

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 51**

[FRL - ]

**Proposed Revisions to Regional Haze Rule to Incorporate  
Sulfur Dioxide Milestones and Backstop Emissions Trading  
Program for Nine Western States and Eligible Indian Tribes  
Within that Geographic Area**

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

**ACTION:** Proposed rule.

**SUMMARY:** The purpose of this proposal is to request comment on revisions to 40 CFR 51.309 of the EPA's regional haze rule to incorporate certain provisions for Western States and eligible Indian Tribes.

The Western Regional Air Partnership (WRAP) submitted an Annex to the 1996 report of the Grand Canyon Visibility Transport Commission (GCVTC) to EPA on September 29, 2000. This submittal was required under 40 CFR 51.309 of the regional haze rule in order for nine Western States (and Indian Tribes within the same geographic region) to have the option of submitting plans implementing the GCVTC recommendations. The Annex contains recommendations for implementing the regional haze rule in the West, including a set of recommended regional emissions milestones for 2003-

2018 sulfur dioxide (SO<sub>2</sub>), a key precursor to the formation of fine particles and regional haze.

In this proposal, EPA proposes to approve the provisions of the Annex submitted by the WRAP as meeting the requirements of the regional haze rule and applicable requirements under the Clean Air Act (CAA). In this proposal, we include specific proposed changes to 40 CFR 51.309 of the regional haze rule to incorporate recommendations from the Annex.

DATES: Comments: We are requesting written comments by

**[Insert date 60 days from date of publication of this**

**proposed rule]**. The EPA intends to hold a public hearing on this proposed rule in Phoenix, Arizona on June 4, 2002.

**Public Hearings.** The public hearing will be held on June 4, 2002 at 2:00 p.m, rooms 1709 and 1710, Arizona Department of Environmental Quality, 3033 North Central, Phoenix, Arizona, located on the South Mall. If you wish to attend the public hearing or wish to present oral testimony, please send notification no later than one week prior to the date of the public hearing to Ms. Marty Robin, Air Division (AIR-1), U.S. EPA Region 9, 75 Hawthorne Street, San Francisco, CA 94105, telephone (415) 947-4143, email robin.marty@epa.gov.

Oral testimony will be limited to 5 minutes each. The hearing will be strictly limited to the subject matter of the proposal, the scope of which is discussed below. Any member of the public may file a written statement by the close of the comment period. Written statements (duplicate copies preferred) should be submitted to docket number A-2000-51 at the address listed above for submitting comments. The hearing schedule, including lists of speakers, will be posted on EPA's webpage at <http://www.epa.gov/air/visibility/whatsnew.html>.

A verbatim transcript of the hearings and written statements will be made available for copying during normal working hours at the Air and Radiation Docket and Information Center at the address listed above.

**Addresses:** Comments: You should submit comments on today's proposal and the materials referenced herein (in duplicate if possible) to the Air and Radiation Docket and Information Center (6102), Attention: Docket No. A-2000-51, U.S. EPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. You may also submit comments to EPA by electronic mail at the following address: A-and-R-Docket@epamail.epa.gov.

Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. All comments and data in electronic form must

be identified by the docket number [A-2000-51]. Electronic comments on this proposed rule also may be filed online at many Federal Depository Libraries.

**Docket:** Information related to this proposal is available for inspection at the Air and Radiation Docket and Information Center, docket number A-2000-51. The docket is located at the U.S. EPA, 401 M Street, SW, Room M-1500, Washington, DC 20460, telephone (202) 260-7548. The docket is available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday, excluding legal holidays. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Tim Smith (telephone 919-541-4718) , Mail Code C504-02 , EPA, Air Quality Strategies and Standards Division, Research Triangle Park, North Carolina, 27711, or Steve Frey (telephone 415-972-3990), EPA Region 9 (AIR-5), 75 Hawthorne Street, San Francisco, CA 94105. Internet addresses: [smith.tim@epa.gov](mailto:smith.tim@epa.gov) and [frey.steve@epa.gov](mailto:frey.steve@epa.gov).

**SUPPLEMENTARY INFORMATION:** We are providing the public with the opportunity to comment on EPA's incorporation of SO<sub>2</sub> milestones and a backstop emissions trading program for nine Western states and eligible Indian Tribes within that geographic area.

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## **I. Overview of the Proposed Stationary Source SO<sub>2</sub>**

### **Reduction Program**

The purpose of this rulemaking is to propose revisions to 40 CFR 51.309 of the regional haze rule to incorporate additional provisions to address visibility impairment in the 16 Class I areas on the Colorado Plateau.

#### **A. What is the Regional Haze Rule?**

\_\_\_\_\_The CAA, in section 169A establishes a national goal for protecting visibility in 156 scenic areas. These 156 "Class I" areas are federally protected areas and include national parks and wilderness areas. The national visibility goal is to remedy existing impairment and prevent future impairment in these Class I areas, consistent with the requirements of sections 169A and 169B of the CAA.

Regional haze is a type of visibility impairment caused by air pollutant emissions from a broad region. The EPA uses the term regional haze to distinguish these types of visibility problems for those which are more local in nature. In 1999, EPA issued a regional haze rule requiring States to develop implementation plans designed to make

"reasonable progress" toward the national visibility goal. The first State plans for regional haze are due between 2003 and 2008, (64 FR 35714, July 1, 1999). The regional haze rule provisions appear at 40 CFR 51.308 and 40 CFR 51.309.

**B. What are the Special Provisions for Western States and Eligible Indian Tribes in 40 CFR 51.309 of the Regional Haze Rule?**

The regional haze rule at 40 CFR 51.308 sets forth the requirements for State implementation plans (SIPs) under the regional haze program. The rule requires State plans to include visibility progress goals for each Class I area, as well as emissions reductions strategies and other measures needed to meet these goals. The rule also provides an optional approach, described in 40 CFR 51.309, that may be followed by the nine Western States (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming) that comprise the transport region analyzed by the GCVTC during the 1990's. This optional approach is also available to eligible Indian Tribes within this geographic region. The regulatory provisions at 40 CFR 51.309 are based on the final report issued by the GCVTC in 1996,<sup>1</sup> which included a number of recommended emissions reductions

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<sup>1</sup>

Recommendations for Improving Western Vistas. Grand Canyon Visibility Transport Commission, June 10, 1996.

strategies designed to improve visibility at the 16 Class I areas on the Colorado Plateau.

In developing the regional haze rule, EPA received a number of comments on the proposed rule encouraging the Agency to recognize explicitly the work of the GCVTC. In addition, in June 1998, Governor Leavitt of Utah provided comments to EPA on behalf of the Western Governors Association (WGA), further emphasizing the commitment of Western States to implementing the GCVTC recommendations. The WGA comments also suggested the translation of the GCVTC recommendations into a separate section of the rule. The EPA issued a Notice of Availability during the fall of 1998 requesting further comment on the WGA proposal and a draft translation into regulatory language. Based on the comments received on this Federal Register notice, EPA developed the provisions set forth in 40 CFR 51.309 that allow the nine Transport Region States and eligible Tribes within that geographic area to implement many of the GCVTC recommendations within the framework of the national regional haze rule.

The provisions in 40 CFR 51.309 comprise a comprehensive long-term strategy for addressing sources that contribute to visibility impairment within this geographic region. The strategy addresses the time period between the



year 2003,<sup>2</sup> when the implementation plans are due, and the year 2018. The provisions address emissions from stationary sources, mobile sources, and area sources such as emissions from fires and windblown dust.

One element of the GCVTC's strategy to address regional haze is a program to reduce stationary source emissions of SO<sub>2</sub>. This program calls for setting a series of declining caps on emissions of SO<sub>2</sub>. These declining caps on emissions are referred to as emissions milestones and provide for a reduction in SO<sub>2</sub> emissions over time. In designing this program, the GCVTC intended for these milestones to be reduced through voluntary measures, but also included provisions for an enforceable market-based program that would serve as a "backstop" if voluntary measures did not succeed. At the time the regional haze rule was published, however, it was broadly recognized that the specific emission milestones, and the details of how both the voluntary and enforceable phases of the program would be implemented, were necessary elements of a regulatory program. Accordingly, the regional haze rule, in 40 CFR 51.309(f), required the development of an "Annex" to the

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As explained in unit III of this preamble, Indian Tribes are given the flexibility under EPA regulations to submit implementation plans and opt into the program after the 2003 deadline.

report of the GCVTC that would fill in these details. The regional haze rule provided that the option afforded by 40 CFR 51.309 would only be available if an Annex addressing the specific requirements of 40 CFR 51.309(f) was submitted to EPA by October 1, 2000. The EPA required the submission of an Annex by this date to ensure that EPA would be able to act on it before the December 31, 2003 deadline for SIPs under 40 CFR 51.309(c).

**C. What was Required to be Included in the Annex to the GCVTC Report?**

The regional haze rule required the GCVTC (or a regional planning body formed to implement the Commission recommendations, i.e., the WRAP) to provide recommendations to fill in the details for two main aspects of the program:

- Emissions reductions milestones for stationary source SO<sub>2</sub> emissions for the years 2003, 2008, 2013, and 2018. The milestones must provide for "steady and continuing emissions reductions" for the 2003-2018 time period. In addition, the milestones must ensure greater reasonable progress than would be achieved by application of best available retrofit technology (BART) pursuant to section 51.308(e)(2).

- Documentation for implementing a market trading program in the event that voluntary measures are not sufficient to meet the required milestones. This

documentation must include model rules, memoranda of understanding, and other documentation describing in detail how emissions reductions progress will be monitored, what conditions will require the market trading program to be activated, how allocations will be performed, and how the program will operate.

The EPA received the Annex from the WRAP in a timely manner, on September 29, 2000. The EPA recognizes the significant amount of work that was devoted to developing the Annex and we commend the WRAP participants for their efforts. Under 40 CFR 51.309(f)(3), if EPA finds that the Annex meets the requirements of the regional haze rule, EPA committed to revise the regional haze rule based on the Annex to incorporate provisions requiring compliance with the milestones and backstop trading program. Along with the existing elements of 40 CFR 51.309, these new provisions would also be addressed in the 2003 SIPs by the Transport Region States. This proposed rule is the first step in revising section 51.309 based on the Annex.

**D. What Topics are Covered in this Preamble?**

The preamble addresses the following topics:

- *The proposed regional SO<sub>2</sub> milestones and WRAP's determination that the milestones meet the criteria for approval in the regional haze rule. The EPA has*

reviewed the WRAP's methodology for developing specific milestones for SO<sub>2</sub> for the years between 2003 and 2018. The EPA proposes to approve the milestones as satisfying the broad requirements of the regional haze rule. The EPA believes that the milestones provide for "steady and continuing emissions reductions." The EPA also believes that the milestones provide for "greater reasonable progress" than the BART emission limits that would otherwise be required by the regional haze rule.

- *Ways in which the milestones may be adjusted in the future.* The preamble discusses the limited circumstances under which the milestones may be adjusted in the future and the proposed administrative process for making those changes.
- *The stationary sources of SO<sub>2</sub> that are included in the program.* This unit of the preamble discusses the stationary sources of SO<sub>2</sub> that would be required to participate in the program, and whose cumulative emissions would be compared to the milestones.
- *The annual process for determining whether a milestone is exceeded, thereby triggering the trading program.* This section describes the steps to be followed in evaluating emissions data at the State, tribal and regional levels. It also describes a mechanism by

which States and Tribes can activate the trading program in 2013 if evidence indicates that the 2018 milestone will not be reached without such action.

- *Key trading program elements that are required in SIPs and Tribal implementation plans (TIPs).* This unit of the preamble covers issuance of and compliance with allowances, emissions quantification protocols and tracking system, the annual reconciliation process, and penalty provisions.
- *Status of the program after 2018.* This unit of the preamble discusses what happens to the milestones and backstop trading program at the completion of the first implementation period, in 2018.

Unit II of the preamble describes each of these programmatic areas in detail, including EPA's review of the relevant portion of the WRAP submittal. Unit III discusses issues related to implementation of this program in Indian country. Unit IV documents that this proposal complies with the administrative requirements of various Executive Orders and statutes.

**E. What is the Next Step if the Regional Haze Rule is Revised?**

If this proposal is finalized, it will modify the requirements in 40 CFR 51.309 of the regional haze rule. As

a result, 40 CFR 51.309 will then provide the complete regulatory framework to be used by Western States and Tribes in developing regional haze implementation plans. The EPA will continue to work closely with the States and Tribes to support their efforts to develop plans that meet the applicable requirements of the regional haze rule. Once State and tribal plans that meet the applicable requirements of the regional haze rule are reviewed and approved by EPA, they will be federally enforceable.

The requirements in 40 CFR 51.309, if revised, will be the product of a substantial effort by many States, Tribes, Federal agencies, and other interested parties, extending over a number of years from the work of the GCVTC to that of the WRAP. The EPA recognizes, however, that the States and Tribes do have the option of implementing the regional haze rule under 40 CFR 51.308 rather than 40 CFR 51.309. Because the objective of 40 CFR 51.309 is to provide a regional approach to protecting air quality at the 16 Class I areas on the Colorado Plateau, EPA believes that there must be a "critical mass" of States participating for 40 CFR 51.309 SIPs to be approvable.

## **II. Proposed Program Details**

Today's proposal closely follows the provisions of the Annex submitted by the WRAP on September 29, 2000, and the

supplement to the Annex submitted on June 1, 2001<sup>3 4</sup>. The EPA proposes to incorporate those provisions into 40 CFR 51.309 of the regional haze rule by adding a new paragraph (h), by adding language to refer to this new paragraph, and by adding a few new definitions.

In this section of the preamble, we discuss the details of the proposed regional emission tracking and backstop trading program for stationary source SO<sub>2</sub> emissions. For each provision of the program, we provide:

- an overview of the provision,
- the requirements that apply to the provision in 40 CFR 51.309(f)(1) of the regional haze rule,
- the section of the Annex and/or supporting documents where the WRAP discusses the provision and its rationale,
- a discussion of EPA's proposed finding that the

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Supplementary Submittal to EPA in Support of the SO<sub>2</sub> Annex to the Grand Canyon Visibility Transport Commission Report. Submitted to EPA by the Western Regional Air Partnership, June 1, 2001.

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The WRAP submitted a satisfactory Annex, which included all of the elements listed in 40 CFR 51.309(f)(1) (i) and (ii). This enabled EPA to begin work immediately on assessing the substance of the WRAP's strategy for addressing visibility impairment in the 16 Class I areas covered by 40 CFR 51.309(f). The October 1, 2000 deadline was accordingly met. The supplemental information submitted by the WRAP after the October 1, 2000 deadline has served to improve the clarity of today's proposal and will improve the implementation of the program.

provision meets the requirements of the CAA and the regional haze rule, and

- a description of how EPA proposes to incorporate the provision into the regional haze rule.

**A. What are the Proposed Regional SO<sub>2</sub> Emission**

**Milestones?**<sup>5</sup>

A key provision of the WRAP's SO<sub>2</sub> reduction program is a set of SO<sub>2</sub> emissions milestones. The Annex includes a set of milestones, which represent targets for the total annual amounts of SO<sub>2</sub> emissions that may be emitted from stationary sources of SO<sub>2</sub> within the nine-State region. The program is designed to ensure that these milestones will be met. The EPA agrees with the WRAP's conclusion that these milestones meet the requirements of the CAA and the regional haze rule, and EPA proposes to amend the regional haze rule to incorporate the milestones into the rule. The rationale for EPA's position is set forth in this unit of the preamble.

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In 40 CFR 51.309 of the regional haze rule issued on July 1, 1999, we defined the term "milestone" as a reduction in emissions relative to a 1990 actual emissions baseline. In discussions of the WRAP, and in the Annex itself, the term almost has most often been used to mean an emissions cap for the region that reflects a reduction in emissions. To avoid any confusion, EPA is proposing to revise the definition of "milestone" to more closely conform to the way it is used in the Annex.



1. Background. Requirement in the Regional Haze Rule that the Milestones Must Provide for "Greater Reasonable Progress" than BART and for "Steady and Continuing" Progress.

The regional haze rule, in 40 CFR 51.309(f)(1)(i), requires the Annex to contain milestones for the years 2003, 2008, 2013, and 2018. Moreover, paragraph 40 CFR 51.309(f)(1)(i) requires that the milestones "must be shown to provide for greater reasonable progress than would be achieved by application of best available retrofit technology (BART) pursuant to §51.308(e)(2)."

In order to understand the implications of these requirements for "greater reasonable progress... than ... BART," it is important to understand the basic provisions for BART in the CAA and in the regional haze rule. The CAA, in section 169A(b)(2) requires that SIPs for visibility protection must apply BART to certain large-emitting sources. More specifically, BART is required for sources that:<sup>6</sup>

(1) are in one of 26 specific listed source categories;

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In the regional haze rule, EPA uses the term "BART-eligible source" to refer to sources meeting criteria (1) to (3), and uses the term "sources subject to BART" to refer to sources meeting all four criteria.

(2) were in existence as of August 1977 but were not in operation in August of 1962;

(3) have the potential to emit 250 tons per year; and

(4) emit an air pollutant that "may reasonably be anticipated to cause or contribute to any impairment of visibility" in any of 156 protected scenic areas.

When EPA published its regulations for regional haze SIPs in 1999, we included a requirement for BART. In their regional haze SIPs, States must identify sources subject to the BART requirement, and for these sources there are two options. The first option, set forth in 40 CFR 51.308(e)(1), is to establish case-by-case BART emissions limits for each source subject to BART. The second option, set forth in 40 CFR 51.308(e)(2), is to develop an alternative program, such as an emission trading program, that provides for "greater reasonable progress" in visibility improvement than would be achieved through the case-by-case imposition of BART. The BART requirements of the regional haze rule are described in detail in the preamble to the regional haze rule, (64 FR 35737, July 1, 1999). Additionally, the EPA has proposed guidelines for implementing the BART requirement, (66 FR 38108, July 20, 2001).

Paragraph 40 CFR 51.309(f)(1)(i) requires that the milestones:

must provide for steady and continuing emissions reductions for the 2003-2018 time period consistent with the Commission's definition of reasonable progress, its goal of 50 to 70 percent reduction in sulfur dioxide emissions from 1990 actual emission levels by 2040, applicable requirements under the CAA, and the timing of implementation plan assessments and identification of deficiencies which will be due in the years 2008, 2013, and 2018.

The requirement for "steady and continuing" emissions reductions originated in a recommendation of the 1996 report of the GCVTC (Recommendations for Improving Western Vistas. Report of the Grand Canyon Visibility Transport Commission to the United States EPA, p. 34).

The Annex includes the WRAP's recommended milestones. The milestones are listed Table 1 in section III (page 55) of the Annex, and are also listed and discussed further in section II (pages 9-15) of the Annex and in Attachment C of the Annex. The WRAP has concluded that the milestones meet the requirements of the regional haze rule discussed above. The EPA agrees with the WRAP's conclusions and is proposing to amend the regional haze rule to incorporate these milestones into the rule. The following discussion sets forth the technical analysis and rationale for (1) EPA's proposed conclusion that the year 2018 milestone provides for "greater reasonable progress than BART," and (2) EPA's

conclusion that the milestones provide for "steady and continuing progress."

2. Milestone for the Year 2018. Rationale for EPA's Proposal that the Year 2018 Milestone Represents "Greater Reasonable Progress" than BART.

Attachment C to the Annex discusses (1) the WRAP's process for developing a regional emissions milestone for SO<sub>2</sub> for the year 2018, and (2) the WRAP's determination that the regional milestone will provide for greater reasonable progress than would be achieved by BART. Considerable discussions, technical analyses, and negotiations were held within the WRAP to develop the year 2018 milestone.<sup>7</sup>

To identify the year 2018 milestone, the WRAP:

- Estimated the baseline SO<sub>2</sub> emissions for the year 2018, (e.g., the predicted SO<sub>2</sub> emissions in the year 2018 in the absence of a program to reduce SO<sub>2</sub> emissions);
- Developed a list of BART-eligible sources in the region;
- Estimated the emissions reductions that BART sources could achieve, and
- Selected a year 2018 milestone that reduces the

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You will find complete information on discussions related to this milestone at the WRAP's website (<http://www.wrapair.org>). These discussions generally took place within the WRAP's Market Trading Forum.

baseline emissions by an amount that would achieve greater reasonable progress in improving visibility than by requiring each BART-eligible source to install BART. The EPA agrees with the WRAP that these are appropriate steps for demonstrating that the year 2018 milestone is consistent with the regional haze rule requirement for achieving greater reasonable progress than BART if source-specific BART is not applied.

Baseline emissions. The WRAP conducted a technical analysis to calculate a best estimate of the projected actual SO<sub>2</sub> emissions baseline for the year 2018. Based upon a review of the documentation of this analysis, and based upon EPA's participation in the WRAP's technical forums and committees, the EPA believes that the data used and assumptions made by the WRAP for projecting the baseline are reasonable. The EPA invites comment on these baseline emission estimates, including whether there are any elements of the calculations for which alternative assumptions would be more technically appropriate. The point source SO<sub>2</sub> emission inventory for the nine-State region can be subdivided into four broad classes: (1) electric utility boilers, (2) cogeneration facilities, (3) copper smelters, and (4) other sources. Electric utility boilers are by far the largest emitting category, comprising about two-thirds

of the overall SO<sub>2</sub> inventory. Copper smelters are the next largest source of SO<sub>2</sub> emissions. A host of smaller sources contribute to the "other source" category, including industrial boilers, petroleum refineries, cement kilns, paper mills, and natural gas production plants.

