Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and A Backstop Market Trading Program

An Annex to the
Report of the
Grand Canyon Visibility Transport Commission

Submitted by the
Western Regional Air Partnership
to the U.S. Environmental Protection Agency

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EXECUTIVE SUMMARY

The Colorado Plateau is a spectacular landscape of massive landforms, unique geology and vivid colors. People from around the world have experienced these wonders at Grand Canyon...and other national parks and wilderness areas on the Plateau. The panorama is a visual experience, and air quality is the key to full enjoyment. On hazy days, when visibility is reduced, the human eye perceives a loss of color, contrast and detail in the landscape...The Colorado Plateau has some of the best visual air quality in the United States. Paradoxically, this means that reduced visual air quality that might go unnoticed in other parts of the United States is starkly apparent on the Plateau. Visual air quality in the West is quite sensitive to relatively small increases in pollutants.

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In the July 1, 1999, promulgation of the federal rule to address the regional haze that impairs visibility in mandatory Class I areas, EPA considered both the recommendations and the supporting technical work of the Grand Canyon Visibility Transport Commission. Section 309 of the rule provides a special option to implement the Commission's recommendations for the 16 Class I areas on the Colorado Plateau. However, in order for the states and tribes in the region to use the §309 option, an Annex to the Commission's recommendations must be submitted by October 1, 2000 for EPA review.

The Annex was developed by the Western Regional Air Partnership (the WRAP), the successor to the Commission. The Annex defines stepped reduction milestones though 2018 for sulfur dioxide emission from large industrial sources in the 9-state Commission Transport Region that affects the Colorado Plateau. The Annex also sets forth provisions for a backstop emission trading program to be implemented if the milestones are exceeded. This program is only one part of the Commission's comprehensive recommendations; other sources and other pollutants will be addressed as states and tribes prepare implementation plans due in 2003 and later.

The Annex has been developed over a three-year period by the WRAP's Market Trading Forum, a group made up of state, tribal and federal agency personnel as well as industrial and environmental group representatives, and by the WRAP's Initiatives Oversight Committee, a group that has similar representation. The resulting complete package of recommendations reflects the inter-relationships among the program elements and stresses the importance of a balanced proposal to address all stakeholder concerns. Further details can be found at www.wrapair.org.

2018 MILESTONE

The 2018 milestone of 510,000 tons, including a 30,000 ton set-aside for two copper smelters not currently operating (or 480,000 tons if the suspended smelters do not resume operation), represents a regional emission reduction of approximately 320,000 tons of SO_2 from the 1990 baseline emissions of 830,000 tons, and is well on the way to the Commission's goal of a 50 - 70% reduction by 2040. The regional haze rule requires that total reductions by 2018 be "better than BART," that is, greater than could be achieved by retrofitting 250 tons per year sources that were built between 1962 and 1977 and currently are operating without modern emissions controls. The WRAP estimated that BART reductions would total approximately 170,000 tons by 2018.

INTERIM MILESTONES

After considerable investigation, the Forum determined that 1999 SO_2 emissions, including expected emissions of 38,000 tons from the two smelters not currently operating, were about 690,000 tons. Interim milestones are intended to meet the Commission's recommendation for steady and continuing reductions, while giving the regulated community operating flexibility in the early years and time to mesh planning for regional haze reductions with other factors such as electricity deregulation. The proposed interim milestones with the suspended smelters in and out respectively are 720,000/682,000 tons in 2003; 715,000/677,000 tons in 2008; and 655,000/625,000 tons in 2013. Milestones step down every fifth year.

TRIGGERING THE TRADING PROGRAM

States and tribes will collect an annual SO_2 inventory. Compliance with the milestones is determined by an annual comparison of the rolling 3-year average of total regional emissions with the rolling 3-year average of the milestones. For 2018, total emissions will be compared with the 2018 milestone. If a milestone is exceeded, the trading program is activated, and emission allocations are made one year later with sources having 5 years from the year of exceedance to comply. Sources may comply by retrofitting to bring emissions below their allocation, by buying credits to emit from other sources that are able to comply more cheaply, or by retiring the source.

CERTAINTY THAT 2018 MILESTONE WILL BE MET ON TIME

With such a large proportion of the reductions scheduled to occur in the last 5 years of the program, it is important to ensure that all the reductions occur on time. Therefore, the proposal includes a mechanism for the states and tribes to activate the trading program in 2013 if available evidence indicates the 2018 milestone will not be reached. Also, compliance with the 2018 milestone will be based on 2018 emissions alone (in addition to compliance based on a three-year rolling average of emissions), and sources that have not controlled their emissions in accordance with their allocations will be subject to financial penalties and a 2-to-1 offset of future emissions allocations for each ton of excess

emissions if the 2018 milestone is not met.

TRADING PROGRAM FEATURES

Details of the backstop trading program such as applicability, monitoring and reporting, trading procedures, compliance requirements and penalties, are defined in the Model Rule that will be used as a template as participating states and tribes develop their implementation plans in 2003. States and tribes will agree to participate and administer the program by signing a memorandum of understanding. Sources that reduce their emissions below their allocation will be able to "bank" those credits for sale to other sources, within certain programmatic restrictions.

REASONABLY ATTRIBUTABLE BART AND GEOGRAPHIC ENHANCEMENT

The existing program to address "hot spots" where specific sources contribute to visibility impairment in protected Class I areas remains in place through 2018. Federal land managers expect to certify impairment only in Class I areas where sulfates are not decreasing, the sources are within 100 miles, and the sources are controlling less than 85% of their emissions. States and tribes intend that the program not be used to address regional haze, but focus on reasonably attributable impacts, and expect to develop guidance to address the distinction between the two. If there is a finding of reasonable attribution, states and tribes have 3 options: BART controls could be required on the attributable sources, emission reductions could be required from other sources, or, in advance of certification, reasonably attributable sources and states could negotiate a settlement to apply control measures.

ALLOCATIONS

If the program is triggered, 20,000 tons of SO_2 allocations will be set aside for tribal interests, acknowledging that tribal lands are largely undeveloped and that tribes would not benefit from a plan based only on past emissions. Second, there will be a new source set-aside to accommodate growth within the region. Third, there will be an allocation for the California RECLAIM program. Fourth, existing sources will receive a "floor"allocation based on some specified level of control such as BACT, BART, LAER, and certain renewable energy sources also will be eligible to receive an allocation. The remainder of the allowances, which will decline over the years, will be allocated to existing sources. Each source's allocation will be specified in state and tribal implementation plans due in 2003 and every fifth year thereafter. If the program is triggered, sources may buy and sell allowances to come into compliance.

STATE AND TRIBAL OPT-IN OR OPT-OUT

In the event that states or tribes with existing sources in the region choose to develop their regional haze plans under §308, proportional adjustments will be made to the milestones and the program components will be altered accordingly.

OTHER CLASS I AREAS

It is the intention of the states and participating tribes to demonstrate in the 2003 Implementation Plans, that the milestones and backstop trading program will satisfy the "greater reasonable progress than BART" requirements, and any other reasonable progress requirements for additional Class I areas through 2018. This demonstration will apply to all sources of sulfur dioxide participating in that program. The work plan and resources needed to make this demonstration in the 2003 implementation plans will be identified and provided by the WRAP. Class I areas beyond the original 16 will be addressed in the Annex, even if only to identify the process and procedures to address this issue in the 2003 implementation plans.

Further, the states must evaluate other sources and pollutants in order to demonstrate reasonable progress for additional Class I area. Although it is their intent to do so, the states and tribes recognize that it may not be practicable to satisfy the additional Class I area requirements for all other sources of anthropogenic emissions besides stationary sources (e.g., mobile and area source sectors), and for all species of visibility impairing pollutants from stationary sources (e.g., NO_x and PM), by the 2003 deadline. States have the option of addressing these additional issues later, in a 2008 SIP.

GLOSSARY OF ACRONYMS AND TERMS

BART	Best Available Retrofit Technology. A requirement under Section 169A of the Clean Air Act and the provisions of 40 CFR subpart P.
BFS	Baseline Forecast Scenario. Emission projections produced by the IAS based on assumptions of expected future economic conditions and known regulatory requirements.
CEMS	Continuous emission monitoring system. The equipment required under 40 CFR part 75 to sample, analyze, measure and provide a permanent record of sulfur dioxide emissions.
EF	Emissions Forum. The Emissions Forum is responsible for the oversight of the assembly and quality assurance of the emissions inventories and forecasts to be utilized by the WRAP forums and oversees the development of a comprehensive emissions tracking and forecasting system.
FLMs	Federal Land Managers. The Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, and the National Park Service.
GCVTC	The Grand Canyon Visibility Transport Commission. The GCVTC was authorized under section 169B(f) of the Clean Air Act and composed of the governors of eight western states (AZ, CA, CO, NM, NV, OR, UT, WY), four tribes (Acoma Pueblo, Hopi, Hualapai, and Navajo), four federal land managers (Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, National Park Service), the Columbia River Inter-Tribal Fish Commission, and the Environmental Protection Agency. The Commission was established to recommend methods to preserve and improve visibility on the Colorado Plateau, and submitted recommendations to EPA in June, 1996.
IAS	Integrated Assessment System. A computer model created by the GCVTC to generate information about future emissions of visibility impairing pollutants and the visibility impacts of those emissions on 16 Colorado Plateau Class I areas (including the Grand Canyon) based on expected future economic trends and a variety pollution control scenarios.

IOC	Initiatives Oversight Committee. The Initiatives Oversight Committee provides general oversight for the coordination and development of air quality strategies necessary to promote the implementation of the GCVTC recommendations. The IOC refers issues to forums, reviews recommendations from forums and makes recommendations to the WRAP.
MTF	Market Trading Forum. The Market Trading Forum is charged with implementing the stationary source recommendations of the GCVTC.
SO_2	Sulfur dioxide.
WEB Trading Program	Western Emissions Budget Trading Program. The WEB Trading Program, or Web Program, is the backstop market trading program that will be triggered in the event regional emissions exceed any of the emission reduction milestones established for the region. The emissions reductions required under the trading program will ensure that future milestones are achieved.
WRAP	Western Regional Air Partnership. The WRAP is a collaborative effort of tribal governments, state governments and federal agencies to promote and monitor implementation of recommendations from the Grand Canyon Visibility Transport Commission (GCVTC). The WRAP may also address other common Western regional air quality issues as raised by its membership. The activities of the WRAP are conducted by a network of committees and forums, composed of WRAP members and stakeholders who represent a wide range of social, cultural, economic, geographic and technical viewpoints.

I. BACKGROUND

"Historically, visibility has been defined as *the greatest distance at which an observer can just see a black object viewed against the horizon sky.* ...Nevertheless, visibility is more than being able to see a black object at a distance." (William C. Malm, *Introduction to Visibility*, CIRA, May 1999) The observer of the spectacular vistas in the Class I areas on the Colorado Plateau will notice the colors of the scenery, the complexity of the geologic features, the shadows of overhead clouds, and the inherent beauty of the landscape features. Particles in the atmosphere interfere with the observer's ability to see and appreciate the landscape. Some particles scatter light so that the observer sees a gray-white glare; other particles absorb light so that the scene appears gray and definition of the features is lost. *In the Western United States average visual range is about 100 - 150 kilometers, about one-half to two-thirds of the visual range that would exist without manmade air pollution.* (Preamble, Regional Haze rule, 64 FR 35715)

Particles come from a variety of sources ranging from desert dust and forest fires to the gaseous emissions of cars and industrial sources that combine with other substances in the atmosphere to form particles. The specific pollutants affecting visibility are sulfates, nitrates, organic carbon, elemental carbon, and soil dust.

A. 1977 Clean Air Act

In 1977, Congress amended the Clean Air Act to include provisions to protect the scenic vistas of the nation's National Parks and Wilderness Areas. In these amendments, Congress declared as a national visibility goal:

> "The prevention of any future, and the remedying of any existing impairment of visibility in mandatory class I Federal areas which impairment results from man-made air pollution.

To address this goal, the Environmental Protection Agency (EPA) developed regulations to reduce the impact of large industrial sources on nearby Class I areas. It was recognized at the time that regional haze, which comes from a wide variety of sources that may be located far from a Class I area, was also a part of the visibility problem. However, monitoring networks and visibility models were not yet developed to the degree that was necessary to understand the causes of regional haze.

B. Grand Canyon Visibility Transport Commission

In 1990, Congress amended the Clean Air Act, and as part of these amendments created the Grand Canyon Visibility Transport Commission (GCVTC). The Commission was given the charge to assess the currently available scientific information pertaining to adverse impacts on visibility from potential growth in the region, identify clean air corridors, and recommend long-range strategies for addressing regional haze.

The GCVTC completed significant technical analysis and developed recommendations to improve visibility in the 16 mandatory federal Class I areas on the Colorado Plateau. The Commission found that visibility impairment in the Colorado Plateau was caused by a wide variety of sources and pollutants. A comprehensive strategy was needed to address all of the causes of regional haze. The GCVTC submitted these recommendations to EPA in a report dated June 1996 for consideration in rule development. These recommendations were:

- **Air Pollution Prevention.** Air pollution prevention and reduction of per capita pollution is a high priority for the Commission. The Commission recommends policies based on energy conservation, increased energy efficiency and promotion of the use of renewable resources for energy production.

- **Clean Air Corridors.** Clean air corridors are key sources of clear air at Class I areas, and the Commission recommends careful tracking of emissions growth that may affect air quality in these corridors.

- **Stationary Sources.** For stationary sources, the Commission recommends closely monitoring the impacts of current requirements under the Clean Air Act and ongoing source attribution studies. Regional targets for SO_2 emissions from stationary sources will be set, starting in 2000. If these targets are exceeded, this would trigger a regulatory program, probably including a regional cap and market-based trading. During the next year, participants in the Commission's process will develop a detailed plan for an emissions cap and market trading program.

- **Areas In And Near Parks.** The Commission's research and modeling show that a host of identified sources adjacent to parks and wilderness areas, including large urban areas, have significant visibility impacts. However, the Commission lacks sufficient data regarding the visibility impacts of emissions from some areas in and near parks and wilderness areas. In general, the models used by the Commission are not readily applicable to such areas. Pending further studies of these areas, the Commission recommends that local, state, tribal, federal, and private parties cooperatively develop strategies, expand data collection, and improve modeling for reducing or preventing visibility impairment in areas within and adjacent to parks and wilderness areas.

- **Mobile Sources.** The Commission recognizes that mobile source emissions are projected to decrease through about 2005 due to improved control technologies. The Commission recommends capping emissions at the lowest level achieved and establishing a regional emissions budget, and also endorses national strategies aimed at further reducing tailpipe emissions, including the so-called 49-state low emission vehicle, or 49-state LEV.

- **Road Dust.** The Commission's technical assessment indicates that road dust is a large contributor to visibility impairment on the Colorado Plateau. As such, it requires urgent attention. However, due to considerable skepticism regarding the modeled contribution of road dust to visibility impairment, the

Commission recommends further study in order to resolve the uncertainties regarding both near-field and distant effects of road dust, prior to taking remedial action. Since this emissions source is potentially such a significant contributor, the Commission feels that it deserves high priority attention and, if warranted, additional emissions management actions.

- **Emissions from Mexico.** Mexican sources are also shown to be significant contributors, particularly of SO_2 emissions. However, data gaps and jurisdictional issues make this a difficult issue for the Commission to address directly. The Commission recommendations call for continued binational collaboration to work on this problem, as well as additional efforts to complete emissions inventories and increase monitoring capacities. These matters should receive high priority for regional and national action.

- **Fire.** The Commission recognizes that fire plays a significant role in visibility on the Plateau. In fact, land managers propose aggressive prescribed fire programs aimed at correcting the buildup of biomass due to decades of fire suppression. Therefore, prescribed fire and wildfire levels are projected to increase significantly during the studied period. The Commission recommends the implementation of programs to minimize emissions and visibility impacts from prescribed fire, as well as to educate the public.

- **Future Regional Coordinating Entity.** Finally, the Commission believes there is a need for an entity like the Commission to oversee, promote, and support many of the recommendations in this report. To support that entity, the Commission has developed a set of recommendations addressing the future administrative, technical and funding needs of the Commission or a new regional entity and has asked the Operations Committee to complete detailed plans by September, 1996. The Commission strongly urges the EPA and Congress to provide funding for these vital functions and give them a priority reflective of the national importance of the Class I areas on the Colorado Plateau.

The stationary source recommendations were a key part of the overall Commission recommendations because they established a backstop trading program that would be implemented if the Commission goals were not met through voluntary measures. The projections and analyses undertaken by the GCVTC indicated that existing requirements under the Clean Air Act, coupled with voluntary measures undertaken by sources, would result in sufficient reductions to address visibility concerns. The purpose of the backstop trading program is to ensure that the emission reduction goals necessary to demonstrate reasonable progress in accordance with the regional haze rule do indeed occur – if sufficient reductions as defined by the milestones are not achieved, the backstop trading program will be activated to ensure further regional reductions. The backstop program would begin within one year after emissions are determined to exceed the relevant milestone, and compliance is required within five years after this determination. Program design elements such as rigorous monitoring and reporting, public availability of emissions and allowance data, as well as compliance information, would ensure confidence of the regulators and the public that requisite reductions are achieved under this backstop program. The GCVTC encouraged states and tribes to review the visibility impacts of uncontrolled pollution sources at Class I sites on the Colorado Plateau and make expeditious determination regarding the need for additional pollution controls pursuant to the Clean Air Act (CAA) to address reasonably attributable impairment. Until such time the trading program is triggered, however, all stationary source reductions for the widespread issue of regional haze will be of a voluntary nature.

The stationary source goals are described in greater detail below.

1. Implement existing Clean Air Act requirements through the year 2000.

Implementation of existing Clean Air Act requirements is expected to result in a significant decrease in sulfur dioxide emissions and their contribution to light extinction in the short term (1990-2000). ... States and tribes are encouraged to review the visibility impacts at Class I sites on the Colorado Plateau of uncontrolled pollution sources and make expeditious determinations regarding the need for additional pollution controls pursuant to the Clean Air Act. To the extent decisions are made to require additional emission reductions at existing facilities, the Commission supports the adoption of the best, most cost-effective strategies.

2. Establish stationary source emission targets as regulatory triggers.

a) An SO2 emissions target for stationary sources will be established effective in the year 2000. The level of the target would be calculated by (1) determining the amount of emission reductions that has actually been achieved (or legally committed to) between 1990 and 2000; (2) comparing the actual reduction to the 13% reduction from 1990 actual emission levels that was projected by the Baseline Forecast Scenario; (3) assuming the actual reduction is higher than the projected reduction, set the emissions target at a level midway between the projected and actual, unless any affected party convinces the Commission or its successor that a different distribution is needed (e.g., emissions growth in undeveloped areas, operational flexibility needs, deteriorating visibility). As part of this calculation, the 1990 emissions inventory will be compared to the reported emissions to 1995/1996 data now available from sources (all utilities and many stationary sources have Continuous Emission Monitors).

b) An ultimate SO2 emissions target for the visibility Transport Region will be established for the year 2040 that locks in the 50-70% reduction in SO2 emissions projected by the Baseline Forecast Scenario. Interim targets may also be needed to ensure steady and continuing emission reductions and to promote investment in pollution prevention (in accordance with five year review periods as described in #4 below).

c) Various emissions management options for stationary source NOx and PM will be explored, including considering the establishment of emission targets, in order to avoid any net increase in these pollutants from stationary sources within the region as a whole and to provide a foundation for future incorporation into a multi-pollutant and possibly multi-source market-based program.

3. Develop a plan for allocating trading credits under a regulatory program emissions cap.

a) Development of an equitable plan for allocating the trading credits among existing and future sources will be accelerated. The Commission expects that the targets will be met based on existing commitments and other actions that are likely to be required because of ongoing source attribution studies. However, in order to create economic incentives for early reductions as well as to provide flexibility and certainty to sources in planning future actions, participants in the Commission's process are committed to designing the plan before the EPA takes final action on the Commission s recommendations so that the elements of that program can be incorporated into the federal regulatory program. (The estimated date for completing development of the program is June, 1997). A number of factors will be considered in developing the program, including measures to:

- prevent new sources from causing the target to be exceeded;

- account for sources which achieve emission reductions early or have achieved maximum control efficiency;

- ensure that all allocations to tribal lands, rural areas and relatively undeveloped areas (e.g., clean air corridors) are of practical benefit; and

- account for the effects of increases or decreases of emissions on visibility.

b) In order to generate information for development and implementation of the incentive-based program, owners and operators of existing facilities located within the Transport Region should: (1) by 1997, notify states and tribes of existing or planned pollution control or prevention measures; and (2) report biannually on efforts that are being made to manage their emissions or engage in other transactions to voluntarily meet their emissions reductions responsibility per the trading credit allocation scheme. These plans would not be incorporated as enforceable permit conditions or SIP revisions except as noted below.

4. Review compliance with targets and establish incentives.

Progress in complying with the emissions target(s) would be assessed in the year 2000 and at five-year intervals thereafter.

a) In 2000, or any subsequent five-year review period, if the regional target in effect at that period has not been exceeded no additional regulatory program will be required. Any source that has contributed significantly to achieving the needed reductions by going beyond compliance or achieving early reductions will be rewarded. For instance, the following rewards could be included:

- an exemption from any interim target requirements that might be established;

- streamlined treatment in the permitting process;

- ability to bank emissions; or

- bonus allowances if credits are used to achieve development on tribal lands or other areas that are relatively undeveloped.

Incentives will be further developed and included in the design of the program.

b) In 2000, or at any subsequent five-year review period, if the regional emissions target has been exceeded, a regulatory program (most likely an emissions cap and incentive-based market trading program) will be implemented. Any source that is exceeding the emission allocation presented in the plan will have no more than five years to come into compliance and any reductions achieved will be discounted. Other disincentives will be developed and included in the design of the program.

5. Complete source attribution studies.

The Commission strongly encourages the EPA to complete, within one year, the source attribution study currently underway at the Mohave Power Project. Further, the Commission strongly encourages the EPA to take action consistent with the results of that study within twelve months of its completion. The Commission supports the commitment by the Mohave Power

Project to maintain voluntarily its emissions at or below current levels (e.g., an average of the past two year's emission levels).

6. Develop an improved monitoring and accounting system.

A major deficiency in the technical analysis associated with the GCVTC activities has been the lack of adequate and reliable monitoring data. In order for any visibility policy to be effective, there must be an adequate benchmark of existing conditions against which to measure progress. To obtain a better understanding of visibility throughout the Colorado Plateau, Class I areas other than Hopi Point in the Grand Canyon need to be included as receptors in visibility modeling and additional monitoring sites should be established.

Emissions in the Transport Region provide another benchmark against which to measure progress. An accurate and credible emissions accounting method will be essential in determining compliance with the emissions targets or caps. Shortcomings in the emissions inventory need to be remedied, and a method for routinely tracking emissions needs to be developed.

It is critical that the emissions monitoring and tracking system be developed quickly so that emission reductions achieved between now and the year 2000 can be recorded and so that those areas that are presently lower-emitting can receive appropriate credit. If an incentive-based regulatory program is implemented after the year 2000, early emission reductions achieved before the year 2000 should be awarded credit, provided established criteria are satisfied."

C. Regional Haze Rule

On April 22, 1999, the EPA issued regulations to improve visibility in 156 national parks and wilderness areas across the country by addressing regional haze. These regulations were published in the Federal Register on July 1, 1999 (64 FR 35714). The regional haze regulations require states to establish goals for improving visibility and to develop long-term strategies for reducing emissions of pollutants that cause visibility impairment.

The regional haze rule establishes in §309 specific SIP requirements which may be used by the nine "transport region states" included in the GCVTC analysis (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming) and the 211 tribes in the same geographic area to satisfy the national regional haze rule requirements for the period from 2003 to 2018. These states and tribes also have the option to submit SIPs and TIPs under the nationally applicable §308 provisions. Because of the substantial work that has already been completed by the GCVTC, the §309 plans will be submitted by 2003 as opposed to as late as 2008 under §308.

In order for any of the transport region states to pursue compliance with the regional haze rule through §309, these states must submit an Annex to the Commission Report to EPA by October 1, 2000. The Annex is required to include quantitative emission reduction milestones for stationary source sulfur dioxide (SO2) emissions for the reporting years 2003, 2008, 2013, and 2018. These milestones must reflect "steady and continuing emissions reductions for the 2003-2018 time period...to provide for greater reasonable progress than would have been achieved by application of Best Achievable Retrofit

Technology (BART)." The Annex is also required to include documentation of a backstop market trading program to be implemented if current programs and voluntary measures are not sufficient to meet these emission reduction milestones.

While transport region states are also provided the option of complying with the rule through the provisions designed for the remainder of the states impacted by the regional haze rule, pursuit of §309 allows these states to capitalize on the work completed in the GCVTC, and therefore rely on previous modeling, inventories, and analyses for the 16 Class I areas on the Colorado Plateau. Additionally, sources in states pursuing a regional trading program will benefit from the cost effectiveness associated with the use of a trading program to achieve emission reductions. Though a regional trading program is also a compliance option under the alternative provisions of the rule, pursuit of the trading program under §309 allows incorporation of the work of the GCVTC and capitalizes on already existing regional relationships.

D. Western Regional Air Partnership

The Western Regional Air Partnership (WRAP) was established in 1997 as the successor organization of the Grand Canyon Visibility Transport Commission. The WRAP is charged with implementing the Commission recommendations, as well as addressing broader air quality issues that affect all western states. The WRAP is designed as a stakeholder-based organization. States, Tribes, Federal Agencies, environmental groups, and industry representatives work in a cooperative process to develop recommendations that meet the environmental goals in the most effective way. The Committees and Forums of the WRAP have worked diligently over the last three years to develop the details of the Annex to the Commission recommendations.

It should be noted that the work of the WRAP with stationary sources is only one part of a complete package to address regional haze. Other forums established by the WRAP are working on control strategies for other contributors to haze, such as fire, road dust and mobile sources. The overall impacts of these programs on visibility will not be apparent until all the forums have completed their work and the results have been modeled.

II. EXPLANATION OF DECISIONS

In this Annex to the Grand Canyon Visibility Transport Commission Recommendations, the Western Regional Air Partnership (WRAP) provides details to the Environmental Protection Agency (EPA) regarding regional sulfur dioxide (SO_2) emissions milestones and a backstop trading program that would be triggered if the milestones are not met in future years. The details of the program are complex and inter-related. Decisions made regarding one element of the program may only be acceptable to the stakeholders that have participated in this process within the context of expectations for how other portions of the program would function. For this reason, the Annex needs to be viewed as an overall package, recognizing that the needs of various stakeholders have been balanced to achieve a program that all of the stakeholders can accept. Any future changes to the milestones and backstop trading program would need to be viewed within this context, recognizing that changing one element may have rippling effects throughout the entire program.

The Regional Haze Rule that was published on July 1, 1999 outlines two paths that States and Tribes may follow to address the impacts of regional haze on Class I areas within their jurisdiction. This Annex outlines the stationary source requirements that would be adopted by a State or Tribe if they choose to implement the Grand Canyon Visibility Transport Commission Recommendations. States and Tribes may also choose to address regional haze by adopting a different set of strategies under §308 of the rule. The submittal of the Annex by the WRAP does not commit any State or Tribe to adopt these provisions into their State or Tribal Implementation Plans (SIPs or TIPs). The States and Tribes in the Visibility Transport Region will work closely together over the next few years to finalize the complete package of strategies recommended by the Grand Canyon Commission, and will make final decisions by December 31, 2003 regarding their participation in the backstop trading program. Tribes are not bound by the same deadlines as the States, and may have the opportunity to join this program at a later date, although this is an unresolved issue pending legal review by EPA.

A. Sulfur Dioxide Milestones

The SO_2 milestones establish the environmental goals of this program. As long as regional emissions of SO2 from major stationary sources remain below these milestones, either through voluntary measures or through other Clean Air Act requirements, all of the reductions called for by this program will remain voluntary. However, if stationary source SO2 emissions are in excess of any of these milestones, the backstop trading program will be triggered to achieve the reductions and ensure future milestones are attained. The determination of milestone levels has thus been both critical and controversial.

