either actual 1-hour SO_2 emissions from the most recent 3 years, or federally enforceable allowable emissions. If the air agency intends to use allowable emissions limits for this analysis, it may submit such allowable emissions limits for the EPA's approval at the time the modeling protocol is submitted.

(3) The air agency shall conduct the modeling analysis for any applicable source identified by the air agency pursuant to section 51.1203(a), and for its associated area and any nearby area, as applicable, and submit the modeling analysis to the EPA Regional Office by January 13, 2017.

§ 51.1204 Enforceable emission limits.

At any time prior to January 13, 2017, for any area that does not have an initial area designation conducted pursuant to section 107(d) of the CAA, the air agency may submit to the EPA for an applicable source a currently applicable and federally enforceable SO_2 emissions limit or limits, associated air quality modeling, and other analyses that demonstrate the area, and any nearby area, as applicable, does not violate the 2010 SO_2 NAAQS, and that the source emissions limit will ensure continued attainment. The EPA will consider such enforceable emissions limits and modeling demonstrations in the initial designations process for these areas.

§ 51.1205 Assuring continued attainment.

(a) For any area in which one or more applicable sources is located and which has been initially designated attainment pursuant to this proposed rule based on ambient monitoring data or based on a modeling analysis using recent actual emissions, the air agency shall ensure that the area continues to attain the 2010 SO_2 NAAQS in subsequent years.

(b) Modeled areas. For any area initially designated attainment where modeling of actual emissions was conducted to characterize air quality to satisfy the requirements listed in 51.1203 of this part, the air agency shall submit a report to the EPA Regional Administrator as an appendix to its annual monitoring plan (due on July 1 each year per 40 CFR 58.10) documenting the annual SO_2 emissions of each applicable source in each such area and providing an assessment of the cause of any emissions increase. The first report for each such area is due by July 1 of the year after the effective date of the area's initial designation.

(1) Along with the annual emissions report, the air agency shall provide a recommendation regarding whether additional modeling is needed to characterize air quality in any area to determine whether it continues to attain the 2010 SO_2 NAAQS. The EPA Regional Administrator will consider the emissions report and air agency recommendation, and may require that the air agency conduct updated air quality modeling for the area and submit it to the EPA by a specified date.

(2) For any area initially designated attainment where modeling of actual emissions was conducted to characterize air quality, the air agency also shall submit to the EPA an updated air quality modeling analysis by July 1 of the third year after the designation for

the area is effective every 3 years thereafter.

(3)(i) The air agency may request that the EPA Regional Administrator approve ceasing continued triennial modeling of the area as required by paragraph (b)(2) of this section if the following criteria are met:

(A) the modeling is not otherwise required to meet any requirement in a SIP or permit; and

(B) the most recent modeling for the area resulted in a modeled design value that is no greater than fifty percent of the 1-hour SO_2 NAAQS.

(4) The EPA will act upon such a request to cease triennial modeling as part of its action on the annual monitoring plan under 40 CFR 58.10. For areas where the EPA has approved the air agency's request to cease continued modeling of the area, the air agency will be required to continue to meet the requirements of paragraphs (b) and (b)(1) of this section.

(c) Monitored areas. For any area initially designated attainment where SO_2 monitoring was conducted to characterize air quality to satisfy the requirements listed in section 51.1203 of this part, the air agency shall continue to operate the monitor(s) used to satisfy those requirements and report ambient data pursuant to existing ambient monitoring regulations.

(1)(i) The air agency may request that the EPA Regional Administrator approve the shut-down of any monitor in operation to satisfy the requirements of section 51.1203 of this part if the following criteria are met:

(A) the monitor is not also satisfying other minimum SO_2 monitoring requirements listed in 40 CFR part 58 Appendix D;

(B) the monitor is not otherwise required to meet any requirement in a SIP or permit; and

(C) the monitor recorded a design value in the most recent 3-year period that is no greater than fifty percent of the 1-hour SO_2 NAAQS.

(ii) The EPA will act upon any request to cease operation of a monitor as part of its action on the annual monitoring plan under 40 CFR 58.10.

(2) For any area for which the EPA has approved the air agency's request for an SO_2 monitor to cease operations, the air agency shall submit a report to the EPA Regional Administrator as an appendix to its annual monitoring plan (due on July 1 each year per 40 CFR 58.10) documenting the annual SO_2 emissions of each applicable source in each such area and providing an assessment of the cause of any emissions increase. The first report for each such area is due by July 1 of the year after the monitor operations were terminated.

(3) Along with the annual emissions report, the air agency shall provide a recommendation regarding whether additional air quality characterization is needed to determine whether the area continues to attain the 2010 SO_2 NAAQS. The EPA Regional Administrator will consider the emissions report and air agency recommendation, and may require that the air agency reinstate ambient monitoring or conduct additional modeling and submit relevant data to the EPA by a specified date.

(d) If modeling or monitoring information required to be submitted by the air agency to the EPA pursuant to section 51.1205 of this part indicates that an area is not attaining the 2010 SO_2 NAAQS, the EPA may take appropriate action, including but not limited to, disapproving the monitoring plan, requiring adoption of enforceable emission limits to ensure continued attainment of the 2010 SO_2 NAAQS, redesignation of the area to nonattainment, or issuance of a SIP Call.

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