For each of these broad classes, estimation of any future year's emissions involves the estimation of actual emissions for a year in the recent past, and then making assumptions on how those emissions will change in the future. We provide an overview here of how the WRAP developed the year 2018 baseline by taking emissions estimates for the most recently available year (generally 1998 or 1999) and by making assumptions on how those emissions would change by the year 2018. Further details are available in the technical support information provided by the WRAP<sup>8</sup>.

The WRAP estimated utility emissions for the year 2018 using, as a starting point, 1999 emissions data that the utilities submitted to EPA to comply with the requirements of the national acid rain program. In order to estimate how these current emissions would change for the year 2018, the

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Technical Support Documentation. Voluntary Emission Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop Trading Program. WRAP, October 16, 2000.

WRAP took into account several considerations. The resulting utility emissions forecast for the year 2018, taking into account all of these considerations, is 415,000 tons.

First, the WRAP took into account for utilities the expected future operations at coal-fired power plants. The WRAP assumed that boilers would be shut down by the year 2018 if they had been in operation more than 60 years by that date (that is, sources which began operation in the year 1957 or before). For the remaining boilers, the WRAP assumed they would continue to operate and would increase their utilization of capacity from current rates (typically less than 80 percent of name plate capacity) to an 85 percent utilization rate. In developing the emission forecasts, the WRAP took into account future demand growth. The WRAP assumed there would be an increase of 1.4 percent per year in net generation in the GCVTC region. As noted above, the WRAP assumed that existing sources would continue to be used until they reached 85 percent of capacity. When existing available generation is exhausted, new sources are assumed to emit on average 0.02 pounds per million BTU. The 0.02 pounds per million BTU figure assumes that well-controlled coal-fired boilers would comprise 20 percent of the new generation capacity, with the remainder of

generation using gas-firing (either natural gas or from coal gasification). Documentation of the WRAP's assumptions for power generation is found in section 2.C of the document entitled Technical Support Documentation. Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop Trading Program. Submitted by the WRAP to the U.S. EPA, October 16, 2000.

Second, the WRAP considered the expected reductions in SO<sub>2</sub> emissions from the Mohave Generating Station in Nevada and from a number of plants on the Colorado Front Range. For the Mohave Generating Station, the plant's owners and a number of environmental organizations entered into a consent decree on December 21, 1999. A proposed revision to the Federal Implementation Plan (FIP) for Nevada, reflecting the terms of the consent decree, was published in the Federal Register on February 8, 2002, (67 FR 6130). For the Colorado Front Range plants, reductions are expected from a voluntary agreement between Public Service Company of Colorado and the Colorado Air Pollution Control Division.<sup>9</sup>

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"Voluntary Emissions Reduction Agreement between the Colorado Air Pollution Control Division and Public Service Company of Colorado," submitted for approval to the Air Quality Control Commission, July 16, 1998.



Third, the WRAP applied a 10,000 ton downward adjustment to account for the expected effects of a recent revision to the procedure for measuring the stack flow rate, which is an integral part of the measurement of SO<sub>2</sub> emissions using a continuous emission monitor (CEM). The procedure in place before the revision, which was used in the calculation of the 1999 baseline emissions, could overestimate the flow rate for certain types of stacks, and thus lead to an overestimate of the measured emissions. This same overestimate would also be present in estimates of future year emissions for the 2003 to 2018 time period, which used the 1999 emissions as a starting point. Accordingly, the new procedure, if used, would lead to a decrease in the measured and forecasted emissions even if the emitting characteristics of the boiler (fuel used and sulfur content) did not change. Such a "paper" decrease would not represent real emissions reductions. The WRAP estimated that for the year 2018, there will be 10,000 tons of emission decreases that will be solely due to expected changes in the flow rate measurement method for the boiler population. Thus, 10,000 tons were subtracted from the year 2018 milestone.

Finally, the WRAP included an upward adjustment to account for continued operation of three of the Colorado

Front Range boilers that would be operating more than 60 years in the year 2018. Even though the general methods used to forecast emissions assumed that these boilers would shut down after 60 years, the WRAP believed that planned capital investments would likely extend the operations of these three boilers for a longer time period. The WRAP's estimated emissions increase, to account for these three boilers, is 4,000 tons.

For cogeneration facilities, the WRAP assumed that year 1999 emissions of 8,000 tons would remain constant through the year 2018, with no growth or retirement of these plants.

For copper smelters, the WRAP used emissions data for 1998<sup>10</sup> provided by the State air quality agencies as the starting point for projecting SO<sub>2</sub> emissions for 2018. Since 1998, two smelters have temporarily suspended operations. It is difficult to predict the national and international market conditions that would influence whether these smelters will resume operation. Accordingly, the WRAP decided to include two separate emissions forecasts for the year 2018 for smelters. The first forecast assumes that the two suspended smelters will be permanently shut down by the

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For all other sources besides utility boilers, the year 1998 was the most recent year of data available to the WRAP at the time the Annex was developed.

year 2018, and emissions from the remaining smelters would be 48,000 tons. The second forecast operations at the two currently suspended smelters will have resumed, which results in an overall smelter emissions total of 78,000 tons.

For the broad "other source" category, the WRAP used recent inventory data as the starting point for future projections. To forecast emissions to the year 2018, the WRAP used general growth and retirement rates that are included in the Integrated Assessment System (IAS) used by the GCVTC. The growth and retirement rates in the IAS are annual percentages that are applied to the base year inventory total.<sup>11</sup> The inventory amount is reduced according to the retirement rates, and increased according to the growth rates. The WRAP funded a technical review of the emissions for the "other source" category, which was completed in July 2000. This report, Historical and Future SO<sub>2</sub> Emissions Analysis. 9 State Western Region Draft Report, is included as section 2.A of the WRAP's technical

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For non-utility sources, the WRAP's IAS took demand growth into account through an economic model called the Regional Economics Model, Inc (REMI) model. The REMI model predicts changes in economic indicators for source categories and regions within the overall geographic area studied. The REMI model was used to determine the degree to which activity levels are predicted to increase for a given source type and sub-region.

support documentation. For these sources, emissions were predicted to decline from the 1998 total of about 162,000 tons to 141,000 tons in the year 2018.

In summary, the WRAP estimates year 2018 emissions as follows:

Electric utility boilers <sup>12</sup>	415,000	
Cogeneration units	8,000	
Copper smelters	48,000	OR
	78,000	
Other stationary sources	141,000	
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TOTAL (if suspended smelters remain closed)	612,000	
TOTAL (if suspended smelters resume operation)	642,000	

List of BART-eligible sources. The WRAP, as described in Appendix C of the Annex, pages C-2 and C-3, developed a list of BART-eligible sources using the definitions in the regional haze rule and a number of assumptions. Subsequent to the submittal of the Annex, the EPA formally proposed

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Including adjustment for new flow rate method, and including the retirement adjustment for Colorado Front Range plants. This value represents the 421,000 tons for "utility emissions" on page C-8 of the Annex, plus the 4,000 tons for "front range adjustment" on page C-8, minus the 10,000 tons referred to as "CEMS bias adjustment" on page C-11 of the Annex.

BART guidelines in a rulemaking proposal published on July 20, 2001 (66 FR 38108). These proposed guidelines include proposed methods for identifying BART-eligible sources. In order to meet the October 2000 deadline for the Annex, the WRAP needed to identify BART-eligible sources before the guidelines were proposed by EPA.

In identifying BART-eligible sources, the WRAP identified individual emission units that have a potential to emit more than 250 tons per year. In the proposed BART guidelines, the EPA takes a slightly different approach. Using the method in the proposed BART guidelines, a source would be BART-eligible when the sum of the potential emissions over all emission units built between the 1962-1977 time period is greater than 250 tons per year. For example, assume a plant had two emission units built within the 1962-1977 time period, emission unit A with a potential to emit 125 tons per year of SO<sub>2</sub>, and unit B with a potential to emit 150 tons per year of SO<sub>2</sub>. Under the proposed BART guidelines, you would add the potential emissions of both units. Thus, both of these units would be BART-eligible under EPA's proposed BART guidelines because their combined potential to emit exceeds 250 tons per year. Under the system used by the WRAP, these units would not have been identified as BART-eligible.

The EPA believes that even if the BART guidelines are finalized as proposed, the BART-eligible sources identified by the WRAP, and the SO<sub>2</sub> emissions resulting from those sources, would be nearly identical to those identified under the BART guidelines. The EPA estimates that the difference in emissions coverage between the method used by the WRAP and the method in EPA's proposed guidelines is at most a few thousand tons. We request comment on this assessment.

Emissions reductions from BART-eligible sources. The WRAP's next step was to calculate the emissions reductions that would be achieved by requiring the installation and operation of BART on all BART-eligible sources in the region. The first step in this process was to identify the "appropriate" retrofit technologies for categories of BART-eligible sources. This is described in section C of Annex Attachment C. The WRAP discusses in Attachment C, page C-4, that the factors to consider for BART, including cost, energy and non-air environmental impacts, existing pollution controls, and remaining useful life were addressed in a broad way through the identification of technologies that were currently being used as retrofits in the region. The WRAP's Market Trading Forum looked at ranges of potential retrofit controls and established a level that it expected to be valid as a regional average. Further documentation of

the technology analysis is found in section 6 of the Technical Support Document (Technical Support Documentation. Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop Trading Program. Submitted by the WRAP, October 16, 2000). This technology analysis was performed on a source category basis, as is allowed by the regional haze rule.

The WRAP developed a series of control technology assumptions for specific categories in the region. These control technology assumptions are summarized in Annex Table 1, page C-5. Another table describing the types of controls considered is included as Table 1 on pages 12-18 of Section 6.A of the Technical Support Document. The technology determination with the greatest effect on emissions was for utility boilers, which represent about 2/3 of projected 2018 emissions, and which also have the greatest potential for further emissions control. For utility boilers, the WRAP developed a three-tier system as follows. For uncontrolled utility boilers, and for boilers currently with controls achieving less than a 70 percent reduction in SO<sub>2</sub> emissions, the WRAP assumed an "appropriate" technology level of 85 percent control. For boilers currently achieving a 70 to 80 percent reduction in SO<sub>2</sub> emissions, the WRAP assumed that

control efficiencies could be increased by five percent. For example, if a boiler is currently achieving 72 percent reduction in SO<sub>2</sub> emissions, the WRAP assumed it would be controlled to 77 percent. For utility boilers currently achieving greater than 80 percent reduction in SO<sub>2</sub> emissions, no additional reductions were assumed.

In developing the three-tier system for boilers, the WRAP assumed that emissions can be reduced by flue gas desulfurization, and made broad judgments on the level of control that this technology could achieve. These judgments included a general discussion of whether any of the statutory factors for BART would likely mitigate against application of the technology. As noted in Table 1, page C-5 of the Annex, the WRAP assumed controls for additional categories as follows:

- Petroleum refineries. For sulfur recovery units, the WRAP assumed BART was 98 percent control or the equivalent of a 3-stage Claus unit. For catalytic crackers, the WRAP assumed 90 percent control level. For flares, the WRAP assumed no additional control.

- Industrial boilers. For non-utility boilers, the WRAP used the same 3-tier assumptions as for utility boilers.



- All other categories, including cement kilns, recovery furnaces at kraft pulp mills, and copper smelters. The WRAP assumed that BART would require no additional SO<sub>2</sub> control.

The WRAP calculated the emissions reductions for the BART-eligible sources for the year 2018 as outlined in section 6.B of the Technical Support Documentation. By applying the 3-tier approach to utility boilers, and the assumptions noted above for refineries and industrial boilers, the WRAP calculated emissions reductions from BART-eligible sources of about 168,000 tons for the year 2018. Of this amount, the great majority of the reductions (152,000 of the 168,000) were from utility boilers.

During May 2000, EPA provided the WRAP with a technical review of the control technology judgments made by the WRAP for utility boilers.<sup>13</sup> As noted in this technical review, EPA believes that for utility boilers that are currently uncontrolled, emissions reductions of 90 percent or better are readily achievable. Of the total of 53 BART-eligible utility boilers in the WRAP region, 21 are currently uncontrolled. The EPA's technical analysis also provided

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May 22, 2000 letter from Lydia Wegman, Richard R. Long, and Deborah Jordan, EPA to Colleen Delaney, co-chair, WRAP Market Trading Forum.

upper and lower-bound estimates of the degree to which the 30 units with existing wet scrubbers could be upgraded. This technical analysis resulted in emissions reductions of 170,000 to 190,000 tons, which were about 15,000 to 35,000 tons greater than estimated by the WRAP.<sup>14</sup>

Inclusion of an additional amount of emissions to account for "uncertainty" and "headroom." In calculating the year 2018 milestone, the WRAP included 35,000 tons for "uncertainty" and "operational headroom." This is discussed on pages C-9 through C-11 of Annex Attachment C.

The WRAP uses the term "headroom" generally to mean an amount that accounts for unexpected future events. For example, if a WRAP-developed milestone is established at 800,000 tons, and expected emissions are 750,000 tons, then the difference - 50,000 tons - is "headroom" that provides additional assurances that the milestone would not be expected to be exceeded.

The WRAP uses the term "uncertainty" generally in the context of data parameters whose actual values in the future may differ from current projections. All parties to the

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Subsequent to EPA's May 2000 analysis, the WRAP developed refined estimates of the year 2000 emissions baseline. This estimate of 170,000 to 190,000 tons was based on the emissions information available at the time of EPA's May 2000 analysis.

WRAP discussions agree that there is a fair degree of uncertainty in projecting emissions nearly 20 years in the future. Projections for the year 2018 involve numerous inherent assumptions about economic and other conditions, and the SO<sub>2</sub> emissions results of those conditions. For example, the tool used for emissions forecasting, the IAS, assumes a certain percentages of plant retirements, and emissions reductions from those plant retirements. There is nothing that would prohibit these sources that are assumed to retire from continuing operating, or even increasing their operations. Scenarios different from those projected by the IAS would result in emission increases for the "other source" category of several tens of thousands of tons per year. Another example of uncertainty leading to an unexpected increase in emissions would be an increase in the overall average sulfur content of coal used in coal-fired boilers. If this value increased by 5 percent, for example, then the forecasted emission baseline for utility boilers would increase by more than 20,000 tons. It is also possible that boilers that are currently burning natural gas could switch to fuel oil if the relative prices of the two fuels were to change. Finally, there are uncertainties regarding the number of new coal-fired utility boilers that

will be built in the region, and the emissions from such boilers.

The EPA agrees with the WRAP that long-term emissions predictions are uncertain and that it is accordingly difficult to predict with accuracy the level of SO<sub>2</sub> emissions for the region in 2018. We request comment on the WRAP's use of the 35,000 tons per year of "headroom/uncertainty" as an amount that is included in the calculation of a year 2018 milestone.

Milestones for the year 2018 selected by the WRAP. The WRAP determined the milestone for the year 2018 by taking the projected baseline amount, subtracting the 168,000 tons for "appropriate" control technology, and adding the 35,000 tons for "uncertainty and headroom." Because the WRAP projected two cases for future smelter operations, there were two associated milestones for the year 2018. For the case without operation of the two smelters, the WRAP determined that the milestone would be 612,000 - 168,000 + 35,000, or 480,000 tons (the WRAP rounded the value of 479,000 tons up to 480,000). For the case which assumes that the two smelters will resume operation, similar calculations yield a milestone of 510,000 tons.

Discussion of EPA's finding that the year 2018 milestone meets the requirements of the regional haze rule.

The EPA believes that the year 2018 milestone fulfills the requirement in 40 CFR 51.309(f)(1)(ii) of the regional haze rule that "the milestones must be shown to provide for greater reasonable progress than would be achieved by application of BART under 51.308(e)(2)." 40 CFR 51.308(e)(2) of the regional haze regulations requires that the analysis of whether "greater reasonable progress" would be achieved must include the following:

- A list of all BART-eligible sources,
- A source-specific or category-wide analysis of possible BART controls, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use, and the remaining useful life, and
- An analysis of the degree of visibility improvement that would be achieved from application of BART-level controls.

The EPA believes that the WRAP's analysis, described above, meets these requirements. The WRAP has provided a list of BART-eligible sources, and a sufficient category-wide analysis of the possible BART controls. The WRAP also provided an analysis of the visibility improvement from the SO<sub>2</sub> emissions reduction program, in addition to a number of possible scenarios for BART-level controls. This visibility analysis is discussed in section F of Attachment C to the Annex. Supplemental information, which included additional visibility analyses, was submitted to EPA on September 24,

2001 in a document entitled "Sensitivity Analysis to Quantify the Benefits Achieved by an Emission Cap."

The EPA has reviewed the calculations, analyses and other documentation provided by the WRAP in order to judge whether the 2018 SO<sub>2</sub> milestone provides for greater reasonable progress than BART. One important consideration in making this judgment, as noted by the WRAP in the Annex, is that the program establishes an enforceable cap for the Region on the emissions of SO<sub>2</sub> from all stationary sources in the region emitting more than 100 tons per year. In contrast, a program that addressed only the BART sources would result in a reduction in emissions from the sources covered by the BART requirements, but it would not limit the overall emissions of SO<sub>2</sub> in the WRAP region.

It is an inherently uncertain exercise to predict future SO<sub>2</sub> emissions in the absence of this program, and there is also uncertainty in predicting what appropriate BART-level emissions controls would be for the year 2018. The EPA believes that the future emissions in the WRAP region could plausibly be greater than or less than those forecasted by the WRAP. For the utility sector, we believe there is a relatively low probability that existing utility boilers will increase their use of capacity by a greater percentage than the overall capacity factor of 85 percent

assumed by the WRAP. There is, however, a growing likelihood that there will be more new coal-fired power plants in place in 2018 than assumed when the Annex was submitted to EPA. For copper smelters, it is unlikely that emissions would increase by any appreciable amount above those forecasted in the two scenarios developed by the WRAP. For the "other" source category incorporating all non-utility and non-smelter sources, greater use of capacity or new source growth could plausibly lead to emissions that are greater than the 141,000 tons forecasted by the WRAP. In summary, taking into account all of these categories, it is possible that future emissions could be more or less than calculated by the WRAP.

Likewise, the EPA believes there is some uncertainty regarding the level of emissions control that would be achieved by applying SO<sub>2</sub> controls to the BART-eligible source population on a source-by-source basis. While EPA, as noted above, calculates a somewhat greater degree of possible SO<sub>2</sub> reductions than the WRAP, it is also possible that a State-by-State, source-specific analysis of BART would result in a lesser degree of control on some sources.

The visibility analyses conducted by the WRAP attempted to capture the uncertainty that exists in comparing a program with a fixed cap on emissions to a program that

would achieve a given level of control on the BART population. The emissions reductions from the trading program are guaranteed, because they assure that emissions will not exceed the milestones. On the other hand, the overall effect of emissions reductions from application of BART is best expressed as a range of results. Because of the factors States and Tribes may consider when determining BART for individual sources, there is no guarantee of the amount of reductions application of BART would achieve.

The uncertainty of the comparison is compounded to a degree by the fact that under a trading program, it is not possible to predict with precision where the emissions reductions would occur. The modeling results showed that the visibility impacts of the trading program are likely to be very similar to those for the range of possible BART results, and that the visibility impacts of the trading program could be slightly greater or slightly less than a BART-only program would achieve.

Taking all of these uncertainties into account, EPA believes that it is reasonable to conclude that the year 2018 milestone meets the requirements for "greater reasonable progress" in the regional haze rule. The WRAP has satisfied the requirements of the regional haze rule that the milestones provided for greater reasonable progress



than would be achieved by BART, and the WRAP has provided the necessary documentation to support that conclusion. Central to their finding of greater reasonable progress is that the program provides for an overall cap instead of individual emission limits which do not guarantee the same emissions reductions. Modeling scenarios show that the trading program is likely to achieve results equivalent to, or greater than, an emission limit-based program. Although not determinative of whether the program achieves better than BART reductions, EPA believes that it is also important to recognize that the WRAP program has resulted from a consensus effort, which included broad-based participation of many Western stakeholders.

3. Milestones for the Interim Years (2003 through 2017). Rationale for EPA's Proposal that the Milestones Represent "Steady and Continuing" Progress.

As discussed above, 40 CFR 51.309 (f)(1)(i) of the regional haze rule requires that the milestones in the Annex:

must provide for steady and continuing emission reductions for the 2003-2018 time period consistent with the Commission's definition of reasonable progress, its goal of 50 to 70 percent reduction in sulfur dioxide emissions from 1990 actual emission levels by 2040, applicable requirements under the CAA, and the timing of implementation plan assessments and identification of deficiencies which will be due in the years 2008, 2013, and 2018.

The WRAP discusses the milestones for these interim years in section II.b, pages 11-15, of the Annex. The milestones selected by the WRAP in the Annex are as follows:

**Table 1. WRAP's Proposed Regional Dioxide Milestones for Stationary Sources Emitting More than 100 TPY**

(amounts listed are tons per year)

<b>Year</b>	<b>Each year between 2003 through 2007</b>	<b>Each year between 2008 through 2012</b>	<b>Each year between 2013 and 2017</b>	<b>2018</b>
<b>Maximum Milestone (smelters in)</b>	720,000	715,000	655,000	510,000
<b>Minimum Milestone (smelters out)</b>	682,000	677,000	625,000	480,000

The EPA believes that these milestones provide for "steady and continuing" emissions reductions and the requirements of 40 CFR 51.309(f)(1)(i). Taking each phrase of 40 CFR 51.309(f)(1) separately, our rationale for this finding is as follows.