After lengthy discussions, the WRAP has agreed to the following regional SO_2 milestones for stationary sources of SO2 emitting more than 100 tons per year:

Regional Sulfur Dioxide Milestones for Stationary Sources Emitting More than 100 TPY
(Tons Per Year)

Year	2003	2008	2013	2018
Maximum Milestone (Smelters In*)	720,000	715,000	655,000	510,000
Minimum Milestone (Smelters Out*)	682,000	677,000	625,000	480,000

* Two Western copper smelters (BHP San Manuel and Phelps Dodge Corporation Hidalgo) suspended operations in 1998 for economic reasons. As discussed in detail later in this document, the milestones have been established with a set-aside in the event that these smelters resume operation in the future.

- The 1990 GCVTC baseline was approximately 830,000 tons per year of SO_2.
- The initial GCVTC goal is a 13% reduction from the 1990 baseline in the first decade, equating to approximately 722,000 tons per year by 2000.

1. Milestone Requirements

a. 13% Reduction by 2000.

The Grand Canyon Commission committed to achieve a 13% reduction in regional sulfur dioxide emissions between 1990 and 2000.[1] The regional haze rule further requires that,

> The plan submission must include provisions requiring the 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 stationary source sulfur dioxide emissions has occurred between the years 1990 and 2000, and whether milestones required by section 51.309(f)(ii) 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 section 51.309(f)(2) 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.[2]

Recent emission inventories show that the region should meet the 13% reduction level set forth in the Commission's Recommendation, and will probably exceed this goal. Regional SO2 emissions for the

[1]GCVTC Recommendations, June 1996, page 37.

[2]64 FR 35770

1998/99 time period were approximately 652,000 tons of SO_2 (with operations at two smelters suspended during this period), which is an emission reduction of 22% from the 1990 baseline. It is important to note that the emission measurement technique for utilities has changed since 1990 due to the requirements of EPA's national acid rain program. Emissions in 1990 were measured using a mass-balance technique where the sulfur content of coal was measured, and then SO_2 emissions were calculated based on the amount of coal burned during that year. Emissions today are measured using continuous emission monitoring systems (CEMS). The CEMS typically measure higher emission levels due to a number of factors. It is difficult to quantify this "CEMS Bias," however, if it were calculated, the actual emission reduction from 1990 levels could be even greater than 22%.

The SIPs and TIPs that will implement the Annex provisions will not be submitted until 2003. The WRAP commits in the Annex to develop a regional emission inventory of SO_2 emissions from all stationary sources with emissions greater than 100 tons/year of SO_2 for the year 2000. The inventory will be collected and quality assured according to existing State and Tribal rules, and then compiled at the regional level by the WRAP's Emission Forum. The 2000 inventory will then be compared to the 1990 inventory to ensure that the 13% emission reduction goal has been achieved. The States and Tribes that participate in the backstop trading program will include this regional inventory as part of their Implementation Plan submittals in 2003.

b. Steady and Continuing Emission Reductions.

The Grand Canyon Visibility Transport Commission took a long-term view towards improving visibility in the 16 Class I Areas of the Colorado Plateau. The visibility modeling and emission reduction strategies were to be analyzed over a 50-year period from 1990 to 2040. The Commission developed the following definition of reasonable progress towards improving visibility:

> **Reasonable Progress**: Reasonable Progress refers to progress in reducing human-caused haze in Class I areas under the national visibility goal. The Clean Air Act indicates that "reasonable" should consider the cost of reducing air pollution emissions, the time necessary, the energy and non-air quality environmental impacts of reducing emissions, and the remaining useful life of any existing air pollution source considered for these reductions. The GCVTC Public Advisory Committee has developed the following definition: "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." [3]

The Commission also established objectives for the stationary source recommendations:

- to achieve significant reductions in sulfur dioxide emissions in the near term;
- to ensure reasonable progress toward the national goal through continuing decreases in sulfur dioxide

[3] Grand Canyon Visibility Transport Commission Report, June 1996, pages x-xi.

emissions over the long term;

- to avoid increases of other visibility-reducing pollutants within the Transport Region as a whole from stationary sources.[4]

When EPA adopted §309 of the Regional Haze rule, specific requirements for the Annex were established to address the issue of reasonable progress.

> 309(f)(I) The annex must contain quantitative emission reduction milestones for stationary source sulfur dioxide emissions for the reporting years 2003, 2008, 2013 and 2018. The milestones must provide for steady and continuing emission reductions for the 2003 - 2018 time period consistent with the Commission's definition of reasonable progress, it's goal of 50 to 70 percent reduction in sulfur dioxide emissions from 1990 actual emission levels by 2040, applicable requirements under the Clean Air Act, and the timing of implementation plan assessments of progress and identification of deficiencies which will be due in the years 2008, 2013, and 2018.[5]

There are a number of principles that were used by the WRAP when deciding on the interim milestones to be included in the Annex.

- Visibility improvement to natural conditions is a long-range goal that is expected to take 60 years or more to achieve.

- The commitment to achieve a 13% reduction in SO_2 emissions by the year 2000 should not be undermined by future growth in the region.

- Early emission reductions, including the significant reductions that have occurred since 1990 should be considered.

- Reductions that have been legally committed to by the year 2000 should be captured in the milestones. Reductions that occur or are committed to after the year 2000 should occur under the milestones.

- The Commission strategies need to be viewed as a whole. There may not be steady progress in all categories at all times, and the overall package is needed to ensure that visibility improves on the Colorado Plateau.

- Flexibility at the beginning of the program is necessary to give a voluntary/ incentive-based program the opportunity to work.

- The utility industry is facing a number of uncertainties at this time. Regional haze BART

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[4]Grand Canyon Visibility Transport Commission Report, June 1996, page 33.

[5] 64 FR 35773

for pollutants other than SO_2 will not be determined until approximately 2008 and the outcome of those negotiations will determine the future viability of some older facilities. The utility industry also is concerned that it is facing additional uncertainties from potential new controls for SO_2, NOx, PM, ozone, CO_2, mercury, and NSR reform. The timing of these is uncertain, but various mixes of controls under these programs may affect the economic viability of generating units. Additional uncertainty is caused by the fact that the industry is being deregulated at an uneven pace, bringing into question how costs for new pollution control will be addressed. Delaying a significant portion of the capital expenditures needed to comply with this program until after 2013 allows for all of these control requirements to be met in the most cost-effective manner possible.

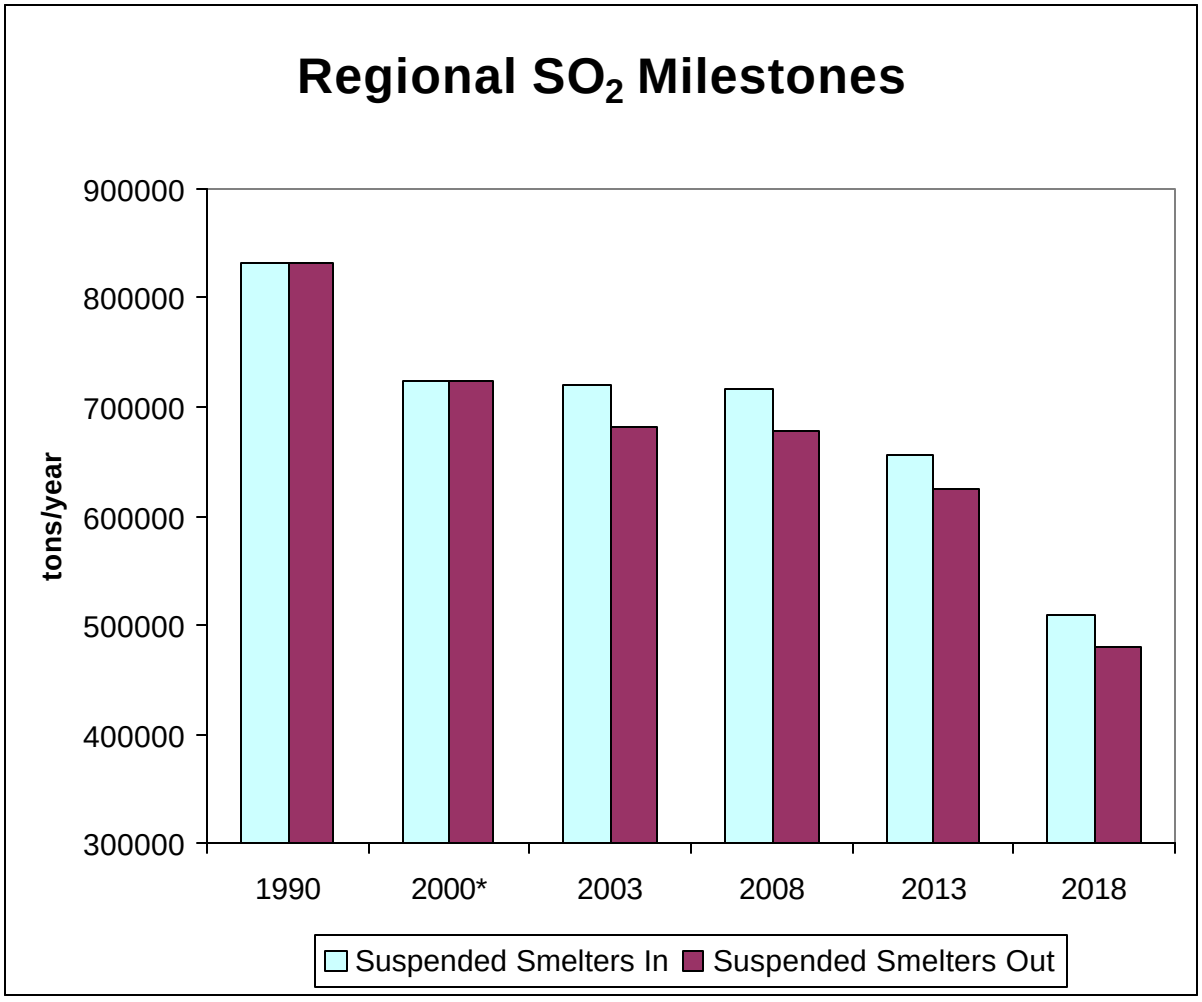
- Adequate emission reductions need to occur by the end of the planning cycle to meet the reasonable progress and regional haze BART requirements of the regional haze rule. A "down payment" is needed in the interim years to ensure continuing emissions decreases and so that all of the emission reductions are not left until the end of this long-range planning cycle. In addition, mechanisms are needed to ensure that the reductions planned by 2018 actually do occur, and to ensure that the region does not begin the next planning cycle significantly "in the hole".

- Tribes strongly support an aggressive definition of reasonable progress and the achievement of BART-equivalent reductions as quickly as possible. At the same time, tribes need to ensure that tribal allocations provide a practical benefit, and that the trading program does not hamper economic development on tribal lands.

- Headroom is necessary to account for natural fluctuations in production and emissions, increased utilization of plants, data errors, and uncertainty in emission projections. In addition, new source growth needs to be accommodated. It is also anticipated that sources will manage their emissions below the milestone to ensure that the program is not accidentally triggered by an unexpected increase in emissions.

The milestones developed by the WRAP go steadily downward throughout the planning cycle, with the most significant reductions occurring between 2013 and 2018 (see Figure 1). It is important to note that the western United States is growing rapidly, and these milestones include significant growth in addition to emission reductions that have already been legally-committed to in the region. For example, utility emissions are projected to grow by approximately 50,000 tons over this time period due to increased utilization of existing plants and the construction of new plants to meet growing demand for electricity. This growth is offset by significant emission reductions from the Mojave Generating Station in Nevada and reductions from a number of power plants owned by Public Service Company of Colorado along the Front Range.

Figure 1.



* The emissions for 2000 shown on this graph represent the goal of a 13% reduction from 1990 emissions established by the GCVTC. It is important to note that the 1990 and 2000 emission levels are based on mass balance measurements for utilities, whereas the milestones for 2003 through 2018 represent CEM measurements. The overall difference between these measurement techniques has been the subject of much discussion and has not yet been definitively resolved.

While the milestones go steadily downward from 2003 to 2018, the WRAP deliberately chose to provide flexibility up front while requiring greater reductions in the last 5 years of the planning period. The WRAP believes that this is consistent with the definition of reasonable progress as envisioned by the Grand Canyon Commission. The overall reductions between 1990 and 2018 will be between 39% and 44% (depending on the future operations of the suspended copper smelters). This overall reduction provides significant progress towards meeting the Commission's goal of 50% to 70% emission reductions by 2040. In addition, by providing flexibility in the early years of the program there

is a much greater potential to achieve these reductions in a cost-effective manner. The region may be able to benefit from strategies to attain the $PM_{2.5}$ and ozone standards, leading to a coordinated strategy as envisioned in the regional haze rule for other areas of the country where regional haze plan submittal dates are tied to the nonattainment plans for $PM_{2.5}$. Other programs, such as the air toxics control requirements under Title III of the Clean Air Act may also help the region meet the emission reduction goals because the required control technology may also reduce SO_2. The Commission's definition of reasonable progress recognized that cost, as well as the other statutory factors described by section 169A of the Clean Air Act must be considered as part of the overall picture.

c. Greater Reasonable Progress than Regional Haze BART.

The regional haze rule contains an additional test for the regional SO_2 milestones. "The emission reduction milestones must be shown to provide for greater reasonable progress than would be achieved by application of best available retrofit technology (BART) pursuant to section 51.308(e)(2) and would be approvable in lieu of BART."[6]

Attachment D of the Annex contains a detailed demonstration of how the milestones developed by the WRAP provide for greater reasonable progress than BART for regional haze. The demonstration outlines the process that was used by the WRAP to estimate the emission reductions that would occur in the region if BART determinations were made for all applicable sources in the region. Additional considerations are also addressed such as the degree of visibility improvement anticipated to be achieved and the increased benefits achieved by including all large stationary sources of SO2 in the program.

The demonstration is included as an attachment in part to emphasize that the 2018 milestone is a negotiated, policy-driven number, and is not directly derived from emission inventory formulas. The WRAP's Committees and Forums have expended considerable effort over the last year to improve the emission inventory projections and to estimate the impacts of future control requirements. The data have informed the debate, and the intense effort to improve and understand the data was necessary for the stakeholders involved in the process to understand the impacts of various proposed milestone levels. However, there was also the recognition that the data will never be perfect, and that the question of greater reasonable progress than BART is a broader question that is also informed by other policy considerations.

There may be changes in the emission inventory estimates as the 2003 SIPs are developed. However, the WRAP has confidence that the milestones as defined in this Annex achieve the goals established by the Grand Canyon Visibility Transport Commission and the Regional Haze Rule. The milestones established in this Annex are not anticipated to change unless major differences in the underlying data

[6] 64 FR 35773

that were used to develop the milestones are discovered during the development of the implementation plans due in 2003.

2. Provisions for Future Adjustments to the Milestones.

a. Suspended Smelters.

There are currently two smelters in the region that have temporarily suspended operations due to economic considerations. The two smelters are the Phelps Dodge Corporation's Hidalgo smelter in New Mexico and BHP's smelter in San Manuel, Arizona. It is estimated that the smelters emit 22,000 tons and 16,000 tons of SO_2, respectively. Uncertainty arises from the fact that it is currently unknown whether these shutdowns will become permanent or whether the smelters will resume operation. If the smelter shutdowns are treated as temporary and the smelter emissions are included in the milestones but the smelters do not in fact resume operation, then this addition could inappropriately inflate the milestones. Conversely, if the shutdowns are treated as permanent and the emissions for these sources are not considered in the development of the milestones but the smelters resume operation, then this deduction could inappropriately under-represent the year 2000 emissions and milestones, leading to milestones that are too low.

The Annex contains provisions that recognize and address the unique uncertainty surrounding the two smelters that are shut down for economic reasons. The Annex is designed to neither over- nor under-estimate the smelter emissions or milestones in light of the uncertainty. The emissions from the two suspended smelters are not included in the milestone initially. However, the Annex contains provisions to automatically adjust the milestones upward in the event one or both smelters are brought back on line. The key elements of the proposed methodology are described below.

(i) Smelter Emissions Provisionally Excluded from Milestones. The emissions associated with the two smelters currently shut down for economic reasons are not initially included in the milestones to reflect that these emissions are not, in fact, occurring. At the same time, it is specifically acknowledged that the milestones will automatically be adjusted in the future to account for the emissions from these two suspended smelters if they resume operations. If either one of the smelters resumes operation, there would be an allocation to the smelters and an appropriate, automatic upward adjustment to the milestones. If these programmatic adjustments were not made and the backstop cap-and-trade program was triggered, the entire allocation for regional new source growth could be consumed by these smelters resuming operation.

(ii) Automatic Adjustment of Milestones Without SIP Revision. It is possible that the smelters could be brought back into operation within a year. The WRAP wants to ensure that the Annex and SIPs are structured to adjust the milestones in this event, without the need for further SIP revision. At the same time, there are a number of different circumstances in which the smelters could resume operations, each with different environmental consequences.

The Annex outlines the different circumstances in which an adjustment would be made to address startup of one or both smelters. These circumstances include the following scenarios:

(1) startup of one or both smelters under circumstances that do not require new source permitting, and that reflect the best estimate of immediately past emissions levels,

(2) startup of one or both smelters under circumstances that do not require new source permitting but result in significantly lower emissions because of an unforeseen development, and

(3) startup of one or both smelters under circumstances that require new source permitting where emissions may be equal to or less than past levels.

In the latter scenario, the new emissions level would be determined by the appropriate permitting authority. The determination as to whether or not a smelter needs to go through NSR will be based upon current EPA requirements.

(iii) Determining the Appropriate Emissions Amount to be Reinstated. In the event one or both smelters resume operations, it is critical to determine the appropriate emissions amount to be added to the milestones. The best estimate of annual emissions for these sources is based on their operations prior to shutdown (1997/98) as follows:

Phelps Dodge Corporation, Hidalgo Smelter	22,000 tons
BHP, San Manuel Smelter	16,000 tons

Making this determination now has several important policy advantages including basing it on more current data, rather than a determination many years from now looking back at potentially stale information. Further, because the best estimate of immediately past emissions represents the maximum amount that the milestones could be adjusted upward in the event the smelters resume operation, it helps define in advance for the regulated community and the public the bounds of the regional emissions cap.

At the same time, the level of emissions associated with the other potential smelter startup scenarios cannot be pinned down firmly at this time and will depend on a variety of unpredictable factors. The Annex outlines the considerations that the permitting authority will use to define the appropriate adjustment to the milestones under these different circumstances.

(iv) Ensuring the Smelter Contingency is Transparent to the Public and Regulated Community. The regional haze rule incorporates the recommendation of the Grand Canyon Visibility Transport Commission to provide for steady and continuing emission reductions. The WRAP believes that the evaluation of this requirement should take into account the uncertainty associated with the smelter emissions status. At the same time, the WRAP recognizes the concern those unfamiliar with the program may have if they perceive the milestones being adjusted upward during the middle of program

implementation. Nevertheless, the WRAP believes the more straightforward approach is to recognize the current uncertainty surrounding the smelters and to craft a program that better tracks the real world conditions including the possibility that the shutdown may become permanent or that operations may resume.

(v) Smelter set-aside if one or more of the smelters don't resume operation. The copper industry has raised concerns that, unlike other industrial SO_2 sources in the region, it operates in a world market, making it difficult to pass on increased operating expenses. The additional cost incurred significantly effects their ability to be competitive in a world market. When the price of copper is low, the high-cost producers are the first to feel the effect. Since 1980 the copper industry has seen the loss of six smelters in the United States. A small portion of the lost smelter capacity has been made up by the remaining smelters. In the last two years, three smelters have gone on standby due to economic conditions. It is important to maintain the remaining smelter capacity as a part of the suspended smelters set-aside.

In 1990, the GCVTC and the IAS forecasted that the copper smelters in 2018 would have 78,000 tons of emissions. Within the GCVTC region, there are two smelters on economic standby. The most recent emissions from these smelters are 38,000 tons SO_2. The remaining operating smelters have current emissions of 48,000 tons, some 30,000 tons below the IAS forecast for 2018. This is a significant reduction over the forecast. In order to maintain the smelting capacity forecasted for the smelters within the region, the remaining smelters may decide to increase throughput to pick up some of the capacity lost if one or both of the smelters currently on standby don't come back up. Currently, these remaining smelters are not operating at 100% capacity. If these smelters increased throughput to a level that would not trigger NSR, the copper industry estimates that emissions would increase by a maximum of 13,600 tons SO_2. Therefore the Annex includes provisions for a 13,600 ton set-aside that could only be used to increase existing capacity. This set-aside will be available only if one or both of the suspended smelters do not resume operation. In addition, the set-aside may not be traded if the backstop trading program is triggered.

The following table identifies the preliminary facility-specific set-aside for each smelter to be used to maintain smelter capacity.

Company / Smelter	Baseline Level	Smelter-specific Set-aside
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
TOTAL	**86,000**	**13,600**

This increase in emissions is not outside the NSR program and, if a smelter increases throughput through the addition of equipment, the smelter may be required to go through NSR. Also, this additional increase in emissions cannot be greater than that allowed in the individual smelter's permit and will not exceed the amount of the smelter set-aside. The SO_2 allowance in this set-aside cannot be traded in the market. It is the sole intent of these allowances to be used to make up some of the lost smelting capacity if one or both smelters don't come back up. If these allowances are used, the corresponding milestone will be increased by that amount not to exceed the amount in the set-aside.

b. State and Tribal Opt In/Opt Out Provisions

(i) Demonstration of Reasonable Progress. The GCVTC recognized that regional haze was a regional problem, and focused its technical and policy work on developing regional solutions. The emission projections, visibility modeling and economic modeling were developed at the regional level, and assumptions were made that may not be valid locally but were expected to balance out throughout the region as a whole. This is especially true for the stationary source recommendations. The back-stop trading program envisioned by the GCVTC would allow the market to find the most cost-effective emission reductions throughout the region rather than specifying reductions for each source in the region through a command-and-control program.

When EPA promulgated the regional haze rule in July 1999, western states and tribes were offered two options for complying with the rule. The first option was to implement the GCVTC recommendations, as outlined in section 309 of the rule, with a SIP submittal due in 2003. The second option was to develop a SIP by the year 2008 as outlined in section 308 of the rule that would demonstrate that the state was on a 60-year glide path to reach natural visibility conditions. The question is how to adapt the GCVTC recommendations for stationary sources to the possibility that:

- One or more states may choose to develop a SIP under section 308 of the rule instead of implementing the GCVTC regional strategies;
- States not currently participating in the WRAP may want to opt-in to the back-stop cap and trade program; and
- Tribes, which are not required to develop a TIP by a specific date, may wish to participate in the regional strategies at a later date.

Section 309(e) of the regional haze rule states:

> "Any Transport Region State may elect not to implement the Commission recommendations set forth in paragraph (d) of this section. Such States are required to comply with the time lines and requirements of section 51.308. Any Transport Region state electing not to implement the Commission recommendations must advise the other states in the Transport Region of the nature of the program and the effect of the program on visibility-impairing emissions, so that other States can take this information into account in developing programs under section 51.309."

This paragraph of the rule provides for the possibility that some of the GCVTC states may not chose to implement a SIP under section 309 of the rule, opting, instead, to submit a SIP under section 308. States that develop SIPs under section 308 are not required to complete their SIPs until approximately 2008, which is well after the deadlines established under section 309. These states will not be able to advise the other states in the region of the effect of their strategies until their SIPs have been adopted. The following paragraphs outline the approach followed by the WRAP to deal with the uncertainties associated with the diversity of potential approaches to complying with the stationary source requirements of the Regional Haze Rule, and to allow states and tribes to choose the best option for their individual situation.

First, the WRAP has developed the backstop trading program, and technical demonstrations based on full participation of the states and tribes in the transport region. (In actuality, very few tribes have major SO2 sources, but those few were included in the emissions inventory on which the milestones are based.) The strategies were developed on a regional level, and many of the individual elements, such as the 50%-70% emission reduction of SO_2 by the year 2040, would be difficult to apply to individual states and tribes.

Second, in the Annex and the 2003 SIPs, the WRAP will make the assumption that states and tribes that do not participate in the program will achieve emission reductions equivalent to BART for sources within their jurisdiction and other regional strategies of the GCVTC. Therefore, as long as the states and tribes that developed SIPS and TIPS under section 309 of the rule implement the regional strategies, then the overall goals of the Commission will be met.

However, at the time of the submittal of 2003 SIPs, the milestones will need to be adjusted to exclude emissions from non-participating states and tribes. The adjustment is important, because it would not be equitable to trigger a trading program based on the activities of states and tribes that are not participating in the program.

The allocation process described in Section III.D.7 of the Annex will be used to determine an estimated emission budget for each State and Tribe in the region for each of the milestone years. The budgets for each of the participating states and tribes will, when added together, equal the regional milestone. The portions of the budget that were retained at the regional level for tracking purposes will be addressed as follows:

> (A) Tribal Allocation. The 20,000 ton tribal allocation will be included in the milestone, and will not be affected by the number of states that participate in the program. The WRAP recognizes that this allocation may become a significant part of the milestone only if few states participate in the program. This concern is counter balanced by the recognition that a critical mass of states and tribes will be necessary to create an effective program. If this critical mass is not achieved, then states and tribes are unlikely to develop Implementation Plans under '309.

(B) New Source Set Aside. The new source set-aside will be divided proportionally using growth estimates that were used to estimate the magnitude of new source growth in the region. These estimates were based on state-specific growth projection. Although state specific projections will be used to adjust the set-aside in accordance with state participation, once adjusted, the new source set aside is regional.

Because the allocation methodology may not be fully consistent with the methodology used to determine the BART level emission reductions, if the allocation methodology is used as the basis for adjusting the milestones in the event that a state opts out of the program, it will be necessary to review the adjusted milestones that are applicable to those states remaining in the program to ensure that the greater reasonable progress than BART requirement is met for those states.

Finally, in the 2008 SIP review, the WRAP will re-evaluate the GCVTC strategies in light of the programs that have been developed by transport region states under section 308 of the rule. If these programs do not achieve the assumed emission reductions, the WRAP will evaluate the magnitude of the shortfall and, if necessary, make adjustments to the programs that were developed under section 309 of the rule in order to meet the goals of the GCVTC.

(iii) Best Available Retrofit Technology for Regional Haze. When estimating the regional emission reductions in the region due to the installation of Best Available Retrofit Technology (BART) for regional haze, the regional haze rule outlines a 2-step process. First, the states must complete "an analysis of the best system of continuous emission control technology available and associated emission reductions achievable for each BART-eligible source within the State subject to BART." Second, the states must complete "an analysis of the degree of visibility improvement that would be achieved in each mandatory Class I Federal area as a result of the emission reductions achievable from all sources subject to BART located within the region that contributes to visibility impairment in the Class I area..."

The GCVTC identified the visibility transport region for the 16 Class I areas of the Colorado Plateau. This transport region consists of 9 states and 211 tribes. In order to complete the analysis of regional haze BART, the states and tribes need to estimate appropriate retrofit control technologies for all BART-eligible sources in the transport region, and assess the visibility improvement due to the installation of these technologies. This regional analysis needs to occur under both sections 308 and 309 of the rule. However, there will be a timing issue; the states that choose to develop a 309 SIP will need to complete the analysis by 2003 while those that develop a 308 SIP will not need to complete this analysis until 2008. The proposed solution to the timing problem is to complete an analysis of regional haze BART for all transport region states and tribes using a source category approach for the 2003 SIPs. These source category estimates may then need to be re-evaluated in the 2008 SIP review based on the regional haze BART determinations that are made by states that develop SIPs under §308 of the rule.

c. Individual Source Opt In. Applicability for the tracking program, and the backstop trading

program is currently limited to sources with actual SO_2 emissions $100 tons/year. The WRAP recognizes that allowing additional sources to opt into the program may provide additional flexibility and may encourage innovative emission reduction strategies.