First, 40 CFR 51.309(f)(1)(i) requires steady and continuing progress "consistent with the Commission's definition of reasonable progress." As noted in section II.A.1.b of the Annex, the GCVTC defined reasonable progress as follows:

Reasonable progress towards the national visibility goal is achieving continuous emission reductions

necessary to reduce existing impairment and attain steady improvement of visibility in mandatory Class I areas, and managing emissions growth so as to prevent perceptible degradation of clean air days.

For the reasons set forth below, EPA is proposing to find that the milestones listed above are consistent with this definition in the Commission report.

In its analysis of whether the milestones provide for "continuous" or "continuing" reductions for the 2003 to 2018 time period, the WRAP uses as its starting point, or frame of reference, the Commission's goal of achieving a 13 percent reduction in 1990 baseline emissions by the year 2000, rather than an estimate of actual emissions for 2000. A 13 percent reduction from the 1990 baseline emission of about 830,000 tons results in emissions of about 720,000 tons. Using the emission inventory estimates for the most recently available year at the time of the Annex, generally from 1998 or 1999, the WRAP estimated that the total actual emissions for the 1998-1999 time period were about 652,000 tons, roughly a 22 percent reduction from the 1990 baseline. Thus, the milestones, which range from 677,000 tons to 715,000 tons for the 2008-2012 time period, allow for actual emission increases to occur between this 1998/1999 time period and this time period. The EPA agrees that the WRAP may use the 13 percent level, rather than current actual emissions, as the basis for determining that "steady"

reductions are occurring. Otherwise, EPA believes that the region would in essence be penalized for achieving early reductions in emissions. Also, there is future emission growth expected due to increased use of operating capacity at utility boilers and other source types. Accordingly, a relatively "flat" line between 2003 and 2012 can represent a significant reduction in emissions that would have otherwise been expected. The EPA requests comment on this finding.

Second, 40 CFR 51.309(f)(1)(i) requires steady and continuing progress "consistent with ... (the Commission's)... goal of 50 to 70 percent reduction in sulfur dioxide emissions from 1990 actual emission levels by 2040." Because the 1990 actual emissions of SO<sub>2</sub> for the region were 830,000 tons per year, the 2018 milestones proposed by the WRAP for 2018 represent a 39 to 43 percent reduction from 1990 baseline emissions. Emissions reductions consistent with the 2018 milestone will achieve a substantial portion of the Commission's goal set by the Commission for the 50-year period, 1990 to 2040. The EPA believes that the criterion for steady and continuing emissions reductions consistent with this long-term goal of 50-70 percent reduction in SO<sub>2</sub> emissions is clearly met.

Third, 40 CFR 51.309(f)(1)(i) requires steady and continuing progress "consistent with applicable requirements

under the CAA." The EPA believes that the milestones recommended by the WRAP are consistent with all applicable requirements of the CAA. As noted above, EPA proposes that the milestones constitute "greater reasonable progress" than would be achieved through implementation of the BART requirements in section 169A of the CAA.

Finally, 40 CFR 51.309(f)(1)(i) requires steady and continuing progress "consistent with the timing of implementation plan assessments and identification of deficiencies which will be due in the years 2008, 2013, and 2018." In the Annex, the WRAP has established an annual process for comparing emissions with milestones. This annual process, discussed in greater detail below, ensures that emissions will be compared against the milestones each year, and not just in 2008, 2013, and 2018. The EPA believes that this annual check is a helpful clarification of the way the program will be implemented, and that it will ensure that ample information will be available at the time of the 5-year program reviews required by 40 CFR 51.309(d)(10) of the regional haze rule.

In summary, EPA believes that the milestones in the Annex fulfill all of the requirements for "steady and continuing" progress. We request comment on this proposed finding.

4. How the Milestones are Listed in the Proposed Amendments to 40 CFR 51.309.

The Annex, in sections II.A.3.b and III.A.6.b, clarifies that the annual process for comparing emissions to the milestones will, with one exception, involve a comparison of multi-year averages. Because the program does not begin until 2003, compliance with the 2003 milestone will be based on 2003 emissions data only. Compliance with the program in 2004 will be based on an average of 2003 and 2004 emissions data. In subsequent years, compliance with the milestones will be determined by using a 3-year average of emissions. The Annex also makes clear that for the 2005 through 2017 time period, compliance will be determined by comparing 3-year averages of emissions with 3-year averages of the milestones. For example, the milestones for 2006, 2007, and 2008 are 677,000, 682,000, and 682,000 tons, respectively (see Table 1 above, smelters out). The 3-year average of the milestones is:  $(682,000 + 682,000 + 677,000)/3$ , or about 680,000 tons. Thus, after the end of calendar year 2008, under the system of averaging contained in the Annex, the participating States and Tribes will compare the 3-year average of emissions (that is, the average of emissions for the years 2006, 2007, and 2008) against 680,000 tons.

To minimize any confusion from this system of averaging, EPA has included in the proposed amendments to 40 CFR 51.309 a table which sets out, for each year of the program, the emission inventory years to be used, and the amount of tons per year that the emissions will be compared against. This is included in the proposed rule amendments as Table 1 in proposed paragraph 40 CFR 51.309(f)(1). This table also makes clear that for the year 2018, participating States and Tribes will compare the year 2018 inventory to the year 2018 milestone, without any averaging of previous years.

**B. What Future Adjustments to the Milestones are Allowed by the Proposed Rule?**

The Annex provides for future adjustments to the milestones under certain prescribed circumstances. The EPA understands that the WRAP's negotiations succeeded largely because the participants were able to reach agreement on milestones that addressed stakeholder interests, met the requirements of the CAA, provided certainty to the regulated community, and provided interest groups with a fixed set of milestones that would ensure long-term progress in reducing SO<sub>2</sub> emissions and improving visibility. However, the WRAP did anticipate that there were a number of specific circumstances under which the milestones should be adjusted.

The EPA believes that these are the only circumstances that should lead to changed milestones. The EPA requests comment on the appropriateness of these adjustments and whether additional adjustment to the milestones may be appropriate. These adjustments are described in sections III.A.3, III.A.4, and III.A.5 of the Annex and are discussed further in section II.A.2 of the Annex. The EPA believes that each of these adjustments is consistent with the requirements of the regional haze rule.

The WRAP identified the following seven possible adjustments to the milestones:

(1) adjustments to be made at the outset of the program if certain States and Tribes choose not to participate in the program, and for Tribes that choose to opt into the program after the 2003 deadline;

(2) adjustments to account for specific contingencies regarding the future operations of copper smelters;

(3) adjustments for changes in emission measurement techniques;

(4) adjustments for changes in flow rate measurement methods;

(5) adjustments for illegal emissions;

(6) adjustments due to periodic reviews and audits; and

(7) adjustments for individual sources opting into the



program.

For the first adjustments (1) and (2), the specific amounts by which the milestones would change are listed in the proposed amendments to 40 CFR 51.309 of the regional haze rule. For adjustment (4), a specific defined process for calculating the adjustment can be specified in the rule. The specifics of each of the adjustments are described in detail below. In addition, for three adjustments, (1) (2) and (4), we are proposing in today's amendments the specific circumstances under which the adjustments would occur and the procedures for making these types of adjustments to the milestones. Because we are proposing the specific emission quantities, circumstances and procedures in the rule, and are taking comment on these specific details, we are also proposing to allow States and eligible Tribes to make these adjustments without triggering a requirement to revise their SIP. For the remaining adjustments, we are proposing to require States and eligible Tribes to revise their implementation plans, consistent with the procedures at 40 CFR 51.102 and 40 CFR 51.103, before making the adjustment.

1. Adjustment for States and Tribes that Choose not to Participate in the Program, and for Tribes that Choose to opt into the Program after 2003.

As noted previously, 40 CFR 51.309 of the regional haze rule provides nine Western States with an optional program to meet the requirements of the CAA and the regional haze rule. States that choose to meet the requirements of 40 CFR 51.309 are assured of having an approvable long-range visibility strategy for 16 Class I areas in the vicinity of the Grand Canyon. It is not yet known, however, which States will choose to exercise the option under 40 CFR 51.309. Accordingly, the Annex, including the supplemental information submitted in June 2001<sup>15</sup>, provides for adjustments to the milestones in the event that not all eligible States and Tribes choose to participate.

The WRAP has identified for each State, and for each year from 2003 to 2018, the amount of emissions that would be deducted from the milestones for each State that chooses not to participate. The methodology and data sources for determining these individual State opt-out amounts are explained further in the WRAP's supplementary information submitted to EPA in June 2001. The EPA includes in the proposed amendments to 40 CFR 51.309 of the regional haze rule a table (Table 2) displaying the opt-out amounts.

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Supplementary Submittal to EPA in Support of the SO<sub>2</sub> Annex to the Grand Canyon Visibility Transport Commission Report. Western Regional Air Partnership, June 1, 2001.

The EPA notes that the emissions amount budgeted in this table are only for the purpose of determining the milestones at the outset of the program should some States and Tribes choose not to participate. The amounts budgeted to each State in this table are not necessarily the amounts that will be allocated to sources in the State if a trading program is triggered. Further discussion on the requirements for source allocations under a trading program are discussed below in unit II.D. of the preamble.

The EPA believes that for the program under 40 CFR 51.309 to achieve the WRAP's objectives and the objectives of the GCVTC, a sufficient number of States must participate in the program. The WRAP recognizes this issue of "critical mass" as well and has funded a study to review the results of a number of scenarios for possible participation in the program. The EPA proposes to defer to the WRAP's judgment on the issue of "critical mass," and we request comment on this proposal.

The process for taking the State opt-out amounts into account would happen automatically at the outset of the program and would be reflected in the SIPs submitted in 2003. For the States that opted out, the amounts in Table 2 of the rule (included in the proposed rule in 40 CFR

51.309(h) (1) (i)) would be deducted from the amounts in Table 1 for purposes of establishing the program milestones.

As is discussed below in unit III.D of this preamble, Tribes have the flexibility to opt into the program after the 2003 deadline. The process for taking into account the tribal amounts in Table 2 of the rule needs to take this into account. For Tribes that have not opted into the program by the 2003 date, the amounts in Table 2 will be deducted from the amounts in Table 1 at the outset of the program. For Tribes that opt into the program at a later date, these amounts will be automatically added to the amounts in Table 1, beginning with the first year after the TIP implementing 40 CFR 51.309 is approved by EPA.<sup>16</sup>

1. Adjustment for Smelter Operations.

Currently, two of the copper smelters in the nine-State Visibility Transport Region are temporarily shutdown due to economic conditions. These smelters are the Phelps Dodge Corporation's Hidalgo Smelter in New Mexico, and the BHP Company San Manuel Smelter in Arizona. As noted above, it is difficult to predict whether long-term economic conditions may lead to resumed operation of these two

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If EPA promulgates a FIP implementing 40 CFR 51.309 for a Tribe, that FIP will be treated in the same manner as a TIP for purposes of this provision.

smelters. Because of the significance of these smelters, the Annex makes provisions to adjust the milestones upward if either of the two smelters resume operation. The Annex also has a provision to adjust the milestones upward if either one, or both, of the two smelters remain shutdown, but other smelters in the region increase copper production such that SO<sub>2</sub> emissions exceed the year 2000 baseline level. This adjustment for the currently suspended smelters is described in section III.A.3.a. of the Annex and is discussed further in section II.A.2.a of the Annex.

During the last full year of operation of the two smelters, 1998, the Phelps Dodge Hidalgo smelter emitted 22,000 tons of SO<sub>2</sub>, while the BHP San Manuel Smelter emitted 16,000 tons. These two smelters have air quality permits from the respective State air agencies, and the Annex states that they would be allowed to resume full operation at any time. The Annex provides for the following adjustments if one or both of these smelters resumes full operation consistent with its existing permitted levels:

- 22,000 tons is added to each of the milestones if Phelps Dodge Hidalgo resumes operation but BHP San Manuel does not resume operation,

- 16,000 tons is added to each of the milestones if BHP

San Manuel resumes operation but Phelps Dodge Hidalgo does not resume operation, and

- If both smelters resume operation, then 38,000 tons is added to the milestones for each subsequent year up to the year 2012, and 30,000 tons is added to each milestone for the year 2013 through the year 2018.

The Annex describes two sets of circumstances under which resumed operations of the smelters could result in emissions that are less than historical levels. The first is if a smelter were to operate in a "substantially different" manner than it had operated in the past. For example, if only a portion of a plant were to resume operation, then emissions would fall below past levels. This would happen, for example, if the plant were to resume operation but used the acid plant to produce acid from elemental sulfur, rather than to resume copper production. The Annex states that in such a case, the State will reduce the emissions adjustment amount to reflect such conditions in the milestones.

The second set of circumstances addressed in the Annex for reducing the adjustments is when one or both of the two smelters resumes operations in a manner that triggers new source review requirements under parts C or D of title I of the CAA. The Annex recognizes that this new source review

process might lead to a change in the level of SO<sub>2</sub> emission levels as compared to past levels. The Annex states that under such circumstances the State will determine an "appropriate" adjustment to the milestone based upon the emission levels allowed by the new source review permit. For this case, the "appropriate" emission level will be added to the milestone for each subsequent year after the source remains in operation at the newly permitted levels. The Annex clarifies that in no instances may the adjustments exceed 22,000 tons for the Hidalgo smelter or 16,000 tons for the San Manuel smelter.

The final consideration in the Annex for making adjustments to the milestones to reflect future changes in smelter operations involves those smelters in the region other than Phelps Dodge Hidalgo or BHP San Manuel. The Annex provides for smelter-specific adjustments to the milestones if two conditions are met:

- (1) either the Phelps Dodge Hidalgo or BHP San Manuel smelter has not resumed operations, AND
- (2) one of the remaining smelters increases its actual emissions<sup>17</sup> above its year 2000 baseline level.

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Although not stated explicitly in the Annex, EPA interprets this to mean legally permissible increases in actual emissions within levels allowed by permits and regulations.

The following table illustrates the smelter-specific adjustments provided for in the Annex.

**Table 2. Smelter-specific Adjustments**

<b>Company/ smelter</b>	<b>Baseline emissions (tons per year)</b>	<b>Maximum adjustment to the milestone for any year where emissions exceed 2000 baseline levels</b>
BHP San Manuel	16,000	1,500
Asarco Hayden	23,000	3,000
Phelps Dodge Chino	16,000	3,000
Phelps Dodge Hidalgo	22,000	4,000
Phelps Dodge Miami	8,000	2,000
Kennecott Salt Lake	1,000	100

The EPA interprets the Annex as providing for an adjustment to the milestones by the amount by which a smelter's actual emissions exceed the baseline levels, up to the amount listed in the right-hand column. For example, if in the year 2006 BHP San Manuel has not resumed operation and Asarco Hayden's actual emissions for that year are 25,000 tons (2,000 tons more than Asarco Hayden's baseline emissions), then the milestone would increase by 2,000 tons. If, on the other hand, Asarco Hayden's actual emissions are 28,000 tons, (5,000 tons more than baseline emissions), the



milestone would be adjusted by 3,000 tons, the maximum amount listed in the table.

40 CFR 51.309(h) (1) (ii) of the proposed rule identifies the adjustments to the milestones under the various operating scenarios identified in the Annex by the WRAP. The EPA has attempted to clarify the adjustments with a series of "if-then" tables consistent with EPA's plain language guidelines. We request comment on these adjustments, and whether these tables properly interpret the procedures in section III.A.3.a of the Annex. In addition, EPA has included in the proposed rule a requirement that any adjustments to the milestones made to reflect changes in smelter operating conditions, and the basis for those adjustments, must be clearly identified by the States and Tribes in the annual process to determine whether the milestone is exceeded. (This annual process is described further in unit II.C of this preamble).

### 3. Adjustment for Changes in Emissions Calculation Methods.

The Annex provides for adjusting the milestones if there are changes in emissions calculation methods. Such changes could result, for example, if States or Tribes were to find errors in the 1998/99 inventories used to establish

the milestones, or based on State, tribal and EPA efforts to improve the accuracy of emissions calculation methods.

In establishing an emissions baseline, the WRAP has used a number of different techniques to estimate or measure the emissions from the sources covered by the program. These current methods vary in their accuracy and reliability. For example, EPA believes that the most reliable method for measuring emissions is that currently being used to monitor electric utility boilers under the CAA acid rain program. This monitoring method measures the amount of SO<sub>2</sub> in the exhaust from the boilers and the quantity (flow) of exhaust on a continuous basis. This allows the hourly tracking of SO<sub>2</sub> emissions. Another method for calculating SO<sub>2</sub> emissions for industrial coal-fired boilers is to measure the amount of sulfur in the coal and the quantity of coal burned, and to use EPA emission factors to determine the SO<sub>2</sub> emissions. The EPA considers this method to be less accurate than the method for monitoring emissions for the acid rain program because coal is a heterogeneous mixture. As such, there are variations in the fuel sulfur which result in inherent uncertainties in knowing whether a given fuel sulfur measurement is representative of the entire quantity of fuel combusted. The copper smelters in the WRAP region are also considered

to have a reliable method of determining their SO<sub>2</sub> emissions, relying on a combination of monitoring and mass balance.<sup>18</sup> For a number of other source types -- such as portland cement plants, fluid cat cracker regenerators and sulfur plants, emissions are usually estimated using emission factors (that is, multipliers that are expressed in terms of amount emitted per amount of throughput or production). For sources relying on emission factors or other calculation techniques, there is a greater probability that there will be future improvements in the emission estimation methods.

As the WRAP's SO<sub>2</sub> program progresses, it is likely that some facilities that have relied on emission factors and other less accurate methods for determining the emissions will improve the accuracy of the emission estimates. The Annex provides for adjustments to the milestones when emission calculation techniques change is to avoid the creation of "paper" increases or decreases in emissions that do not reflect actual changes in emissions. As an example,

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"Mass balance" (also sometimes called "material balance") techniques use data on the total amount of pollutant present, along with the amount that ends up in product or wastes, to deduce the amount that is emitted to the air. For some source categories, this can be a highly accurate method for determining the emissions. For others, it is much more uncertain.

assume that in their baseline inventory, a State in the WRAP region estimated emissions for a portland cement plant using an emission factor that a subsequent source test shows to be inaccurate. If the source test indicated that the plant is emitting 10 percent more emissions per unit of production than predicted by the emission factor, the emission estimate for the portland cement plant would increase even if production levels remained the same. While the new information shows that the emissions from the plant are more than previously thought, this does not mean that emissions have increased. Similarly, a new method of calculating emissions that shows that emissions per unit of production are less than previously estimated would not indicate that emissions have decreased. Accordingly, in a program which depends on long-term comparisons of emission inventories relative to initial expectations, EPA agrees with the WRAP that it is important that the system avoid creating such "paper" increases and decreases.

This provision for making these adjustments is discussed in sections II.A.d. and III.a.4.b of the Annex, and in a supplemental paper entitled "Emission Tracking Prior to Triggering the Backstop Trading Program." In summary, the Annex provides for:

- documenting the method of estimating or measuring

emissions that was used in developing a baseline for the program,

- keeping track of when these emission calculations methods change relative to the baseline,
- periodically revising the SIPs to adjust the milestones to reflect these changes, and
- using the method in place pending the SIP revision.

The Annex provides that the implementation plan submittals must document how the emissions were determined for each unit that is part of the program. This information will be used to track the changes that occur over the years in the emission estimating and measuring techniques. As noted below in unit II.C of this preamble, States will report these changes annually in "exceptions reports," which are reports that are intended to facilitate public review of the annual inventories by highlighting items of interest.

The EPA agrees with the WRAP that future adjustments to the milestones for currently unknown changes in emissions calculation methods should only be made through revisions of SIPs/TIPs. The milestones are a fundamental component of the SO<sub>2</sub> reduction program. Accordingly, it is important that any changes to those milestones be transparent to the public in order to ensure the overall integrity of the program. The implementation plan revision process assures

that such a public review will take place. At the same time, we agree with the WRAP that it is not practical to provide for SIP revisions every year to account for such adjustments. In the supplemental paper, the WRAP recommends that these adjustments be made every 5 years and be included in the SIP revisions required by 40 CFR 51.309(d)(10). The EPA believes that this is a reasonable time frame for making these changes. The EPA notes, however, that during the time period between the date the calculation method changes and the date that the SIP is revised, it is equally important to ensure that there not be "paper" emissions increases and decreases relative to the milestones. This would occur if emissions were reported using a new method, while the milestone reflected baseline estimates based on the previous method. The EPA agrees with the WRAP's suggestion that for purposes of the annual determination, the same method be used for reporting emissions, that is, the old method (on which the baseline emissions were calculated), pending the completion of the periodic SIP revision. The WRAP's process would accomplish this by having the regional planning body identify and account for any such "paper" increases and decreases in the annual determination process.

The EPA has incorporated the proposed adjustment for emission calculation method changes in the proposed rule as paragraph 40 CFR 51.309(h)(1)(iii).