The details of how this process would occur have not been discussed by the WRAP's Committees and Forums, and will need further definition, but the WRAP felt that it was important to provide a placeholder for this issue in the Annex to ensure that the milestone language that was adopted into EPA's regional haze rule would not preclude adding opt-in provisions at a later date. The details of these provisions would need to be developed in consultation with EPA, and submitted as part of the State and Tribal Implementation Plans.

d. Changes due to Emission Measurement Techniques. There is the possibility that new emission measurement techniques may significantly change the accuracy of emissions measurements from a particular source category. These changes would be either paper increases or paper reductions that would not reflect an actual change in the operation of sources within the region, or the amount of SO2 that they are emitting. This may be a significant issue in the near-term as the WRAP begins to develop monitoring protocols for measuring emissions if the backstop trading program is triggered.

The Annex includes provisions for establishing a technical review process, in consultation with EPA, to address future changes in emission measurement techniques. Any changes to the milestones that are developed through this process would need to be accepted by all of the participating states and tribes, and would then be submitted to EPA as revisions to the applicable Implementation Plans. The details of this technical review process have not been discussed by the WRAP's Committees and Forums, but the WRAP felt that it was important to provide a placeholder for this issue in the Annex to ensure that the milestone language that was adopted into EPA's regional haze rule would not preclude making adjustments due to new measurement techniques at a later date.

e. Changes due to Periodic Audits and SIP/TIP Reviews. The states and Tribes will conduct periodic reviews and audits, as described in Section II.F.7 of this document. The WRAP's Committees and Forums have not discussed the details of these audits, and how they might lead to changes in the milestones. However, the WRAP felt that it was important to provide a placeholder for this issue in the Annex to ensure that the milestone language that was adopted into EPA's regional haze rule would not preclude any necessary adjustments at a later date.

f. Utility CEMS Adjustment Protocol for Interim Milestones. As currently crafted the WRAP interim milestones are based on utility emissions projections from 1999 as measured by the current CEMS test method. (Test Method 2). EPA has established several alternative test methods that will be available to utilities on a going-forward basis. These new emission measurement techniques are expected to lower emission level readings from utilities. To account for these changes in utility CEMS emission measurement techniques, the WRAP, working with EPA, will develop a protocol by the end of 2000 to adjust the interim milestones as necessary. This protocol will be submitted to EPA for

approval as part of the changes to section 309 that incorporate the Annex.
The protocol must be designed to ensure that utility sources using new CEMS measurement techniques are identified through reporting requirements, and to ensure that the interim milestones are consistent with the new measurement techniques so that compliance is not affected by "paper" emission reductions or emissions increases. The WRAP's goal is to design the protocol in such a way that milestones can be adjusted without the need for SIP revisions. The actual magnitude of the adjustments will be determined using a facility specific analysis of those facilities that actually adopt the new measurement methodologies. The CEMS measurement issue has already been addressed in the 2018 milestone and that milestone will not be affected by this protocol.

3. Measuring compliance.

a. Annual SO_2 Emissions Inventory. The goal of the stationary source program described in this Annex is to establish SO_2 milestones, and then use voluntary and incentive-based mechanisms to meet those milestones. A key element of this program is therefore a tracking system to ensure that the milestones are being met. The Annex contains provisions for participating States and Tribes to compile an annual SO_2 emission inventory from all sources within their jurisdiction with actual emissions of 100 tons/year or greater of SO_2. A regional inventory will then be developed for comparison to the applicable SO_2 milestones.

b. Averaging. The milestones are created to establish the overall environmental goals for the program. The tracking system is then designed to ensure that these goals are achieved and should trigger the backstop trading program if the voluntary component fails to provide the needed emission reductions. However, the tracking system should also contain provisions to ensure that the backstop trading program is not triggered solely due to data collection fluctuations, unusual weather conditions, etc. that are not indicative of a program failure. The Annex contains provisions to measure compliance with the milestones by using a three-year rolling average. Because this program does not begin until 2003, compliance in 2003 will be based on 2003 data only. Compliance in 2004 will be based on an average of 2003 and 2004 data. Compliance using a three-year rolling average will begin with the 2003-05 data.

These averaging provisions should help to smooth out the natural variations in actual emissions as described below.

> (i) Weather Fluctuations. Electricity generation is affected by the weather conditions. In a wet year more hydro generation will occur. A hot summer or cold winter increases usage of air conditioning and heating. Unusual weather patterns can continue for several years before reverting back to "normal" conditions. These fluctuations are accommodated under the existing permits for these sources because they can legally operate up to their allowable emissions.

(ii) Cyclical Industries. Some industries in the region are affected by global markets which can cause emissions to fluctuate. Production, and therefore emissions, may fluctuate significantly from year to year. These fluctuations are accommodated under the existing permits for these sources because they can legally operate up to their allowable emissions.

(iii) Variable sulfur content in fuels and feedstock. The sulfur content in fuels and feedstock is not constant. While smelters and power plants are designed to operate within an optimal range of sulfur content, there will be higher or lower SO_2 emissions depending on the natural variability of the ore or coal.

(iv) Unexpected Emissions. Unexpected emissions due to breakdowns or other unusual events could skew the emission inventory in a particular year.

The averaging provisions will provide an additional benefit. If emissions reductions are not meeting the established goals in one year, sources will have some lead time to implement additional voluntary measures to ensure that the three-year average remains below the milestones. Averaging smooths out the year-to-year fluctuations and shows trends (favorable or unfavorable) allowing for the region to plan ahead and correct the problem.

c. Special Provisions for the Year 2018.

(i) One-Year Average. While the averaging provisions are needed to address natural variations in actual emissions, the year 2018 needs to be treated in a different manner. The regional haze rule requires that the milestones provide greater reasonable progress than regional haze BART. This demonstration has been focused on the year 2018, to show that this test has been met by the end of the long-range planning period. The Annex contains provisions that require a direct comparison of actual emissions in the year 2018 to the 2018 milestone, without any additional averaging provisions, to ensure that the overall regional emission reductions achieve greater reasonable progress than regional haze BART.

(ii) Penalty Provisions. The milestones developed by the WRAP delay the most significant emission reductions until the end of the 15 year long-range planning period, with a "down payment" in the year 2013 to ensure that there is continuing progress. The utilities are facing a number of uncertainties due to deregulation, new source review reform, BART for NOx and PM (due in 2008 SIPs), as well as other potential regulatory requirements. As a result, they do not want to make significant capital expenditures until after 2013 when they expect to have a better understanding of the total set of requirements. Environmental groups have expressed concern that: 1) the program provide for interim air quality progress through sound interim milestones, and 2) excessive deferral of emission reductions to the end of the planning period may mean that we get to that point only to find that the emission reductions are too great to occur in such a short time, leading to a large non-compliance problem, or even a back-tracking from the commitments made in the SIPs.

The WRAP has included provisions in the Annex to ensure that the 2018 milestone would in fact be achieved. The suggested method for doing so is a penalty mechanism. Under this penalty approach, if the 2018 regional milestone was not met, each source would compare their actual emissions in 2018 with their 2018 allowance allocation. The source would then be assessed a financial penalty for each ton of SO_2 that was emitted above its allocation, as well as a mitigation penalty in the form of a reduced allocation in the future. The concept is that sources that had "done their part" to reduce emissions would not be penalized.

(iii) 2013 SIP Review.

§309(d)(10) of the regional haze rule outlines the requirements for the 5-year SIP reviews. The following paragraphs deal specifically with an assessment of the effectiveness of the control strategies:

> §309(d)(10)(I)(F) [The progress reports must contain at a minimum the following elements:] An assessment of whether the current implementation plan elements and strategies are sufficient to enable the State, or other States with mandatory Federal Class I areas affected by emissions from the State, to meet all established reasonable progress goals.
>
> §309(d)(10)(ii)(B) If the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources in another State(s) which participated in a regional planning process, the... State must also collaborate with the other State(s) through the regional planning process for the purpose of developing additional strategies to address the plan's deficiencies.

Therefore, the assessment of progress towards meeting the regional emission targets must include a backward-looking review of progress to date, as well as a forward-looking view of the region's expected emissions for the remainder of the planning period. By the time the 2013 SIP review is completed, the states and tribes in the region should have a good emission inventory projection for the year 2018. Sources that are planning to install new pollution control equipment will most likely have begun the permitting process for the equipment, or will be far enough in the planning process to commit to making the reductions by the year 2018.

The program will include five year State Implementation Plan (SIP) reviews, with an option for a 2013 trigger of the program. The purpose of the optional trigger is to insure that regardless of whether the milestone is met in 2013, the targeted emission reductions actually occur by the 2018 milestone date, as agreed to in this program and as required by the regional haze regulations. This 2013 trigger option will be implemented by consensus of those states and tribes that have implementation plans under Section 309. Implementation of the early trigger will be based on a demonstration that available data indicates compliance with the 2018 milestone will not be achieved. Data used to make this forecast includes projected or actual emission levels for 2013, and projected remaining emission reductions available in the region through 2018. Even so, there are provisions for individual source penalties if the 2018 milestone is eventually exceeded.

d. Special Provisions for Mohave Emissions for 2003-2006

When the interim milestones where first recommended by the WRAP's IOC, there was an undiscovered error in the baseline emissions projection for utilities. The error was that controls planned for the Mohave Electric Generating Station in 2006 were incorrectly assumed to be in place in 2003. Therefore, the WRAP has included a correction for this error that will be used when measuring compliance with the milestones for 2003 through 2006.

Consistent with the recommendations of the GCVTC, for the purposes of evaluating compliance with the interim milestones, prior to installation of the SO2 controls required by the end of 2006 in the Consent Decree for Grand Canyon Trust v. Southern California Edison (District of Nevada CV-S-98-00305-LDG, dated December 15, 1999), emissions from the Mohave Generating Station will be calculated using an SO2 emission rate of 0.15 pound per million BTU of coal input. This emission rate is consistent with the maximum allowable emission rate effective in 2006 under the Consent Decree. These calculated emissions for Mohave will be substituted for the actual emissions in 2003, 2004, 2005, and on a prorated basis for 2006 (i.e., for any part of 2006 prior to the installation of the controls) for the purpose of determining compliance with the interim milestones.

B. Reasonably Attributable BART and Geographic Enhancements.

The purpose of the "reasonably attributable visibility impairment" (RA visibility impairment) program is to address "hot spots" in the WRAP region until 2018, the date when all BART ends assuming the 2018 milestone is satisfied. During this period, there will be no restrictions on Federal Land Manager (FLM) "certification of impairment," when it is found that sulfates are not decreasing in Class I areas. FLM recommendations to the states regarding causes of RA visibility impairment will only focus on stationary sources controlling less than 85 percent of SO_2 emissions located within 100 miles of the Class I area in question. Prior to the issuance of any certification letter containing recommendations to the state on source controls, the FLM's will consult with the states and those sources implicated under this program, in order to determine what SO_2 emission control plans are already planned by 2018.

Also, there will be no restrictions on subsequent state determination of reasonable attribution of impairment during the RA visibility impairment program duration. However, the states intend for this program to address impairment that is reasonably attributable to a particular source, rather than to address that source's general contribution to haze level visibility impairment. The states recognize that a BART action for RA visibility impairment may have a coincidental impact on regional haze, but addressing regional haze is not the purpose of the RA visibility impairment program. In order to clarify some of these distinctions, the WRAP states plan to develop guidance that addresses the distinction between reasonably attributable visibility impairment and regional haze visibility impairment. Feedback from interested parties is requested on the content of state guidance related to reasonable attribution.

Also, there will be no restrictions on state analysis and determinations of BART for an effected source. Three options for remedy are provided in cases where "certification" is executed and a finding of reasonable attribution is made. First, BART retrofit controls can be required on the sources to which the impact has been attributed. As a second alternative, states can apply controls to other sources. Finally, as under current law, sources and states may negotiate a BART "off ramp" in advance of certification, which entails installation and operation of emission controls, or includes other restrictions such as limitations on the purchase of allowances, that satisfies BART for the source.

C. Other Class I areas.

It is the intention of the states and participating tribes to demonstrate in the 2003 Implementation Plans, that the milestones and backstop trading program will satisfy the "greater reasonable progress than BART" requirements, and any other reasonable progress requirements for additional Class I areas through 2018. This demonstration will apply to all sources of sulfur dioxide participating in that program. The work plan and resources needed to make this demonstration in the 2003 implementation plans will be identified and provided by the WRAP. Class I areas beyond the original 16 will be addressed in the Annex, even if only to identify the process and procedures to address this issue in the 2003 implementation plans.

Further, the states must evaluate other sources and pollutants in order to demonstrate reasonable progress for additional Class I area. Although it is their intent to do so, the states and tribes recognize that it may not be practicable to satisfy the additional Class I area requirements for all other sources of anthropogenic emissions besides stationary sources (e.g., mobile and area source sectors), and for all species of visibility impairing pollutants from stationary sources (e.g., NO_x and PM), by the 2003 deadline. States have the option of addressing these additional issues later, in a 2008 SIP.

D. Allocations.

The Annex outlines a methodology for allocating SO_2 allowances to stationary sources characterized by emissions of 100 or more tons of SO_2 per year, and also explains the timing of various draft source-specific allocations based on this methodology. This methodology describes the procedures that participating Transport Region States and Tribes will use in assigning facility-specific allocations in their SIPs and TIPs. There are several key elements to the methodology, including:

- Compliance with the trading program would be assessed annually beginning five years after the program trigger determination.

- Allowance allocations would occur in five-year increments four years in advance of first availability for compliance through the end of the first planning period of 2018 (see example timeline for more detail).

- The Tribal and new source set-asides will remain at the regional level, whereas, the allocations to existing sources will be dispersed proportionately to the States and Tribes for distribution via their SIPs/TIPs. States and Tribes will use the agreed-upon formula for allocating credits.

- Each tonnage amount associated with a set-aside will be an annual provision to the set-aside (for example, a 20,000 ton set-aside for the Tribes means 20,000 tons apportioned to the Tribes every year once allocations under the trading program begin).

- Renewable energy allocations will be distributed from the reducible portion of emissions and be administrated on a regional level.

It should be noted that this allocation procedure would only be used in the event the voluntary reductions are not sufficient to meet the projected milestones.

1. Timing. The following paragraphs explain the timing and duration of allocations under the trading program. For further clarification, an example based on a hypothetical trigger is included following the description.

As required by the regional haze regulations, the initial allocation of SO_2 allowances for the trading program will occur twelve months following the program trigger, allowing sources several years to incorporate allocation information into planning for compliance. (Note that sources would have had approximate allocation estimates associated with each milestone in the Annex and a more accurate – but still approximate – estimate by the time the 2003 SIPs are due. See Projected Results section for more information.) This initial allocation will span a period of five years, beginning with the year in which compliance with the trading program is first required. The Regional Haze Rule requires compliance with the milestone within five years.

Subsequent allocations will occur every five years, beginning five years after the initial allocation. As a result, sources will always have a minimum of five years of allocations for planning purposes. Additionally, the methodology will remain unchanged through the allocation periods, providing an additional degree of certainty.

Hypothetical Timeline

2008 Three-year regional emissions averages exceed corresponding average of associated three milestones

2009 Determination of exceedance and trigger of backstop trading program (RHR requires triggering within twelve months of determination)

2010 Allocations distributed to sources contributing to the trigger for the first five years of the trading program (2014 - 2018). Sources are not collectively required to reduce their emissions until the start of the trading program in 2014. Official trading may begin as soon as allowances are allocated.

2014 Compliance with the trading program is required (RHR requires compliance within five years of the trigger determination)

2015 Allocations distributed to sources for the next five years of the trading program (2019 - 2023)

....and so on.

A five-year allocation means that new sources will receive allowances from the new source set-aside for a finite amount of time before they are folded into the standard allocation process, and receive their floor as existing sources. For example, a source entering the program in 2014 under the scenario above would receive allocations from the new source set-aside for only the years 2014 - 2018, since that source would be incorporated into the next region wide allocation which would occur in 2015 for the years 2019 through 2023. This is explained further in the new source piece of the following section.

Sources that retire will maintain possession of their full allocation for that allocation time period. During the following allocation periods, they will receive their floor allocation through the life of the program. For example, a source retiring in 2014 under the scenario above would maintain possession of allowances allocated in 2010 for the period 2014 - 2019, but will only receive the floor portion of their allocations distributed in 2015 for the next allocation period.

2. State and Tribal Budgets. The States and Tribes are the regulatory authority for the backstop trading program, and the program is designed to function as a cooperative agreement between independent, sovereign entities. This has implications for the process used to distribute allowances for the backstop trading program. Allowances cannot be distributed to sources by a regional entity such as the WRAP because the regulatory authority is retained by the states and tribes. The best way to handle this type of program is to establish budgets for each participating state and tribe. The state and tribal budgets will be calculated from the facility level, using the allocation formulas described in this section. The states and tribes will then distribute the allowances to sources within their jurisdictions using the

same formulas. In the case of regional set-asides (the new source and tribal set asides), different mechanisms may be established to reconcile the need to recognize state and tribal sovereignty with the regional nature of these allowances.

3. Distribution Order. Allowances under the emission cap will be distributed according to the following order:

- 20,000-ton Tribal allocation
- 9,000-ton new source set-aside
- California RECLAIM Program (4,977 tons in 2000-2002 and 3,462 tons in 2003 for the life of the program). These credits will be a subset of the existing source pool for the state of California, and, hence, will not consume any extra allowances from the total pool.
- Floor allocations to existing sources
- Renewable energy allocation
- Early reduction bonus allocations
- Reducible allocations to existing sources

4. Regional Set-Asides. The regional set-aside will be made up of two components: the Tribal allocations and the new source allocations. Both will be administered on a regional level.

a. Tribal allocation. Once the trading program is triggered, 20,000 tons each year will be distributed directly to tribal interests as directed by the tribes, and will be used by the tribal community as they wish. The methodology for redistributing the 20,000 tons among the tribes in the region will determined by the tribes in consultation with EPA. Attachment F discusses some of the considerations for determining the methodology, and presents a conceptual proposal.

These allowances acknowledge that Tribal lands are predominantly undeveloped and, thus, would not receive allowances under a scheme incorporating only past emissions as a basis for allocation rights. As stated on page 35 of the GCVTC recommendations, the program should "ensure that all allocations to Tribal lands, rural areas and relatively undeveloped areas (e.g., clean air corridors) are of practical benefit."

The 20,000 tons included in the targets help assure that Tribes will be treated equitably under the trading program and not excluded from the opportunity to develop industry on Tribal lands. This allocation does not represent a cap on emissions from Tribal lands, as Tribes may also acquire allowances by other means. For example, existing sources on Reservations which opt into the program would receive allowances according to the provisions of the general allocation scheme. In addition, Tribes have the option of regulating SO_2 emissions under §308.

b. New source set-aside. Given the nature of the applicability requirements for the trading program, there will be two different categories of new sources, or sources not included in the initial applicability,

for purposes of this discussion: (1) sources that commenced operation after the program trigger years and are characterized by a PTE of 100 tpy or greater, or that were modified after the program trigger years and are characterized by a PTE of 100 tpy or greater (those sources lacking operating data on which to base allocations, or, in the case of modified sources, at least do not have data that can serve as a basis for prescribing future allocations); and (2) sources not covered by the first category that emit 100 or more tons of SO2 in any year after the program trigger year (those sources for which operating data is available to provide a basis for allocations). The first category will be referred to as "truly new sources" and the latter category will be referred to as "existing new sources". Both of these groups will receive allocations from the new source set-aside, but based on different criteria:

- **Truly new source**: the lower of the NSPS or permitted emission rate for the source multiplied by the maximum design heat input if the source is a utility, or by the maximum hours of operation or equivalent measure if the source is not a utility. Since these sources receive an allocation based on maximum assumptions, they will be required to surrender allowances in addition to those needed to cover emissions following each control period; these sources will be required to surrender allowances to account for the actual, as compared to the maximum, utilization of the unit.

- **Existing new source**: the lower of the NSPS or permitted emission rate for the source multiplied by the average heat input of the higher two of the last three years if the source is a utility, or by the average hours of operation or equivalent measure of the higher two of the last three years if the sources is not a utility.

New sources will be required to request an allocation from the applicable State or Tribe according to the above criteria. The number of years for which a source receives an allocation from the new source set-aside will be dependent on the timing of the trigger of the trading program, but since allocations will occur every five years, a new source will be included in the standard allocation process as an existing source no later than nine years after first entering the program. New sources will be thus gradually incorporated into the floor as allocations are updated over time.

Any allowances remaining in the new source set-aside in any year will be carried over for potential use by new sources in the following year until such time that the regional five-year allocation process occurs. In conjunction with allocations every five years, any allowances remaining in the new source set-aside will be carried over to the next five-year allocation period to be used by new sources. Use of these allowances will be subject to the banking and management provisions of the trading program.

Though the new source set-aside is intended to be large enough to ensure that it is not depleted of allowances to distribute for a given year, it may be over-subscribed if growth exceeds projections for a given period. In the event that the allocations needed for new sources coming into the region exceed the number of allowances available in the new source set-aside, new sources not covered must purchase allocations from the market. The idea behind this strategy is to minimize the barriers to new

sources coming into the region – since new sources will be subject to NSR, they will be highly controlled and have had their visibility impact highly mitigated – while maintaining all new source growth within the cap.

It should be noted that the new sources on Tribal lands will also have access to the new source set-aside.

The new source set-aside shall consist of 27,000 tons of allowances, parceled out in increments of 9,000 tons, with one allotment issued at the beginning of each five year period (2003, 2008 & 2013). The set aside will be available to new sources on a "first come - first served" basis, with allocated allowances available for sources to use each year of their subsequent existence. Should allowances available in any one period be fully expended, new sources subsequently entering the program during that period will have to buy allocations from the market until such time as another allotment of new source allowances is made. Thus, the program would continue to be based on a "first come - first served" priority. This arrangement will ensure that the set-aside will be distributed over the life of the program, giving new sources that come on line later in the program the opportunity to receive allocations without having to purchase them from existing sources.

All new sources that come into existence after 2003 will utilize allowances first from this new source pool, even though they would not formally be allocated those allowances until such time as the backstop trading program is triggered. Thus in 2008, if a hypothetical value of 12,000 tons of SO_2 happened to already have been used up by new sources coming into the region since 2003, then there would be 6,000 tons left for new sources at that time (9,000 tons issued in 2003, plus 9,000 tons issued in 2008, minus the 12,000 tons already used by new sources).

A 1,000 ton source entering the program in 2014 under the "Hypothetical Timeline" cited earlier in this section, would apply to the new source set-aside for 1,000 allowances each year for the years 2014 - 2018 (at which time the source would be folded into the floor as an existing source). Were no other sources to enter the program that year, 14,000 tons of new source allowances would be carried over to the next year (6,000 tons left over in 2008, plus 9,000 tons issued in 2013, minus 1,000 tons from this latest new source).

During the 2008 SIP review, the States and Tribes will evaluate the new source set-aside to determine if it is meeting its objective. At that time, adjustments to the set-aside can be made.

5. Distribution to Existing Sources. The remaining regional allowances will be distributed to existing sources as described below. The distribution to existing sources is composed of two portions: floor and reducible allocation, as further explained below.

a. Floor. There will be two components of the “floor allocation” – an allocation for the California RECLAIM program, and source specific floor allocations for non-RECLAIM sources. A “floor” level

will be provided to all sources with the intention of ensuring each has sufficient allowances to operate were the source highly controlled. This floor portion of the allocations will remain constant through the program; though overall allocations will decrease every year in conjunction with decreasing milestones. The resulting allocations must be less than or equal to the relevant portion of the State's or Tribe's trading program budget. Should these calculations result in allocations greater than the State's or Tribe's trading program budget, then the allocations must be proportionately decreased at existing sources to result in a level of allocations equal to the state trading program budget.

(i) California RECLAIM Program. SO_x stationary source facilities in the South Coast Air Basin that emit 4 tons per year or greater, including new sources, are already captured in RECLAIM, a declining cap market trading program. Between 1994 and 2003, the program will achieve a reduction of roughly 80% of all permitted stationary source emissions of SO_x in the South Coast Air Basin. SO_x emissions will be capped at their 2003 level. New SO_x sources who qualify for the RECLAIM program must apply LAER and offset any remaining emissions by purchasing credits in the RECLAIM market. Therefore, new SO_x sources are not expected to contribute to any emissions increase in the programmatic allocation. For this reason, new sources that fall into the RECLAIM program will not be subject to this provision of the allocation methodology, but will be contained within the RECLAIM "source category." As indicated, RECLAIM facilities are not expected to contribute to any increase in the annual programmatic allocations for SO_x sources in the South Coast. However, should the RECLAIM program fail to achieve required SO_x reductions, the South Coast SIP will be revised to correct any deficiencies. It should be noted that the total RECLAIM Program allocations are less than those that the sources would have received under the MTF methodology.

The following methodology will be used to address the California RECLAIM Program: (1) assign each specific RECLAIM facility a zero allowance; and (2) include a new line item for the California RECLAIM program equal to the aggregated SO_x emissions for the RECLAIM Program as of 2003. The RECLAIM program has a higher cap that exists prior to 2003. Details regarding this earlier cap are not included because the backstop trading program would not be triggered prior to the year 2003, even under the worst-case scenario. Since the RECLAIM Program is already a cap and trade program that allows trading within the RECLAIM universe, no other actions would be necessary; i.e., the RECLAIM allocation would be a stand-alone program. If at any point a market program for regional haze is triggered, the RECLAIM facilities would continue to operate according to the State regulations that apply to these sources. In turn, the SO_x market trading program would account for these RECLAIM emissions in the baseline as the "floor" with no reducible portion; the regional allocations would be adjusted accordingly so that there would be no double counting from what has been assumed in the California baseline. It should be noted that the California RECLAIM allocation is a subset of the total California allocation.

The RECLAIM allocations will be given to the California RECLAIM program for their

management and distribution.

(ii) Existing source-specific floors. The floor allocation for existing sources which will be divided into two industry sector categories: Utility Sources and Non-Utility Sources. This allocation will be determined on a facility-by-facility basis and then aggregated into sectors. The division of the floor allocation into these two industry sectors will in no way restrict trading of credits across both sectors.

b. Non-utility source-specific floors. To provide each source with its "floor" allocation, apply BACT, BART or LAER as appropriate to each source, and multiply that level of control by the appropriate measure of a source's operation as determined by averaging the higher of two of the three latest years of data at the time the calculation is performed. This floor determination will be made on a source by source, as opposed to a category, basis, as necessary. For some of the larger sources, the floor has been well defined but, for others, the States will have to determine them prior to the 2003 SIP.

c. Utility source-specific floors. The Utility Sector has been working diligently to resolve the floor determination. They currently have two floor determinations under consideration. The methodology for these two approaches is as follows:

The **control efficiency option** uses a floor at a control efficiency of 85 percent. Those units operating at this level receive allocations that enable them to operate at an 85 percent capacity factor or their year 2000 capacity factor, whichever is greater. For the remaining units, their uncontrolled emissions are calculated, then the 85 percent control efficiency is applied to each of those units and finally their allocations are shaved to meet the allocations level.

The **emissions rate option** is similar to the control efficiency option but uses a floor set at the emissions rate of .271 lbs/mmbtu. The emissions rate option captures changes in coal quality and other variables that may impact total emissions. The floor rate is based on a calculation of projected emissions for the 2003 milestone and using the average heat rate for all units over the 1996-99 time period. As in the first option, units emitting at or below the emission rate receive allocations enabling them to operate at an 85 percent capacity factor or their year 2000 capacity factor, whichever is greater. The remaining allocations are then redistributed to those with emission rates above the level of .271 lbs/mmbtu.

d. Reducible allocations. From the reducible portion of the allocations, both renewable energy allocations and early reduction credits will be awarded. The remainder of the reducible portion will then be allocated to existing sources.

(i) Renewable energy allocations. Renewable energy sources were defined by the Pollution Prevention Forum and, for the purpose of allocation, those sources will be eligible for incentive allocations. The following is the definition of renewable energy developed by the Pollution

Prevention Forum: "Renewable energy" means electricity generated by non-nuclear and non-fossil low or no air emission technologies using resources that are virtually inexhaustible, reduce haze, and are environmentally beneficial. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources, and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria. Biomass includes agricultural, food and wood wastes. The term does not include pumped storage or biomass from municipal solid waste, black liquor, or treated wood.

Eligible renewable energy resources that begin operation after October 1, 2000 will receive 2.5 tons of SO2 allocations per megawatt of installed nameplate capacity per year. A source beginning operation prior to the trigger will receive its SO2 allowances as part of the initial allocation. The allocation will be retroactive back to the time of initial operation. Sources beginning operation after the program begins will be awarded allowances for each year of operation at the time of the five-year allocations (including retroactive coverage of prior year operations). Thus there will not be a set-aside in advance -- allocations will be awarded in conjunction with the five-year allocations, coming from the reducible portion of existing source emissions. It is presumed that the amount of renewable allowances will be small in relation to the overall size of the program. An emitting eligible renewable energy source would receive allowances from the new source set-aside and an additional 2.5 allowances per MW of capacity from the reducible portion of the allocations.

(ii) Source-specific early reduction bonus allocations. To provide an incentive as well as additional flexibility for sources, a system is being proposed for awarding of bonus allocations for sources reducing their emissions prior to the imposition of any reduction requirements or below their floor allocations. These allocations would be issued as allowances to meet compliance requirements under the backstop trading program.

To protect the integrity of the emissions milestones, early reduction bonus allocations should come from the pool of "reducible" allocations. It is acknowledged that this approach would place more pressure on other sources to reduce emissions after the market is triggered. Regardless, sources would be aware of this at the time of the trigger, and, therefore, five years prior to compliance requirements to plan accordingly. Although sources would receive a somewhat smaller allocation across the board for the first year of compliance, these allowances will be available to sources, either through the pursuit of early reductions, or through the market.

A source would earn early bonus allocations, beginning as early as 2003, if its emissions are less than that source's 2018 allocation, prior to triggering of the market. A source would be eligible for bonus allocations based on each year that actual measured emissions are below their 2018 allocation or floor.

Allocations are more abundant at earlier stages in the program. As a result, the use of an earlier year as the basis for awarding bonus allocations creates the potential for some sources to earn credits as a result of environmental or market factors as opposed to making permanent emissions reductions. Incentives for all sources to reduce emissions may not be present until the 2013 to 2018 time period. Using interim milestones creates a sliding scale that may make enough bonus allocations available to result in paper reductions but actual emissions increases, creates an added burden for tracking allowances and emissions, and could reduce public confidence in the program. Reliance on 2018 as the benchmark directly ties the early credits to the operative legal standard, which is to achieve, by 2018, greater reasonable progress than would have resulted from the installation and operation of BART. This may help ensure the 2018 milestone is met if the program has not already been triggered at that time.

(e) Existing Source Bonus Allowance. In cases where the source undergoes modifications and the State or Tribe is required to issue an updated operating permit to reflect the changes (either in process technology or emission controls), the source and state should identify these emission reductions and begin tracking them at that time. Sources that are making reductions without going through formal permitting should notify the permitting authority at the time the reduction effort is initiated. Regardless, within 90 days after formal notification that the backstop cap-and-trade program has been triggered, all sources wishing to receive early reduction bonus allocations would be required to submit requests for bonus allocations to the appropriate State or Tribe for certification. States and Tribes will certify the emissions reductions that can be credited toward bonus allocations as equal to the sum of tons below the 2018 allocation for that source for every year emissions were below the 2018 allocation. The annual bonus allocations will be equal to the certified total tonnage, divided by 10, and available for ten years, beginning with the first compliance year. The Administrator must then reallocate the reducible portion of the allocations pool, pro rata, to each source, after subtracting the total amount of bonus allocations from the reducible pool. All bonus allowances awarded will be available for use in the first year in which compliance is required. Any allowances not used for compliance in the first year of the program will be carried over as banked allowances just as would be the case with any other allowance banked under the program.

Example: Partially controlled source X, with a 2018 allocation of 6,000 tpy, installs new scrubbers that began operating on January 1, 2005, reducing its allowable emissions rate to 6,000 tpy. It is determined in 2011 that the milestone was exceeded in 2009. The source operated at 4,800 tpy all years from 2005 through 2009, accumulating a total of 6,000 tons for use as bonus allocations. Beginning in 2016, the first compliance year, source X receives its regular allocation for each year plus 600 tpy bonus allocations for up to 10 years. If this was the only source receiving bonus allocations, the reducible pool of allocations would have 600 tons less each year and be redistributed on a pro rata basis to all sources operating above their floor allocations, including source X, if its floor was less than 6,000 tpy.

(f) New source bonus allocations. New facilities are a special case since they generally will receive a

floor allocation consistent with their operating permit limits. In the case of a new facility where the permit limits (and thus the floor allocation) is above the actual emissions, and no "actual" reduction in emissions has taken place, no early reduction bonus allocations would be available. An exception to this would be made if the source changes its permit limit downward to reflect a long-term commitment to operate at a reduced emission limit that will also cause its actual emissions to decrease. In this case, the bonus allocation for the new source would be limited to the lesser of the actual or permitted emission reduction.

(g) Verification of reductions. Early reductions must be real, surplus and quantifiable. Since reductions would be based on the allocation for each source in the absence of a standard emission rate or other requirement, sources must verify that reductions represent actual control measures and not shifts in utilization to other sources. Further, reductions must be monitored according to prescribed protocols. Since it appears that monitoring and reporting before and after the trading program begins will be identical for utility sources, but potentially different for non-utility sources, non-utility sources seeking early reduction credits would need to follow post-trigger monitoring and reporting protocols in order to qualify for bonus allocations.

> **(i) Source-specific reducible allocations.** These are the emissions in excess of a source's floor and will be reduced over time to meet the milestones. The reducible allocations will be distributed on a regional basis, and not by Industry Sector categories. However, distribution to sources in the utility and non-utility sector will utilize different historic data to determine each source's relative contribution to emissions in the State or Tribe: 1996 and 1998 emissions for non-utility sources, and 1995 - 1999 emissions for utilities.

6. Allocation Estimates for Individual Sources. Preliminary results of the application of the methodology explained in this report will be provided based on existing sources and the milestones established in the Annex. More refined estimates will be provided in the 2003 SIPs. To provide these preliminary results for the 2003 SIPs, the allocations will be estimated based on the sources that were in existence in 1996 and 1998 for non-utilities and 1999 for utilities.

The individual source allocations for actual distribution under the trading program will not be finalized until the trading program is triggered, since applicability is dependent upon the sources involved in triggering the program.

7. Enforcement Actions. Should a source be subject to an enforcement action, that source's emissions shall be limited to the appropriate level prescribed by that action, and the allocation methodology will acknowledge that limitation by limiting the source's allowances accordingly.

E. Description of Backstop Trading Program Elements

This section of the report delineates the elements of the Western Emissions Budget Trading Program (WEB Trading Program or WEB Program). It is important that many of these key elements be identical across the region in order to ensure a viable and effective trading program with low transaction costs and minimum administrative costs. Consistency in key elements will ensure trading and compliance can occur seamlessly and equitably in achievement of program goals. The WRAP used existing programs such as the Acid Rain SO_2 trading program, the OTC NOx Budget Program, and the SIP call NOx Budget Trading Program, which operate similarly in terms of several of these elements, as a template for the backstop trading program. Therefore, the decisions below reflect basic tenets of programs already operating successfully and/or sanctioned by EPA. Further, they provide consistency for those sources in the backstop trading program already covered by the Acid Rain Program.

1. Applicability

The sources to which the backstop trading program will apply are all those stationary sources in participating states and tribes that emit SO_2 in an amount greater than or equal to 100 tons per year. The 100 ton cut-off will be assessed at the plant level to correspond with the methodology used in the 1990 emissions inventory. Among the source types covered by this definition are utility and industrial boilers, refineries, smelters, pulp and paper mills, cement and lime kilns, and all of the other source categories listed in Section 169(g)(7) of the Clean Air Act. Basing applicability on actual emissions instead of the more traditional assessment of potential to emit (PTE) raises several concerns. Following are these concerns as well as the WRAP's decisions as to how to address them:

- Basing applicability on actual emissions requires determining the baseline year for inclusion in the program. The backstop trading program uses the program trigger years as the baseline for applicability. Since all sources at or over 100 tpy at the time the program is triggered have to be brought into the program, using an earlier set of years as the applicability baseline would just label more sources as "new" as opposed to "existing" sources for applicability and allocations purposes. Using the program trigger years is not in conflict with the allocation methodology, which incorporates recent emissions in the late 1990's into distribution of the reducible allowances, since applicability and determination of allocations do not need to be identical.

- There are some sources that will emit less than100 tons at the start of the program, and then increase their emissions at a later date. These sources will be brought into the program during the five year SIP reviews. EPA's Proposed Consolidated Emissions Reporting Rule, published on May 23, 2000, requires emission reporting from smaller stationary sources of SO_2 with emissions between 100 tons/year and 2,500 tons/year every three years (sources currently are required to report annually). In recognition that inventories for smaller sources therefore may not be available annually, applicability for these sources will be determined as part of the five-year SIP review process. There will not be many sources affected by this issue and their

emissions will not significantly affect overall regional emissions. The milestones will not be affected by the addition of these sources in five-year intervals.

- The SO_2 emissions of some sources may fluctuate above and below the 100 ton/year cut off, which could make it difficult to include program requirements in permits, and to have a stable measure of the sources that are in the program. Therefore, the program includes applicability provisions to ensure that any source that exceeds the 100 tpy threshold (either at the start or at any future date after the program is triggered) will be included and will remain in the program thereafter. Sources exceeding the threshold after the program begins will be folded into the program in conjunction with the five year SIP reviews. Should a source be allowed to take a permit limitation below 100 tons per year to exempt from the program, the milestones will be adjusted downward accordingly.

- The applicability of new sources cannot be assessed based on actual emissions, because these sources have not yet begun operations. Therefore, applicability for new sources will be based on their permitted level of emissions. If a new source is permitted to emit 100 tons or more of SO_2, then the source will be included in the program.

- A modification to an existing source raises similar issues because emission changes due to the modification will not be known for several years. Therefore, applicability for modified sources will be based on their new permitted level of SO_2 emissions.

- Finally, basing applicability on actual emissions raises the concern that all BART-eligible sources may not be included, since BART-eligibility is determined based on PTE of 250 tpy, and there could be such a source which emits less than 100 tpy. As a result, the applicability definition is extended to all BART-eligible sources. It is not anticipated that many, if any, sources will fall into this category.

2. Monitoring and Reporting

Sources participating in a cap-and-trade program must be able to accurately and consistently account for their emissions. According to the Draft Economic Incentive Program (EIP) Guidance, the cap-and-trade EIP must require capped sources to use the best available monitoring techniques. This is because the monitoring and reporting needed to demonstrate compliance with an emissions cap and to support an emissions trading market are very different from the monitoring and reporting necessary to support many traditional programs. Compliance for many traditional programs can be confirmed by a simple demonstration that an affected source is operating at or below the applicable emissions rate. With emissions caps and trading, the monitoring methods must be able to quantify the total amount of emissions created by a source so that compliance can be determined and so that allowances can be created consistently and fairly. The ability to trade allowances creates an economic interdependence between the participating sources in a market-based program; allowing sources to use less-certain

measurement techniques or quantification procedures could introduce uncertainty into this program.

For program success, it is necessary to ensure that a WEB SO_2 allowance actually represents one ton of SO_2 emissions, and that one ton of reported emissions from one source is equivalent to a ton of emissions reported from another source. This establishes the integrity of WEB allowances and instills confidence in the market mechanisms that provide covered sources with flexibility in compliance. Accurate and consistent monitoring and reporting ensure that compliance can be determined quickly and equitably, and that the buyers and sellers in the market can determine the value of what they are trading. Therefore, the system efficiency, as well as the environmental performance, is dependent on comparable emissions measurement requirements for all sources.

In addition, a monitoring and reporting system must be consistent from state to state and source to source. These requirements may differ from existing state requirements which were, in most cases, developed to support other programs. This system must provide all the data needed to determine compliance with a mass emissions trading program, meaning that WEB sources will have to report mass emissions. In order to ensure that all emissions are accounted for, sources also must be able to provide emissions data on a continuous basis.

The specific monitoring and reporting requirements necessary for the WEB Trading Program apply to two distinct groups: utilities and remaining source categories.

a. Utilities:

Utilities will be required to continue monitoring and reporting in accordance with 40CFR Part 75 for purposes of the regional haze trading program. Utilities have already installed and currently operate Part 75 continuous emissions monitoring systems (CEMs) for purposes of the Acid Rain Program, and thus are already monitoring and reporting emissions with a high level of accuracy. The high level of accuracy achievable with CEMs must be replicated to the greatest extent possible with other source types to maintain the credibility of the trading program and the value of allowances.

b. Remaining Source Categories:

Monitoring: The remaining source categories will be monitored in accordance with existing practices, with the addition of conservative elements to achieve a level of accuracy comparable with 40CFR Part 75. The wide variety of sources potentially included in the WEB Trading Program requires that we incorporate alternative monitoring requirements for those sources for which Part 75 is not readily applicable or feasible, including smelters, refineries, lime plants and cement kilns, industrial boilers, pulp and paper, and potentially additional categories. These sources currently report emissions based on CEMs under 40CFR Part 60, source testing, mass balance, or emission factors proven to be representative of operations. Existing monitoring methodologies, as well the RECLAIM protocols for SO_2, will need to be reviewed as these

have been working for a number of years and have received EPA approval. It is essential that the quantification methods for the trading program reflect actual emissions to ensure the integrity of the program.

Several difficulties associated with such requirements need to be addressed, including: providing a means of assuring that emission factors will be sufficiently stringent and representative of actual emissions; quantifying fugitive emissions; and verifying that post combustion controls are operating properly.

Reporting: The reporting for the non-utility sector needs to be comparable to Part 75. *As a result, the applicability of Part 75 to the non-utility sector needs to be evaluated. If Part 75 is not found to be applicable, something comparable will need to be developed.*

The monitoring and reporting protocols for the non-utilities remain largely conceptual and require further research, definition, and discussion.

3. Trading Policies and Procedures

Though the Western Emissions Budget Trading Program has several unique characteristics, including its backstop nature and focus on visibility, the policies and procedures for trading allowances under this program reflect the standard practices proven under existing trading programs, such as the Acid Rain Program and the OTC NOx Budget Program. Fundamental to program operation is that an allowance at one source in one state is equivalent to an allowance at another source in another state, that both represent one ton of sulfur dioxide emissions, and that each ton can be exchanged evenly. This enables the transfer of allowances between parties to occur quickly and without need for review or assessment.

Each source in the trading program will be required to appoint an Authorized Account Representative (AAR) as the individual authorized to represent the owners and operators of the source in all matters pertaining to the WEB Trading Program. Only an AAR can request transfers of allowances to or from an account in the trading program. To enact an allowance transfer, a WEB Program AAR will simply submit an Allowance Transfer Form to the administrator of the WEB Allowance Tracking System. The transfer form will be standard across the program and will include the account numbers identifying the transferor and transferee accounts; the associated AARs; a specification by serial number of each SO_2 allowance to be transferred; the printed name and signature of the AAR of the transferor account and the date signed; and a certification statement stating that the AAR is making the submission on behalf of the owners and operators of the WEB sources or the parties with an ownership interest in the allowances in the account.

Transfer requests will be processed by the WATS Administrator in order of receipt, but no later than 5 days of receiving a transfer, except in the case of transfers of allowances available for compliance

during the compliance determination period. A transfer is recorded in the WATS by deducting the specified allowances from the transferor account and adding them to the transferee account. The Administrator will then notify the AARs for each of the accounts, as well as make the information publicly available.

4. Permitting

The trading program will directly affect permitting requirements because it will be implemented through state and tribal permits for individual sources. Each source covered by the trading program will be required to have a WEB program permit, which will be a portion of that source's operating permit, and will contain provisions for operation of the trading program.

a. General. The WRAP approach is based on the NOx Budget Trading Program under the NOx SIP call, which has already been designed to work with existing permitting programs:

- For those sources already holding a title V operating permit, the WEB Program portion of the permit will be administered in accordance with the State or Tribe's title V operating permits regulations under 40 CFR part 70 or 71.

- For WEB sources such as synthetic minors (i.e., a source not initially brought in by the applicability requirements, but that later emits in excess of the cut-off) that hold non-title V federally enforceable permit, the WEB Program portion of the permit will be administered in accordance with the regulations promulgated to administer this permit.

- For sources that do not have a federally enforceable permit, either because a permit has not yet been issued or because a source is too small, the SIP or TIP will be the federally enforceable mechanism.

As a result, most of the new program permit administration matters will defer to permitting programs already established by each state. Matters such as permit issuance, revisions and reopening, public participation, and state and EPA review will all defer to already established state permitting programs. The only new requirements with respect to permitting matters will be the application information, contents, and effective date of the initial permit for the trading program, as delineated below.

Incorporating the WEB Program requirements into an existing permit is likely to require a significant modification. In accordance with the Title V guidelines, a permit would require reopening and public review if the permit has more than three years remaining before renewal in the five year issuance cycle. Otherwise the new requirements could be incorporated at the time of renewal with public comment at that point.

b. Contents: The permit for each source will be required to contain the applicable trading program requirements, including the requirement that each source must hold sufficient SO_2 allowances to account for SO_2 emissions by the allowance transfer deadline for each control period and specifying the penalties in accordance with E.6.f. below if the sources do not. As in other trading programs, the allocation, transfer or deduction of allowances will be incorporated into the permit automatically, and not require a revision or reopening.

c. Application and Effective Date of Initial Permit: Each AAR will be responsible for submitting a WEB Program permit application to obtain a formal permit revision prior to participating in the program. This is fully separate from the permit requirements for purposes of regional tracking required for all potential WEB sources prior to the trigger. WEB sources included in the initial trading program applicability will be required to submit a permit application no later than 18 months before compliance with the trading program is required; sources not included in the program until after compliance requirements have already begun will face similar requirements based on the timing of commencement of operations or exceedance of the 100 tons per year benchmark, as applicable.

5. Banking

Generally speaking, the addition of banking will impart additional flexibility and encourage early emission reductions, allowing sources to create reductions beyond required levels and "bank" the unused allowances for later use. However, the presence of banking allows higher emissions in later years as banked emissions are used. EPA's draft guidance for trading programs (EIP Guidance) requires consideration of the possible negative impacts of banking:

Draft EIP Guidance requirements for including banking:

- Demonstrate that emission spiking is not likely to occur.
- Include safeguards to prevent spiking commensurate with the probability that spiking will occur.
- Assure that banking will not interfere with attainment or maintenance of the NAAQS or reasonable progress requirements.

The visibility goal established by Congress focuses on long-term results and progress towards improving visibility rather than establishing a specific standard that must be met every year. The WRAP believes that use of banked emissions in future control periods is consistent with the overall goal. Banking will encourage early reductions, and the downward trend of the milestones will ensure that progress is achieved over the long term. In addition, banking will increase the flexibility for sources in the region allowing the visibility goal to be met in the most cost-effective manner.

While the incentive provided by banking is important, the WRAP also believes that it is appropriate to include a management system ("flow control") which would constrain the use of some or all banked allowances in the future. The management system is similar to that used by the NOx SIP call.

- "Flow Control" provisions will limit the amount of banked allowances that may be used without constraints during a given control period. Flow control provisions will discourage the "excessive use" of banked allowances whenever an amount of more than a given percentage (10% in the NOx programs) of the overall multi-state trading program budget is banked, without establishing any absolute limits.

- Sources will maintain the option to use their banked allowances, albeit at a reduced rate, even in the event that the flow control restrictions are activated.

This management system was chosen to maintain the advantages of banking while protecting the integrity of the milestones established by the Annex.

6. Annual Reconciliation

The annual reconciliation or compliance certification process in a cap-and-trade program entails a comparison of allowance account balances for each source (composed of each source's allocations as supplemented or depleted by allowance transfers) with the monitored emissions data for each source on an annual basis. Explained below are the components of the annual reconciliation process.

a. Allowance Transfer Deadline: The allowance transfer deadline in the WEB Program will mirror the deadline in the Acid Rain Program, set at 60 days after the control period ends on December 31, or March 1 of each non-leap year and February 29 of each leap year. This is the date by which each source's compliance account must hold sufficient allowances to cover that source's emissions for the previous control period. The deadline provides sources with a window of time between the end of the control period on December 31 and the beginning of the compliance determination period in order to ensure they have sufficient allowances to cover emissions for that control period. Also by this deadline, each Authorized Account Representative (AAR) would submit a compliance certification report (as explained later in this section) to the state in which their sources are located.

b. Allowance Transfer Freeze. The trading program will institute an allowance transfer freeze following each compliance period, beginning with the allowance transfer deadline and continuing until the WEB Allowance Tracking System Administrator has made all deductions from each source's compliance account for compliance. During this time there will be a freeze on the transfer of any allowances eligible for use in the compliance process (meaning that no allowances from the current or a previous year could be transferred into or out of a compliance account during this period). The length of this freeze on transfers will be determined by the length of the compliance determination process,

which will be most impacted by the amount of time needed by the States and Tribes to quality assure the emissions data and submit it to the Emissions Tracking System for comparison with the allowance holdings.

c. Compliance Certification Report. The trading program will require that each AAR submit a compliance certification report to the relevant state for each source in each compliance period. This report will be standard across all participating states will certify that each source demonstrates compliance with the applicable requirements of the trading program (i.e., that emissions data has been recorded and submitted as required, that each source holds sufficient allowances in its compliance account as of the allowance transfer deadline, that all the SO_2 emissions from the source were monitored or accounted for as required, etc.). Also in this report, the AAR can specify the serial numbers of the allowances to be deducted from each source's compliance account for the control period if the AAR does not wish allowances to be deducted based on a predetermined default methodology.

d. Allowance and Emissions Data Finalization. In order to perform the annual reconciliation process, the Tracking Systems Administrator is in need of both final allowance data and final emissions data. The allowance holdings for each source will be considered final after all of the allowance transfer requests submitted by the allowance transfer deadline have been processed. Finalization of the emissions data is the time and resource intensive component of the compliance determination process. Since States and Tribes will remain the authority on their sources' emissions data for purposes of the trading program, once all the covered sources report their emissions as required, each S State and Tribe will be responsible for quality-assuring and finalizing data for use in the annual reconciliation process. This is different from other existing programs such as Acid Rain and the OTC NOx Budget Program where the entity that finalizes the data (EPA) is the same entity that performs annual reconciliation. States and Tribes should anticipate added burdens for quality assurance as compared to current practices since monitoring and reporting for compliance with the trading program will occur more frequently and with greater precision than under current practices. Further, additional time will be required for submission of the data to the Tracking Systems Administrator for use in the compliance process, and the quality checks to ensure the data is entered properly.

e. Allowance Deductions for Compliance. Since all allowances across the WEB Trading Program will be equivalent, each representing one ton of sulfur dioxide emissions, one allowance will be retired for every one ton of SO_2 emitted by a source in a control period (note that this may not always be the case with banked allowances, which management provisions may dictate represent less than one ton of emissions in some circumstances). Allowances will be deducted until the number deducted equals the number of tons of SO_2 emissions for the source in that control period, or until no more allowances are available. Deductions will occur from a source's compliance account in the order in which allowances were placed in the account, beginning with current year allowances. If an AAR wishes allowances to be deducted in any other order than this default manner, he or she may identify by serial number the allowances to be deducted in conjunction with the compliance certification process. If a source does

not hold sufficient allowances in its compliance account as of the allowance transfer deadline, enforcement action and penalties will be applied as described below.

f. Penalties: Recognizing the critical nature of the incorporation of automatic and stringent penalties to provide sufficient disincentives for noncompliance in the trading program, the Annex includes the following penalty provisions:

> Excess emissions:
>
> - 2-for-1 offset ratio (automatic surrender of 2 future-year allowances for every 1 ton of excess emissions)
>
> AND
>
> - A financial penalty of $5,000 (indexed to inflation from the year 2000) for each ton emitted in excess of allowance holdings. This penalty is based on a projected range of prices for WEB allowances multiplied by a factor of three to four to ensure an appropriate compliance incentive.
>
> Failing to comply with other program requirements: (such as monitoring and reporting requirements)
>
> - Establish penalties in conjunction with CAA civil and criminal penalties. Accordingly, it *can* be a violation each and every day of the averaging period (365 days), with the associated monetary penalties. Note that though a state will have the authority to impose the maximum penalties allowable under the CAA (or the state's maximum statutory authority if it is some lesser amount), the state will not be required to impose penalties in this amount, since the magnitude of such penalties may need to be tailored to the particular case.

g. State Verification of Compliance: States and Tribes will be responsible for enforcement in the backstop trading program, and will have the right to verify compliance by whatever means necessary. Further, the States and Tribes will report to EPA annually on the compliance status of their sources.

7. Auditing and Evaluation

The regional haze regulations require that the SIP submission include provisions for implementation plan assessments of the trading program in 2008, 2013, and 2018. Additionally, EPA's draft Economic Incentive Program Guidance requires that a program evaluation be performed a minimum of every three years and submitted to EPA. The purpose of this evaluation is to determine the overall effects of the

program on emissions, as well as measurement of other aspects of program performance, such as reduced costs. Specific evaluation procedures need to be included in the SIP, including procedures that make the public aware that the program is being evaluated and give the public opportunity to assist in program evaluation. With respect to banking, the EIP also recommends annual evaluation of the inter-temporal effects and inclusion of a commitment to develop and implement reconciliation procedures if the program is not meeting its emission reduction goals.

In acknowledgment of these requirements, the Tracking Systems Administrator will be required to provide annual reports to the States, Tribes, sources, EPA, and the public that detail the results of the compliance process, including the level of compliance, the use of banked emissions, and a source by source accounting of allocations compared to emissions. Evaluation components should also include a confirmation of emission reporting accuracy and review of allowance transfer and use by sources in the program (both geographically and temporally). Assessments will also gauge the consistency of the compliance results with requirements of the haze rule. This analysis should occur on both a local and regional level. In addition, a third party audit under the supervision of the WRAP should occur. Should the audit result in a need for revisions, each State and Tribe could consider the recommended revisions in consultation with the WRAP and propose program revisions accordingly.

8. Environmental Justice

Though environmental justice (EJ) is an important issue to address in the development of any trading program, the MTF believes that Western Emissions Budget Trading Program will not raise EJ-related concerns, primarily for the following reasons: 1) the trading program includes only SO_2, and not any air toxics, which seem to be the particular focus of such concerns; and 2) SO_2 emissions are additionally controlled by the SO_2 NAAQS, which prevent SO_2 concentrations in any given area from exceeding a level determined to be harmful to health. Further, the trading program is a backstop measure not anticipated to be utilized. Should concerns arise (i.e., through the incorporation of banking, which EPA has indicated may be such a cause for concern), individual States and Tribes can look at possible EJ ramifications as they develop their implementation plans.

9. Integration with Other Programs

The interaction of the WEB Trading Program with other existing programs needs to be clearly delineated in order to clarify requirements for sources covered by the program as well as to assure regulators that requirements of all existing programs continue to be met. For example, EPA's draft Economic Incentive Program guidance (EIP guidance) requires that if a cap-and-trade program covers sources with RACT requirements, the rule must address the overlay onto sources with RACT limits, and that NSR requirements may not be lifted by the adoption of an EIP. Generally, the trading program must contain limitations not allowing the use of emission reductions to meet NSPS, BACT,

LAER, NSR offset requirements, or Title IV Acid Rain Requirements.