#### 4. Adjustments for Utility Boilers Opting to Use More Refined Flow Rate Methods.

In 1999, EPA adopted revisions to EPA's Reference Method 2, the standard method for measuring stack flow rates, (64 FR 26484, May 14, 1999). The revisions provided three new procedures: Methods 2F, 2G, and 2H. The new procedures, if used for a given source, allow for a more detailed assessment of the stack flow rates to provide more accurate results. The changes addressed concerns raised by utilities that Reference Method 2 may over-estimate flow in certain cases, such as when the flow is not going straight up the stack. If the flow rate is over-estimated, this would also lead to the overestimation of SO<sub>2</sub> emissions because the facility's continuous flow rate monitor is calibrated to correspond to the flow test method. Facilities subject to the acid rain program under title IV of the CAA must perform these flow tests at least once a year to determine the accuracy of their continuous flow monitors. Facilities have an option to use either the old Method 2, or one or more of the new methods.

When the WRAP made its emission projections for purposes of developing the milestones, the new methods were not yet in place. Accordingly, if a source owner chooses to use the new flow methods, and if as expected it results in a reduced flow rate for the same level of operation, then there will be a corresponding decrease in the emissions estimate. The EPA agrees with the WRAP that this would create the possibility of a "paper" decrease relative to the milestone if the milestone reflects the old method. As discussed in section III.A.5 of the Annex, the WRAP notes that a protocol is needed for adjusting the milestones to reflect changes in the baseline emission for utility boilers any time that a source opts to change its CEMs method. The WRAP addressed this issue in greater detail in a supplemental paper entitled "Emissions Tracking Prior to Triggering the Backstop Trading Program," which was submitted to EPA on June 1, 2001.

The WRAP has identified three possible technical procedures for developing an "adjustment factor" for the new flow method. The EPA agrees that any of these three procedures would be acceptable. Under the first procedure, there would be a side-by-side comparison of flow rates using both the new and the old flow reference methods. For example, if the new method measured 760,000 cubic feet per



minute, and the old method measured 800,000 feet per minute, the adjustment factor would be  $(760,000/800,000)$ , or 0.95.

The second method would use annual average heat rate, which is reported to the Energy Information Administration (EIA), as a surrogate for the flow rate. Under this method, the flow adjustment factor would be calculated using the annual average heat rate using acid rain heat input data (MMBtu) and total generation (MWHrs) reported to EIA, calculated as the following ratio:

$$\frac{\text{Heat Input/MW for first full year of data using new flow rate method}}{\text{Heat Input/MW for last full year of data using old flow rate method}}$$

The third method would use data reported to EPA's acid rain program. Under this method, there would be a comparison of the standard cubic feet per minute (CFM) per megawatt (MW) before and after the new flow reference method based on CEMS data, as follows:

$$\frac{\text{SCF/Unit of Generation for first full year of data using new flow rate method}}{\text{SCF/Unit of Generation for last full year of data using old flow rate method}}$$

In the supplemental information paper, the WRAP identified three possible approaches for using the adjustment factors for making a correct comparison of emissions to the milestones. The WRAP did not indicate a

preference for any single approach. The three options are as follows:

(a) Using one of the options described above for determining the flow adjustment factor, revise the source's baseline emissions forecast for 2003, 2008 and 2013. For each year following the adoption of the new flow reference method through 2017, reduce the interim milestone by the corresponding amount. Using the example above where the adjustment factor is 0.95, this means that the previous baseline emissions for that source would be multiplied by 0.95. The annual compliance check will then be done by comparing regional SO<sub>2</sub> emissions (unadjusted, as reported to EPA's acid rain program) to the revised milestone.

(b) Using one of the options described above for determining the flow adjustment factor, revise the source's reported emissions on an annual basis, and do not adjust the milestone. For the example noted above, the emissions reported to EPA's acid rain program would be adjusted upward by multiplying the amount times (1/0.95). For each year following the adoption of the new flow reference method through 2017, the annual compliance check will be done by comparing the adjusted regional SO<sub>2</sub> emissions to the unadjusted milestones.

(c) Use a combination of the two approaches. Under

this approach, interim milestones would be adjusted only every 5 years [using option (a) above] and the reported emissions for additional sources making the change in the intervening years are adjusted for comparison to the milestones [using option (b) above].

The EPA believes that any one of these three approaches would be acceptable, but that a specific approach needs to be selected for the final rule. The EPA also believes that these adjustments to the milestone or to the reported emissions would not necessarily require SIP or TIP revisions, because the precise method for making the adjustment, and the publicly available data elements that will be used for making the adjustment, could be specifically identified in the final rule.

#### 5. Adjustments for Illegal Emissions.

The Annex at section III.A.4.d. provides for future decreases to the milestones if it is determined that "the milestones were based on illegal emissions." The Annex also includes a discussion of this adjustment in Attachment A, Draft Model Rule, sections A3.3(b)(4) and C4.6. These sections of the Annex provide a brief discussion of this adjustment and noted that "the specific mechanism for this adjustment needs further discussion by the WRAP."

In developing the milestones, the WRAP identified the baseline emissions for each source during the base year, and estimated emissions for the source during the 2003 to 2018 time period, taking into consideration growth, utilization, retirement, and the absence of any additional requirements. The compilation of these source-specific baseline emissions resulted in the baseline emission inventory totals, which serve as a "starting point" for measuring progress from the program. The WRAP recognized in the Annex that if a source was in violation during the base year when its emissions were determined, the baseline emissions during 2003 - 2018 would be overestimated. For example, assume the baseline emissions for a boiler were calculated based upon an emission factor of 0.6 pounds per million BTU, and using actual and projected fuel amounts, the baseline emissions source were 10,000 tons in the year 1998, increasing to 20,000 tons in the year 2008 and continuing at 20,000 tons for the years between 2008 and 2018. For this example case, it is later discovered that the source has been in violation since 1998 of an emission limit of 0.3 pounds per million BTU. Based on a final enforcement action that takes place in the year 2007, it is determined that if the source was in compliance with its limit, baseline emissions would have been 5000 tons in the year 1998, increasing to 10,000 tons

in the year 2008 and continuing at 10,000 tons for the years between 2008 and 2018. For this example case, baseline emissions for each year between 1998 and 2018 would be overestimated, by amounts that vary from 5,000 to 10,000 tons.

The Annex and the WRAP's supplementary information include this provision without any further explanation of what should be considered as illegal emissions, who makes the determination, or what is the process for making this adjustment. The EPA is proposing the rule with the language consistent with the Annex, and we solicit comments on whether the term "illegal emissions" should be further clarified in the final rule.

There are many types of outcomes between plaintiffs and defendants when resolving a dispute over illegal emissions. The most obvious example is when a case goes to court and there is a court decision that the emissions were not legal. This is the rarest of the dispute resolution methods. It is more typical that the disputing parties resolve their differences through one of the following two methods:

- a consent decree that is either entered through Federal or State courts, or

- an administrative enforcement proceedings by either States, Tribes, or EPA.

Under these two methods of resolving an allegation of an illegal emission, it is typical that the defendant neither admits nor denies the alleged violation. They simply agree to correct the situation through injunctive relief and often pay penalties for being in violation.

Sometimes, States and EPA disagree over whether or not a particular alleged violation was correct. This is typical in cases when EPA files a case that a State has opted not to pursue. There also can be disagreement when citizen groups pursue violations. Many of these cases are due to a difference in the federally enforceable SIP regulations and the current State regulations.

Because of the issues referred to above, EPA is soliciting comment on how these types of settlements should affect the milestones. An important consideration to note is that under any of the options described below, adjustments to the milestone would occur only after the source in the enforcement case has achieved the additional control of their SO<sub>2</sub> emissions. Consequently, adjustments to the milestone will have no affect on any other facility's operation because all of the reductions are being achieved by the source subject to the enforcement action. We seek comment on the following possible options:

Option 1. Under this option, the rule would require

that if there is any resolution to an alleged illegal SO<sub>2</sub> emission, then all of the reductions would be considered as "illegal emissions." Taking into account these reductions, there would be a "re-forecast" of the source's emissions and its effect on the milestone. "Re-forecast" means to re-apply the forecasting process, that is the process the WRAP originally used to project future emissions and develop the milestones, using the corrected baseline sulfur dioxide emissions for the affected source. A comparison of this re-forecasted emission level with the previously forecasted emissions would yield a calculation of the amount of the adjustment for each year up through 2018.

Option 2. Under this option, the rule would allow for case-by-case judgments on the appropriateness of the adjustment, and would clarify the entity responsible for deciding whether a case involves illegal emissions warranting an adjustment to the milestones. Under this option, we also seek comment on the entity responsible for this determination, that is whether the rule should clarify whether the parties entering into a settlement, the States, the Tribes, the WRAP, or EPA would determine the settlement's impact on the milestones.

Another issue that EPA is soliciting comments on is how to treat any extra SO<sub>2</sub> emissions reductions that a facility

might achieve as a result of a settlement. The EPA will often allow a company that is settling through a consent decree or consent agreement to perform a "supplementary environmental project" and allow the expenditures on this project to partially offset penalties that the company would be assessed. If the milestones are not reduced by the amount of extra emissions reductions from this type project, then the environment may see little benefit, since another company would be allowed more SO<sub>2</sub> emissions. We seek input on whether these "extra" emissions reductions should be considered part of this "illegal emission" adjustment and factored into a recalculation of the milestone.

In the proposed rule, EPA includes, at 40 CFR 51.309(h)(1)(v), the Annex's provision for decreasing the milestone for illegal emissions. The EPA requests comment on how we have incorporated this provision, including whether the final rule should add further detail on the timing of the adjustment, and on the administrative steps that would be followed in making the adjustment. For example, EPA believes it may be useful to clarify that the adjustment to the milestone should be made beginning with the year that the source comes into compliance, rather than beginning with the date of the enforcement action.



## 6. Adjustment Based Upon Findings of Future Program Audits.

As will be discussed in greater detail below, there are several types of program reviews and audits that are part of this program. The Annex includes a provision to adjust the milestones if these program reviews and audits identify reasons for an adjustment. The Annex describes this adjustment in section III.A.4.c. and in Attachment A, Draft Model Rule sections B5 and C14.2. The WRAP has further clarified this process in the Supplemental Paper, "Emissions Tracking Prior to Triggering the Trading Program."

There are three types of program reviews and audits in this program: (1) audits of the data quality and administrative aspects of the program if the trading program is not triggered, (2) a review of data quality, administrative process and other issues related to the trading program if it is triggered, and (3) the 5-year SIP or TIP review (due in 2008, 2013, and 2018) required by the regional haze rule in 40 CFR 51.309(d)(10). The WRAP recommends, and EPA agrees, that such program reviews and independent party audits may identify the need for adjustments to the milestones to correct errors that do not fit into any of the other categories of adjustments discussed above. Accordingly, the Annex and the proposed

rule provide a process for making such adjustments as appropriate.

As indicated, in a supplemental paper to the Annex,<sup>19</sup> the pre-trigger audits of the program will be completed by the third year of each 5-year cycle (that is, by 2006, 2011, and 2016.) A requirement for these audits is included in the proposed rule at 40 CFR 51.309(h) (3) (v). The timing of these pre-trigger audits is designed to provide participating States and Tribes with sufficient lead-time to make any necessary changes during the general program review due 2 years later (in 2008, 2013, and 2018, respectively).

The EPA includes the requirement to adjust milestones based on the results of the three types of data and program audits described above. This provision is included in the proposed rule as 40 CFR 51.309(h) (1) (vi). The proposed rule also requires that if, during any audit or program review, the WRAP finds that changes need to be made then they will be incorporated at the time of the next SIP revision required under 40 CFR 51.309(d) (10).

The EPA wishes to clarify that each 5-year SIP review under 40 CFR 51.309(d) (10) should include an evaluation of:

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Supplementary Submittal to EPA in Support of the SO<sub>2</sub> Annex to the Grand Canyon Visibility Transport Commission Report. Submitted to EPA by the Western Regional Air Partnership, June 1, 2001.

(1) key program assumptions against current findings, (2) the adequacy of State and tribal resources to implement the program, and (3) the effectiveness of interstate coordination and memoranda of understanding between the States and Tribes implementing the program.

7. Adjustments for Individual Sources Opting Into the Program.

The Annex, in section III.A.4.a. on page 58, and in section II.A.2.c on pages 21 and 22, provides for possible adjustments to the milestones for small sources that choose to participate in the program. Because the program includes all sources whose emissions exceed 100 tons per year, any such source opting into the program would be one that emits less than this amount.

The EPA does not view the individual source opt-in as an essential element of the regional SO<sub>2</sub> program, but we do not object to its inclusion. We believe that if the program allows an expansion of the universe of sources subject to the program, it is reasonable that the milestones be adjusted upward to account for the inclusion of additional sources. The proposed rule, in proposed 40 CFR 51.309(h)(1)(vii), allows for adjustments to the milestones if such sources opt into the program. In addition, the proposed rule requires that the adjustment be done through SIP revision procedures.

**C. What is the Annual Process for Determining Whether a Trading Program is Triggered?**

The regional haze rule requires the Annex to identify the specific process for determining whether the milestones are exceeded. The WRAP included in the Annex a discussion of an annual process for making the determination, and in a supplemental paper submitted to EPA in June 2001. In this unit of the preamble, we discuss this annual process and how EPA has incorporated this process into the proposed rule.

Regional Haze Rule Requirements for Specifying How the Market Trading Program Would Be Activated

The regional haze rule, in 40 CFR 51.309(f)(1)(ii) requires that the Annex provide documentation "describing in detail how emissions reduction progress will be monitored, and what conditions will require the market trading program to be activated...". In addition, 40 CFR 51.309(d)(4)(i) requires that implementation plans submitted under 40 CFR 51.309 must

include provisions requiring the monitoring and reporting of actual stationary source sulfur dioxide emissions within the State. The monitoring and reporting must be sufficient to determine whether a 13 percent reduction in actual stationary source emissions has occurred between the years 1990 and 2000, and whether milestones required by paragraph ..[40 CFR 51.309(f)(1)(i)] ... have been achieved for the transport region. The plan submission must provide for reporting of these data by the State to the Administrator. Where procedures developed under paragraph (f)(1)(ii) of this section and agreed upon by

the State include reporting to a regional planning organization, the plan submission must provide for reporting to the regional planning body in addition to the Administrator.

Finally, 40 CFR 51.309(d)(4)(ii) requires that implementation plans submitted under 40 CFR 51.309 must include "the criteria and procedures for activating a market trading program or other program consistent with paragraph (f)(1)(i) of this section if an applicable regional milestone is exceeded,...", that is, consistent with the Annex.

How the Regional Haze Rule Requirements for Program Activation are Addressed in the Annex

The WRAP addresses the requirements for documenting how the program would be activated in the Annex, and in a June 2001 supplemental paper entitled "Emissions Tracking Prior to Triggering the Emissions Trading Program." Regarding the requirement to "include provisions requiring the monitoring and reporting of actual stationary source sulfur dioxide emissions," the Annex provides that participating States and Tribes will compile an annual emissions report indicating the emissions of all stationary sources with actual SO<sub>2</sub> emissions greater than 100 tons per year, beginning with the year 2003 inventory. Any source which reduces emissions below 100 tons per year in later years will continue to be subject to the program.

As further described in the Annex (III.A.6.b and II.A.3.b), participating States and Tribes must determine annually from 2003 to 2018 whether the market trading program is triggered by comparing the regional SO<sub>2</sub> emissions from stationary sources covered by the program to the applicable milestone. Compliance with the milestone is measured by using a 3-year average of total regional emissions with the 3-year average of the milestones except for the years 2003, 2004, and 2018. For 2003, the determination is based on 2003 emissions data only. For 2004, the program will use an average of 2003 and 2004 emissions data. Compliance using a 3-year average will begin with the 2003-05 emissions data for comparison with the year 2005 milestone. For the year 2018, total emissions will be compared to the 2018 milestone, not a 3-year average.

As outlined in greater detail in the supplemental paper cited above, the annual process that participating States and Tribes will use consists of the following steps:

- 1) Each participating State and Tribe will compile annual emissions reports from all sources within their jurisdiction that are subject to the program (this includes all sources with actual emissions of 100 tons/year or greater of SO<sub>2</sub> during the year 2003 or any subsequent year),

2) Each State and Tribe will solicit public comment on its annual emissions report for stationary sources,

3) States and Tribes will submit their annual emissions report to the WRAP. The annual emissions report would be due by September 30 of the following year. (For example, the emissions report for calendar year 2003 would be due September 30, 2004),

4) The WRAP will consolidate the data into a regional emissions report, assure the integrity of the regional reporting process and the quality of the data, and issue a draft regional emissions report. The draft regional emissions report will compare regional emissions to the milestone. (Note: this function could also be carried out by another State and tribal designee approved by EPA, for example, a regional modeling center or other program tracking administrator.) The draft regional emissions report will be completed by December 31 of the following year (for example, the draft finding for the year 2003 will be completed by the end of calendar year 2004), and

5) Taking into account public comment, participating States and Tribes will review and approve the final regional emissions report and make a formal submittal to EPA documenting their final determination of whether the milestone has been exceeded. The WRAP's supplementary

information paper clarifies that this final submittal will be due the following March (for example, March 2005 for the emissions report for the year 2003), and this March deadline is included in the proposed rule. If the regional inventory exceeds the applicable milestone, participating States and Tribes will formally trigger the program by notifying EPA and the public at the time that the final report is submitted.

#### Special Provisions for the Year 2018

As discussed in sections III.A.6.c and II.A.3.c of the Annex, the participating States and Tribes will compare the total regional emissions of SO<sub>2</sub> for 2018 against the year 2018 milestone. Unlike for the comparison for years before 2018, there is no averaging of the emissions for 2018 with emissions of previous years. If emissions in 2018 are greater than the 2018 milestone, then source-specific penalties will be imposed if sources exceed their trading program emissions allowances.<sup>20</sup>

#### Option for Triggering the Program in the Year 2013 Based Upon Projected Emissions for the Year 2018

The Annex provides participating States and Tribes an option for triggering the market trading program in the year

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See preamble unit II.D below for a further discussion of the trading program allowances.



2013 even if the milestone has not been exceeded. This 2013 trigger option will be implemented by consensus of those States and Tribes that have implementation plans under 40 CFR 51.309. Implementation of the early trigger will be based on emissions forecasts indicating that compliance with the 2018 milestone is not expected. The purpose of the optional trigger is to help sources to avoid penalties for the year 2018 by formally triggering the trading program in advance. Triggering the trading program early would also help ensure that actual emissions in the year 2018 will be less than the milestone.

Special Provisions for Mohave Electric Generation Station for the Years Between 2003 and 2006

The Annex also provides for special provisions in the annual emissions reporting for the Mohave Electric Generating Station for the years between 2003 and 2006. For this plant, controls will be installed by the year 2006 consistent with the Consent Decree for Grand Canyon Trust v. Southern California Edison (District of Nevada CV-S-98-00305-LDG, dated December 15, 1999).

When the interim milestones were first recommended by the WRAP Initiatives Oversight Committee (IOC), there was an error in the baseline emissions projection for the Mohave Generating Station. In estimating this baseline, the WRAP

assumed that controls required for the Mohave Electric Generating Station in 2006 would be in place in 2003. Therefore, as discussed in Annex sections III.a.6.d. and II.A.3.d, the WRAP has included a correction for this error that will be used when measuring compliance with the milestones for 2003 through 2006. For these years, emissions from the Mohave Generating Station will be calculated using an SO<sub>2</sub> emissions rate of 0.15 pound per million BTU of coal input, consistent with the maximum allowable emissions rate effective in 2006 under the Consent Decree. These calculated emissions for Mohave will be substituted for the actual emissions in 2003, 2004, and 2005. For the year 2006, the emissions will be calculated based upon 05 pound per million BTU for any part of 2006 prior to the installation of the controls.

#### Reliance on Current Emissions Reporting Requirements

The WRAP, in the Annex, recommends that the current inventory techniques and requirements that States are using in the development of emissions inventories should be sufficient for quantifying the regional SO<sub>2</sub> emissions on an annual basis for the pre-trigger program. Consistent with this recommendation, the Annex does not provide for the development of emission quantification protocols for the pre-trigger phase of the program. The WRAP recommends that

this should be adequate since the large majority of emissions come from the coal-fired power plants and the copper smelters, which are accurately measured using current methods. As noted above, the Annex includes adjustments to the milestones to take into account any changes to emission estimating or measuring techniques. If the trading program is triggered, as discussed below, the WRAP recognizes the need for protocols for consistent and "best available" emission monitoring and reporting for each source category. The EPA proposes to agree with the WRAP's recommendation that existing emissions reporting requirements are sufficient for the pre-trigger phase. However, EPA recognizes that there is some measure of uncertainty in the program because there is currently less information on the specific methods being used for reporting emissions from the other sources (that is, other than utilities and smelters), and the level of accuracy with the methods for each of these sources is not as well understood. Reliance on current inventory techniques and requirements will also result in sources in the same source category using different methodologies since the inventory reporting process allows for such variability. There will also be variability from State to State, or Tribe to Tribe, since there is no requirement for consistency between States or Tribes. We

request comment on the acceptability of reliance on current emission inventory methods being used for sources in the region.