Generally speaking, the Western Emissions Budget Trading Program will be a completely stand-alone program. Allowances from this program will not be fungible with allowances or offsets in any other programs, except as explained below.

a. Title IV: The WEB Trading Program is similar to the Acid Rain Program under Title IV in that many of the affected sources are utilities, and that the program is characterized as an SO_2 cap-and-trade program. Thus, utilities under the WEB Program will have two different sets of SO_2 allowances, one for use in compliance with the Acid Rain Program and one for use in compliance with the WEB Program. Though the allowances are not fungible between the two programs for the sake of the integrity of their respective caps, reductions in one program may be redeemable as reductions in the other program. For example, allocations to western sources under the WEB Trading Program will presumably be smaller than allocations for these same sources under the Acid Rain Program. Therefore, if sources reduce their emissions to emit less than their allocated level in the WEB program, they will generate allowances to trade in the WEB program as well as an even larger amount of allowances to trade in the Acid Rain Program due to the difference in allocation levels. As a result, shifts in emissions may occur from sources in the WEB Trading Program towards other sources in the Acid Rain Program. However, since the Acid Rain Program is a capped market system, allowing only emissions of a set level across the nation, this shift of emissions will not affect the integrity of the environmental goals of that program.

b. RECLAIM: There is also an overlap with sources already covered by the RECLAIM program. Again, affected sources will hold allowances or credits for compliance with each distinct program. These allowances or credits will only be redeemable consistent with the applicable requirements of the programs.

c. NSR Requirements: NSR requirements will continue to apply to sources in the region (as a separate requirement) both within and outside of the trading program. We do not at this time recommend provisions for interface of the trading program and the NSR offsets program. In accordance with the example set by the OTC NOx Budget Program in the Northeast, the only way a source in the trading program will be impacted by the production of offsets will be when a source transfers emission reductions as offsets to a source outside the program. In this case, the source in the program should be subject to deduction of allowances. This is because if the source inside the program were to continue to receive the same amount of allocations after selling off some or all of those allocations to a source outside the program, emissions within the cap would remain the same and those outside the cap would be increased, thus impacting regional emissions. New sources in the region that are included in the trading program would need both allowances and offsets to operate, as also practiced under the OTC program.

d. RACT Limits and Other Permitted Requirements: While the trading program will require that

each source have enough allowances to cover emissions released, this requirement will not have any impact on any permitted emission limitation for that source due to RACT requirements or any other existing requirements. Depending on the circumstances, a source may have more allowances than it is permitted to emit, or may be given fewer allowances than it is permitted to emit. In the former case, the source could sell its allowances on the open market for a profit. In the latter case, the source could either reduce emissions or could purchase additional allowances to cover its emissions. In no case would a source legally be allowed to operate above its permitted emission limit.

F. Trading Program Administration

This section covers emissions and allowance tracking as well as account structure and representation for the WEB Trading Program. The program is very similar to existing programs such as the OTC NOx Trading Program and the Acid Rain SO_2 trading program. Therefore, the decisions below reflect tenets of programs already operating successfully.

Both the WEB Allowance Tracking System and the WEB Emissions Tracking System will be centrally run databases tracking program activity and compliance across the region. Both systems will be run by a contractor hired through and managed by the WRAP. This will enable maintenance of program authority in the West and can ensure avoidance of any potential conflict of interest. The databases will most likely be based on the EPA prototypes used in the Acid Rain Program. The role of the contractor serving as the data systems administrator will be limited to tracking and providing information, as all regulatory authority for the program will by maintained by the states and tribes.

1. Emissions Tracking System

The WEB Emissions Tracking System (WETS) will be the official centralized database for the source-specific emissions information as monitored and reported in accordance with program specifications. This system will be populated via state and tribal submissions of annual quality-assured data for all sources in the program. During the compliance process, the emissions information in WETS will be reconciled with the allowance data in the Allowance Tracking System to determine compliance. The compliance information will then be transmitted back to the states and tribes who retain all regulatory authority for the program.

2. Allowance Tracking System

The WEB Allowance Tracking System (WATS) will be an electronic record keeping and reporting system serving as the official database for all allowance use and transfers within this program. Each allowance will be assigned a unique serial number. Each allowance serial number shall also indicate the year in which that allowance is first available for use in the compliance process.

a. Information tracked:

- Allowances allocated to each WEB source;
- Allowances held in each account;
- Accounts established for each WEB source to determine compliance;
- Accounts opened by individuals or entities, upon request, which are not used to determine compliance;
- Allowance transfers between accounts; and,
- Deductions of allowances for compliance purposes.

b. Types of accounts:

- One compliance account for each WEB source. These accounts are automatically created for each source in WATS, and will be allocated allowances as determined by the allocation methodology at the start of the program.
- General accounts for any person of group wishing to hold or transfer allowances: these accounts are not a part of the compliance process.

c. Account Representation

As previously noted, there will be an Authorized Account Representative (AAR) who is authorized to represent the owners and operators of each WEB source at a source in matters pertaining to the WEB Trading Program. Each WEB source will be required to have an AAR selected by the owners and operators of the source and all WEB sources at the source. Each source may also have an Alternate AAR who may act on behalf of the primary AAR. The AAR's responsibilities include: holding and transferring allowances and submitting permit applications, monitoring plans, certification applications, emissions data and compliance reports as required by the program. Each submission under the WEB Trading Program will be submitted, signed, and certified by the AAR for the relevant WEB source.

In order to appoint an AAR for a source covered by the program, an Account Certificate of Representation Form, which constitutes an agreement of representation, must be completed and submitted to the State or Tribe in which each WEB source is located. This form will be standard across the WEB Trading Program and will include identification of the WEB source, contact information for the AAR and any alternate, a list of owners and operators of the WEB source, a statement certifying that the owners and operators are bound by the actions of the AAR, and the signatures of the AAR and alternate.

In order to appoint an AAR for a general account that is not relevant to the compliance process, the party seeking to open a general account must name the AAR and alternate on the request form, which includes a statement certifying the role of the AAR.

G. Benefits of a Backstop Cap-and-Trade Program

The GCVTC recommendations for stationary sources approached this category of sources in a non-traditional manner. Rather than establishing emission limits for individual sources, the GCVTC recommended establishing 5-year emission targets for SO_2 emissions in the region. If the targets were not met voluntarily, then a backstop regulatory program, preferably an emissions cap and incentive-based market trading program, would be implemented. Several key underlying principles were the foundation of this recommendation:

- The Commission expected that implementation of existing CAA requirements in combination with source retirements and modernization would provide on-going significant emission reductions throughout the region.
- Long-term emission targets would provide an incentive for businesses to incorporate voluntary emission reductions into their business plans. Incentives, including the ability to avoid a regulatory program, would be a powerful motivator.
- The establishment of targets would allow the region to benefit from the most cost-effective emission reductions either through voluntary measures, other regulatory drivers, or if necessary through a cap-and-trade regulatory program.

The GCVTC preference for an incentive-based trading program should a regulatory program be deemed necessary was based on the fact that "earlier studies showed that a regional cap and trade program is the most cost-effective way to deal with regional haze."[7] As explained in the preamble to the regional haze rule, there are several advantages associated with a regional trading approach as compared to source-specific BART requirements:

> First...[a cap-and-trade program] provides flexibility to participating states in deciding whether to purchase credits or to implement on-site emission reduction strategies, while being designed to achieve an equivalent level of emissions...Second, trading allows sources to assess the costs of control technology, alternative fuels, and process changes across a broad array of sources and source categories. Thus, a trading program typically will result in a lower cost per ton of pollutant reduced than a program which mandates plant-specific technological control. For example, EPA's experiences in the Acid Rain Program have shown that sulfur dioxide reductions achieved through market-based programs in the electric utility sector continue to be quite cost-effective, in the $170 - 320 per ton range. A program which allows broader trading among sources in other industrial categories as well would likely lead to even greater cost effectiveness for individual sources.

Generally speaking, a cap-and-trade program can result in benefits to both affected sources and to the environment by harnessing the incentives of the free market to reduce pollution. Due to the monetary award associated with avoided emissions in a market system, pollution prevention becomes more cost

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[7] GCVTC Recommendations, June 1996, page 89.

effective and innovations in less-polluting alternatives and control equipment are encouraged. The capping of total emissions in a region ensures achievement of the established environmental goal (the cap), while still allowing economic growth through the development of new sources or the increased use of existing sources. Further, the flexibility imparted to sources through the use of a market system can allow the establishment of a more ambitious environmental goal than would otherwise be possible – and the achievement of this goal is assured through the presence of the cap, enforced by an accordingly limited supply of allowances. Even in the presence of a more ambitious environmental goal, the cost of compliance can be markedly less than command-and-control, since sources have a host of compliance options to choose from.

Market-based systems to control SO_2 are already in existence, in the aforementioned national Acid Rain Program and the RECLAIM program in the South Coast Air Basin, centered in Los Angeles. These programs offer working examples of effective, efficient market programs, and the MTF has taken their design into account in the development of the Western Emissions Budget Trading Program (WEB Trading Program) put forth in this document. The MTF has also considered the similar design of both new and existing NOx cap-and-trade systems in the eastern US.

The Grand Canyon Commission expected that a backstop trading program would be more cost-effective than a traditional command-and-control program. However, there are many aspects of a trading program that will influence the effectiveness of the market approach, including the overall level of the targets, the number and diversity of sources participating in the program, and the flexibility provisions within the program itself. The Initiatives Oversight Committee (IOC), the committee under the WRAP responsible for oversight of the MTF, commissioned an economic analysis to assess the impacts of the program set forth in this Annex and the related cost savings as compared to a command-and-control approach. This analysis examined the effect of the backstop program on the overall economy of the region, the effect on individual states and tribes, and the effect on specific industrial sectors. In addition, the analysis projects the location of emissions to help project whether trading is an effective solution to the visibility problem, or whether trading may result in concentrations of emissions leading to increased visibility degradation in specific Class I areas.

H. Next Steps

1. Critical Mass Needed to Implement a Viable Trading Program

The Annex has been developed based on the Grand Canyon Visibility Transport Commission recommendations, which assumed that all of the states and tribes in the transport region would participate in the program. The regional haze rule establishes two paths for states: implement the Commission recommendations, including the backstop trading program under §309; or develop an independent plan under §308. An important issue still to be addressed is the effect on the trading program if one or more states and tribes do not choose to participate. Will there be enough sources or enough diversity in the program to create a viable market? Will the administrative costs of the program be justifiable with a smaller group of states and tribes? To address these questions, the WRAP needs to evaluate the economics of the program, and determine the critical mass that is needed to create a viable program.

2. Completion of Draft Documentation Submitted with the Annex.

Some of the documentation that is submitted with the Annex is still in draft form. The WRAP has made a good faith effort to complete these documents, and intends to finalize these attachments by December 31, 2000.

Model Rule
Trading Program MOU
MOU between States, Tribes and FLMs

III. ANNEX RECOMMENDATIONS

A. Regional Sulfur Dioxide Milestones

1. Year 2000 Goal. The Grand Canyon Visibility Transport Commission Recommendations, dated June, 1996 contained a commitment to achieve a 13% reduction in sulfur dioxide emissions from stationary sources from the 1990 baseline. The Western Regional Air Partnership commits as part of this Annex to compile a regional inventory of sulfur dioxide emissions from stationary sources with actual emissions greater than 100 tons/year of sulfur dioxide. The 2000 inventory will then be compared to the 1990 inventory to ensure that the 13% reduction has been achieved. This regional inventory will be submitted to the Environmental Protection Agency in 2003 as part of Implementation Plans for the States and Tribes that choose to participate in the backstop trading program.

2. Base Milestones. The regional milestones for sulfur dioxide are described in Table 1.

Table 1. Regional Milestones for Sulfur Dioxide (tons SO_2) for All Transport Region States and Tribes

Year	2003	2008	2013	2018
Minimum Milestone (without Suspended Smelters)	682,000	677,000	625,000	480,000
Maximum Milestone (with Suspended Smelters)	720,000	715,000	655,000	510,000

Note: Provisions for defining how the milestones will be adjusted depending on the future operations of two suspended smelters in the region are described below in section 3.a. The Table shows the minimum and maximum milestones that would occur based on the smelter adjustment.

The 2003 milestone will remain constant until it is stepped down in the year 2008, and this same process will be applied for each subsequent 5-year period.

3. Automatic Adjustments. The SO_2 Milestones will be automatically adjusted in the future under the following circumstances:

a. Suspended Smelters.

There are currently two copper smelters in the nine-state Visibility Transport Region that are temporarily suspended due to economic conditions. These smelters are fully permitted, and may resume full operation at any time. EPA policies will determine whether a suspended source resumes operations under its existing permit or alternatively goes through new source review to receive a new permit. If one or both of the smelters resume operation, then the milestones will be adjusted as described below. Once the adjustments have been made, the milestone will not be changed due to future suspensions or changes in plant operations, except as provided below.

(i) If one or both smelters resume operations under their existing permits, the milestone will automatically be adjusted upward for each smelter respectively by the following maximum amounts:

(A) Phelps Dodge Corporation, Hidalgo Smelter, 22,000 tons SO_2
(B) BHP, San Manuel Smelter, 16,000 tons SO_2
(C) For the milestones of 2013 and 2018, the maximum increase will be 30,000 tons.

If either smelter resumes operation in a substantially different manner than historic operations (for example, only operating a portion of the plant), the appropriate permitting authority will scale the emission estimates listed above to reflect current conditions. If the smelter resumes "normal" operations at a later date then the full adjustment described above will be applied.

(ii) If one or both smelters resume operations after going through new source review, the appropriate permitting authority will determine the appropriate SO_2 emission levels for that source. The guidelines established in the model rule for new source allocations will be used to determine the appropriate emission levels. The milestone will automatically be adjusted upward by this amount, but in no instance may the adjustment to the milestones exceed 22,000 tons per year for the Hidalgo Smelter or 16,000 tons per year for the San Manuel Smelter.

(iii) If one or both smelters do not resume operation, each of the remaining existing smelters will be given a facility specific set-aside as described in Table 2 (preliminary numbers). This set-aside will only be available for use if emissions from a remaining copper smelter are above its assumed year 2000 baseline level in any particular year. The actual emissions that are above the assumed baseline level up to the level specified as the set-aside for each smelter will be added to the milestone to account for the increased capacity. The set-aside will not be available for use by other source categories and may not be traded.

Table 2. Preliminary Smelter-Specific Set Aside

Company / Smelter	Baseline Level	Smelter-specific Set-aside
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
TOTAL	**86,000**	**13,600**

b. State and Tribal Opt in/Opt out. The regional haze rule allows the Transport Region States and Tribes to develop SIPs and TIPs under either section 308 or 309 of the rule. It will not be known until 2003 which States will be part of the program, and Tribes may have a longer time period to develop TIPs (the timing of tribal opt-in is pending legal review by EPA). The milestones have been established assuming that all Transport Region States and Tribes are participating in the program. If one or more Transport Region States or one or more Tribes with eligible sources do not participate, then the regional milestone will be adjusted as follows.

(i) A state or tribal budget under the total regional milestone will be determined as described elsewhere in this Annex. The budgets for all States and Tribes that are participating in the program will be summed to establish the applicable milestone.

(ii) The Tribal Set Aside of 20,000 tons SO_2 as described elsewhere in this Annex will remain constant and will not be affected by this readjustment of the milestone.

(iii) The new source set-aside will be adjusted proportionately to reflect the states and tribes that are participating in the program.

(iv) The suspended smelter provisions described above in paragraph 3.a. will only apply to the extent that the state with jurisdiction over that source participates in the program.

Because the allocation methodology may not be fully consistent with the methodology used to determine the BART level emission reductions, if the allocation methodology is used as the basis for adjusting the milestones in the event that a state opts out of the program, it will be necessary to review the adjusted milestones that are applicable to those states remaining in the program to ensure that the greater reasonable progress than BART requirement is met for those states.

4. Adjustments Due to SIP/TIP Revisions. The SO_2 Milestones will be adjusted in the future under the following circumstances through the process of State and Tribal Implementation Plan revisions:

a. Individual Source Opt In. The WRAP will establish guidelines in consultation with the Environmental Protection Agency for adjusting the milestones to account for non-applicable sources that opt in to the program at a later date.

b. Changes to emission measurement techniques. The WRAP will establish a technical review process in consultation with the Environmental Protection Agency to adjust the milestones based on revised measurement techniques and monitoring protocols. The process will be designed to ensure that compliance with the milestones is measured appropriately and is not affected by "paper" emission reductions or emission increases.

c. Changes due to periodic reviews and audits. The states and tribes will conduct periodic reviews and audits to evaluate program performance. Any changes identified through this process will be incorporated into SIP/TIP revisions.

d. Illegal emissions limits. If it is determined that the milestones were based on illegal emissions, an appropriate adjustment will be made. The specific mechanism for this adjustment needs further discussion by the WRAP.

5. Utility CEMS Adjustment Protocol for Interim Milestones.

As currently crafted the WRAP interim milestones are based on utility emissions projections from 1999 as measured by the current CEMS test method. (Test Method 2). EPA has established several alternative test methods that will be available to utilities on a going-forward basis. These new emission measurement techniques are expected to lower emission level readings from utilities. To account for these changes in utility CEMS emission measurement techniques, the WRAP, working with EPA, will develop a protocol by the end of 2000 to adjust the interim milestones as necessary. This protocol will be submitted to EPA for approval as part of the changes to section 309 that incorporate the Annex.

The protocol must be designed to ensure that utility sources using new CEMS measurement techniques are identified through reporting requirements, and to ensure that the interim milestones are consistent with the new measurement techniques so that compliance is not affected by "paper" emission reductions or emissions increases. The WRAP's goal is to design the protocol in such a way that milestones can be adjusted without the need for SIP revisions. The actual magnitude of the adjustments will be determined using a facility specific analysis of those facilities that actually adopt the new measurement methodologies. The CEMS measurement issue has already been addressed in the 2018 milestone and that milestone will not be affected by this protocol.

6. Compliance. Compliance with the milestones will be measured according to the following process:

a. Annual SO_2 Emissions Inventory. The participating Transport Region States and Tribes will compile a regional SO_2 emissions inventory of all stationary sources with actual emissions greater than 100 tons/year SO_2 on an annual basis, beginning with the year 2003 inventory. Applicable sources that reduce emissions below the 100 tons/year cutoff for SO_2 will continue to be included in the inventory in future years.

b. Averaging. The participating Transport Region States and Tribes will compare the three-year average emission inventory to the comparable three-year average milestones. Because this program does not begin until 2003, compliance in 2003 will be based on 2003 data only. Compliance in 2004 will be based on an average of 2003 and 2004 data. Compliance using a three-year rolling average will begin with the 2003-05 data. If the emission inventory average exceeds the milestone average, then the backstop trading program will be triggered.

c. Special Provisions for the year 2018. The participating Transport Region States and Tribes will compare the year 2018 SO_2 emissions inventory to the year 2018. If emissions in 2018 are greater than the 2018 milestone then the program will be triggered. In addition, penalties will be imposed as follows:

(i) each source's emissions would be reconciled with each source's allowance allocations under the trading program for the year 2018.

(ii) After a brief reconciliation period during which sources would be allowed to trade allowances with one another, any source found to have emissions in excess of its allowances would face both a 2:1 allowance offset and monetary penalties of $5,000 per ton of excess SO2 emissions in 2000 dollars indexed to inflation.

d. Special Provisions for Mohave Emissions for 2003-2006. When the interim milestones where first recommended by the WRAP's IOC, there was an undiscovered error in the baseline emissions projection for utilities. The error was that controls planned for the Mohave Electric Generating Station in 2006 were incorrectly assumed to be in place in 2003. Therefore, the WRAP has included a correction for this error that will be used when measuring compliance with the milestones for 2003 through 2006.

Consistent with the recommendations of the GCVTC, for the purposes of evaluating compliance with the interim milestones, prior to installation of the SO2 controls required by the end of 2006 in the Consent Decree for Grand Canyon Trust v. Southern California Edison (District of Nevada CV-S-98-00305-LDG, dated December 15, 1999), emissions from the Mohave Generating Station will be calculated using an SO2 emission rate of 0.15 pound per million BTU of coal input. This emission rate is consistent with the maximum allowable emission rate effective in 2006 under the Consent Decree.

These calculated emissions for Mohave will be substituted for the actual emissions in 2003, 2004, 2005, and on a prorated basis for 2006 (i.e., for any part of 2006 prior to the installation of the controls) for the purpose of determining compliance with the interim milestones.

7. 2013 SIP review: The program will include five year State Implementation Plan (SIP) reviews, with an option for a 2013 trigger of the program. The purpose of the optional trigger is to insure that regardless of whether the milestone is met in 2013, the targeted emission reductions actually occur by the 2018 milestone date, as agreed to in this program and as required by the regional haze regulations. This 2013 trigger option will be implemented by consensus of those states and tribes that have implementation plans under Section 309. Implementation of the early trigger will be based on a demonstration that available data indicates compliance with the 2018 milestone will not be achieved. Data used to make this forecast includes projected or actual emission levels for 2013, and projected remaining emission reductions available in the region through 2018. Even so, there are provisions for individual source penalties if the 2018 milestone is eventually exceeded.

B. Best Available Retrofit Technology and Geographic Enhancements

1. Greater Reasonable Progress than BART. The supporting documentation that is submitted with the Annex demonstrates that the regional milestones provide greater reasonable progress than BART, and therefore meet the RH rule requirement to address BART for regional haze.

2. Reasonably Attributable BART. EPA has indicated that all BART for the region does not expire until the milestone reflecting greater reasonable progress than BART has been achieved. In the interim, it is therefore necessary to reconcile the use of BART for regional haze and reasonably attributable visibility impairment.

There are three steps to the process of determining reasonable attribution and BART under the visibility protection program. The Federal Land Manger must certify to the State or Tribe that impairment exists. The State must then determine attribution for a specific BART-eligible source or group of sources. Finally, appropriate emission controls would be established for the source after considering the statutory factors of cost of compliance, the energy and non-air environmental impacts of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, and the degree of improvement in visibility that may reasonable be anticipated to result from the use of such technology. The participating Transport Region States and Tribes and the Federal Land Managers intend to submit a Memorandum of Understanding as part of their the State and Tribal Implementation Plans in 2003 that outlines the principles that will be followed for addressing reasonably attributable BART within the context of regional SO_2 milestones and a backstop emission trading program that have been developed to address regional haze (a draft MOU is provided as part of the supporting documentation for the Annex).

a. FLM Certification.

The Federal Land Managers have a statutory obligation to protect the National Parks and Wilderness Areas that have been designated as mandatory federal Class I areas. The MOU cannot restrict the authority of the Federal Land Managers to fulfill this obligation. In the course of certifying impairment, the FLMs may make recommendations to the states regarding a source or sources to which impairment may be reasonably attributable. Within the context of established regional milestones for SO_2 and a backstop trading program, the Federal Land Managers have said they believe that it is appropriate to use the following screening process in making these recommendations as part of the certification process.

(i) Sulfate levels in the Class I area are not decreasing.

(ii) One or more BART-eligible sources for SO_2 are located within 100 miles of the mandatory federal Class I area.

(iii) The BART-eligible sources identified in (ii) are not already well-controlled for SO_2 (85% control for coal-fired utility boilers, the level for other sources will be determined at a later date)

The FLMs are in the process of expanding the IMPROVE monitoring network throughout the west. The FLMs will establish a goal to complete their certification process by the year 2006, after consultation with the states, for Class I areas within the Visibility Transport Region to provide greater certainty for the potentially affected sources in the region. This goal will not in any way restrict the ability of the Federal Land Managers to certify impairment at a later date if it is necessary to fulfill their statutory obligations.

b. State or Tribal Determination of Attribution.

The Transport Region States and Tribes have a statutory obligation to respond to certifications of visibility impairment by the Federal Land Managers. The MOU cannot restrict the authority of the Transport Region States and Tribes to fulfill this obligation. Within the context of established regional milestones for SO_2 and a backstop trading program, the Transport Region States and Tribes believe that it is appropriate to use the following principles when determining reasonable attribution.

(i) The attribution process is intended to identify "hot spots" that are caused by the contribution of individual sources, and is not intended to directly address visibility impairment due to regional haze. The SO_2 milestones and backstop trading program have been designed to address regional haze.

(ii) The frequency, magnitude and duration of visibility impairment should be considered.

The States are in the process of developing guidelines for determining reasonable attribution, and intend to submit these guidelines as part of their State Implementation Plans in 2003. These guidelines will outline the technical basis for making this determination, and may include factors, criteria, and a threshold or metric for determining when impairment can be reasonably attributed to a source and how this level of contribution is to be distinguished from a contribution to regional haze impairment. The guidelines will be consistent with the states' authority under the Clean Air Act to determine reasonable attribution.

c. Remedy Options.

Three options for remedy are provided in cases where "certification" is executed and a finding of reasonable attribution is made. First, BART retrofit controls can be required on the attributed source(s) of the impact. As a second alternative, states can look for control on other sources of sulfates, besides the BART-eligible facilities impacting the resource. Finally as under current law, sources and states may negotiate a BART "off ramp" in advance of certification, which entails installation and operation of emission controls, or includes other restrictions such as limitations on the purchase of allowances, that satisfies BART for the source. The states may propose a geographic enhancement remedy that involves the award and transferability of credits by the affected source.

C. Other Class I Areas

It is the intention of the states and participating tribes to demonstrate in the 2003 Implementation Plans, that the milestones and backstop trading program will satisfy the "greater reasonable progress than BART" requirements, and any other reasonable progress requirements for additional Class I areas through 2018. This demonstration will apply to all sources of sulfur dioxide participating in that program. The work plan and resources needed to make this demonstration in the 2003 implementation plans will be identified and provided by the WRAP. Class I areas beyond the original 16 will be addressed in the Annex, even if only to identify the process and procedures to address this issue in the 2003 implementation plans.

Further, the states must evaluate other sources and pollutants in order to demonstrate reasonable progress for additional Class I area. Although it is their intent to do so, the states and tribes recognize that it may not be practicable to satisfy the additional Class I area requirements for all other sources of anthropogenic emissions besides stationary sources (e.g., mobile and area source sectors), and for all species of visibility impairing pollutants from stationary sources (e.g., NO_x and PM), by the 2003 deadline. States have the option of addressing these additional issues later, in a 2008 SIP.

Since §309 is designed to address impairment at the 16 Class I areas on the Colorado Plateau, it is important to establish the meaning of the milestones established under §309 for other Class I areas beyond the original 16. For purposes of addressing the additional Class I areas under section 309, the Transport Region States and Tribes must meet the requirements of section 51.309(g) which

incorporates two tests: 1) the Plan must demonstrate reasonable progress towards achieving the long-term goal of returning to natural conditions by 2064; and 2) the milestones must demonstrate greater reasonable progress that BART for regional haze in all Class I areas. The technical work that is needed to make these demonstrations will be completed as part of the 2003 State and Tribal Implementation Plans. The following principles are established as part of the Annex.

1. The Grand Canyon Visibility Transport Commission established a broad range of strategies to reduce visibility impairing emissions from all major emission sources in the region, including stationary sources, mobile sources and fire. The Environmental Protection Agency evaluated the Commission Recommendations and determined that these strategies, if augmented with an approvable Annex, would meet the goal to achieve reasonable progress for the 16 Class I areas of the Colorado Plateau for the first long-range planning period. The Commission work was focused on the Class I areas of the Colorado Plateau, but their recommended strategies are regional in nature and should have benefits for Class I areas beyond the Colorado Plateau.

2. The GCVTC stationary source recommendations were designed to provide flexibility to sources and to achieve the emission reductions needed through a non-regulatory program. If the goals are not met, then a backstop emission trading program would be triggered to ensure that the progress is achieved in the most cost-effective manner. If substantially different requirements are needed for the effected stationary sources of SO_2 in order to meet the reasonable progress goals for other Class I areas, then the underlying goals of the GCVTC stationary source strategy may not be met. Under these circumstances, Transport Region States and Tribes may not pursue the strategies outlined in this Annex, and instead develop plans under section 308 of the RH rule.

3. The WRAP technical committees have been charged with evaluating whether or not it will be possible to analyze the reasonable progress requirements for other mandatory Classs I areas in the 2003 SIPs. If completing the necessary technical analysis by 2003 is not possible, the WRAP expects to provide Transport Region States and Tribes with a technical analysis that is adequate to evaluate whether or not additional SO2 emission reductions from sources covered by this program are likely. The WRAP also intends to do the analysis necessary to demonstrate that the milestones and backstop trading program satisfy all of the SO2 BART requirements of the regional haze rule for the sources participating in the program.

D. Backstop Emission Trading Program

If compliance with the SO_2 milestones is not achieved in the region, a backstop emission trading program will be triggered to ensure that the emission reduction goals that have been established are met. The trading program has been designed to allow seamless trading across the region, and to be enforceable and transparent. The trading program as outlined in the draft model rule will meet the following general principles.

1. Emission Cap. If the trading program is triggered, the regional milestones will become an enforceable emission cap for SO_2 in the region. SO_2 allowances under the trading program will be allocated by the participating Transport Region States and Tribes in aggregate in an amount no greater than the regional cap for each year.

2. Seamless Trading Provisions. SO_2 allowances under the trading program will be fungible between all sources within the jurisdiction of Participating Transport Region States and Tribes, and may not be used for any other requirement in any other program, except as stipulated by the model rule.

3. Monitoring. SO_2 emissions of applicable sources will be monitored, recorded, and reported to the Transport Region States and Tribes and compiled annually. Monitoring protocols will be established to ensure that the emission measurements are accurate and are comparable across source categories.

4. System Administrator. The Transport Region States and Tribes will appoint a Tracking Systems Administrator to track allowances and emissions for purposes of compliance determination and program assessment. The States and Tribes will maintain all regulatory functions, including emissions data certification and enforcement of program requirements.

5. Periodic Audits. The Transport Region States and Tribes will conduct periodic audits of program performance including regional emissions assessments, confirmation of monitoring and reporting accuracy and allowance market integrity, and environmental impacts. In addition, it is likely that a periodic third party audit will be performed.

6. Banking. Banking of excess allowances will be permitted to encourage early reductions and provide sources additional compliance flexibility. 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 for use in compliance.

7. Allocations.

If the backstop trading program is triggered, allocations will be made to applicable sources by the participating Transport Region States and Tribes as described below.

a. General Process and Timing.

(i) The initial allocation of SO_2 allowances will occur twelve months following the program trigger. This initial allocation will cover a period of five years, beginning with the year in which compliance with the trading program is first required.

(ii) Subsequent allocations will occur every five years, beginning five years after the initial allocation.

(iii) A mechanism will be included to the issue of allocations to shut-down sources. The details of this mechanism are still under discussion.

b. Distribution of Allowances. At the beginning of each five-year allowance distribution period, an allowance budget will be calculated for each participating State and Tribe using the process outlined in paragraphs (I) through (iii). The State or Tribe will then distribute allowances to individual sources within their jurisdiction, using the same process that is outlined to calculate the State and Tribal budgets.

(i) Regional Set- Asides. The following regional set-asides will be distributed by the program administrator according to pre-determined agreements between the States and Tribes. The States and Tribes will maintain all regulatory authority, and the program administrator's sole function will be to track the distribution of these set-asides.

(A) Tribal Allocation. A 20,000-ton set aside will be established as a general Tribal allocation. The Tribes in the Transport Region will determine how to distribute these allowances. The 20,000 tons is fully separate and additional to any Tribal budgets as determined using the process described in paragraphs (ii) and (iii).

(B) New Source Set-Aside. A new source set-aside will be established to accommodate regional growth. The new source set-aside shall consist of 9,000 allowances each year for a maximum of 27,000 tons for the years 2003 through 2018. New sources will be required to request an allocation from the applicable State or Tribe. New sources will eventually be incorporated into the floor as allocations are updated over time. Any allowances remaining in the new source set-aside in any year will be carried over for potential use by new sources in the following year until such time that the regional five-year allocation process occurs. If the new source set-aside is depleted, incoming new sources will have to buy allocations from the market.

(ii) State and Tribal Floor Allocation. The floor allocation consists of two components: California RECLAIM sources and existing source-specific floor. The floor allocation is a minimum allocation for all existing sources which will be calculated to ensure that well-controlled sources will receive a full allocation.

(A) California RECLAIM Program. 3,462 SO_2 allowances will be included in the California budget for RECLAIM sources. These credits will be a subset of the existing source pool for the State of California and, hence, will not consume any extra credits from the total pool of credits.

(B) Source-Specific Floor Allocation. A floor allocation will be calculated for all existing sources in the region based on some specified level of control (e.g., BACT, BART, LAER) for non-utility sources. This determination will have to be made by the authorized State or Tribe prior to submittal of their 2000 SIP. The Utility Sector currently has two options based on either an emission rate or a combustion control efficiency.

(iii) Reducible Allocation. From the reducible portion of the allocations, both renewable energy allocations and early reduction credits will be awarded. The remainder of the reducible portion will then be allocated to existing sources.

(A) Source-Specific Early Reduction Bonus Allocation. Sources that reduce their emissions below their 2018 allocation as estimated in the State or Tribal Implementation Plan prior to the program trigger will be eligible for early reduction bonus allocations. States and Tribes will certify and publish the amount of early reduction bonus allowances that are earned each year until the program is triggered. If the program is triggered, the source will receive a bonus allocation equal to the total sum of these early reduction bonus allowances, divided by ten, for the first ten years of the program.

(B) Renewable Energy Sources. Eligible renewable energy resources that begin operation after October 1, 2000, will receive 2.5 tons of SO_2 allocations per MW of installed nameplate capacity per year. A source beginning operation prior to the program trigger will receive its SO_2 allowance as part of the initial allocation. The allocation will be retroactive to the time of initial operation. Sources beginning operation after the program begins will be awarded allowances for each year of operation at the time of the five-year allocations (including retroactive coverage of prior year operations). An emitting eligible renewable energy source would receive allowances from the new source set-aside and an additional 2.5 allowances per MW of capacity from the reducible portion of the allocations.

An eligible renewable energy resource is defined to mean electricity generated by non-nuclear and non-fossil low or no air emission technologies using resources that are virtually inexhaustible, reduce haze, and are environmentally beneficial. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources, and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria. Biomass includes agricultural, food and wood wastes. The term does not include pumped storage or biomass from municipal solid waste, black liquor, or treated wood.

(C) Reducible Allocation.

(i) The remainder of the allowances under the emission cap will be distributed to existing sources based on each source's relative contribution to emissions during 1996 and 1998 for non-utilities and 1995-1999 for utilities. These allowances will be distributed on a regional basis, as compared to the floor allocation which will be done on a source sector basis.

(ii) Should a source be subject to an enforcement action, that source's emissions shall be limited to the appropriate level prescribed by that action, and the allocation methodology will acknowledge that limitation by limiting the source's allowances accordingly.

DRAFT
The Western Emissions Budget Trading Program:
Model Rule

This document contains the Model Rule to implement a backstop cap-and-trade program in the event that current programs and voluntary measures are not sufficient to meet the emission reduction targets for the transport region states set forth in the Annex. The Western Emissions Budget Trading Program (hereafter the WEB Program or WEB Trading Program) will be activated to require stationary source SO_2 reductions should any of these regional targets be exceeded.

This model rule specifies the nature of the trading program requirements for sources and is intended to serve as a template for states and tribes in the transport region to adopt their own rules to implement the WEB Trading Program as part of a compliance strategy to address regional haze. In addition to promulgating legislation, states and tribes choosing to participate in the trading program will also be required to sign the Memorandum of Understanding Between the States and Tribes of the Grand Canyon Visibility Transport Region on the Development of a Western Emissions Budget Trading Program to Ensure Continuing Improvement in Visibility (hereafter referred to as the WEB MOU). The WEB MOU states in broad terms the requirements that must be met by the states and tribes -- and by extension, the sources within the jurisdiction of these states and tribes -- opting to participate in a §309 compliance strategy.

THE WESTERN EMISSIONS BUDGET TRADING PROGRAM MODEL RULE

A1. PURPOSE

(a) This rule establishes the general provisions governing compliance under Section 309 of the regional haze regulations. As such, it includes the regional emissions targets required to demonstrate greater reasonable progress than would be achieved by the application of BART, and backstop WEB Trading Program trigger and compliance procedures should any of these targets be exceeded.

(b) The WEB Trading Program will require reductions in SO_2 emissions from WEB sources in participating transport region states and tribes in the event that the program is triggered in accordance with the provisions delineated in Section B4.

1. Once the trading program is triggered and compliance is required, the annual SO_2 targets become the declining limits on annual regional emissions.

2. The declining limits, or caps, will be implemented by allocations of WEB SO_2 allowances equivalent to the regional targets as prescribed in Section C4.

(c) The trading of WEB allowances between WEB sources in different states and tribes is contingent upon the adoption and implementation of comparable and consistent rules by those states and tribes, and therefore rules mirroring the components set forth in this model rule.

(d) Nothing in this rule waives any SO_2 reduction requirement otherwise in effect or subsequently required under another program, including rules governing new sources.

(e) The following implementation guidance documents shall supplement this rule: _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]*.

A2. DEFINITIONS

The terms used in this rule apply solely to this rule. The following words and phrases shall have meaning in the WEB Trading Program as defined below:

Account Certificate of Representation means the completed and signed submission required to certify the designation of an Authorized Account Representative for a WEB source who is authorized to represent the owners and operators of the source with regard to matters under the WEB Trading Program.

Account number means the identification number given by the Tracking Systems Administrator to an account in which allowances are held in the WEB Allowance Tracking System pursuant to Section C8 of this rule.

Allocate or allocation means the assignment of allowances to a WEB source or set-aside through this rule, and the recordation in the WEB Allowance Tracking System.

Allowance/WEB allowance means the limited authorization under the WEB Trading Program to emit one ton of SO_2 during a specified control period or any control period thereafter subject to the terms and conditions for use of banked allowances as defined by this rule. All allowances shall be allocated, transferred, or used as whole allowances.

Allowance deduction means the withdrawal of allowances for permanent retirement by the Tracking Systems Administrator from a WEB Allowance Tracking System compliance account to account for the number of tons of SO_2 emissions from a WEB source for a control period, determined in accordance with Sections C9 and C10 of this rule, and with any additional requirements delineated in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA],* or for any other allowance surrender obligation under this rule.

Allowance limitation/WEB allowance limitation means, for a WEB source, the SO_2 allowances available for compliance deduction for the source for a control period under Section C11, adjusted by any deductions of such allowances to account for excess emissions for a prior control period under Section C13.1, or to account for any other provisions as may be required by this rule.

Allowances held or hold allowances means the WEB SO_2 allowances recorded by the Tracking Systems Administrator, or submitted to the Tracking Systems Administrator for recordation, in accordance with Sections C6 and C8 of this rule, in a WEB Allowance Tracking System account.

Allowance transfer means the conveyance to another account of one or more allowances by whatever means, including but not limited to purchase, trade, or gift in accordance with the procedures established in Section C6 of this rule, effected by the submission of an allowance transfer request to the Tracking Systems Administrator.

Allowance transfer deadline/WEB allowance transfer deadline means midnight on the date 60 days following the end of the control period, or March 1 of each non-leap year and February 29 of each leap year (or if this date is not a business day, midnight of the first business day thereafter), and is the deadline by which allowances must be submitted for recordation in a source's compliance account for purposes of meeting the requirements of this rule for the preceding control period.

Authorized Account Representative/WEB Authorized Account Representative means the responsible person who is authorized by the Account Certificate of Representation to transfer and otherwise manage allowances as well as certify reports to the WEB Allowance Tracking System and the WEB Emissions Tracking System for purposes of this rule.

Banked allowance means an allowance which is not used to reconcile emissions in the designated year of allocation but which is carried forward for use in a later year.

Banking means the retention of unused allowances from one year for use in a future year.

Best Available Retrofit Technology (BART) means a requirement under Section 169A of the Clean Air Act and the provisions of 40 CFR subpart P.

Clean Air Act means the Clean Air Act, 42 U.S.C. sections 7401, et seq. as amended by Pub. L. No. 101-549 (November 15, 1990).

Commence operation means to have begun any mechanical, chemical, or electronic process.

Compliance account means a WEB Allowance Tracking System account established under Section C8 for each WEB source, in which the SO_2 allowance allocations for the source are initially recorded and in which are held allowances available for use by the source in compliance.

Compliance certification means a submission to the permitting authority and the state or tribe (if an entity other than the state or tribe is the permitting authority) by the Authorized Account Representative as required under Section C12 to report a WEB source's compliance or noncompliance with this rule.

Control period means the period beginning January 1 of each year and ending on December 31 of the same year, inclusive.

Emissions means air pollutants exhausted from a source into the atmosphere as measured, recorded, and reported to the state or tribe by the WEB Authorized Account Representative and as determined by the state or tribe to be in accordance with monitoring and reporting requirements in Sections C9 and C10 and with any additional requirements delineated in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA].*

EPA Administrator means the Administrator of the United States Environmental Protection Agency or the Administrator's duly authorized representative.

Excess emissions means any emissions of SO_2 emitted by a WEB source during a control period that exceeds the WEB allowance limitation for that source.

Existing source means, for purposes of applicability at the start of the program, a source that commences operation before or during the program trigger years. For purposes of allocations, existing source means a source included in the distribution of floor and reducible allocations.

Existing new source means, for purposes of allocations, a source that is an existing source, but not a WEB source under C4.1(a), which subsequently emits 100 tons or more of SO_2 in any year after the program trigger year. Existing new sources have operating data available to provide a basis for allocations.

Floor allocation means the amount of allowances, to be set by each state in their 2003 SIP, that represents, for each source, the minimum necessary for the source to operate under stringent control assumptions (i.e., BACT, BART, or LAER, as appropriate.) The floor allocation for each source will remain constant throughout the program, provided the sum of the floor allocations in the region and the allocation set-asides does not exceed the relevant target.

General account means a WEB Allowance Tracking System account established under Section C8 of this rule that is not a compliance account.

Geographic enhancement means a method, procedure or process to allow a broad regional strategy, such as a milestone or backstop market trading program designed to achieve greater reasonable progress than BART for regional haze, to accommodate BART for reasonably attributable impairment. *[not yet utilized in the rule]*

Grand Canyon Visibility Transport Commission (GCVTC), authorized under section 169B(f) of the Clean Air Act, means the planning body composed of the governors of eight western states (AZ, CA, CO, NM, NV, OR, UT, WY), four tribes (Acoma Pueblo, Hopi, Hualapai, and Navajo), four federal land managers (Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, National Park Service), the Columbia River Inter-Tribal Fish Commission, and the Environmental Protection Agency. The Commission was established to recommend methods to preserve and improve visibility on the Colorado Plateau, and submitted recommendations to EPA in June, 1996.

Maximum design heat input means the ability of a unit to combust a stated maximum amount of fuel per hour on a steady state basis, as determined by the physical design and physical characteristics of a unit.

Modification means any change at a source that would result in an increase in the potential to emit of the source.

Opt-in means to choose to participate in the WEB Trading Program and to comply with the terms and conditions of this rule.

Owner or operator means any person who is an owner or who operates, controls or supervises a WEB source and shall include, but not be limited to, any holding company, utility system or plant manager.

Permitting authority means the state or tribal air pollution control agency, local agency, or other agency authorized by the EPA Administrator to issue or revise permits to meet the requirements of the WEB Trading Program in accordance with Sections B2 and C5 of this rule.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

Potential WEB source means a stationary source subject to the requirements of Part B of this rule.

Program trigger year(s) means the year in which the annual emissions of applicable sources exceed the annual target, or the years in which the average of annual emissions of applicable sources exceeds the average of the associated targets, as applicable, in accordance with Section A3.4.

Recordation, recorded or record means, with regard to WEB SO_2 allowances, the movement of allowances by the Tracking Systems Administrator from one WEB Allowance Tracking System account to another, for purposes of allocation, transfer, or deduction.

Reducible allocation means the amount of allowances that represents, for each source, emissions in excess of a source's floor. The reducible allocation for each source will be reduced as the targets decrease.

Regional cap means the limit on the amount of SO_2 emissions that can be emitted from WEB sources collectively in a given control period in the states and tribes that choose to participate in the WEB Trading Program. Each regional target becomes a regional cap once the program is triggered and compliance is required.

Renewable energy source means electricity generated by non-nuclear and non-fossil low or no air emission technologies using resources that are virtually inexhaustible, reduce haze, and are environmentally beneficial. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources, and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria. Biomass includes agricultural, food and wood wastes. The term does not include pumped storage or biomass from municipal solid waste, black liquor, or treated wood.

Serial number means, when referring to allowances, the unique identification number assigned to each allowance by the Tracking Systems Administrator, in accordance with Section C8.3.

Set-aside means an amount of allowances under the regional cap designated for a specific use each year throughout the trading program. There is one set-aside for new sources and one for tribal allocations.

State trading program budget means the total number of SO_2 tons within the regional cap that are apportioned to all WEB sources in a given state, in accordance with this rule, for use in a given control period.

State means a transport region state (including local agencies and state agencies) which has promulgated the WEB Trading Program provisions.

Stationary source means any building, structure, facility or installation which emits or may emit any air pollutant subject to regulation under the Clean Air Act.

Submit or submitted means sent to the appropriate authority under the signature of the Authorized Account Representative. For purposes of determining when something is submitted, an official U.S. Postal Service postmark, or electronic time stamp, shall establish the date of submittal.

Suspended smelters means smelters that were operating in 1990, but during the year 2000 were under economic suspension of operations despite a permitted capability to operate. Two smelters, Hidalgo in New Mexico and San Manuel in Arizona, are known to fall within this category. If any suspended smelter should resume operation, such smelter will receive allocations from a pool of allowances added to the regional cap in accordance with Section A3.3(a)(2).

Target means the maximum level of regional SO_2 emissions, assessed annually under Section A3.4 beginning in the year 2003, allowable under the regional haze regulations. Each target shall become a regional emissions cap once the trading program is triggered and compliance is required.

Ton or tonnage means any "short ton"(i.e., 2000 pounds). For the purpose of determining compliance with the WEB allowance limitation, total tons for a control period shall be calculated in accordance with Section C9 of this rule and with any additional requirements delineated in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]*, with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed to equal zero tons.

Tracking Systems Administrator means the person or corporation designated by the states and tribes as the administrator of the WEB Allowance Tracking System and the WEB Emissions Tracking System.

Transport region state/transport region tribe means one of the nine states or 211 tribes that is included within the Transport Region addressed by the Grand Canyon Visibility Transport Commission. The states are Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah and Wyoming.

Tribal trading program budget means the total number of SO_2 tons apportioned to all WEB sources in a given tribe in accordance with this rule, for use in a given control period.

Tribe means a transport region tribe which has promulgated the WEB Trading Program provisions.

Trigger/triggered refers to the activation of the backstop trading program in accordance with the regional haze regulations and Section B4. of this rule to require regional SO_2 emissions reductions. The trading program will commence within 12 months of the trigger, and compliance will be required within five years of the trigger.

Truly new source means, for purposes of allocations, a source that lacks relevant operating data on which to base allocations, requiring therefore that assumptions be made in the allocation process. Sources falling into this category are sources that either: 1) commence operation after the program trigger years and are characterized by a potential to emit of 100 tpy or greater, or 2) sources that undergo a modification after the program trigger years and, as a result are characterized by a potential to emit of 100 tpy or greater.

Unit means a stationary boiler, combustion turbine or combined cycle system.

Utilization means the heat input (expressed in mmBtu/time).

WEB allowance means the limited authorization under the WEB Trading Program to emit one ton of SO_2 during a specified control period or any control period thereafter, subject to the terms and conditions for use of banked allowances as defined by this rule. All allowances shall be allocated, transferred, or used as whole allowances. To determine the number of whole allowances, the number of allowances shall be rounded down for decimals less than 0.50 and rounded up for decimals of 0.50 or greater.

WEB Allowance Tracking System means the system by which the Tracking Systems Administrator records allocations, deductions, and transfers of WEB allowances under the WEB Trading Program.

WEB Allowance Tracking System account means an account in the WEB Allowance Tracking System established by the Tracking Systems Administrator for purposes of recording the allocation, holding, transferring, or deducting of WEB allowances.

WEB MOU means the Memorandum of Understanding Between the States and Tribes of the Grand Canyon Visibility Transport Region on the Development of a Western Emissions Budget Trading Program to Ensure Continuing Improvement in Visibility, and refers to the signed agreement establishing the WEB Program parameters, including the participating states and tribes.

WEB permit means the legally binding and federally enforceable written document, or portion of such document, issued by the permitting authority under this rule, including any permit revisions, specifying the WEB Trading Program requirements applicable to a WEB source and to the associated owners and operators and Authorized Account Representative.

WEB source means a source subject to the WEB Trading Program requirements under Part C of this rule, including the allowance limitation pursuant to Section C4.

WEB Trading Program/WEB Program means the backstop market trading program set forth in this rule and pursuant to the regional haze regulations that will be triggered, if necessary, according to the provisions in Section B4. of this rule to reduce regional sulfur dioxide emissions.

Western Regional Air Partnership (WRAP) means a collaborative effort of tribal governments, state governments and federal agencies to promote and monitor implementation of recommendations from the GCVTC, and to address other common Western regional air quality issues as raised by its membership.

A3. SULFUR DIOXIDE EMISSIONS TARGETS

A3.1 2018 Target

(a) Value. The 2018 target shall be 480,000 tons of SO_2. This target may be increased by a maximum of 30,000 tons of SO_2 to account for the operation of suspended smelters according to the provisions in A3.3(a)(2).

(b) Ensuring achievement of the 2018 target.

1. 2013 assessment. If the trading program has not yet been triggered by 2013, states and tribes shall complete a formal assessment of projected regional emissions to determine the feasibility of achieving the 2018 target. Data used to make this forecast shall include projected or actual emission levels for 2013 and projected remaining emission reductions available in the region through 2018. If, based on this survey, the states and tribes determine by consensus that the 2018 target will not be met, the backstop trading program will be triggered.

2. Backstop penalties. If the trading program has not yet been triggered prior to 2018, and the 2018 target is not met according the provisions in Section A3.4(b):

(i) The trading program shall be triggered as required;

(ii) Each state and tribe shall assess excess emissions penalties in accordance with Section C13 to WEB sources based on a comparison of each source's 2018 allocation (as potentially adjusted by trades) to each source's 2018 emissions.

3. The parameters and criteria for the determinations under (1) and (2) of this section are delineated in _____ *[insert reference to guidance collaboratively developed by the states, tribes, and EPA, and included in the state and tribal implementation plans under §309]*.

A3.2 Interim Targets

(a) Year 2000 target. The target for 2000 shall be 721,703 tons, a 13% reduction in emissions from 1990 emissions in the transport region.

(b) Targets for 2003 through 2017. The interim targets for each year from 2003 to 2017 shall be set as follows, and shall serve as voluntary reduction guidelines until such time as the trading program is triggered in accordance with Section B4. of this rule and compliance requirements begin.

Year	**Target***
2003 - 2007	682,000 tons
2008 - 2012	677,000 tons
2013 - 2017	625,000 tons

*Note that the emissions from suspended smelters are not included in target calculations, but that a suspended smelter adjustment may occur to increase the targets in accordance with A3.3(a)(2).

(c) Utility CEMs adjustment protocol for interim milestones. As currently crafted the WRAP interim milestones are based on utility emissions projections from 1999 as measured by the current CEMS test method. (Test Method 2). EPA has established several alternative test methods that will be available to utilities on a going-forward basis. These new emission measurement techniques are expected to lower emission level readings from utilities. To account for these changes in utility CEMS emission measurement techniques, the WRAP, working with EPA, will develop a protocol by the end of 2000 to adjust the interim milestones as necessary. This protocol will be submitted to EPA for approval as part of the changes to section 309 that incorporate the Annex.

The protocol must be designed to ensure that utility sources using new CEMS measurement techniques are identified through reporting requirements, and to ensure that the interim milestones are consistent with the new measurement techniques so that compliance is not affected by "paper" emission reductions

or emissions increases. The actual magnitude of the adjustments will be determined using a facility specific analysis of those facilities that actually adopt the new measurement methodologies. The CEMS measurement issue has already been addressed in the 2018 milestone and that milestone will not be affected by this protocol.

A3.3 Revisions to Targets

(a) Once the targets are established as set forth in this section, the values may be automatically modified due to any or all of the following circumstances:

1. The regional haze rule allows the Transport Region States and Tribes to develop SIPs and TIPs under either section 308 or 309 of the rule. It will not be known until 2003 which States will be part of the program, and Tribes may have a longer time period to develop TIPs (the timing of tribal opt-in is pending legal review by EPA). The milestones have been established assuming that all Transport Region States and Tribes are participating in the program. If one or more Transport Region States or one or more Tribes with eligible sources do not participate, then the regional milestone will be adjusted as follows.

(i) A state or tribal budget under the total regional milestone will be determined as described in the allocation section of the Annex. The budgets for all States and Tribes that are participating in the program will be summed to establish the applicable milestone.

(ii) The Tribal Set Aside of 20,000 tons SO_2 as described in the allocation section of the Annex will remain constant and will not be affected by this readjustment of the milestone.

(iii) The new source set-aside will be adjusted proportionately to reflect the states and tribes that are participating in the program.

(iv) The suspended smelter provisions described above in paragraph B.2 will only apply to the extent that the state with jurisdiction over that source participates in the program.

Note: Because the allocation methodology may not be fully consistent with the methodology used to determine the BART level emission reductions, if the allocation methodology is used as the basis for adjusting the milestones in the event that a state opts out of the program, it will be necessary to review the adjusted milestones that are applicable to those states remaining in the program to ensure that the better reasonable progress than BART requirement is met for those states.

2. Suspended smelters. There are currently two copper smelters in the nine-state Visibility Transport Region that are temporarily suspended due to economic conditions. These smelters are fully permitted, and may resume full operation at any time. EPA policies will determine

whether a suspended source resumes operations under its existing permit or alternatively goes through new source review to receive a new permit. If one or both of the smelters resume operation, then the milestones will be adjusted as described below. Once the adjustments have been made, the milestone will not be changed due to future suspensions or changes in plant operations, except as provided below.

(i) If one or both smelters resume operations under their existing permits, the milestone will automatically be adjusted upward for each smelter respectively by the following maximum amounts:

(A) Phelps Dodge Corporation, Hidalgo Smelter, 22,000 tons SO_2
(B) BHP, San Manuel Smelter, 16,000 tons SO_2
(C) For the milestones of 2013 and 2018, the maximum increase will be 30,000 tons.

If either smelter resumes operation in a substantially different manner than historic operations (for example, only operating a portion of the plant), the appropriate permitting authority will scale the emission estimates listed above to reflect current conditions. If the smelter resumes "normal" operations at a later date then the full adjustment described above will be applied.

(ii) If one or both smelters resume operations after going through new source review, the appropriate permitting authority will determine the appropriate SO_2 emission levels for that source. The guidelines established in the model rule for new source allocations will be used to determine the appropriate emission levels. The milestone will automatically be adjusted upward by this amount, but in no instance may the adjustment to the milestones exceed 22,000 tons per year for the Hidalgo Smelter or 16,000 tons per year for the San Manuel Smelter.

(iii) If one or both smelters do not resume operation, each of the remaining existing smelters will be given a facility specific set-aside as described in Table 2. This set-aside will only be available for use if emissions from a remaining copper smelter are above its assumed year 2000 baseline level in any particular year. The actual emissions that are above the assumed baseline level up to the level specified as the set-aside for each smelter will be added to the milestone to account for the increased capacity. The set-aside will not be available for use by other source categories and may not be traded.

Table 2. Smelter-Specific Set Aside

Company / Smelter	Baseline Level	Smelter-specific Set-aside

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
TOTAL	**86,000**	**13,600**

(b) Once the targets are established as set forth in this section, the values may be modified due to any or all of the following circumstances through the process of State and Tribal Implementation Plan revisions.