#### Exceptions Reports

The supplemental information provided by the WRAP indicates that the program will include a requirement for participating States and Tribes to include what are termed "exceptions reports." These exceptions reports will contain the following information:

- identification of any new or additional SO<sub>2</sub> sources greater than 100 tons per year that were not contained in the previous inventory;

- identification of sources shut down or removed from the previous inventory;

- explanation for emissions variations at any covered source that exceeds plus or minus 20 percent from the previous year's emissions; and

- identification and explanation of new emissions reporting methods at any source.

#### Incorporation of the Annual Process Into the Proposed Rule

The EPA believes that the detailed information provided by the WRAP in the Annex and in supplemental materials fulfills the requirements for the Annex that are contained in 40 CFR 51.309(f)(1)(ii) for "documentation describing in

detail how emissions reduction progress will be monitored." In addition, EPA believes that State SIPs and tribal TIPs submitted consistent with these provisions will satisfy the requirements of 40 CFR 51.309(d)(4)(i) for monitoring and reporting of SO<sub>2</sub> emissions.

How EPA Proposes to Incorporate the Annual Process into 40 CFR 51.309 of the Regional Haze Rule

In the proposed rule, EPA includes the WRAP program's requirements for an annual process for determining whether the milestones are exceeded. This process appears in the proposed rule at 40 CFR 51.309(h)(2) and (3). The EPA proposes that the Annex (including the supplemental papers) meets all of the requirements of 40 CFR 51.309 of the regional haze rule for "describing in detail how emission progress will be monitored, and what conditions will require the market trading program to be activated."

Proposed paragraph 40 CFR 51.309(h)(2) describes the process for collecting emissions data each year and for the reporting of such data by each participating State and Tribe. This includes provisions describing which sources must be included in the program, a requirement for States to submit emissions reports for the previous year by September 30th of each year, a requirement that the annual emissions report include exceptions reports, the special provisions

for the Mohave Generating Stations for the years 2003 through 2006, and the option for including year 2018 emissions projections in the year 2013.

The regional haze rule requires, as noted above, that:

The plan submission must provide for reporting of these data by the State to the Administrator. Where procedures developed under paragraph (f)(1)(ii) of this section and agreed upon by the State include reporting to a regional planning organization, the plan submission must provide for reporting to the regional planning body in addition to the Administrator. 40 CFR 51.309(d)(4)(i).

This provision does not require participating States and Tribes to report the relevant data to a regional planning organization, but it does give the WRAP the ability to include procedures in the Annex for the collection of data by a regional planning body. Such procedure would facilitate each State and Tribe's ability to determine whether the milestones are exceeded.

As indicated in the WRAP's supplemental paper "Emissions Tracking Prior to Triggering the Emissions Trading Program" the Annex includes a regional planning body, that is, the WRAP, for the reporting of emissions. Assuming that each participating State and Tribe designates the WRAP as the "regional planning body," each State and Tribe would report to the WRAP. The EPA, therefore, expects that the WRAP will be compiling the information from each participating State and Tribe.

The EPA assumes at this point that the participating States and Tribes will agree on the procedures for reporting data to the WRAP. However, to ensure that there would be a process in place in the unlikely instance that the participating States and Tribes do not designate a regional planning body for this purpose, or do not agree on the reporting procedures, the proposed rule provides that each State and Tribe would make the determination of whether a milestone is exceeded based on the information submitted to them by the other participating States and Tribes.

Proposed paragraph 40 CFR 51.309(h) (3) describes the process for making the annual determination of whether the milestone was met. A draft determination would be submitted by the regional planning body (which EPA assumes will be the WRAP) or each State or Tribe by the end of the following year (for example, the end of 2004 for the determination for the year 2003). The proposed rule requires a final determination, based on comments received on the draft determination, by the end of the following March (for example, the end of March 2005 for the year 2003).

**D. What Must Each Participating State and Tribe's Implementation Plan Include for Administering the Trading Program, if it is Triggered?**

The regional haze rule, at 40 CFR 51.309(d)(4)(iii) and (iv), requires that SIPs/TIPs provide for a market trading program that would serve as a "backstop" to ensure that SO<sub>2</sub> emissions would not exceed the milestone. The regional haze rule, at 40 CFR 51.309(f)(1)(ii), requires that the annex provide information on this market trading program, consistent with 51.309(d)(4). This provision requires that the Annex must contain "documentation" of the market trading program, including model rules, memoranda of understanding, and other documentation describing in detail how emissions reduction progress will be monitored, what conditions will require the market trading program to be activated, how allocations will be performed, and how the program will operate.

The regional haze rule, in 40 CFR 51.309(d)(4)(iii) requires that the implementation plans submitted under 40 CFR 51.309 must:

- contain provisions to activate the market trading program or other program within 12 months after the emissions for the region are determined to exceed the applicable emissions reductions milestone, and
- must assure that all affected sources are in compliance with allocation and other requirements within 5 years after the emissions for the region are



determined to exceed the applicable emissions reductions milestone.

Additionally, 40 CFR 51.309(d)(4)(iv) requires that the implementation plans include provisions for market trading program compliance reporting, and provisions requiring the State to provide annual reports assuring that all sources are in compliance with the market trading program.

The Annex includes documentation of the market trading program in sections II.D and II.E of the Annex, pages 28-53, and in section III.D of the Annex, pages 63-67. A draft model rule is included as Appendix A to the Annex. A draft memoranda of understanding is included as Appendix B. A few clarifications on trading program issues are included in the supplemental information submitted by the WRAP during June 2001.

These sections of the Annex provide the "documentation" required by 40 CFR 51.309(f)(2)(ii), and they include "model rules, memoranda of understanding, and other documentation describing in detail how emissions reduction progress will be monitored, what conditions will require the market trading program to be activated, how allocations will be performed, and how the program will operate." Therefore, EPA proposes a finding that the information submitted in the Annex, including the Appendices

and supplemental information, satisfies the requirements in 40 CFR 51.309(f)(2)(ii) of the regional haze rule.

The EPA also proposes a finding that the Annex provides for a trading program which, if followed in the 2003 SIP submittals, will satisfy the requirements in 40 CFR 51.309(d)(4)(iii) and (iv). The June 2001 supplemental information makes clear that the backstop market trading provisions will be activated within 12 months after the emissions for the region are determined to exceed the applicable emissions reductions milestone. The Annex also, as clarified with the example in section II.D.1 on page 29, provides that all affected sources must be in compliance with allocation and other requirements within 5 years after the emissions for the region are determined to exceed the applicable emissions reductions milestone. The Annex includes provisions requiring annual reports assuring that all sources are in compliance with applicable requirements of the market trading program.

#### Incorporation of Annex Trading Program Provisions in the Proposed Rule

\_\_\_\_\_The EPA has incorporated the Annex provisions for a market trading program in proposed 40 CFR 51.309(h)(4). In the proposed rule, EPA also has included a list of fundamental elements that the SIPs must contain, and the

basic requirements for those elements that will help guide EPA's review of the SIPs. These fundamental elements are aimed at ensuring the integrity of the market trading program, and are consistent with the provisions of EPA's guidance for economic incentive programs (EIPs). (Improving Air Quality with Economic Incentive Programs EPA-452/R-01-001, January 2001). The fundamental elements are as follows:

(1) provisions for the allocation of allowances to each source in the program;

(2) emissions quantification protocols;

(3) provisions for the monitoring, record keeping and reporting of emissions;

(4) provisions for a centralized system to track allowances and emissions;

(5) provisions requiring the identification of an authorized account representative for each source in the program;

(6) provisions requiring the account representative to demonstrate annual compliance with allowances;

(7) provisions for the process of transferring allowances between parties;

(8) provisions describing the "banking" of extra emissions reductions for use in future years, if the implementation plan allows for banked allowances;

(9) provisions establishing enforcement penalties for noncompliance with the trading program; and

(10) provisions for periodic evaluation of the trading program.

The EPA believes that the detailed draft model rule, which is Appendix A to the Annex, addresses these general principles. The draft model rule is intended to provide detailed regulatory language to implement the program and will serve as a template that individual States and Tribes can use to develop their SIPs under 40 CFR 51.309. The EPA intends to work together with States and Tribes to ensure that the final model rule, and the resulting State and tribal plans, are consistent with the requirements of the regional haze rule, with the provisions for TIPS contained in 40 CFR part 49, and with other requirements that are common to all State/tribal implementation plans and EIPs. The EPA believes that completion of this model rule effort in a timely manner is very important to the overall success of the program. In a supplemental paper entitled, "State Rulemaking Schedules for 309," the WRAP provided estimated

timelines for each of the 9 States in the transport region to complete a SIP under 40 CFR 51.309. Based on this paper, it appears that the WRAP intends to refine and finalize the model rule by early 2002.

The EPA believes that the Annex provisions in 40 CFR 51.309 do not require the WRAP's submittal to contain the same level of detail that is required in the final model rule. First, EPA believes that it need not incorporate into 40 CFR 51.309 the same level of detail regarding the trading program that will be set forth in the model rule. Second, the model rule addresses details that are essential to the program, but may not be appropriate as Federal mandates. For example, while it is essential that the program issue specific emissions allocations to each source under the trading program, it is not necessary or appropriate for EPA to dictate that a specific method be used. Finally, we believe that if SIPs/TIPs submitted under 40 CFR 51.309 adequately address the basic fundamental criteria that we are proposing, they will provide for a sound program consistent with EPA regulations and policies.

The following is a description of each of the trading program requirements that are included in proposed 40 CFR 51.309(h) (4). For each of these proposed requirements, EPA requests comment on whether we have addressed the

requirement to an appropriate level of detail, and on whether the substance of the requirement is sufficient to ensure program integrity for the backstop market trading program.

Allowances. 40 CFR 51.309(h)(4)(i) and (ii)

Allowances are a key feature of the backstop market trading program. An allowance authorizes a source to emit one ton of SO<sub>2</sub> during a given year or (with some exceptions) in a future year. At the end of the compliance period, which is a 12-month period ending with each calendar year, a source owner's allowances must exceed or equal its annual emissions. For example, a source that emits 5,000 tons of SO<sub>2</sub> in a given year must hold at least 5,000 allowances for that year.

Allowances are fully marketable commodities. Once allocated, allowances may be bought, sold, traded, or (where allowed) banked for use in future years. If the trading program is triggered, allowances are the currency with which compliance with the SO<sub>2</sub> emissions requirements is achieved. Sources that reduce their emissions below the number of allowances they hold may transfer allowances to other units in their system, sell or trade allowances to other sources or private parties on the open market, or bank them to cover

emissions in future years. Allowance trading provides incentives for energy conservation and technology innovation that can both lower the cost of compliance and yield pollution prevention benefits.

The Annex includes a hypothetical timeline in section II.D.1. on page 29 of the Annex, which clarifies how the market trading program would be implemented. This Annex shows sources must hold sufficient allowances to cover their emissions by the 6<sup>th</sup> year following the calendar year for which emissions exceed a milestone. For example, if the milestone is exceeded in 2004, then the first calendar year for which a source would have to comply with allowances would be the calendar year 2010. As a result, the milestones become an enforceable "cap" on emissions, and the total amount of allowances issued for participating States may not exceed this "cap." A table listing the allowance totals by year is included in the proposed rule as Table 4.<sup>21</sup>

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Note that while the Annex provides for averaging of emissions reporting and milestones for purposes of making the annual determination of whether the milestone is exceeded, once a trading program is in place, there is no averaging of the milestones for purposes of the trading program. For example, milestones for the year 2013 must add up to 655,000 (with suspended smelters) or 625,000 tons (without suspended smelters). There is no averaging of the year 2013 with 2012 and 2011 as is done for the annual determination.

The proposed rule requires States and Tribes to include initial source-specific allowance allocations for each source in their implementation plans submitted under 40 CFR 51.309. These initial allocations must specify the tons per year allocated for each source for each year between 2009 and 2018.

The Annex, in section II.D (pages 28-37) and in section III.D.7 (pages 63-67) contains a detailed discussion of the methodology that the WRAP proposes for distributing allowances to sources. This methodology outlines in detail the parameters and considerations that States and Tribes will use for issuing initial allowances to sources, and for adjusting those allowances with time. The EPA proposes not to include the details of this methodology in 40 CFR 51.309. So long as the SIPs/TIPs contain source-specific allowances for each source included within the program, and those allowances add up to the appropriate regional total, EPA believes the objectives of the program are met. The EPA views the choice of method, and the implementation of the method, to be primarily an issue for States and Tribes to address.

There is one element of the allocation methodology that EPA has chosen to include in the proposed rule to ensure that it is included in the program. This element, a 20,000



ton "set-aside" for use by Tribes, over and above any amount allocated in the process described above, can probably be assured only if EPA includes a requirement in the rule. Accordingly, 40 CFR 51.309(h)(4) requires that before issuing allowances to individual sources, 20,000 tons must be subtracted from the total for use by Tribes. The EPA believes that this 20,000 ton set-aside should not be used for issuing initial allowances to tribal sources of SO<sub>2</sub> included within the program, and for adjusting those allowances with time. Further discussion of issues related to tribal participation in the program, and use of the "set-aside" for Tribes, is included below in unit III of this preamble.

Emissions Quantification Protocol, and Monitoring, Record keeping and Reporting Provisions. 40 CFR 51.309(h)(4)(iii) and (iv)

The proposed rule requires that States include specific emissions quantification protocols, that is the procedures for determining actual emissions. These procedures will be used to measure, or determine, annual emissions if the trading program is triggered. The proposed rule also requires that States include the necessary monitoring, record keeping, and reporting provisions to measure and track results.

The WRAP recognized the need to have detailed and prescribed emission quantification protocols and proposes that the participating States and Tribes establish such provisions in the SIPs submitted under 40 CFR 51.309. The Annex describes the WRAP's approach to monitoring in section II, pages 39-41, in section III, item III.D.3 on page 64, and in Attachment A, Draft Model Rule section C.2.3 Monitoring Requirements, and section C9 Emissions Monitoring. In particular, the WRAP recognized the need for emission monitoring protocols which ensure that emissions are accurate and comparable for participating sources. For the trading program, the emissions amount becomes a tradeable, fungible commodity. Accordingly, it is important to the integrity of the program to ensure that one ton of emissions from one source is equivalent to one ton of emissions from another source. The WRAP plans to develop the specific emissions quantification protocols in a subsequent collaborative process involving States, Tribes, and EPA.

Under this program, the WRAP in the Annex proposes that sources subject to the acid rain program under title IV of the CAA will continue to follow the continuous emission monitoring procedures in the acid rain program, which appear

on 40 CFR part 75. As a result, EPA would not develop or require separate emission protocols for these sources as part of implementing 40 CFR 51.309.

For the other source categories not covered by part 75, the WRAP in the Annex recognizes the need to develop protocols based upon "best available" monitoring techniques for each source category. The EPA proposes that the criteria for acceptability of these protocols in the implementation plans are the same criteria as listed in section 5.2 and 5.3 of the EIP guidelines. These guidelines state that emission quantification protocols:

- must ensure reliable results, and that they must ensure that repeated application of the protocol obtains results equivalent to EPA-approved test methods;

- must be replicable, that is, the protocol ensures that different users will obtain the same or equivalent results in calculating the amount of emissions and/or emissions reductions.

These guidelines also specify that trading programs need to include monitoring, record keeping, and reporting provisions to provide adequate information for determining a source's compliance with the program. Adequate monitoring, record keeping and reporting procedures have several key attributes, including representativeness (characteristic of

the source category and available monitoring techniques), reliability, replicability, frequency (that is, the monitoring is sufficiently repeated within the compliance period), enforceability (that is, the monitoring is independently verifiable), and timeliness.

Tracking Process. 40 CFR 51.309(h)(4)(v)

The proposed rule requires that the implementation plans submitted under 40 CFR 51.309 must include provisions identifying a specific tracking process to track allowances and emissions. Consistent with the EIP guidance, the proposed rule requires that the implementation plans must provide that all emissions, allowance, and transaction information is transparent and publicly available in a secure, centralized data base.

The WRAP, in the Annex and draft model rule, has included numerous provisions detailing the system that States and Tribes intend to use to satisfy this proposed requirement. These provisions are outlined in detail in the draft Model Rule section C.8 and on pages 64-65 of the Annex. The overall program is referred to as the Western Emission Budget, or WEB. The tracking system includes a centralized tracking systems administrator who would be appointed by States and Tribes as the administrator of a "WEB allowance tracking system" and a "WEB emissions

tracking system." The WRAP and EPA recognize that in assigning duties to any such tracking system administrator, States and Tribes may not delegate any inherent governmental responsibilities. For example, emissions data certification and program enforcement must remain with the States and Tribes. The WRAP envisions that the central tracking system will serve a number of functions: to identify which sources hold allowances in the program, to identify how many allowances a source owner holds, and to record allowance transactions. Another function of the tracking system administrator in the trading system is to record allowance transfers and to ensure at the end of the year that a source's emissions do not exceed the number of allowances it holds. The tracking system serves as the official record and operates much like a bank account.

The allowance accounts are the official records for allowance holdings for compliance purposes. It is for that reason that the EIP requires that these systems be secure and allow for frequent updates (EIP, section 7.4(g)). Also consistent with the EIP, there must be a way to uniquely identify each allowance and there must be enforceable procedures for recording data.

Responsible Party. 40 CFR 51.309(h)(4)(vi)

The EPA believes that it is important that each source owner or operator designate a person who is responsible for the data reported for that source. The proposed rule includes a requirement that the SIPs/TIPs must include such a provision.

The market trading program described in the Annex includes this requirement and refers to this person as the Authorized Account Representative (AAR). The Annex discusses the role and responsibilities of the AAR on pages 44 and 45 and in section C3 of the Draft Model Rule. The representative's responsibilities include performing permit, compliance, and allowance related actions for the WEB Program. That person will be responsible for certification for each emissions and allowance transaction.

Requirement for Annual Demonstration of Compliance. 40 CFR 51.309(h)(4)(vii)

The proposed rule requires that the SIPs/TIPs include a provision requiring the responsible party for each source to demonstrate that the source holds a quantity of allowances equal to or greater than the amount of SO<sub>2</sub> emitted during that year. The responsible party must make this determination within a specified number of days following the end of each calendar year. The responsible party must

determine the amount of SO<sub>2</sub> emitted in accordance with the approved emissions quantification protocols and monitoring, record keeping and reporting provisions developed by the participating States and Tribes or the WRAP as part of this program. The EPA believes that 60 days should be generally sufficient for preparing this demonstration. This time period is consistent with the national acid rain program, and thus has been demonstrated as a reasonable time period for utility boiler sources covered by that program. The WRAP has indicated that the time necessary for determining compliance will be dependent on emission quantification protocols adopted. As these protocols are still under development, the WRAP believes that it is possible that a longer time period may be warranted in some cases. The EPA proposes that the WRAP deadline be 60 days unless a specific need is identified. We request comment on whether EPA should include a specific, generally applicable, deadline in the final rule.

Requirement for Provisions Detailing the Process for Transferring Allowances Between Parties. 40 CFR 51.309(h) (4) (viii)

The proposed rule requires that SIPs/TIPs must contain provisions detailing the process for transferring allowances from one source to another. Section C6 of the Draft Model

Rule in the Annex provides a detailed description of allowance transfer procedures. The program would provide procedures for sources to request an allowance transfer, for the Tracking System Administrator to record the requests, and for notification of the source and the public of each transfer and request.

Banking Provisions. 40 CFR 51.309(h) (4) (ix)

The banking of allowances occurs when allowances that have not been used for compliance are set aside for use in a later compliance period. Banking provides flexibility to sources, encourages early reductions, and encourages early application of innovative technology. However, banking also carries an associated risk of delayed or impaired achievement of air quality goals due to the use of banked allowances.

The Annex discusses banking on page 64 and the Draft Model Rule outlines the banking procedures in section C7. The Annex states that the use of banked allowances in the compliance process will be regulated by management provisions, which would act as a disincentive for sources to use banked allowances in years where there is a substantial bank of allowances available to use in compliance. The purpose of these management provisions, sometimes referred



to as "flow control" is to ensure that there would not be a substantial increase in emissions in a year for which a relatively large fraction of banked emissions were used. This provision, accordingly, will help to ensure that the milestones continue to be met.

The proposed rule allows trading programs to include provisions for banked allowances, so long as the SIPs/TIPs clearly identify how unused allowances may be kept for use in future years, and the restrictions for use of any such banked allowances. Because a key objective of the Annex is to ensure that actual emissions will not exceed the milestone for the year 2018, the proposed rule requires that any banking provision of the trading program must be designed in a way that would not allow actual emissions to exceed this milestone.

Allowing the use of banking raises a potential issue regarding records retention. While records are normally required to be retained for a minimum of 5 years from their creation, banking allows for the possibility that an unused allowance could be banked for some time before being used. Consequently, in order to ensure that records are retained for a sufficient period of time to provide for enforceability of the program, the proposed rule requires

that records relating to the banked allowances must be retained for at least 5 years after the use of those allowances. For example, if an unused allowance from the year 2009 is used in 2012, the source owner or operator must retain records relating to that allowance for 5 years after its use, which in this example would be 2017.