1. Individual source opt-in. Following the WEB Program trigger, allocations for individual sources choosing to join the program according to the requirements set forth in Section C1.2 will be added to the regional targets to establish a new regional cap.

2. Periodic review and audits. If the periodic reviews, including modeling and other analyses as stipulated in Sections B5 and C14, performed by the states and tribes indicate that additional reductions are required to demonstrate reasonable progress towards achievement of the national visibility goal under the regional haze regulations, then the targets may require adjustment.

3. New measurement techniques/CEMS adjustment protocol. If new measurement techniques are implemented or data collection techniques are improved, the targets may require adjustment for purposes of accuracy. _____ *[refer to guidance developed collaboratively by the states, tribes and EPA following submission of this model rule to EPA]*

4. Non-complying emission limits. If a state(s) or tribe(s) determines that any target is based on emissions exceeding those allowed under law, an appropriate adjustment will be made to decrease the targets pursuant to procedures developed and codified in the state and tribal implementation plans.

(c) Any changes to the targets must be authorized by the states and tribes. Any modification of the targets shall be recorded and maintained by each state and tribe, and submitted to the Tracking Systems Administrator and to the EPA on an annual basis. Modifications to the targets shall be subject

to public notice of at least 30 days and the opportunity for public comment should a hearing request be received within the notice period. Further, revisions to the targets must be codified in Section 309 and in the state and tribal implementation plans, as applicable.

A3.4 Compliance With Targets

(a) Compliance with interim targets.
Compliance with the interim targets will be assessed annually beginning with the 2003 target. The source of the actual emissions for the year(s) included in the comparison shall be the final state and tribal emission inventories. The comparison will occur in the year following the year under assessment.

1. Basis for compliance determination. If the annual emissions are greater than the annual targets under (i), or the average emissions are greater than the average targets under (ii) or (iii), as applicable, the trading program will be triggered in accordance with B4.(a)(1).

(i) 2003. Compliance with the 2003 target shall be determined based on a comparison of the regional sum of emissions from potential WEB sources in 2003 to the 2003 target.

(ii) 2004. Compliance with the 2004 target shall be determined based on a comparison of the average of the regional emissions in 2003 and 2004 from potential WEB sources to an average of the 2003 and 2004 targets.

(iii) 2005 through 2017. The regional sum of emissions from potential WEB sources for the year under assessment and the two previous years shall be averaged and compared to the average of the three associated targets.

2. Special provisions for Mojave (provided Nevada is included in the WEB Program). Prior to the installation of the SO_2 controls scheduled for 2006 under the Mojave Generating Station Consent Decree, the emissions from Mojave will be calculated using the 0.15 lb/mmBtu emission rate stipulated by the Decree for 2006. These calculated emissions will be substituted for Mojave's actual emissions in 2003, 2004, 2005, and on a pro-rated basis in 2006, for the purpose of determining compliance with the targets.

(b) Compliance with 2018 target.
In the event that the trading program has not been triggered by 2018, compliance with the 2018 target will be assessed in 2019 by comparison of the regional sum of emissions from potential WEB sources in 2018 to the 2018 target. If the annual emissions are found to be greater than the annual target, the trading program will be triggered in accordance with Section B4.(a)(1) and penalties will apply in accordance with Section C13.

PART B – PRE-TRIGGER REQUIREMENTS

B1. APPLICABILITY

All stationary sources in a state or tribe which record actual emissions of 100 tons or more of sulfur dioxide in the year 2000, or in any subsequent year, shall be potential WEB sources, and therefore subject to the requirements of Part B of this rule.

B2. PERMIT TRACKING REQUIREMENTS

(a) General requirements.

1. For each potential WEB source required to have a federally enforceable permit, such permit shall conform to requirements of this section to track emissions for purposes of regional assessment of compliance with the targets.

2. any potential WEB source is not already required to have a federally enforceable permit, Section B of this rule, as adopted by the state or tribe and approved by EPA, shall serve as the federally enforceable mechanism to ensure emissions are tracked appropriately.

(b) Duty to Apply. Any potential WEB source required to have a federally enforceable permit shall submit to the permitting authority a complete Regional Tracking permit application by the applicable deadline in paragraph (c) of this section. Each such permit application shall include the following elements in a format prescribed by the permitting authority:

1. Identification of the source, including plant name and AIRS code;

2. A statement obligating the source to monitor and report emissions in accordance with the current inventory requirements as delineated in each state's or tribe's implementation plan and as codified in the Code of Federal Regulations, to enable state and tribal compilation of an accurate and complete regional emissions inventory for purposes of tracking regional emissions and assessing compliance with the targets.

(c) Deadlines.

1. Any potential WEB source in a state or tribe at the time of the promulgation of the state or tribal WEB Program rule shall submit an application in conjunction with the next reopening of the source's permit by the permitting authority following promulgation of the state or tribal WEB Program rule. This submission shall in no case be later than five years after the promulgation of the rule.

2. Any stationary source that becomes a potential WEB source after the promulgation of the WEB Program rule, but prior to the program trigger, shall submit an application in conjunction with the next reopening of the source's permit by the permitting authority. This submission shall in no case be later than five years after the stationary source becomes a potential WEB source.

B3. EMISSIONS MONITORING AND REPORTING REQUIREMENTS

(a) *Sources.* Each potential WEB source shall report emissions to the state or tribe in accordance with the current inventory requirements in each state's and tribe's implementation plan, as codified in the Code of Federal Regulations.

(b) *States and tribes.*

1. The states and tribes shall compile emissions information annually to create an accurate and complete regional emissions inventory to assess compliance with the emission reduction targets delineated in Section A3.

2. The states and tribes shall publish this information and make a joint finding each year in accordance with subsequent explicit guidelines collaboratively developed by the states, tribes and EPA as to whether emissions have exceeded the relevant target. When a finding is made in the affirmative under Section B4(a)(1), the trading program shall be triggered.

3. If the trading program has not yet been triggered by 2013, the states and tribes shall perform an assessment of projected regional emissions in accordance with Section A3.1(b).

B4. PROGRAM TRIGGER

(a) The backstop trading program will automatically commence within 12 months when either of the following occurs as a trigger:

1. The collective emissions for applicable sources in states participating in the WEB Trading Program are determined to exceed the applicable SO_2 emission reduction target in accordance with Section A3.4(a) or A3.4(b), as applicable. The trading program can be triggered in any year from 2003 through 2018 based on this comparison.

2. The state and tribal 2013 checkpoint assessment projects that the 2018 target will not be achieved in accordance with Section A3.1(b)(1).

(b) As required by the regional haze regulations, all WEB sources must be in compliance with program requirements beginning January 1 of the year five years after the program trigger. At this time, the annual targets become the annual regional cap on SO_2 emissions for WEB sources.

B5. AUDITS AND REPORTS

(a) States and tribes shall conduct an audit every three years beginning in 2006 to ensure that the program is providing expected performance and meeting the requirements of the regional haze regulations. This evaluation is additional to the implementation plan assessments required by the regional haze regulations in 2008, 2013, and 2018, and must include at least the following:

1. Summary of emissions information reported under B3 of this section;

2. Confirmation of emissions monitoring and reporting accuracy, including performance of monitoring systems;

3. Environmental assessment of progress, including modeling and other analyses.

(b) The public shall have an opportunity to participate in this program evaluation.

(c) The states and tribes reserve the right to request a third party audit of the program's efficacy.

(d) In the event that any audit result in recommendations for program revisions, the states and tribes, in consultation with the WRAP, may propose the appropriate revisions as changes to current procedures or modifications to this rule.

PART C – POST-TRIGGER REQUIREMENTS (BACKSTOP TRADING PROGRAM)

C1. APPLICABILITY

C1.1 General Applicability

(a) The following stationary sources in a state or tribe will be WEB sources, and therefore subject to the requirements of Part C of this rule from the time compliance with the trading program is required:

1. All BART-eligible sources as defined in 40 CFR 51.301.

2. All existing stationary sources that emit SO_2 in an amount greater than or equal to 100 tons per year in any of the program trigger years.

(b) The following stationary sources in a state or tribe will be WEB sources, and therefore subject to the requirements of Part C of this rule, beginning January 1 of the year following the commencement of operation or the modification, reconstruction or repowering, as applicable. The targets will not be affected by the addition of these sources.

1. Any source that commences operation in any year following the program trigger years, and which emits or has the potential to emit 100 tons per year or more of sulfur dioxide.

2. Any source which is modified, reconstructed or repowered in any year following the program trigger years, and which emits or has the potential to emit 100 tons per year or more of sulfur dioxide.

(c) The following stationary sources in a state or tribe will be WEB sources, and therefore subject to the requirements of Part C of this rule beginning January 1 of the year no later than two years following the regulatory deadline for the relevant five year SIP review required under the regional haze regulations: any existing source that emits SO_2 in an amount greater than or equal to 100 tons per year any year following the program trigger years. The relevant five-year SIP review for such a source will be the deadline for the first review following the year in which the source's emissions are in excess of 100 tons of SO_2. The targets will not be affected by the addition of these sources.

(d) Once a source is included in the program as a result of the applicability requirements, the source will remain in the program thereafter.

(e) The WEB Trading Program will apply in its entirety to the owner or operator of any WEB source.

C1.2 Opt-in Provisions

(a) Any owner or operator of a stationary source that is not a WEB source under Section C1.1, but that is operating within the jurisdiction of a participating state or tribe will have the option to voluntarily opt-in to the WEB Trading Program according to the following parameters:

1. Any person who owns, operates, leases or controls a stationary source that voluntarily opts in to the WEB Program will be considered a WEB source upon approval of the opt-in application and will be subject to all terms and conditions of the WEB Program, including requirements for WEB allowance transfer and use, emissions monitoring, recordkeeping, reporting, and penalties.

2. To opt into the WEB Program, the owner or operator of a stationary source shall submit to the permitting authority the following:

(i) Permit application under Section C5.2 of this rule;

(ii) Monitoring plan in accordance with Section C9 of this rule;

(iii) Complete Account Certificate of Representation under Section C3;

(iv) Documentation of the baseline control period emissions. Baseline control period emissions are a representative average of the actual emissions of two consecutive control periods within the five years preceding the opt-in application. In no event may the baseline be greater than allowable emissions for that source as established by state permit or rule.

3. The permitting authority will assess the completeness and adequacy of the application in accordance with Section C5.2 and Section C9 of this rule. If the application is determined sufficient, a permit will be issued, and will become effective January 1 of the first control period following the issuance of the permit. The permit will include applicability of this program, authority to trade allowances, and authority to emit in accordance with allowances allocated or obtained by the allowance transfer deadline.

(b) Opt-in allocations will be added to the regional cap as defined by the targets after the start of the program in accordance with the procedures in Section A3.3, and will be assigned by each state or tribe to any source that chooses to opt into the program. The allowance allocation for an opt-in source shall be equivalent to the baseline control period emissions, or the permitted allowable SO_2 emissions from the source, whichever is less. In no case will allocation of allowances to a source opting into the program require adjustments to the allocation of allowances to sources already included in the WEB Program. Any person who chooses to opt into the WEB Program, and who subsequently chooses to cease or curtail operations, will be subject to an allowance adjustment which represents emissions equivalent to those reduced through the cessation or curtailment of emitting operations.

C1.2 Retired Source Exemption

(a) General provisions. Any WEB source, other than a WEB opt-in source, that is permanently retired shall be exempt from the WEB Trading Program except for the provisions of this section, effective the day on which the source is permanently retired. A WEB source shall be considered permanently retired only in the event that all emitting units at the source are permanently retired.

1. Within 30 days of permanent retirement, the WEB Authorized Account Representative shall submit a statement to the permitting authority otherwise responsible for administering any WEB permit for the source. The statement shall state that the source is permanently retired and will comply with the requirements of paragraph (b) of this section.

2. After receipt of this notice, the permitting authority will amend any permit covering the source to add the provisions and requirements of the exemption under paragraph (b) of this section.

(b) Special provisions.

1. A source exempt under this section shall not emit any SO_2, starting on the date that the exemption takes effect. The owners and operators of the source will be allocated allowances in accordance with Section C4 of this rule.

2. Should a source desire to resume operation, the Authorized Account Representative of the source must submit a complete WEB Program permit application for the source not less than 18 months (or such lesser time provided under the permitting authority's rules for final action on a permit application) prior to the date on which the source is to first resume operation.

3. The owners and operators and, to the extent applicable, the WEB Authorized Account Representative of a source exempt under this section shall comply with the requirements of the WEB Program in accordance with Section C2 for all periods in which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.

4. A source that is exempt under this section is not eligible to be a WEB opt-in source.

5. For a period of 5 years from the date the records are created, the owners and operators of a source exempt under this section shall retain at the source records demonstrating that the source is permanently retired.

C2. STANDARD REQUIREMENTS

C2.1 Trigger of Program Requirements

The requirements listed in this Section C2 will not become applicable unless and until the backstop trading program is triggered in accordance with Section B4 and compliance is required.

C2.2 Permit Requirements

(a) Each WEB source that is required to have a federally enforceable permit will be required to include permit conditions for the WEB Trading Program. Each WEB source that is not otherwise required to have a federally enforceable permit will not require a permit for purposes of the WEB Program and this rule as adopted by the state or tribe, as applicable, and as approved by EPA, shall serve as the federally enforceable mechanism.

(b) The Authorized Account Representative of each WEB source required to have a federally enforceable permit will do the following:

1. Submit to the permitting authority a complete WEB permit application as explained in Section C5.2.

2. Submit any supplemental information that the permitting authority determines is necessary in order to review a permit application and issue or deny a WEB permit.

C2.3 Monitoring Requirements

(a) The owners and operators and, to the extent applicable, the Authorized Account Representative of each WEB source are required to comply with the monitoring requirements of Section C9 of this rule, and with any additional requirements delineated in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]*.

(b) The emissions measurements recorded and reported in accordance with Sections C9 and C10 of this model rule shall be used to determine compliance for each WEB source with the WEB allowance limitation under 2.4 of this section.

C2.4 SO_2 Requirements

(a) A WEB SO_2 allowance is a limited authorization to emit one ton of SO_2, valid only for the purpose of meeting the requirements of this rule. No provision of the WEB Trading Program or other law should be construed to limit the authority of the United States or the state or tribe to terminate or limit such authorization.

(b) Allowances will be allocated in accordance with the provisions in Section C4. A source that begins operation after the initial allocation must have allowances in order to operate.

(c) Upon recordation by the Tracking Systems Administrator, every allocation, transfer, or deduction of a WEB allowance to or from a compliance account is deemed to amend automatically the WEB permit of a WEB source without any further review.

(d) The owners and operators of each WEB source shall hold SO_2 allowances as of the allowance transfer deadline in the source's compliance account in an amount not less than the total SO_2 emissions from the source for the control period, as determined in accordance with the monitoring and reporting protocols of this rule.

(e) Each ton of SO_2 emitted in excess of a WEB source's allowance limitation can constitute a separate violation of this part, the Clean Air Act or implementing regulations, and applicable state and tribal law.

C2.5 Excess Emission Requirements

The owners and operators of a WEB source that has excess emissions in any control period will be required to:

(a) Surrender the SO_2 allowances required for deduction under Section C13.1(a), and

(b) Pay any fine, penalty, or assessment, or comply with any other remedy imposed under Section C13.1(b).

C2.6 Recordkeeping and Reporting Requirements

Unless otherwise provided, the owners and operators of each WEB source will keep on site at the source each of the following documents for a period of 5 years from the date the document is created:

(a) Copies of all reports, compliance certifications, and other submissions or records under the WEB Trading Program, including those under Sections C9, C10, and C12.

(b) Copies of all documents used to complete a WEB Program permit application.

(c) All emissions monitoring information, in accordance with Section C9 of this part.

(d) The Account Certificate of Representation for the Authorized Account Representative for the source.

C2.7 Liability

(a) Each WEB source shall meet the requirements of the WEB Trading Program.

(b) Any provision of the WEB Program that applies to a WEB source and/or a WEB Authorized Account Representative shall apply also to the owners and operators of such source.

(c) Any person who knowingly violates any requirement or prohibition of the WEB Trading Program or a WEB permit will be subject to enforcement pursuant to applicable state, tribal or federal law.

(d) Any person who knowingly makes a false material statement in any record, submission, or report under the WEB Trading Program shall be subject to criminal enforcement pursuant to the applicable state, tribal or federal law.

C2.8 Effect on Other Rules

The restrictions and requirements of state, tribal and local rules, as well as state, tribal and federal law, remain applicable. No provision of the WEB Trading Program should be construed as exempting any source from compliance with any other provision of the applicable, approved state implementation plan, tribal implementation plan, a federally enforceable permit, the CAA or implementing federal regulations.

Allowances under the WEB Trading Program may not be used to exceed the limitations of a permit or rule unrelated to this program as further explained in Section C15 of this rule.

C3. AUTHORIZED ACCOUNT REPRESENTATIVE

C3.1 Requirements and Responsibilities

(a) Each WEB source must have one WEB Authorized Account Representative selected by the owners and operators of the source, with regard to all matters under the WEB Trading Program. Each WEB source may also have an alternate Authorized Account Representative who may act on behalf of the primary Authorized Account Representative, though all correspondence related to the WEB Trading Program will be directed to the primary Authorized Account Representative. Any representation, action or submission by the alternate Authorized Account Representative will be deemed to be a representation, action or submission by the primary Authorized Account Representative.

(b) The WEB Authorized Account Representative shall be selected by an agreement binding on the owners and operators of the source.

(c) Each submission under the WEB Trading Program shall be submitted, signed and certified by the WEB Authorized Account Representative for each WEB source on behalf of which the submission is made. Each such submission shall include the following certification statement by the WEB Authorized Account Representative: "I am authorized to make this submission on behalf of the owners and operators of the WEB source for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(d) The Authorized Account Representative's responsibilities include, but are not limited to: holding and transferring allowances and submitting permit applications, monitoring plans, certification applications, emissions data and compliance reports as required by this rule.

C3.2 Certification of an Authorized Account Representative

(a) Upon receipt by the state or tribe of a complete Account Certificate of Representation, the WEB Authorized Account Representative of the source shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each owner and operator of the WEB source represented in all matters pertaining to the WEB Trading Program. The owners and operators shall be

bound by any decision or order issued to the WEB Authorized Account Representative by the permitting authority, the state or tribe, the EPA Administrator, or a court regarding the source.

(b) No WEB Program permit shall be issued, and no WEB Allowance Tracking System account shall be established for a WEB source until the state or tribe has received a complete Account Certificate of Representation.

(c) The Account Certificate of Representation must include at least the following elements:

1. Identification of the WEB source by plant name, state, and AIRS code for which the certificate of representation is submitted;

2. The name, address, e-mail (if available), telephone and facsimile number of the Authorized Account Representative and any alternate;

3. A list of owners and operators of the WEB source;

4. The following certification statement: "I certify that I was selected as the Authorized Account Representative or alternate Authorized Account Representative, as applicable, by an agreement binding on the owners and operators of the WEB source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the Western Emissions Budget Trading Program on behalf of the owners and operators of the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the permitting authority, the state or tribe, the EPA Administrator, or a court regarding the source."

5. The signature of the Authorized Account Representative and any alternate Authorized Account Representative and the dates signed.

(d) Once a complete Account Certificate of Representation under this section has been submitted and received, the permitting authority and the state or tribe (if an entity other than the state or tribe is the permitting authority) will rely on the Account Certificate of Representation unless and until a superseding complete Account Certificate of Representation under this section is received by the state or tribe.

C3.3 Changing the Authorized Account Representative or Owners and Operators

(a) Changes of the WEB Authorized Account Representative or alternate.
The WEB Authorized Account Representative or alternate may be changed at any time upon receipt by the state or tribe of a superseding complete Account Certificate of Representation under Section C3.2. Notwithstanding any such change, all representations, actions, inactions, and submissions by the

previous WEB Authorized Account Representative or alternate prior to the time and date when the state or tribe receives the superseding Account Certificate of Representation shall be binding on the new WEB Authorized Account Representative and the owners and operators of the WEB source.

(b) Changes in owners and operators.

1. In the event a new owner or operator of a WEB source is not included in the list of owners and operators submitted in the Account Certificate of Representation, such new owner or operator shall be deemed to be subject to and bound by the Account Certificate of Representation, the representations, actions, inactions, and submissions of the WEB Authorized Account Representative and any alternate of the source, and the decisions, orders, actions, and inactions of the permitting authority and the state or tribe, as if the new owner or operator were included in such list.

2. Within 30 days following any change in the owners and operators of a WEB source, including the addition of a new owner or operator, the WEB Authorized Account Representative or alternate shall submit a revision to the Account Certificate of Representation amending the list of owners and operators to include the change.

C4. WEB SO_2 ALLOWANCE ALLOCATIONS

C4.1 General Distribution and Timing

(a) Each state and tribe shall include in their respective 2003 state or tribal implementation plan preliminary allocations for all existing WEB sources within their state or tribe based on the targets also included in the implementation plans. Individual source allocations shall not be considered final until such time as the trading program is triggered, since final allocations are dependent upon the sources involved in triggering the program.

(b) Allowances in the amount of each target, beginning with the target under which compliance is first required, will be disaggregated into three major segments:

1. Regional tribal set-aside in accordance with Section C4.2;
2. Regional new source set-aside in accordance with Section C4.3;
3. State and tribal trading program budgets for existing sources in accordance with Section C4.4.

(c) Twelve months following the trigger, the state or tribe shall submit to the Tracking Systems Administrator an initial allocation of SO_2 allowances in accordance with Section C4.2 – 4.4 for the first five years of compliance under the trading program (or until allowances are allocated through 2018, whichever is shorter). This allocation shall be less than or equal to the applicable state or tribal trading program budget for each of the allocation years.

(d) By December 1 of the year five years after the initial allocation, the state or tribe will submit to the Tracking Systems Administrator the WEB SO_2 allowance allocations in accordance with Section C4.2 – 4.4 for the control periods beginning five years after the year of the deadline for this submission. This will continue until allowances have been allocated through 2018. This allocation shall at all times be less than or equal to the applicable state or tribal trading program budget for each of the allocation years.

C4.2 Regional Tribal Set-aside

(a) The Tracking Systems Administrator shall transfer 20,000 WEB SO_2 allowances to the tribal set-aside each year in which allowances are allocated under the WEB Trading Program, in accordance with the timing prescribed in 4.1 of this section.

(b) The tribal caucus shall determine the means for distributing the allowances among the tribes.

(c) The tribal set-aside allowances are bonus allowances for the tribes and as such, are separate and additional to any allowances tribes may receive under 4.3 and 4.4 of this section, or under C1.2 of this rule.

C4.3 Regional New Source Set-aside

(a) Size. There shall be 27,000 allowances available to new sources from 2003 to 2018, assuming approximately 9,000 tons per year for each of the three five-year periods under the 2003 –2018 planning period delineated by the regional haze regulations. Should any states and tribes choose not to participate, the set-aside shall be adjusted downward based on the new source growth projections of those entities opting out.

1. In conjunction with the initial allocation under C4.1(c), the Tracking Systems Administrator shall note the total amount of allowances for the first year of compliance that are allocated to sources commencing operation during or after 2003.

2. Because these sources will be included in the initial allocation and thus will not need allowances from the new source set-aside, the Tracking Administrator shall subtract the number determined in (1) from 27,000 to determine the amount of allowances available to be distributed to new sources under the trading program.

3. The amount of allowances available shall be divided equally across the remaining allocation periods from the first year of compliance until 2018.

4. The Tracking Systems Administrator shall transfer the amount of allowances determined for each of the remaining allocation periods in (3) to the new source set-aside each year in which allowances are allocated under the WEB Trading Program, in accordance with the timing

prescribed in 4.1 of this section.

(b) Allocation process. New sources shall request floor allocations via the state or tribe according to the following criteria until all allowances are awarded. Allowances shall be awarded on a first-come, first-served basis for the number of years remaining until the next allocation:

1. Truly new source.

(i) For the first three year of allocations, multiply the lower of the NSPS or permitted emission rate by the maximum design heat input (utility sources) or by the maximum hours of operation or equivalent measure (non-utility sources). Each source will be required to surrender allowances additional to those needed for compliance purposes following each control period.

(ii) If a source is eligible for more than three years of allowances from the new source set-aside (determined by the timing of the commencement of operation as related to the next five-year allocation), the source is eligible to receive allowances in accordance with (b)(2) of this section.

2. Existing new source. Multiply the lower of the NSPS or permitted emission rate by the average heat input of the higher two of the last three years (utility sources) or by the average hours of operation or equivalent measure of the higher two of the last three years (non-utility sources).

(c) Under-subscription. If any WEB allowances remain in the new source set-aside following a control period, these allowances shall be carried over as banked allowances added to the set-aside for potential distribution to new sources in the subsequent control period.

(d) *Over-subscription.* Should there be insufficient allowances remaining in the new source set-aside to cover a new source's allocation, the allowances required to cover operations must be purchased in the market.

C4.4 Allocations to States and Tribes for Existing Sources

(a) Each state and tribe shall have the authority to submit to the Tracking Systems Administrator allocations in the amount of the applicable state or tribal trading program budget. The state/tribal trading program budgets do not represent limits on the aggregate emissions of sources in any state or tribe.

(b) The state and tribal program budget shall be determined at the time of the initial allocation, and again at the time of the subsequent allocations. The determination will be based upon the portion of allowances ascribed to sources in each state or tribe in the floor and reducible allocations calculations in Section C4.5. The sum of the state and tribal trading program budgets as determined through an

aggregation of the source calculations in C4.5 and the regional new source and tribal set-asides must be no greater than the applicable target.

(c) The states and tribes shall submit allocations to the Tracking Systems Administrator for recordation in accordance with the process outlined in 4.5 of this section, and also in accordance with the determination of the state and tribal budgets.

C4.5 Allocations to Existing Sources

(a) Floor Allocations. A floor allocation shall be provided to each WEB source. The floor for each source will remain fixed throughout the life of the WEB Program.

1. California RECLAIM program allocation. California shall be allocated 3,462 WEB allowances to represent the aggregate floor for RECLAIM sources each year in which allowances are allocated under the WEB Trading Program. No additional allowances under 4.5(b) shall be allotted to the state for these sources. Additional allowances shall be awarded to the state for WEB sources which are not RECLAIM sources, and therefore not covered by this allocation.

2. Individual source floor allocation.

(i) Non-utility sources. A floor allocation shall be calculated for each non-utility WEB source based on a specified level of control (i.e., BACT, BART, LAER), and a 100% utilization assumption.

(ii) Utility sources. ***Yet to be determined.***

(iii) The floor allocation shall not be greater than the permitted emission level for the source.

(b) Reducible Allocations. The early reduction and renewable energy allocations shall be awarded from the reducible portion of the allocations. The reminder of the reducible portion will then be allocated to the existing sources.

1. Early Reduction Allocations.

(i) Any year prior to the trigger, a source may earn bonus SO_2 allowances by demonstrating emissions below that source's 2018 allocation as projected in the relevant state or tribal implementation plan. The allowance award shall be based upon the magnitude of the reductions in relation to the 2018 allocation and the number of years for which a reduction is verified.

(ii) Within 90 days after the trigger, a source seeking early reduction allocations must

submit a request to the appropriate state or tribe for certification. Certification requires that reductions be:

A. Real and quantifiable;

B. Representative of control measures and not utilization shifts;

C. Monitored according to protocols prescribed in Sections C9 and C10 of this rule.

(iii) The sum of reductions that are certified as meeting the requirements of this section shall be divided by ten (or the number of years remaining until 2018, inclusive, whichever is less) and distributed to eligible sources for each of the first ten years (or the number of years remaining until 2018, inclusive, whichever is less) of allocations under the WEB program. The award of the first five years of early reduction credits shall occur in conjunction with the initial allocation, and the second five years shall occur in conjunction with the subsequent allocation five years later.