Enforcement Penalties. 40 CFR 51.309(h)(4)(x)

The proposed rule requires that the trading program describe the specific enforcement penalties that will be applied if a source's emissions exceed its allowances. The EPA agrees with the WRAP that it is important to provide automatic and stringent penalties to provide for sufficient incentive for source owners to comply with their allowances.<sup>22</sup>

The EPA requires all market trading programs to include provisions for imposing penalties when a source fails to hold enough allowances to cover emissions, violates its record keeping obligations, or violates any other

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It should be noted that EPA policy for the Administration of Environmental Programs on Indian Reservations, reaffirmed by the Administrator on July 11, 2001 and the EPA Office of Enforcement and Compliance Assurance (OECA) Guidance on the Enforcement Principles outlined in the 1984 Indian Policy dated January 17, 2001 provide guidance on EPA's response to noncompliance at tribal facilities. The EPA intends to act in a manner consistent with the Indian Policy and OECA guidance with regard to enforcement actions that would be taken under this program against tribal facilities.

obligations under the program. The program must define a violation, establish the procedure for determining the magnitude of a violation, set potential penalties, and maintain the ability to impose the maximum monetary penalty consistent with the CAA. The EIP (section 7.4(h)) outlines the compliance provisions EPA considers to be essential in multi-source emission cap-and-trade programs.

The EIP also outlines the provisions for assessing liability, in section 6.1(a). Emission trading, unlike traditional regulatory mechanisms, generally involves more than one party. These parties can be not only the owners or operators of the sources participating in the program but sometimes another party who facilitated the trade (e.g., a broker). To ensure integrity in the trading system, all parties are normally responsible for ensuring the validity of the trades or their use of emissions reductions.

The penalty provisions in the emissions trading program must include mechanisms that enable the State to assess monetary penalties and impose corrective actions against the sources participating in the trading program.

The Annex outlines the enforcement elements developed by the WRAP in section II.E.6.f and in Draft Model Rule section C13. These provisions include two automatic penalties for excess emissions. First, there would be an

automatic surrendering of two future year allowances for every one ton of excess emissions. Second, there would be a financial penalty that would exceed by a factor of three to four the projected range of prices for allowances. In addition to these penalties for excess emissions, the Annex provides for penalties for failure to comply with other program requirements, such as the monitoring, record keeping and reporting requirements, that would be consistent with CAA civil and criminal penalties.

Provisions for Periodic Evaluation of the Trading Program.

40 CFR 51.309(h) (4) (xi)

The proposed rule requires the backstop trading program to include a provision for periodic evaluations of the program. Such periodic evaluations are required as a means of determining whether the program, in its actual implementation, needs any mid-course corrections. The EPA, in the proposed rule, includes a list of questions that the program evaluations should address. These questions are derived from the EIP, section 5.3(b).

**E. What Additional Provisions Must the SIP or TIP Include Regarding the Market Trading Program?**

As included in the proposed rule in 40 CFR 51.309(h) (5), EPA proposes to include two provisions of the Annex that provide for integration with other CAA programs.

The proposed language in 40 CFR 51.309(5)(i) notes that the requirements of this program, including the backstop market trading program, are applicable requirements of the CAA that must be included in permits issued under title V of the CAA. The EPA expects that most, if not all, sources included within the program will have title V permits. The program requires participation by all sources with actual emissions of SO<sub>2</sub> of more than 100 tons per year. These sources would also have a potential to emit of more than 100 tons per year. As the requirements of title V apply to sources with the potential to emit 100 tons per year of any air pollutant, EPA anticipates that almost all sources in the program would have a title V permit. The only likely sources which may not have title V permits would be any source that chose to opt into the program with potential emissions of less than 100 tons per year. In the Annex in section II.E.4., the WRAP discusses permit requirements for the program. This discussion describes in detail the mechanisms that would be used to ensure that any such opt-in sources have federally enforceable permit requirements. The EPA does not believe it is necessary in 40 CFR 51.309 to include this same level of detail for opt-in sources. The proposed rule does include in 40 CFR 51.309(h)(5)(i) a

requirement that all requirements of the program be enforceable by EPA, and by citizens to the extent permitted under the CAA.

As the WRAP noted in section III.D. on page 47 of the Annex, the market trading program must not interfere with other provisions of the CAA. The program must also provide for provisions to ensure its integration with other programs. For example, some sources in the market trading program may be subject to title IV of the CAA or the Southern California RECLAIM program and these sources would be subject to more than one trading program. We have included as 40 CFR 51.309(h)(5)(ii) a requirement that the SIPs submitted in 2003 must ensure that this program does not eliminate or interfere with any other requirements a source may have under the CAA.

**F. What happens to the program after the year 2018?**

It is EPA's understanding that the Annex did not attempt to address the fate of this program beyond calendar year 2018. The regional haze rule requires that SIPs be submitted in the year 2018 for a long-term regional haze strategy covering the time period between 2018 and 2028. There may be significant technological advances between now and the time that these SIPs/TIPs are developed that affect the possible measures for visibility protection, or the

reasonableness of existing measures. Accordingly, EPA believes it is reasonable to defer until that time the judgment on the specific levels of SO<sub>2</sub> that can be achieved.

At the same time, EPA believes it is important to recognize that any actions that occur after 2018 should not be allowed to increase SO<sub>2</sub> emissions beyond the 2018 milestone. Accordingly, we note in the discussions of the milestones in Table 1 of the proposed rule that any milestone developed for years after 2018 must not allow increases over and above those for the year 2018.

### **III. Implementation of the Regional SO<sub>2</sub> Emissions Reduction Program in Indian Country**

The provisions in 40 CFR 51.309 of the regional haze rule provide for a regional visibility program within a geographic area of nine Western States. Within that geographic area, there are more than 200 federally recognized Indian Tribes. Throughout the development of the GCVTC report, and in the subsequent activities of the WRAP, including the development of the Annex, Indian Tribes have been involved in the discussions. The GCVTC and the WRAP have clearly benefitted from their understanding of the tribal perspective. These discussions have also served the Tribes in ensuring that unique issues of importance to

Tribes have been carefully considered by both entities. The GCVTC report included section IV, "Tribal Perspectives and Position Regarding Recommendations." The Annex includes specific consideration of tribal interests, including a specific provision of the program for Tribes in the market trading program that is described in Attachment F to the Annex.

As demonstrated by the Tribes' participation in the WRAP, EPA believes that continued involvement by Tribes is important to any program for visibility protection in the Western United States, including the program in the Annex for stationary source SO<sub>2</sub> emissions. In this unit of the preamble, we discuss issues related to tribal implementation of the SO<sub>2</sub> program contained in the Annex.

**A. Current Stationary Source SO<sub>2</sub> Emissions in the Region**

The Annex includes only those sources whose annual emissions exceed 100 tons per year. Although as noted previously there are more than 200 Indian reservations in the geographic region potentially covered by the Annex, it appears that only four currently have stationary sources that would be affected by the program.<sup>23</sup> The EPA is aware

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To date, EPA has not received any TIPs from these four Tribes. Nothing in this preamble is intended to suggest that these Tribes are authorized by EPA to administer CAA regulatory programs.



of only six such sources located in Indian country within the geographic area covered by the Annex, as noted in the following table:

<b>Reservation</b>	<b>Source</b>	<b>Base Year Emissions (tons/yr)</b>
Navajo (NM)	Four Corners Power Plant	42,522 (1999)
Navajo (AZ)	Navajo Generating Station	9,162 (1999)
Fort Hall (ID)	Astaris-Idaho elemental phosphorous production facility	4,994 (1998)
Wind River (WY)	Snyder Oil	147 (1998)
Wind River (WY)	Koch Sulfur Products	1,237 (1998)
Uintah and Ouray (UT)	Bonanza Power Plant	1,135 (1999)
	<b>TOTAL</b>	59,197

Together, these sources represent about nine percent of the total base year stationary source inventory of 652,000 tons of SO<sub>2</sub> emissions in the region.

**B. "Set-Aside" for Tribes in the Market Trading Program**

A key feature of the Annex program provides that if the market trading program is triggered, a 20,000 ton amount will be allocated to Tribes. This amount is in addition to

any allocations to the six individual sources within Indian country (see table above), and is also in addition to specific amounts in the Annex that are allocated for new source growth. As discussed in Attachment F to the Annex, this 20,000 ton set-aside is intended to help ensure equitable treatment for tribal economies and to prevent barriers to economic development. The 20,000 ton amount of allowances would be available to Tribes to either: (1) allow for new source growth over and above the amounts allocated for new sources by the Annex program, (2) sell for revenue, such that the source owners could purchase the allowances and increase their emissions or (3) retire the allowances, which would mean they would not be sold and would therefore lead to emission decreases relative to the milestones.

The process for allocating the tribal set-aside allowances is still to be determined. In Attachment F to the Annex, the WRAP states that:

In order to insure that all Tribes in the region have a fair and meaningful opportunity to take part in this determination, it must be done in the context of government-to-government consultation between EPA and the Tribes, during the rule making process to amend 40 CFR 51.309.

While EPA agrees with the need for meaningful consultation, EPA proposes that the process of allocating need not be determined during the rulemaking process to amend 40 CFR 51.309. For example, the proposed rule for participating

States and Tribes, as noted above, allows for initial allocations in the SIPs/TIPs submitted in the year 2003. Moreover, States and Tribes could amend these initial allocations later consistent with a methodology they include in their SIPs/TIPs. The EPA proposes that allocation of the additional 20,000 tons for Tribes could take place over a more extended time frame.

**C. Background on Provisions for Tribal Air Quality Programs in the CAA and in EPA Regulations**

On November 8, 1984, the EPA adopted a policy entitled "EPA Policy for the Administration of Environmental Programs on Indian Reservations." This policy, available on the Internet at <http://www.epa.gov/indian/1984.htm>, establishes a number of principles that guide EPA in the conduct of our congressionally mandated responsibilities. In particular, EPA will pursue the principle of tribal "self-government" and will work with tribal governments on a "government-to-government" basis. The EPA will work with interested tribal governments in developing environmental programs for Indian country. Generally, EPA will retain responsibility for protecting tribal air quality until such time as Tribes administer their own air quality protection programs. Administrator Whitman reaffirmed the 1984 EPA Indian policy on July 11, 2001.

The CAA, as amended in 1990, added section 301(d) which authorizes EPA to "treat Tribes as States" for the purposes of administering CAA programs. Section 301(d) requires that EPA promulgate regulations listing CAA provisions for which it would be appropriate to treat Tribes as States and establishing the criteria that Tribes must meet in order to be eligible for such treatment under the CAA. The EPA proposed these regulations on August 25, 1994 (59 FR 43956), and finalized the rule on February 12, 1998 (63 FR 7254). Much of the regulatory language in this rule is codified in the CFR as a new 40 CFR part 49. This rule is generally referred to as the Tribal Authority Rule or TAR.

The TAR includes general eligibility requirements, codified in 40 CFR 49.6, for Tribes interested in assuming program responsibilities. Tribes may request a formal eligibility determination using administrative procedures contained in 40 CFR 49.7. Tribes may also use the administrative procedures in 40 CFR 49.7 to seek approval to implement CAA programs. As noted in 40 CFR 49.7(c), Tribes that are interested in seeking EPA approval to implement air quality programs under the CAA may request approval to implement only partial elements of a CAA program, so long as the elements of the partial program are "reasonably severable."

Section 301(d)(4) of the CAA confers discretionary authority on EPA to provide through regulation alternative means of air quality protection in cases where it determines that treating Tribes as "identical" to States would be inappropriate or administratively infeasible. In promulgating the TAR, EPA provided flexibility to Tribes seeking to implement the CAA. Some flexibility is established by virtue of EPA's decision, under 40 CFR 49.4 of the final rule, not to treat Tribes as States for specified provisions of the CAA. The rationale for this approach is discussed in the preamble to the TAR (63 FR 7264-7265) and in the preamble to the proposed rule (59 FR 43964-43968). For example, unlike States, Tribes are not required by the TAR to adopt and implement CAA plans or programs. Tribes are also not subject to mandatory deadlines for submittal of implementation plans. As discussed in the preamble previously, EPA believes that it generally would not be reasonable to impose the same types of deadlines on Tribes as on States. Among the CAA provisions for which EPA has determined it will not treat Tribes as States is section 110(c)(1) of the CAA, which requires EPA to intervene and ensure air quality protection within 2 years after a State either fails to adopt a SIP or does not win EPA approval for a SIP that was determined to

be deficient. The EPA did not apply this provision to Tribes because the section 110(c) obligation on EPA to promulgate a FIP is based on failures with respect to required submittals, and, as noted above, tribal submissions under the TAR are voluntary, not mandatory. Instead, pursuant to its section 301(d)(4) discretionary authority, EPA has provided in the TAR that, where necessary and appropriate, it will promulgate FIPs within reasonable timeframes to protect air quality in Indian Country. See 40 CFR 49.11(a).

**D. Discussion of the TAR as it Relates to Tribal Participation in the SO<sub>2</sub> Reduction Program**

The EPA believes that clarification is needed on whether Tribes, like States, must develop and submit implementation plans by the end of the year 2003 in order to exercise the option provided by 40 CFR 51.309. Regarding this year 2003 deadline, in the preamble to the regional haze rule we laid out the framework for waiving the 51.309(c) deadline with respect to Indian Tribes. Section 309(c) requires that, in order to exercise the option provided by section 309, each Transport Region State must submit an implementation plan addressing regional haze visibility impairment in the sixteen Class I areas by December 31, 2003. The preamble reiterates the Agency's

recognition that some Tribes have limited resources and/or expertise to participate in regional planning efforts for regional haze, stating:

[i]n order to encourage Tribes to develop self-sufficient programs, the TAR provides Tribes with the flexibility of submitting programs as they are developed, rather than in accordance with statutory deadlines. This means that Tribes that choose to develop programs, where necessary may take additional time to submit implementation plans for regional haze over and above the deadlines in the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) legislation as codified in today's final rule. (See unit III.B for discussion of those deadlines.) (64 FR 35759, July 1, 1999).

Unit III.B of the preamble, entitled, "Timetable for Submitting the First Regional Haze State Implementation Plan (SIP)" includes in the summary of the timetable for submitting SIPs, the 40 CFR 51.309 deadline of Dec. 31, 2003.

The preamble further discusses the link between the TEA-21 legislation changing the SIP deadlines for regional haze, and the TAR 49.4(f) provision waiving the section 169(b)(e)(2) SIP submittal deadline with regard to Indian Tribes.

The TEA-21 legislation changed the deadlines for State submission of SIP revisions to address regional haze, which were originally set out in section 169(B)(e)(2) of the CAA. Section 49.4(a) of the TAR provides that specific plan submittal and implementation deadlines for NAAQS-related

requirements do not apply to Tribes. Section 49.4(e) states that Tribes will not be subject to specific visibility implementation plan submittal deadlines established under 169A of the CAA. Section 49.4(f) of the TAR provides that deadlines related to SIP submittals under section 169(B)(e)(2) do not apply to Tribes. Under section 49.4(f) Tribes will not be treated in the same manner as States with regard to, "[specific implementation plan submittal deadlines related to sections 169B(e)(2), 184(b)(1) & (c)(5) of the Act. For eligible Tribes participating as members of such commissions, the Administrator shall establish those submittal deadlines that are determined to be practicable or, as with other non-participating Tribes in an affected transport region, provide for federal implementation of necessary measures."

Under 40 CFR 51.309(c), each Transport Region State must submit an implementation plan addressing regional haze visibility impairment in the sixteen Class I areas by December 31, 2003. Otherwise, the State must submit SIPs consistent with 40 CFR 51.308. Based on the above provisions of the TAR, however, Tribes are not required to develop and submit implementation plans by the end of the year 2003 and may chose to opt-in to the program at a later date. We encourage Tribes choosing to develop



implementation plans to make every effort to submit by the deadlines to ensure that the plans are integrated with and coordinated with regional planning efforts.

**E. Current Thinking on Tribal Program Assistance**

For Tribes which choose to implement 40 CFR 51.309, EPA believes there are a number of ways that EPA can provide assistance. As discussed above, a number of major sources of SO<sub>2</sub> are located on areas within Indian country. The EPA would like to help the Tribes that have major SO<sub>2</sub> sources to comply with the pre-trigger emission tracking requirements of the program, and to help them develop ways to participate in the backstop trading program.

The EPA also sees a possible need to help facilitate allocation of the 20,000 tons allocated to Tribes under the backstop market trading program. The EPA believes, however, that the critical need for the allocation does not exist until a trading program is triggered. As discussed above in unit II.D of this preamble, the earliest year for compliance with allowances is the year 2009. While it is preferable to have any allowances in place well in advance of this date, EPA does not see the distribution of the tribal set-aside as a critical issue for EPA involvement in the near term. The EPA expects that Tribes will develop a method for allocating

the 20,000 tons. The EPA will seek to provide assistance as necessary to facilitate the process.

In summary, EPA is committed to ensuring protection of tribal air resources, building tribal air program capacity and working with Tribes on a government-to-government basis. We request comment from Tribes on how we can implement this program in the best way consistent with EPA's Indian Policy.

#### **IV. Administrative Requirements**

In preparing any proposed rule, EPA must meet the administrative requirements contained in a number of statutes and executive orders. In this unit of the preamble, we discuss how today's regulatory proposal for incorporating the provisions of the WRAP Annex addresses these administrative requirements.

##### **A. Executive Order 12866: Regulatory Planning and Review by the Office of Management and Budget (OMB)**

Under Executive Order 12866 (58 FR 51735, October 4, 1993) the Agency must determine whether the regulatory action is "significant" and, therefore, subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) have an annual effect on the economy of \$100 million or more or adversely affect in a material way the

economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impacts of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant regulatory action." As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

Today's proposed rulemaking would amend the regional haze rule by incorporating a specific set of SO<sub>2</sub> emission targets for region-wide stationary sources of SO<sub>2</sub> emissions for a nine-State region in the western United States. The emission targets would affect and have potential economic impacts only for States choosing to participate in the optional program provided by 40 CFR 51.309 of the regional haze rule. The emissions reductions resulting from the

program vary over the 2003 to 2018 time period. If all nine States participate in the program, the WRAP estimates that for the year 2018, SO<sub>2</sub> emissions would be reduced from a projected baseline of 612,000-642,000 tons to an enforceable milestone of 480,000-510,000 tons (described above in unit II.A.). If the milestones are not achieved through voluntary emissions reductions by the affected sources, then they will be achieved through an enforceable backstop market trading program.

The EPA believes that in order to understand the possible regulatory impacts of today's proposed rule, it is important to review the previous analysis that EPA completed for the regional haze program overall. In 1999, the EPA prepared a Regulatory Impact Analysis (RIA) for the regional haze rule (available in the docket for the regional haze rule (A-95-38)). In that RIA, the EPA assessed "the costs, economic impacts, and benefits for four illustrative progress goals, two sets of control strategies, two sets of assumptions for estimating benefits, and systems of national uniform versus regionally varying progress goals," (64 FR 35760, July 1, 1999). Because EPA had no way of predicting the visibility goals each State would pick under the regional haze rule requirements, EPA conducted an extensive analysis of "what if" scenarios. For example, one of the

scenarios assumed that all States would choose to achieve a 10 percent improvement in visibility (measured in deciviews) over a 10-year period, while another of the scenarios assumed a 1.0 deciview improvement over a 15-year period. For each scenario, the RIA determined the control measures that would be needed to achieve the given degree of visibility improvement, and the cost of those control measures. In addition to calculating the national impacts of the regional haze rule under the various scenarios, the RIA also presented results for six specific sub-regions. Four of the sub-regions ("Rocky Mountain," "West," "Northwest," and "South Central") contained one or more States within the nine-State region addressed by the WRAP Annex. The regional approach reflected the distinction across regions in the nature of the impairment in the Class I areas, the causes of the visibility impairment, and the costs of achieving the various progress objectives in each region. Emission reductions under the various scenarios by sub-region are provided in the RIA in tables 6-7 and 6-8.

The EPA believes that some of the emission reductions resulting from the Annex provisions for stationary source SO<sub>2</sub> (assuming that States exercise the option for this program) may result from other environmental obligations under the CAA. For example, SO<sub>2</sub> reductions may be required

for attainment of the national ambient air quality standard for PM<sub>2.5</sub>. To the extent that this is the case, the emissions reductions required by the WRAP's SO<sub>2</sub> milestones and backstop trading program may have already been addressed in other regulatory impact analyses for those programs.

The remainder of the emissions reductions resulting from the WRAP's program for stationary source SO<sub>2</sub> would be over and above those required to meet other environmental obligations. Where this is the case, EPA believes that the control costs and other potential economic consequences of achieving the reductions are reflected in the RIA for the 1999 regional haze rule. The range of results for the eight scenarios analyzed in the RIA resulted in predicted sulfur dioxide emission reductions that are within the range of emission reductions included in the Annex. Two of the eight scenarios resulted in 284,000 tons of stationary source reductions in regions containing one or more of the WRAP Annex States. Five other scenarios included sulfur dioxide emissions reductions ranging from 95,000 to 128,000 tons per year. Hence, the costs and benefits associated with the WRAP's program are captured in the RIA for the 1999 final regional haze rule.

**B. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 USC 601 et. seq.**

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that 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 today's proposed rule on small entities, small entity is defined as: (1) a small business that is a small industrial entity as defined in the U.S. Small Business Administration (SBA) size standards (as discussed on the SBA website at <http://www.sba.gov/size/SIC2NAICSmain.html>); (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 potential for economic impacts of today's proposed rule on small entities, I certify that this

action will not have a significant economic impact on a substantial number of small entities. Today's proposed rule amends the requirements of the regional haze program to provide nine western States and a number of Tribes with an optional method for complying with the requirements of the CAA. No State or Tribe is required to submit an implementation plan meeting its requirements. For States or Tribes that choose to submit an implementation plan under this optional program, however, today's proposed rule requires those States and/or Tribes to meet a series of regional SO<sub>2</sub> emission milestones. The EPA will determine whether these milestones are met based on the actual emissions from stationary sources with SO<sub>2</sub> emissions of more than 100 tons per year. From data EPA obtained from the WRAP's website, it appears that there are 197 establishments meeting the 100 tons per year of SO<sub>2</sub> criterion for this program, including 39 utility power plants, and 158 non-utility sources.<sup>24</sup> The vast majority of these

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The number of power plants was obtained from "Data Worksheets from ICF Consulting Detailing Utility Emissions Projections," Item 3 in supplemental information transmitted to Tim Smith, EPA, from Patrick Cummins, WRAP. June 29, 2001. The non-utility estimate was obtained from: Technical Support Documentation. Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop Market Trading Program. Section 2.A. Revised Appendix A for the Pechan Report, table A-1.



establishments -- which include sources such as power plant boilers, copper smelters, chemical plants, petroleum refineries, natural gas production plants, large manufacturing operations, paper mills -- are not small entities. The EPA estimates that 12 facilities are likely to be small entities, and 166 are not small. The EPA has been unable to determine the size of 16 entities at this time.<sup>25</sup> Even if all 16 were determined to be small entities, and all nine States and those Tribes with covered sources adopted the optional approach to complying with the visibility requirements of the CAA, less than 30 small entities would be potentially affected by this proposed rule. The goal of the WRAP is for the regional SO<sub>2</sub> milestones established by the rule to be met through voluntary measures, see Annex at 23, and EPA believes that participating States and Tribes may be able to meet the milestones through such measures. However, as a backstop in the event the milestones are not met in this manner, the proposed rule requires the implementation of a market

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The EPA provides documentation of these estimates in a technical memorandum, "Size of Potentially Affected Entities Should the Western Regional Air Partnership States Choose to Adopt Regulations in Accordance with the Draft Proposed Rule Revising Section 51.309(h)." Allen Basala, EPA, October 17, 2001. This memorandum is included in the docket for today's proposal.

trading program to ensure that emissions in the relevant region do not exceed the milestones. The proposed rule gives the States and Tribes the discretion to structure the emissions trading program, including the discretion to allocate emissions credits to sources, as the States and Tribes determine appropriate. Thus, ultimately, the impact on small entities will be determined not by this rule, but rather by how the relevant State or Tribe exercises its discretion in adopting the optional program and allocating emissions credits. The EPA encourages the States to consider the impact of its market trading program on small entities in structuring the program, but EPA cannot predict the impact of the rule on small entities. Nonetheless, EPA believes that no more than 28 small entities will be effected by this rule, and most likely less, given that EPA does not anticipate that all 9 States with the option of adopting this program will do so. Thus, EPA believes that this action will not have a significant economic impact on a substantial number of small entities.

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.

**C. Paperwork Reduction Act -- Impact on Reporting Requirements**

The information collection requirements in this proposal have been submitted to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 1813.03) and a copy may be obtained from susan auby, by mail at Collection Strategies Division; U.S. EPA (2822T) 1200 Pennsylvania Avenue, NW, Washington, DC 20460, by email at [auby.susan@epa.gov](mailto:auby.susan@epa.gov) or by calling (202)566-1672. A copy may also be downloaded off the Internet at <http://www.epa.gov/icr>.

This ICR contains burden estimates specific to the implementation of the WRAP's program for stationary sources of SO<sub>2</sub>. Because this proposed rule is an amendment to the regional haze rule, this ICR will revise the existing ICR for the regional haze rule (ICR 1813.02). For future ICR renewals for the regional haze rule, EPA will incorporate the effects of this rule.

The EPA has prepared burden estimates for the specific burden impacts of today's proposed rule. These burden estimates are calculated using the assumption that seven eligible States and 4 Tribes would participate in the program. The results of the calculations indicate 16,100 hours to 19,990 hours for affected sources, 14,010 to 14,430 hours for States, 2520 to 2600 hours for Tribes, and 1305 to

1375 for the Federal government. The proposed amendments to the regional haze rule have impacts only for States and tribes who choose to implement section 40 CFR 51.309 of the regional haze rule. For States and tribes who choose to implement the program, the amendments would also affect stationary sources owners within their jurisdictions. The EPA estimates, on average, a total of 11,650 burden hours for State, tribal and industry/source respondents would result from the proposed amendments over the three year period covered by this ICR. Average costs over the three-year period would be \$743,000.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the

collection of information; and transmit or otherwise disclose the information.

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 EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

Comments are requested on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. Send comments on the ICR to the Director, Collection Strategies Division; U.S. Environmental Protection Agency (2822T); 1200 Pennsylvania Ave., NW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17<sup>th</sup> St., NW, Washington, DC 20503, marked "Attention: Desk Officer for EPA." Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, a comment to OMB is best assured of having its full effect if OMB receives it by **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**. The final rule will respond to any OMB or public

comments on the information collection requirements contained in this proposal.

#### **D. Unfunded Mandates Reform Act**

Title II of the Unfunded Mandates Reform Act of 1995 (P.L. 104-4) (UMRA), establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, 2 U.S.C. 1532, EPA generally must prepare a written statement, including a cost-benefit analysis, for any proposed or final rule that "includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100,000,000 or more ... in any one year." A "Federal mandate" is defined under section 421(6), 2 U.S.C. 658(6), to include a "Federal intergovernmental mandate" and a "Federal private sector mandate." A "Federal intergovernmental mandate," in turn, is defined to include a regulation that "would impose an enforceable duty upon State, local, or tribal governments," section 421(5)(A)(i), 2 U.S.C. 658(5)(A)(i), except for, among other things, a duty that is "a condition of Federal assistance," section 421(5)(A)(i)(I). A "Federal private sector mandate" includes a regulation that "would impose an

enforceable duty upon the private sector," with certain exceptions, section 421(7)(A), 2 U.S.C. 658(7)(A).

Before promulgating an EPA rule for which a written statement is needed under section 202 of the UMRA, section 205, 2 U.S.C. 1535, of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule.

By proposing to incorporate into the regional haze rule the provisions of the Annex for a voluntary emissions reductions program and backstop trading program, EPA is not directly establishing any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments. The entire program under 40 CFR 51.309, including the proposed amendments, is an option that each of the States may choose to exercise. The program is not required and thus is clearly not a "mandate." Thus, EPA is not obligated to develop under section 203 of the UMRA a small government agency plan.

The EPA also believes that because today's proposal provides those States potentially subject to the proposed rule with substantial flexibility, the proposed rule meets the UMRA requirement in section 205 to select the least

costly and burdensome alternative in light of the statutory mandate for SIPs for visibility protection that address BART. The proposed rule provides States and sources with the flexibility to achieve regional SO<sub>2</sub> reductions in a way that is cost effective and administratively effective. Sources are given the opportunity to achieve voluntary reductions. If such reductions do not occur, the rule provides for the establishment of a trading program to achieve targeted emissions reductions. If a trading program is implemented, sources have the flexibility to buy and sell allowances in order to reach emissions reduction milestones in the most cost-effective way. The proposed rule therefore, inherently provides for adoption of the least costly, most cost-effective, or least-burdensome alternative that achieves the objective of the rule.

The EPA believes that this rulemaking action is not subject to the requirements of UMRA. For regional haze SIPs overall, it is questionable whether a requirement to submit a SIP revision constitutes a Federal mandate, as discussed in the preamble to the regional haze rule, (64 FR 35761, July 1, 1999). However, today's proposed rule contains no Federal mandates (under the regulatory provisions of title II of the UMRA) for States, local, or tribal governments or the private sector. The program contained in 40 CFR 51.309,



including today's proposed amendments, is an optional program.

**E. Executive Order 12898: Environmental Justice**

Executive Order 12898 requires that each Federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minorities and low-income populations.

The EPA believes that this proposed rule should not raise any environmental justice issues. The overall result of the program is regional reductions in SO<sub>2</sub>. Because this program would likely reduce regional and local SO<sub>2</sub> levels in the air, and because there are separate programs under the CAA to ensure that SO<sub>2</sub> levels do not exceed national ambient air quality standards, it appears unlikely that this program would permit any adverse affects on local populations.

**F. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks**

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or

safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency. The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. The proposal to codify the SO<sub>2</sub> emissions reduction program is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

**G. Executive Order 13132: Federalism**

Executive Order 13132, entitled *Federalism* (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that 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.”

Under section 6(b) of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. Under section 6(c) of Executive Order 13132, EPA may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This proposed rule 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. As an optional program, the proposed rule will not directly impose significant new requirements on State and local governments.

In addition, even if the proposed rule did have federalism implications, it will not impose substantial direct compliance costs on State or local governments, nor will it preempt State law.

Consistent with EPA policy, EPA nonetheless consulted with State and local officials early in the process of developing the proposed regulation, to provide them an opportunity for meaningful and timely input into its development. These consultations included a working meeting with State and local officials, and numerous discussions with committees and forums of the WRAP.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

#### **H. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments**

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to, among other things, ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that

have "substantial direct effects on one or more Indian Tribes, on the relationship between the Federal government and the Indian Tribes, or on the distribution of power and responsibilities between the Federal government and Indian Tribes."

Under section 5(b) of Executive Order 13175, EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation. Under section 5(c) of the Executive Order, EPA may not issue a regulation that has tribal implications and that preempts tribal law, unless the Agency consults with tribal officials early in the process of developing the proposed regulation.

This proposed rule may have tribal implications, but EPA believes that it will neither impose substantial direct compliance costs on the Tribes nor preempt tribal law. The EPA is seeking input from potentially affected Tribes before reaching a conclusion on whether this rule will have tribal implications. This is due, in large part, to the voluntary nature of this program and the uncertainty of potential

impacts on Tribes in the event a State or Tribe chooses to participate in the program. Possible impacts on Tribes choosing to opt into the program are discussed above in unit III of this preamble. The EPA specifically requests comments from tribal governments on whether this proposed rule, if finalized, constitutes a policy that has tribal implications as defined in E.O. 13175.

The EPA notes that the WRAP consulted extensively with tribal representatives in the development of the Annex, the document which provided the basis for today's proposed rulemaking. The Annex provides recognition of Tribes throughout the document and a specific discussion of tribal issues in Attachment F. Today's rulemaking closely mirrors the recommendations of the WRAP and therefore reflects discussions between the WRAP and Tribes.

In any case, prior to the issuance of the final rule, EPA will provide additional opportunities for consultation with tribal officials or authorized representatives of tribal governments on the potential impacts of the proposed rule on Tribes and whether the rule has tribal implications. The EPA will consider concerns expressed by tribal officials during these consultations in the development of the final rule. This consultation will be conducted consistent with the requirements of E.O. 13175 and afford Tribes

opportunities to provide additional input into the development of this rule. In the preamble to the final rule, EPA will include a discussion of the consultation we have undertaken and our conclusions regarding tribal implications. The EPA specifically solicits additional comment on this proposed rule from tribal officials.

#### **I. National Technology Transfer and Advancement Act**

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Pub. L. No. 104-113, Section 12(d) (15 U.S.C. 272 note) directs 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. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

However, this action does not incorporate any requirements to use any particular technical standards, such as specific measurement or monitoring techniques. Therefore, EPA is not considering the use of any voluntary consensus standards in this rulemaking. The proposed rule

does require States to develop emissions quantification protocols and monitoring procedures for their SIPs as part of the market trading program. However, EPA generally defers to the choices the States make in their SIPs when the CAA does not prescribe requirements, so EPA is not proposing to require the use of specific, prescribed techniques or methods in those SIPs. Nevertheless, while EPA believes that it is not necessary to consider the use of any voluntary consensus standards for this proposal, we will encourage States and tribes to consider the use of such standards in the development of these protocols.

We welcome comments on this aspect of the proposed rulemaking.

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

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," (66 FR 28355, May 22, 2001), provides that agencies shall prepare and submit to the Administrator of the Office of Information and Regulatory Affairs, OMB, a Statement of Energy Effects for certain actions identified as "significant energy actions." Section 4(b) of Executive Order 13211 defines "significant energy actions" as "any



action by an agency (normally published in the Federal Register) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1) (i) that is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action." Under Executive Order 13211, a Statement of Energy Effects is a detailed statement by the agency responsible for the significant energy action relating to: (i) any adverse effects on energy supply, distribution, or use including a shortfall in supply, price increases, and increased use of foreign supplies should the proposal be implemented, and (ii) reasonable alternatives to the action with adverse energy effects and the expected effects of such alternatives on energy supply, distribution, and use.

While this rulemaking is a "significant regulatory action" under Executive Order 12866, EPA has determined that this rulemaking is not a significant energy action because it is not likely to have a significant adverse effect on the

supply, distribution, or use of energy. In the proposed rule, if States chose to implement the option provided by 40 CFR 51.309, this would lead to a regional reduction in SO<sub>2</sub> emissions in order to meet the WRAP's SO<sub>2</sub> milestones for the 2003-2018 time period. The WRAP's analysis of the program's requirements results in the following projections:<sup>26</sup>

- No reduction in crude oil supply;
- No reduction in fuel production;
- 0.0 percent to 0.2 percent increase in wholesale electricity prices in 2018;
- Production cuts in coal in the western States balanced by increases in coal production in the Appalachian region;
- No increase in energy distribution costs;
- No significantly increased dependence on foreign supplies of energy;
- Adverse impacts on employment, gross regional product, and real disposable incomes in the affected western States of less than 0.05 percent in 2018;
- Room for new sources of electrical generating capacity within the target SO<sub>2</sub> emission levels.

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<sup>26</sup>

ICF consulting, Final Report on Regional Economic Impacts of Annex. Transmitted to Tim Smith, EPA/OAQPS by Patrick Cummins, WRAP Co-Project Manager, June 29, 2001.

Given the particular concern in the West regarding needed electrical generating capacity, EPA believes it important to note the WGA statement that "the conclusion [... of their analysis...] is that sulfur dioxide emissions reductions milestones should in no way impede the construction of new coal-fired power plants in the West<sup>27</sup>..."

Furthermore, an assessment by WGA of the effects of the WRAP Annex indicates that it is possible to build 7000 megawatts or more of new coal fired generation at any time between 2001 and 2018 without exceeding the SO<sub>2</sub> emission milestones in the Annex.<sup>28</sup> However the amount of megawatts that could be built is affected by analytical assumptions regarding fuel mix and quality, capacity utilization, control levels, and the demarcation of fuel use regions. Additional scenarios included in the WGA analysis show that there could be room for 19,000 megawatts of generation capacity.

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<sup>27</sup>

Memorandum from Jim Souby to Staff Council, State Environmental Directors and State Air Directors, "Energy and Air Quality Issues." February 23, 2001.

<sup>28</sup>

Technical Memorandum, "Analysis of New Coal-Fired Power Plants Under the Proposed Sulfur Dioxide Emission Reduction Milestones for the Nine-State Grand Canyon Visibility Transport Region." February 22, 2001.

The EPA believes that the program contained in the Annex and in today's proposed rule will not result in energy reduction of 500 or more megawatts installed production capacity. Under this program, considerable flexibility is afforded to electricity generators on how to comply with the program. Even if the trading program is triggered and sources must comply with allowances, we believe that the least-cost solutions afforded by the trading program, and the ability to secure emissions reductions from other

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sources, will make it very unlikely that the program would lead to plant shutdowns.

**List of Subjects in 40 CFR Part 51**

Environmental protection, Administrative practice and procedure, Air pollution control, Carbon monoxide, Nitrogen dioxide, Particulate matter, Sulfur oxides, Volatile organic compounds.

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Dated:

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Christine Todd Whitman,  
Administrator.

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

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

**Subpart P - Protection of Visibility**

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

**Authority:** 42 U.S.C. 7410-7671q.

2. Section 51.309 is amended by:

- a. Revising paragraph (b) (5).
- b. Adding paragraphs (b) (8) and (b) (9).
- c. Revising paragraph (c).
- d. Revising paragraphs (d) (4) (i) through (d) (4) (iv).
- e. Revising paragraph (f) (1) (i).
- f. Adding paragraph (h).

The revisions and additions read as follows:

**§51.309 Requirements Related to the Grand Canyon Visibility Transport Commission.**

\* \* \* \* \*

(b) \* \* \*

(5) Milestone means the maximum level of annual regional sulfur dioxide emissions for a given year, assessed

annually consistent with paragraph (h)(2) of this section beginning in the year 2003.

\* \* \* \* \*

(8) BHP San Manuel means:

(i) the copper smelter located in San Manuel, Arizona which operated during 1990, but whose operations were suspended during the year 2000,

(ii) The same smelter in the event of a change of name or ownership.

(9) Phelps Dodge Hidalgo means:

(i) The copper smelter located in Hidalgo, New Mexico which operated during 1990, but whose operations were suspended during the year 2000,

(ii) the same smelter in the event of a change of name or ownership.

(c) Each Transport Region State may meet the requirements of §51.308(b) through (e) by electing to submit an implementation plan that complies with the requirements of this section. Each Transport Region State must submit an implementation plan addressing regional haze visibility impairment in the 16 Class I areas no later than December 31, 2003. Indian Tribes may submit implementation plans after the December 31, 2003 deadline. A Transport Region State that elects not to submit an implementation plan that

complies with the requirements of this section (or whose plan does not comply with all of the requirements of this section) is subject to the requirements of §51.308 in the same manner and to the same extent as any State not included within the Transport Region.

\* \* \* \* \*

(d) \* \* \*

(4) \* \* \*

(i) Sulfur dioxide milestones consistent with paragraph (h) (1) of this section.

(ii) Monitoring and reporting of sulfur dioxide emissions. The plan submission must include provisions requiring the annual monitoring and reporting of actual stationary source sulfur dioxide emissions within the State. The monitoring and reporting data must be sufficient to determine whether a 13 percent reduction in actual emissions has occurred between the years 1990 and 2000, and for determining annually whether the milestone for each year between 2003 and 2018 is exceeded, consistent with paragraph (h) (2) of this section. The plan submission must provide for reporting of these data by the State to the Administrator and to the regional planning organization consistent with paragraph (h) (2) of this section.

(iii) Criteria and Procedures for a Market Trading Program. The plan must include the criteria and procedures for activating a market trading program within 5 years consistent with paragraph (h) (3) of this section if an applicable milestone is exceeded. The plan must also provide for implementation plan assessments of the program in the years 2008, 2013, and 2018.

(iv) Provisions for market trading program compliance reporting consistent with paragraph (h) (3) of this section.

\* \* \* \* \*

(f) \* \* \*

(1) \* \* \*

(i) The annex must contain quantitative emissions milestones for stationary source sulfur dioxide emissions for the reporting years 2003, 2008, 2013 and 2018. The milestones must provide for steady and continuing emissions reductions for the 2003-2018 time period consistent with the Commission's definition of reasonable progress, its goal of 50 to 70 percent reduction in sulfur dioxide emissions from 1990 actual emission levels by 2040, applicable requirements under the CAA, and the timing of implementation plan assessments of progress and identification of deficiencies which will be due in the years 2008, 2013, and 2018. The milestones must be shown to provide for greater reasonable



progress than would be achieved by application of best available retrofit technology (BART) pursuant to §51.308(e) (2) and would be approvable in lieu of BART.

\* \* \* \* \*

(h) Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide. The first implementation plan submission must include a stationary source emissions reduction program for major industrial sources of sulfur dioxide that meets the following requirements:

(1) Regional sulfur dioxide milestones. The plan must include the milestones in Table 1, and provide for the adjustments in paragraphs 51.309(h) (1) (i) through (iv) of this section. Table 1 follows:

**Table 1. Sulfur Dioxide Emissions Milestones.**

Column 1	Column 2	Column 3	Column 4
For the year...	... if BHP San Manuel and Phelps Dodge Hidalgo resume operation, the maximum regional sulfur dioxide milestone is...	... if neither BHP San Manuel nor Phelps Dodge Hidalgo resumes operation, the minimum regional sulfur dioxide milestone is...	... and the emission inventories for these years will determine whether emissions are greater than or less than the milestone:
2003	720,000 tons	682,000 tons	2003
2004	720,000 tons	682,000 tons	Average of 2003 and 2004
2005	720,000 tons	682,000 tons	Average of 2003, 2004 and 2005

Column 1	Column 2	Column 3	Column 4
For the year...	... if BHP San Manuel and Phelps Dodge Hidalgo resume operation, the maximum regional sulfur dioxide milestone is...	... if neither BHP San Manuel nor Phelps Dodge Hidalgo resumes operation, the minimum regional sulfur dioxide milestone is...	... and the emission inventories for these years will determine whether emissions are greater than or less than the milestone:
2006	720,000 tons	682,000 tons	Average of 2004, 2005 and 2006
2007	720,000 tons	682,000 tons	Average of 2005, 2006, and 2007
2008	718,333 tons	680,333 tons	Average of 2006, 2007, and 2008
2009	716,667 tons	678,667 tons	Average of 2007, 2008 and 2009
2010	715,000 tons	677,000 tons	Average of 2008, 2009 and 2010
2011	715,000 tons	677,000 tons	Average of 2009, 2010, and 2011
2012	715,000 tons	677,000 tons	Average of 2010, 2011, and 2012
2013	695,000 tons	659,667 tons	Average of 2011, 2012, and 2013
2014	675,000 tons	642,333 tons	Average of 2012, 2013, and 2014
2015	655,000 tons	625,000 tons	Average of 2013, 2014, and 2015
2016	655,000 tons	625,000 tons	Average of 2014, 2015, and 2016
2017	655,000 tons	625,000 tons	Average of 2015, 2016, and 2017
2018	510,000 tons	480,000 tons	Year 2018 only
each year after 2018	no more than 510,000 tons	no more than 480,000 tons	Three-year average of the year and the two previous years, or any alternative provided in a future plan revisions under §51.308 (f).

(i) Adjustment for States and Tribes Which Choose Not to Participate in the Program, and for Tribes that choose to opt into the program after the 2003 deadline. If a State or Tribe chooses not to submit an implementation plan under the option provided in §51.309, the amounts for that State or Tribe which are listed in Table 2 must be subtracted from the milestones that are included in the implementation plans for the remaining States and Tribes. For Tribes that opt into the program after 2003, the amounts in Table 2 of 4 will be automatically added to the milestones that are included in the implementation plans for the participating States and Tribes, beginning with the first year after the tribal implementation plan implementing §51.309 is approved by the Administrator. The amounts listed in Table 2 are for purposes of adjusting the milestones only, and they do not represent amounts that must be allocated under any future trading program. Table 2 follows:

**Table 2. Amounts Subtracted from the Milestones for States and Tribes Which do not Exercise the Option Provided by §51.309.**

<b>State or Tribe</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
1 Arizona	117,372	117,372	117,372	117,372	117,372	117,941	118,511	119,080





(ii) Adjustment for Future Operation of Copper Smelters.

(A) The plan must provide for adjustments to the milestones in the event that Phelps Dodge Hidalgo and/or BHP San Manuel resume operations or that other smelters increase their operations.

(B) The plan must provide for adjustments to the milestones according to Tables 3a and 3b except that if either the Hidalgo or San Manuel smelters resumes operation and is required to obtain a permit under 40 CFR 52.21 or 40 CFR 51.166, the adjustment to the milestone must be based upon the levels allowed by the permit. In no instance may the adjustment to the milestone be greater than 22,000 tons for the Phelps Dodge Hidalgo, greater than 16,000 tons for BHP San Manuel, or more than 30,000 tons for the combination of the Phelps Dodge Hidalgo and BHP San Manuel smelters for the years 2013 through 2018. Tables 3a and 3b follow:

**Table 3a. Adjustments to the Milestones for Future Operations of Copper Smelters.**

Scenario	If this happens ...	... and this happens...	.... then you calculate the milestone by adding this amount to the value in column 3 of Table 1:
1	Phelps Dodge Hidalgo resumes operation, but BHP San Manuel does not	Phelps Dodge Hidalgo resumes production consistent with past operations and emissions	<p>A. Beginning with the year that production resumes, and for each year up to the year 2012, the milestone increases by:</p> <p>(1) 22,000 tons PLUS</p> <p>(2) Any amounts identified in Table 3b</p> <p>B. For the years 2013 through 2018, the milestone increases by this amount or by 30,000 tons, whichever is less.</p>
2	Phelps Dodge Hidalgo resumes operation, but BHP San Manuel does not	Phelps Dodge Hidalgo resumes operation in a substantially different manner such that emissions will be less than for past operations (an example would be running only one portion of the plant to produce sulfur acid only)	<p>A. Beginning with the year that production resumes, and for each year up to the year 2012, the milestone increases by:</p> <p>(1) Expected emissions for Phelps Dodge Hidalgo (not to exceed 22,000 tons), PLUS</p> <p>(2) Any amounts identified in Table 3b</p> <p>B. For the years 2013 through 2018, the milestone increases by this amount or by 30,000 tons, whichever is less.</p>
3	BHP San Manuel resumes operation, but Phelps Dodge Hidalgo does not	BHP San Manuel resumes production consistent with past operations and emissions	<p>A. 16,000 tons PLUS</p> <p>B. Any amounts identified in Table 3b</p>

Scenario	If this happens ...	... and this happens...	.... then you calculate the milestone by adding this amount to the value in column 3 of Table 1:
4	BHP San Manuel resumes operation, but Phelps Dodge Hidalgo does not	BHP San Manuel resumes operations in a substantially different manner such that emissions will be less than for past operations (an example would be running only one portion of the plant to produce sulfur acid only)	A. Expected emissions for BHP San Manuel (not to exceed 16,000 tons) PLUS  B. Any amounts identified in Table 3b
5	Both Phelps Dodge Hidalgo and BHP San Manuel resume operations	Both smelters resume production consistent with past operations and emissions	A. Beginning with the year that production resumes, and for each year up to the year 2012, the milestone increase by 38,000 tons.  B. For the years 2013 through 2018, the milestone increases by 30,000 tons.
6	Both Phelps Dodge Hidalgo and BHP San Manuel resume operations	Phelps Dodge Hidalgo resumes production consistent with past operations and emissions, but BHP San Manuel resumes operations in a substantially different manner such that emissions will be less than for past operations (an example would be running only one portion of the plant to produce sulfur acid only)	A. For the year that production resumes, and for each year up to the year 2012, the milestone increases by:  (1) 22,000 PLUS  (2) Expected emissions for San Manuel (not to exceed 16,000 tons)  B. For the years 2013 though 2018, the milestone increases by this same amount, or by 30,000 tons, whichever is less.



Scenario	If this happens ...	... and this happens...	.... then you calculate the milestone by adding this amount to the value in column 3 of Table 1:
7	Both Phelps Dodge Hidalgo and BHP San Manuel resume operations	BHP San Manuel resumes production consistent with past operations and emissions, but Phelps Dodge Hidalgo resumes operations in a substantially different manner such that emissions will be less than for past operations (an example would be running only one portion of the plant to produce sulfur acid only)	<p>A. For the year that production resumes, and for each year up to the year 2012, the milestone increases by:</p> <p>(1) 16,000 PLUS</p> <p>(2) expected Hidalgo emissions (not to exceed 22,000 tons)</p> <p>B. For the years 2013 through 2018, the milestone increases by this same amount, or by 30,000 tons, whichever is less.</p>
8	Both Phelps Dodge Hidalgo and BHP San Manuel do not resume operations		A. Any amounts identified in table 3b

**Table 3b. Adjustments for Certain Copper Smelters Which Operate Above Baseline Levels.**

Where it applies in table 3a, if the following smelter...	complies with existing permits but has actual annual emissions that exceed the following baseline level...	...the milestone increases by the difference between actual emissions and the baseline level, OR the following amount, whichever is less.
Asarco Hayden	23,000 tons	3,000 tons
BHP San Manuel	16,000 tons	1,500 tons
Kennecott Salt Lake	1,000 tons	100 tons
Phelps Dodge Chino	16,000 tons	3,000 tons
Phelps Dodge Hidalgo	22,000 tons	4,000 tons
Phelps Dodge Miami	8,000 tons	2,000 tons

(iii) Adjustments for changes in emission monitoring or calculation methods. The plan must provide for adjustments to the milestone to reflect changes in sulfur dioxide emission monitoring or measurement methods for a source that is included in the program, including changes identified under paragraph(h) (2) (iii) (D) of this section. Any such adjustment based upon changes to emissions monitoring or measurement methods must be made in the form of an implementation plan revision that complies with the

procedural requirements of §51.102 and §51.103. The implementation plan revision must be submitted to the Administrator no later than the first due date for a periodic report under paragraph(d) (10) of this section following the change in emission monitoring or measurement method.

(iv) Adjustments for changes in flow rate measurement methods. The implementation plan must provide for adjustments to the milestones for sources using the methods contained in 40 CFR part 60, appendix A, Methods 2F, 2G, and 2H.

(v) Adjustments for illegal emissions. The implementation plan must provide for adjustments to the milestones if any source in the program decreases its sulfur dioxide emissions in order to comply with applicable regulations which were in effect prior to the calculation of the source's baseline sulfur dioxide emissions. The plan must provide that the milestone must be decreased by an appropriate amount based on a reforecasted calculation of the source's decreased sulfur dioxide emissions. Any such adjustment based upon illegal emissions must be made in the form of an implementation plan revision that complies with the procedural requirements of §§51.102 and 51.103.

(vi) Adjustment based upon program audits. The plan must provide for appropriate adjustments to the milestones based upon the results of program audits. Any such adjustment based upon audits must be made in the form of an implementation plan revision that complies with the procedural requirements of §§51.102 and 51.103. The implementation plan revision must be submitted to the Administrator no later than the first due date after the audit for a periodic report under (d)(10) of this section.

(vii) Adjustment for individual sources opting into the program. The plan must provide for adjustments to the milestones for any source choosing to participate in the program even though they do not meet the 100 tons per year criterion for inclusion. Any such adjustments must be made in the form of an implementation plan revision that complies with the procedural requirements of §§51.102 and 51.103.

(2) Requirements for monitoring, record keeping and reporting of actual annual emissions of sulfur dioxide

(i) Sources included in the program. The implementation plan must provide for annual emission monitoring and reporting, beginning with calendar year 2003, for all sources whose actual emissions of sulfur dioxide are 100 tons per year or more as of 2003, and all sources whose

actual emissions are 100 tons or more per year in any subsequent year. States and Tribes may include other sources, if the implementation plan provides for the same procedures and monitoring as for other sources in a way that is federally enforceable.

(ii) Documentation of emissions calculation methods. The implementation plan must provide documentation, consistent with EPA's applicable guidance on preparation of emissions inventories, of the specific methodology used to calculate emissions for each emitting unit during the base year. The implementation plan must also provide for documentation for each emission unit of any change to the specific methodology for each year after the base year.

(iii) Record keeping. The implementation plan must provide for the retention of records for at least 5 years from the establishment of the record. If a record will be the basis for an adjustment to the milestone as provided for in paragraph(h) (1) of this section, that record must be retained for at least 5 years after the date of the SIP revision which reflects the adjustment.

(iv) Completion and submission of emissions reports. The implementation plan must provide for collection of the emissions data, quality assurance, and public review and submission to the Administrator and to each State and Tribe

which has submitted an implementation plan under this section by no later than September 30 of the following year. For sources for which changes in emission quantification methods require adjustments under paragraph (h)(1)(iii) of this section, the emissions reports must reflect the method in place before the change, for each year until the milestone has been adjusted. If each of the States which have submitted an implementation plan under this section have identified a regional planning organization to coordinate the annual comparison with the milestone, the implementation plan must provide for reporting of this information to the regional planning body.

(v) Exceptions reports. The emissions report submitted by each State and Tribe under paragraph(h)(2)(ii) of this section must provide for exceptions reports containing the following:

(A) identification of new or additional sulfur dioxide sources greater than 100 tons per year that were not contained in the previous year emissions report;

(B) identification of sources shut down or removed from the previous year emissions report;

(C) explanation for emissions variations at any covered source that exceeds plus or minus 20 percent from the previous year emissions report;

(D) identification and explanation of new emissions monitoring and reporting methods at any source. The use of any new methods requires an adjustment to the milestones according to paragraph(h) (1) (iii) of this section.

(vi) Reporting of emissions for the Mohave Generating Station for the years 2003 through 2006. For the years 2003, 2004, 2005, and for any part of the year 2006 before installation and operation of sulfur dioxide controls at the Mohave Generating Station, emissions from the Mohave Generating Station will be calculated using a sulfur dioxide emission factor of 0.15 pounds per million BTU.

(vii) Special provision for the year 2013. The implementation plan must provide that in the emissions report for calendar year 2012, which is due by September 30, 2013 under paragraph(h) (2) (ii) of this section, each State has the option of including calendar year 2018 emission projections for each source, in addition to the actual emissions for each source for calendar year 2012.

(3) Annual comparison of emissions to the milestone.

\_\_\_\_\_(i) The implementation plan must provide for a comparison each year of annual SO<sub>2</sub> emissions for the region against the appropriate milestone. In making this comparison:

(A) Each State or Tribe must make the comparison, using its annual emissions report and emissions reports from other States and Tribes reported under paragraph(h) (2) (ii) of this section, or

(B) Where each State or Tribe has designated a regional planning organization for this purpose, the regional planning organization makes the comparison, using information provided by each State and Tribe.

(ii) Beginning with an initial public review draft report due December 31, 2004 that makes the comparison for the year 2003 milestone, the implementation plan must provide the public with a public review draft comparison by no later than December 31 of each year. This public review draft must be issued by each State or Tribe or in a coordinated report by the regional planning body.

(iii) The implementation plan must provide for a final determination by each State or Tribe, or by the regional planning organization designated by each State or Tribe, of whether or not the annual milestone is exceeded. The determination must take into account public comments on the draft report. This determination must be submitted to the Administrator by the end of March of the year following issuance of the initial public review draft report. The



first final determination will be due to the Administrator on March 31, 2005.

(iv) Special considerations for year 2012 report. If each State or Tribe has included calendar year 2018 emission projections under paragraph(h) (2) (v) of this section, then the report for the year 2012 milestone which is due by December 31, 2013 under paragraph(h) (3) (ii) of this section may also include a comparison of the regional year 2018 emissions projection with the milestone for calendar year 2018. If the report indicates that the year 2018 milestone will be exceeded, then each State or Tribe, or the regional planning organization may choose to implement the market trading program beginning in the year 2018.

(v) Independent review. The implementation plan shall provide for reviews of the annual emissions reporting program by an independent third party. This independent review is not required if a determination has been made under paragraph(h) (3) (iii) of this section to implement the market trading program. The independent review shall be completed by the end of 2006, and every 5 years thereafter, and shall include an analysis of:

(A) the uncertainty of the reported emissions data;

(B) whether the uncertainty of the reported emissions data is likely to have an adverse impact on the annual determination of emissions relative to the milestone; and,

(C) whether there are any necessary improvements for the annual administrative process for collecting the emissions data, reporting the data, and obtaining public review of the data.

(4) Market trading program. The implementation plan must provide for implementation of a market trading program if the determination required by paragraph(h) (3) (iii) of this section indicates that a milestone has been exceeded. The implementation plan must provide for the option of implementation of a market trading program if a report under paragraph(h) (3) (iv) of this section indicates that projected emissions for the year 2018 will exceed the year 2018 milestone. The implementation plan must provide for a market trading program whose provisions are the same for each State or Tribe submitting an implementation plan under this section. The implementation plan must include the following market trading program provisions:

(i) Allowances. For each source in the program, the implementation plan must identify the specific allocation of allowances, on a tons per year basis, for each calendar year from 2009 to 2018. The total of the tons per year

allowances across all participating States and Tribes may not exceed the amounts in Table 4 of this paragraph, less a 20,000 ton amount that must be set aside for use by Tribes. The implementation plan may include procedures for redistributing the allowances in future years, so long as the amounts in Table 4 of this paragraph, less a 20,000 ton amount, are not exceeded. The implementation plan must provide that any adjustment for a calendar year applied to the milestones under paragraphs (h)(1)(i) through (v) of this section must also be applied to the amounts in Table 4. Table 4 follows:

**Table 4. Total amount of allowances by year.**

<b>For this year:</b>	<b>If the two smelters resume operations, the total number of allowances issued by States and Tribes may not exceed this amount:</b>	<b>If the two smelters do not resume operations, the total number of allowances issued by States and Tribes may not exceed this amount:</b>
2009	715,000	677,000
2010	715,000	677,000
2011	715,000	677,000
2012	715,000	677,000
2013	655,000	625,000
2014	655,000	625,000

<b>For this year:</b>	<b>If the two smelters resume operations, the total number of allowances issued by States and Tribes may not exceed this amount:</b>	<b>If the two smelters do not resume operations, the total number of allowances issued by States and Tribes may not exceed this amount:</b>
2015	655,000	625,000
2016	655,000	625,000
2017	655,000	625,000
2018	510,000	480,000

(ii) Compliance with allowances. The implementation plan provide that, beginning with the compliance period 6 years following the calendar year for which emissions exceeded the milestone and for each compliance period thereafter, each source owner must hold allowances for each ton of sulfur dioxide emitted.

(iii) Emissions quantification protocols. The implementation plan must include specific emissions quantification protocols for each source category included within the program, including the identification of sources subject to part 75 of this chapter. For sources subject to part 75 of this chapter, the implementation plan may rely on the emissions quantification protocol in part 75. For source categories with sources in more than one State

submitting an implementation plan under this section, each State must use the same protocol. The protocols must provide consistent approaches for all sources within a given source category. The protocols must provide for reliability (repeated application obtains results equivalent to EPA-approved test methods), and replicability (different users obtain the same or equivalent results that are independently verifiable). The protocols must include procedures for addressing missing data, which provide for conservative calculations of emissions and provide sufficient incentives for sources to comply with the monitoring provisions.

(iv) Monitoring and Record keeping. The implementation plan must include monitoring provisions which are consistent with the emissions quantification protocol. Monitoring required by these provisions must be timely, of sufficient frequency, and ensure the enforceability of the program. The implementation plan must also include requirements that source owners or operators keep records consistent with the emissions quantification protocols, and keep all records used to determine compliance for at least 5 years, unless a longer period is required by paragraph(h) (2) (iii) of this section. For source owners or operators which use banked allowances, all records relating to the banked allowance

must be kept for at least 5 years after the banked allowances are used.

(v) Tracking system. The implementation plan must provide for submitting data to a centralized system for the tracking of allowances and emissions. The implementation plan must provide that all necessary information regarding emissions, allowances, and transactions is publicly available in a secure, centralized database. The system must ensure that each allowance may be uniquely identified, allow for frequent updates, and include enforceable procedures for recording data.

(vi) Authorized account representative. The implementation plan must include provisions requiring the owner or operator of each source in the program to identify an authorized account representative. The implementation plan must provide that all matters pertaining to the account, including, but not limited to, the deduction and transfer of allowances in the account, and certifications of the completeness and accuracy of emissions and allowances transactions required in the annual report under paragraph(h) (4) (vi) of this section shall be undertaken only by the authorized account representative.

(vii) Annual report. The implementation plan must include provisions requiring the authorized account representative for each source in the program to demonstrate and report within a specified time period following the end of each calendar year that the source holds allowances for each ton per year of SO<sub>2</sub> emitted. The implementation plan shall require the authorized account representative to submit the report within 60 days of the end of each calendar year, unless an alternative deadline is specified consistent with emission monitoring and reporting procedures.

(viii) Allowance transfers. The implementation plan must include provisions detailing the process for transferring allowances between parties.

(ix) Emissions banking. The implementation plan may provide provisions for the banking of unused allowances. Any such provisions must state whether unused allowances may be kept for use in future years and describe any restrictions on the use of any such allowances. Allowances kept for use in future years may be used in calendar year 2018 only to the extent that the implementation plan ensures that such allowances would not interfere with the achievement of the year 2018 amount in Table 4 in paragraph (C) (4) (i) of this section.

(x) Penalties. The implementation plan must include specific enforcement penalties to be applied if emissions from a source in the program exceed the allowances held by the source. In establishing specific enforcement penalties, the State or Tribe must ensure that:

(A) When emissions from a source in the program exceed the allowances held by the source, each day of the year is a separate violation; and

(B) Each ton of excess emissions is a separate violation.

(xi) Provisions for periodic evaluation of the trading program. The implementation plan must provide for an evaluation of the trading program no later than 3 years following the first full year of the trading program, and at least every 5 years thereafter. Any changes warranted by the evaluation should be incorporated into the next periodic SIP or TIP revision required under paragraph(d)(10) of this section. The evaluation should be conducted by an independent third party and should include an analysis of:

(A) Whether the total actual emissions could exceed the values in §51.309(h)(4)(i), even though sources comply with their allowances;



(B) Whether the program achieved the overall emission milestone it was intended to reach, and a discussion of actions that have been necessary to reach the milestone;

(C) The effectiveness of the compliance, enforcement and penalty provisions;

(D) The administrative costs of the program to sources and to State and tribal regulators, including a discussion of whether States and Tribes have enough resources to implement the trading program;

(E) Whether the market trading program has likely led to decreased costs for reaching the milestone relative to a non-market based approach, including a discussion of the market price of allowances relative to control costs that might have otherwise been incurred;

(F) Whether the trading program resulted in any unexpected beneficial effects, or any unintended detrimental effects;

(G) Whether the actions taken to reduce sulfur dioxide have led to any unintended increases in other pollutants;

(H) Whether there are any changes needed in emissions monitoring and reporting protocols, or in the administrative procedures for program administration and tracking;

(I) The effectiveness of the provisions for interstate trading, and whether there are any procedural changes needed to make the interstate nature of the program more effective.

\_\_\_\_ (5) What other provisions are required for the program?

The implementation plan must provide for:

(i) permitting of affected sources. For sources subject to part 70 or part 71 of this chapter, the implementation plan requirements for emissions reporting and for the trading program under paragraph(h) of this section must be incorporated into the part 70 or part 71 permit. For sources not subject to part 70 or part 71, the requirements must be incorporated into a permit that is enforceable as a practical matter by the Administrator, and by citizens to the extent permitted under the CAA.

(ii) integration with other programs. In addition to the requirements of paragraph(h) of this section, the restrictions of State, tribal and local rules, and State, tribal and Federal law remain in place. No provision of paragraph(h) of this section should be interpreted as exempting any source from compliance with any other provision of State, tribal or local law, the applicable and approved implementation plan, the tribal implementation plan, a federally enforceable permit, or implementing regulations under the CAA.