2. Eligible renewable energy resources that begin operation after October 1, 2000, will receive 2.5 tons of SO_2 allocations per MW of installed nameplate capacity per year. A source beginning operation prior to the program trigger will receive its SO_2 allowance as part of the initial allocation. The allocation will be retroactive to the time of initial operation. Sources beginning operation after the program begins will be awarded allowances for each year of operation at the time of the five-year allocations (including retroactive coverage of prior year operations). An emitting eligible renewable energy source would receive allowances from the new source set-aside and an additional 2.5 allowances per MW of capacity from the reducible portion of the allocations.

3. Source-specific Reducible Allocations. The remainder of the allowances available under the level of the target shall be distributed to existing non-utility sources based on each source's relative contribution to reducible emissions during 1996 and 1998, and to existing utility sources based on each source's relative contribution to reducible emissions during 1995 through 1999.

C4.6 Allocations to Existing Sources Subject to an Enforcement Action

Should a source be subject to an enforcement action, that source's emissions shall be limited to the appropriate level prescribed by that action, and the allocation methodology will acknowledge that limitation by limiting the sources allowances accordingly. The difference between the source's allocation prior to and following the enforcement action shall be removed from the allocation pool.

C5. PERMITS

C5.1 General

(a) For each WEB source required to have a federally enforceable permit, such permit shall be required

to contain all applicable WEB Trading Program requirements under Section C2 and conform to the requirements under 5.2 of this section prior to the beginning of compliance requirements.

(b) If any WEB source is not already required to have a federally enforceable permit, this rule shall serve as the federally enforceable mechanism for the WEB Trading Program.

C5.2 WEB Trading Program Permit Applications and Revisions

(a) Duty to Apply. The WEB Authorized Account Representative of any WEB source required to have a federally enforceable permit shall submit to the permitting authority a complete WEB permit application by the applicable deadline in paragraph (b) of this section. Each WEB permit application shall include the following elements in a format prescribed by the permitting authority:

1. Identification of the source, including plant name and AIRS code;

2. The standard requirements under Section C2 of this rule; and

3. For each opt-in source, certification by the Authorized Account Representative that the source is not a WEB source under Section C1.1 and is not covered by a retired source exemption.

(b) Deadlines.

1. Any source that is a WEB source under Section C1.1(a) shall submit a WEB permit application to the permitting authority at least 18 months before compliance with the trading program is required.

2. Any source that is a WEB source under Section C1.1(b) shall possess a WEB permit prior to initial commencement of operation or commencement of operation following a modification, reconstruction or repowering, as applicable.

3. Any source that is a WEB source under Section C1.1(c) shall submit a WEB permit application to the permitting authority within six months after the regulatory deadline for the submission of the five-year SIP review concluding the source is a WEB source.

(c) Contents.

Each WEB permit is deemed to automatically incorporate the definitions of terms, and upon recordation by the Tracking Systems Administrator, every allocation, transfer or deduction of a WEB allowance to or from the compliance account of the WEB sources covered by the permit.

(d) Revisions.

Revisions to a WEB permit shall occur in accordance with the permitting authority's operating permits

rules governing permit revisions.

C6. ALLOWANCE TRANSFERS

C6.1 Submission of WEB Allowance Transfers

To enact an allowance transfer, the WEB Authorized Account Representative shall submit the transfer to the Tracking Systems Administrator, including the following elements in a specified format:

(a) The numbers identifying both the transferor and transferee accounts;

(b) A specification by serial number of the allowances to be transferred; and

(c) The printed name and signature of the Authorized Account Representative of the transferor account and the date signed.

C6.2 Recordation

(a) Within 5 business days of receiving an allowance transfer, except as provided in paragraph

(b) of this section, the Tracking Systems Administrator will record an allowance transfer by moving each WEB allowance from the transferor account to the transferee account as specified by the request, provided that:

1. The transfer is correctly submitted;

2. The transferor account includes each WEB allowance identified in the transfer; and

3. The transfer meets all other requirements of this part.

(b) Any allowance transfer that is submitted for recordation following the WEB allowance transfer deadline and that includes any WEB allowances allocated for a control period prior to or the same as the control period to which the WEB allowance transfer deadline applies, will not be recorded until after completion of the compliance process.

(c) Where a WEB allowance transfer submitted for recordation fails to meet the requirements of paragraph (a) of this section, the Tracking Systems Administrator will not record such transfer.

C6.3 Notification

(a) Notification of recordation.

1. Within 5 business days of recordation of a WEB allowance transfer under C6.2, the Tracking Systems Administrator will notify the Authorized Account Representatives of both the transferor and transferee accounts, and also notify the designated state or tribal officials where the accounts are located; and

2. The Tracking Systems Administrator shall make transfer information publicly available on the Internet.

(b) Notification of non-recordation. Within 10 business days of receipt of an allowance transfer that fails to meet the requirements of C6.2, the Tracking Systems Administrator will notify the WEB Authorized Account Representatives of both accounts of:

1. A decision not to record the transfer, and

2. The reasons for such non-recordation.

C7. BANKING PROVISIONS

(a) WEB allowances may be banked for future use or transfer in a compliance account or a general account, as follows:

1. Any allowance that is held in a compliance account or a general account will remain in such account unless and until the allowance is deducted in conjunction with the compliance process or transferred to another account.

2. After the Tracking Systems Administrator has made all deductions for a given control period from the compliance account pursuant to Section C11, any allowance that remains in any compliance account or general account shall be designated as "banked."

(b) Each year beginning with the year following the first year in which compliance with the WEB Trading Program is required, after completion of the designation of banked WEB allowances in (a), the Tracking Systems Administrator will report the extent to which banked WEB allowances may be used for compliance in the current control period according to the following process:

1. Identify the total number of banked WEB allowances held in compliance accounts or general accounts.

2. If the total number of banked WEB allowances is less than or equal to 10% of the regional cap in the control period, any banked WEB allowance may be deducted for compliance for the control period in accordance with Section C11.

3. If the total number of banked WEB allowances exceeds 10% of the regional cap for the control period, banked allowances may be used for compliance in accordance with the following:

(i) The Tracking Systems Administrator will determine the following ratio: 0.10 multiplied by the regional cap for the control period divided by the total number of banked WEB allowances determined under paragraph (b)(1) of this section.

(ii) The Tracking Systems Administrator will apply this ratio to each account, multiply the resulting number in (i) by the number of banked WEB allowances in each compliance account. The resulting product is the number of banked WEB allowances in each account that may be deducted for compliance in accordance with Section C11. Any banked WEB allowances in excess of the resulting product may also be deducted for compliance, but if such allowances are used to make a deduction, two WEB allowances must be deducted for each deduction of one WEB allowance required under Section C11.

C8. WEB ALLOWANCE TRACKING SYSTEM (WATS)

C8.1 Accounts

(a) Compliance accounts.

1. Upon receipt of a complete Account Certificate of Representation under Section C3.2, the Tracking Systems Administrator will establish a compliance account for each WEB source for which the Account Certificate of Representation was submitted, and will record the associated information.

2. Allocations of WEB allowances and deductions or transfers will be recorded in the compliance accounts in accordance with this subpart.

(b) General accounts.

1. Any person may apply to open a general account for the purpose of holding and transferring allowances by submitting a complete application for a general account to the Tracking Systems Administrator. This application shall including the following elements in a prescribed format:

(i) Name, mailing address, e-mail address (if any), telephone number, and facsimile transmission number (if any) of the WEB Authorized Account Representative and any alternate;

(ii) At the option of the WEB Authorized Account Representative, the organization name and type of organization;

(iii) A list of all persons subject to a binding agreement for the WEB Authorized Account Representative or any alternate to represent their ownership interest with respect to the allowances held in the general account;

(iv) The following certification statement by the WEB Authorized Account Representative and any alternate: "I certify that I was selected as the WEB Authorized Account Representative or the WEB alternate Authorized Account Representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the WEB Trading Program on behalf of such persons and that each such person shall be fully bound by my representations, actions, inactions, or submissions and by any order or decision issued to me by the state or tribe, as applicable, or a court regarding the general account."

(v) The signature of the WEB Authorized Account Representative and any alternate and the dates signed.

2. Upon receipt of a complete application for a general account, the Tracking Systems Administrator will establish a general account for the person or persons for whom the application is submitted. At this time:

(i) The WEB Authorized Account Representative and any alternate shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each person who has an ownership interest with respect to WEB allowances held in the general account in all matters pertaining to the WEB Trading Program. Any such person shall be bound by any order or decision issued to the WEB Authorized Account Representative or any alternate by the state or tribe, as applicable, or a court regarding the general account.

(ii) Each submission concerning the general account shall be submitted, signed, and certified by the WEB Authorized Account Representative or any alternate. Each submission shall include the following certification statement by the WEB Authorized Account Representative or any alternate: "I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the WEB allowances held in the general account. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware

that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

3. Changes.

(i) The WEB Authorized Account Representative or alternate for a general account may be changed at any time upon receipt by the Tracking Systems Administrator of a superseding complete application for a general account under this section. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous WEB Authorized Account Representative prior to the time and date when the Tracking Systems Administrator receives the superseding application for a general account shall be binding on the new WEB Authorized Account Representative and the persons with an ownership interest with respect to the allowances in the general account.

(ii) In the event a new person having an ownership interest with respect to WEB allowances in the general account is not included in the list of such persons in the application for a general account, such new person shall be deemed to be subject to and bound by the Account Certificate of Representation. Within 30 days following any change in the persons having an ownership interest with respect to WEB allowances in the general account, including the addition of persons, the WEB Authorized Account Representative or any alternate shall submit a revision to the application for a general account amending the list of persons having an ownership interest with respect to the WEB allowances in the general account to include the change.

(c) Account identification. The Tracking Systems Administrator will assign a unique identifying number to each account established under paragraph (a) or (b) of this section.

C8.2 Responsibilities of a WEB Authorized Account Representative in the WEB Allowance Tracking System

(a) Following the establishment of any WEB Allowance Tracking System account, all submissions to the Tracking Systems Administrator pertaining to the account, including submissions concerning the deduction or transfer of WEB allowances in the account, shall be made only by the WEB Authorized Account Representative for the account.

(b) The Tracking Systems Administrator will assign a unique identifying number to each WEB Authorized Account Representative.

C8.3 Recordation of WEB Allowance Allocations.

(a) Initial allocation. The Tracking Systems Administrator will record the WEB allowances as

allocated under Section C4 in the WEB sources' compliance accounts and allocation set-asides within twelve months of the program trigger.

(b) Subsequent allocations. Every five years following the initial allocation of WEB allowances -- after making all deductions from a WEB source's compliance account pursuant to Section C11 -- or until allowances have been allocated through 2018, the Tracking Systems Administrator will record five years of WEB allowance allocations beginning with the year following the last year for which allowances were previously allocated to a source, in accordance with Section C4 of this part. Every five years, or until allowances have been allocated through 2018, the Tracking Systems Administrator will also record WEB allowances, as allocated under Section C4 of this part, in the allocation set-asides for the five years following the last year for which allowances were previously allocated to each allocation set-aside.

(c) Serial numbers for WEB allowances. When allocating WEB allowances and recording such allowances in an account, the Tracking Systems Administrator will assign each WEB allowance a unique identification number that will include digits identifying the year in which each allowance is first eligible for use in compliance.

C8.4 Integrity and Public Availability of WEB Allowance Tracking System Information
The WEB Allowance Tracking System shall be a secure and transparent system, as verified by double-entry accounting and periodic audits by the states and tribes. The Tracking Systems Administrator shall provide to states, tribes, sources, and other interested parties an official record of initial allowance allocations, current holdings, transfers, and/or deductions for compliance under the WEB Trading Program as requested and through frequent electronic updates or Internet postings.

C9. EMISSIONS MONITORING

The owners and operators, and to the extent applicable, the WEB Authorized Account Representative of each WEB source shall comply with the following requirements, as applicable:

(a) SO_2 emissions from each WEB source, and each unit at the WEB source, if applicable, shall be monitored as specified by this section, by 40 CFR part 75, and by requirements delineated in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA],* as applicable.

(b) By January 1 of the year two years prior to the beginning of compliance requirements under the WEB Trading Program, the owner or operator of each WEB source shall submit to the state or tribe a monitoring plan in accordance with these specifications.

(c) Emission monitoring systems, as required and specified by this section and in _____ *[refer to guidance specifying non-utility requirements, developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]*, shall be installed, operational and shall have met all of the certification testing requirements in

accordance with the following deadlines:

1. For WEB sources under C1.1(a), by no later than January 1 of the year one year prior to the beginning of compliance requirements under the WEB Trading Program.

2. For WEB sources under C1.1(b), by no later than January 1 of the year following the date when modifications were completed or operations commenced, as applicable.

3. For WEB sources under C1.1(c), by no later than January 1 of the year following the five-year SIP review concluding the source is a WEB source.

(d) All monitoring systems are subject to initial performance testing and periodic calibration, accuracy testing and quality assurance/quality control testing as specified in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA].*

(e) During a period when valid data is not being recorded by monitoring devices approved for use to demonstrate compliance with this rule, missing or invalid data shall be replaced with representative default data in accordance with the provisions of 40 CFR part 75 and any additional requirements delineated in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]*.

(f) SO_2 emissions data shall be reported to the states or tribes in accordance with provisions of Section C10 of this rule and in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]*. The states and tribes shall quality assure and finalize the data in accordance with these provisions for submission to the WEB Emissions Tracking System.

(g) The states and tribes shall agree to a deadline for finalizing and submitting data to the WEB Emissions Tracking System to ensure compliance is determined in a timely manner.

(h) The WEB Emissions Tracking System shall be a secure and transparent system, as verified by double-entry accounting and periodic audits by the states and tribes.

C9.1 Utilities - Part 75 Sources

The owner or operator of each WEB source subject to 40 CFR part 75 shall demonstrate compliance with the WEB Program with a certified part 75 monitoring system.

C9.2 Non-utilities - Non-Part 75 Sources

The owner or operator of each WEB source not subject to 40 CFR part 75 shall demonstrate compliance with the WEB Program through the current methodologies delineated in the Title V permit as adjusted to achieve a level of accuracy comparable to part 75, or _____ *[refer to non-utility requirements developed collaboratively by the states, tribes, and EPA*

following submission of this Model Rule to EPA].

C10. EMISSIONS RECORDKEEPING AND REPORTING

(a) Recordkeeping. The owner or operator of any WEB source, unless otherwise provided, shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created:

1. Copies of all reports, compliance certifications, and other submissions or records under the WEB Trading Program.

2. Copies of all documents used to complete a WEB Program permit application.

3. All emissions monitoring information, in accordance with Section C9 of this part, unless otherwise indicated by Section C9 or _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]*. Additionally, sources will be required to maintain emissions records from 1996 through 1999 in order to support the allocation process.

4. The Account Certificate of Representation for the Authorized Account Representative for the source.

(b) Reporting.

1. The WEB Authorized Account Representative for each WEB source shall submit emissions and operations information each control period on a quarterly basis and in accordance with standards specified in 40 CFR part 75, subpart G, or in any other suitable format as specified by _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA].*

2. WEB sources subject to 40 CFR part 75 shall submit data to the state or tribe in conjunction with the quarterly reports submitted to Environmental Protection Agency for the purpose of compliance with 40 CFR part 75.

3. WEB sources not subject to 40 CFR part 75 shall submit quarterly reports within 30 days of the end of each of the calendar quarters according to guidelines specified in _____ *[refer to requirements developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA]* for equivalency with part 75.

C11. COMPLIANCE

Monitored emissions data as reported by the WEB source to the state or tribe, adjusted as necessary to be in accordance with Section C9 and _____ *[refer to guidance*

developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA], and recorded in the WEB Emissions Tracking System, combined with allowance allocations and transfers recorded in the WEB Allowance Tracking System, shall provide the basis for determination of compliance with this rule.

(a) Allowance transfer deadline. WEB allowances are available to be deducted for compliance with a source's WEB allowance limitation for a control period only if the WEB allowances:

1. Were allocated for a control period in a prior year or the same year; and

2. Are held in the source's compliance account as of the WEB allowance transfer deadline for that control period, or are transferred into the compliance account by a WEB allowance transfer correctly submitted for recordation under Section C8 by the WEB allowance transfer deadline for that control period.

(b) Deductions for compliance.

1. Following the recordation of WEB allowance transfers submitted by the WEB allowance transfer deadline, the Tracking Systems Administrator will deduct WEB allowances available under paragraph (a) of this section to cover the source's SO_2 emissions for the control period as determined in accordance with Section C9 from the source's compliance account.

2. The Tracking Systems Administrator will deduct WEB allowances:

(i) Until the number of WEB allowances deducted for the control period equals the number of tons of WEB emissions from the source for the control period for which compliance is being determined; or

(ii) Until no more WEB allowances available under paragraph (a) of this section remain in the respective account.

(c) Order of deductions. The WEB Authorized Account Representative for each compliance account may identify by serial number the WEB allowances to be deducted from the source's compliance account in the compliance certification report submitted under Section C12. In the absence of such identification, the Tracking Systems Administrator will deduct WEB allowances for a control period from the compliance account on a first-in, first-out (FIFO) accounting basis in the following order:

1. Those WEB allowances that were allocated for the control period to the source, or that were allocated for the control period to any source and transferred and recorded in the account;

2. Those WEB allowances that were allocated for a prior control period to the source or that were allocated for a prior control period to any source and transferred and recorded in the account.

(d) Failure by a WEB source to obtain and hold in its compliance account, for any control period, sufficient allowances equal to or exceeding its WEB allowance limitation for the control period, shall result in enforcement action and penalties pursuant to Section C13 of this rule.

C12. COMPLIANCE CERTIFICATION

(a) For each control period in which a WEB source is subject to the WEB allowance limitation, the WEB Authorized Account Representative of the source shall submit to the permitting authority and the state or tribe (if an entity other than the state or tribe is the permitting authority), a compliance certification report for the source.

(b) The compliance certification report shall be submitted no later than the allowance transfer deadline of each control period.

(c) The compliance certification report shall contain at least the following elements concerning each source subject to the WEB allowance limitation for the control period covered by the report:

1. Identification of each WEB source;

2. At the WEB Authorized Account Representative's option, the serial numbers of the WEB allowances that are to be deducted from a source's compliance account; and

3. The compliance certification under paragraph (d) of this section.

(d) In the compliance certification report, the WEB Authorized Account Representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the WEB source in compliance with the WEB Trading Program, whether the source for which the compliance certification is submitted was operated during the control period covered by the report in compliance with the requirements of the WEB Trading Program applicable to the source, including:

1. Whether the source was operated in compliance with the WEB allowance limitation;

2. Whether emissions data has been submitted to the states and tribes in accordance with the procedures established in Section C10 of this rule and other applicable guidance, for review, revision as necessary, and finalization for forwarding to the WEB Emissions Tracking System for recordation;

3. Whether the monitoring plan that governs the source, and units at the source, if applicable, has been maintained to reflect the actual operation and monitoring of the source, and contains all information necessary to attribute SO_2 emissions to the source, in accordance with the requirements in Section C9 of this rule, and any additional requirements delineated in _____ *[refer to guidance developed collaboratively by the states, tribes, and EPA following submission of this Model Rule to EPA];*

4. Whether all the SO_2 emissions from the source, and units at the source, if applicable, were monitored or accounted for, either through the applicable monitoring or through application of the appropriate missing data procedures; and

5. Whether there were any changes in the method of operating or monitoring the source, and units at the source, if applicable. If there were any changes, the report must specify the nature of the change, the reason for the change, when the change occurred, and how compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification.

(e) The permitting authority and the state or tribe (if an entity other than the state or tribe is the permitting authority) may review and conduct independent audits concerning any compliance certification or any other submission under the WEB Trading Program and make appropriate adjustments to the information. Compliance may be verified by whatever means necessary, including but not limited to:

1. Inspection of operating records;

2. Testing of emission monitoring devices; and

3. Testing of emissions under supervision of the permitting authority and the state or tribe (if an entity other than the state or tribe is the permitting authority).

C13. PENALTIES

The states and tribes shall retain all enforcement authority under the WEB Trading Program, except as delegated to the Tracking Systems Administrator under Section C13.1 for deduction of allowances for excess emissions.

C13.1 Excess Emissions

(a) Allowance deduction penalties.

1. For a WEB source exceeding its WEB allowance limitation, the Tracking Systems Administrator will deduct from the source's compliance account an amount of SO_2 allowances equal to two times the number of the source's tons of excess emissions, after making the deductions for compliance under Section C11. The allowances will be deducted from the control period after the control period in which the source has excess emissions. If there are not sufficient allowances to cover the excess emissions in the compliance account for the next control period, the Tracking Systems Administrator will deduct the required number of SO_2 allowances, regardless of the control period for which they were allocated, whenever allowances are recorded in the account.

2. Any allowance deduction required under this section shall not affect the liability of the owners and operators of the WEB source for any fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under the Clean Air Act, implementing regulations or applicable state or tribal law. Accordingly, a violation can be assessed each day of the control period for each ton of excess emissions if the state or tribe so chooses.

(b) Financial penalties. For a WEB source exceeding its allowance limitation, a financial penalty of $5,000 per ton of excess emissions, indexed to inflation from the year 2000, shall be levied.

(c) State, tribal and federal administrative procedures are applicable, including those pertaining to hearings and appeals of enforcement actions.

C13.2 Other Violations

(a) The states and tribes shall have the authority to enforce the provisions of this rule pursuant to all applicable state, tribal and federal law and regulations, including civil and criminal penalties in conjunction with the Clean Air Act.

(b) State, tribal and federal administrative procedures are applicable including those pertaining to hearings and appeals of enforcement actions.

C14. AUDITS AND REPORTS

C14.1 Annual reports

(a) Beginning with the year following the year in which compliance with the trading program is first required, the Tracking Systems Administrator shall provide an annual report detailing the results of the compliance process, including at least the following:

1. The level of compliance program-wide;

2. Review of allowance transfer and use, both geographically and temporally;

3. A source-by-source accounting of allocations compared to emissions;

4. Report on the use of banked allowances in compliance and extent to which banked allowances have, or have not, contributed to emissions in excess of the cap.

5. The number of WEB sources and changes to covered universe (opt-in, retirement, etc.)

C14.2 Triennial Audits

(a) States and tribes shall conduct an audit of the WEB Trading Program every three years beginning with the third year following the year in which compliance with the trading program is first required to ensure that the program is providing expected performance and meeting the requirements of the regional haze regulations. This evaluation is additional to the implementation plan assessments required by the regional haze regulations in 2008, 2013, and 2018, and must include at least the following:

1. Summary information required in Section C14.1;

2. Regional emission levels as compared to allocations;

3. Confirmation of emissions monitoring and reporting accuracy, including performance of monitoring systems;

4. Confirmation of market integrity and report on performance, including statistics from the WEB Allowance Tracking System and projection of cost savings; and

5. Environmental assessment of progress, including modeling and other analyses.

(b) The public shall have an opportunity to participate in this program evaluation.

(c) The states and tribes reserve the right to request a third party audit of the program's efficacy.

(d) In the event that any audit result in recommendations for program revisions, the states and tribes, in consultation with the WRAP, may propose the appropriate revisions as changes to current procedures or modifications to this rule. If the program is not meeting its emission reduction goals, such revisions will be required.

C15. INTEGRATION WITH OTHER PROGRAMS

(a) The restrictions and requirements of state, tribal and local rules, as well as state, tribal and federal law, remain applicable. No provision of the WEB Trading Program should be construed as exempting any source from compliance with any other provision of state or local law, the applicable, approved state implementation plan, tribal implementation plan, a federally enforceable permit, the Clean Air Act, or implementing regulations under the Clean Air Act.

(b) Allowances under the WEB Trading Program may not be used to exceed the limitations of a permit or rule unrelated to this program, and may not be used outside the WEB Trading Program, except as explained below:

1. Title IV and RECLAIM. WEB sources which are also RECLAIM and/or Title IV affected sources will hold allowances or credits, as applicable, for compliance with each program. Allowances or credits are only redeemable consistent with the applicable requirements that apply to the specific programs.

2. New Source Review. Offset requirements will continue to apply to sources as a separate requirement. Accordingly, offsets required for new and modified sources subject to New Source Review must be obtained in accordance with state and tribal rules and subject to the offset requirements of Section 173 of the Clean Air Act. Should a WEB source reduce emissions and transfer said emission reductions as offsets to sources outside the WEB Trading Program, that source will be subject to a deduction of allowances commensurate with the emission reductions moved off-budget.

3. RACT limits and other permitted requirements. In no case shall a source legally be allowed to operate above their permitted emissions.

DRAFT
Memorandum of Understanding
Annex to the Grand Canyon Visibility Transport Commission Report
October 2000

Whereas, section 169(A) of the Clean Air Act (Act) sets forth a national goal for visibility as the "prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas [in] which impairment results from man-made air pollution;"

Whereas, section 169(A) of the Act calls for states to develop implementation plans ensuring reasonable progress toward the national visibility goal, including emission limits, schedules of compliance and other measures as necessary, including a long term strategy and provisions for Best Available Retrofit Technology (BART) for certain major stationary sources;

Whereas, reducing visibility impairment complements reduction strategies necessary to achieve ozone and PM national ambient air quality standards (NAAQS);

Whereas, the states are empowered to adopt rules protecting public health and welfare, including visibility impairment in the nation's Class I areas;

Whereas coordination of multi-state and tribal efforts to address regional haze will maximize regional efforts to achieve ozone and PM NAAQS;

Whereas, the Act requires the protection of health and welfare, including visibility impairment, from the adverse impacts of air pollution;

Whereas, it is desirable to meet these goals through an intensive, coordinated, federal, state, regional, and local effort to improve air quality, including protection of our national vistas for public enjoyment;

Whereas, it is desirable to develop a strategy that reduces emissions that impair visibility in the nation's Class I areas, consistent with the states' preeminent responsibility to protect public health;

Whereas, towards this end, it is in the best interest of the citizens of the West for Western states impacting the 16 Class I areas in the Colorado Plateau to work together to reduce visibility impairment in these areas from affected pollution sources.

Whereas regional haze is visibility impairment caused by the cumulative air pollutant emissions from numerous sources over a wide geographic area;

Whereas there are 16 Class I areas within the Colorado Plateau, specifically, Flat Tops, Maroon Bells-Snowmass, West Elk, Black Canyon of the Gunnison, Weminuche, Mesa Verde, San Pedro Parks, Mt. Baldy, Petrified Forest, Sycamore Canyon, Zion, Bryce Canyon, Canyonlands, Capitol Reef,

Arches, and Grand Canyon;

Whereas the Grand Canyon Visibility Transport Region comprised nine states and 211 tribes that influence or are influenced by emissions that contribute to regional haze in the Colorado Plateau;

Whereas, the U.S. Environmental Protection Agency (U.S. EPA) established the Grand Canyon Visibility Transport Commission (GCVTC) in 1991 to assess information about the adverse impacts on visibility in and around these 16 Class I areas and to provide policy recommendations to U.S. EPA to address such impacts;

Whereas, the GCVTC was comprised of eight states and four tribes from the Region;

Whereas, the GCVTC issued a report to U.S. EPA in 1996 recommending measures that should be taken to protect visibility in these 16 Class I areas;

Whereas, the GCVTC report, in part, recommended the close monitoring of stationary source emissions, the establishment of regional targets for sulfur dioxide emissions for the year 2000 and the year 2040 with interim targets, and the development of market-based programs if emission targets are not met;

Whereas, the U.S. EPA promulgated a Regional Haze Regulation in July 1999 that established goals and emission reduction strategies for improving visibility in all 156 mandatory Class I national parks and wilderness areas;

Whereas, the Regional Haze Regulation incorporates the GCVTC recommendations in specific provisions that allows the states and tribes in the Grand Canyon Visibility Transport Region to implement the recommendation of the Grand Canyon Visibility Transport Commission (GCVTC) within the framework of the national regional haze program;

Whereas, the follow-up body to the GCVTC is the Western Regional Air Partnership (WRAP) that was formed by Western states to establish a regional process to address, at a minimum, the 16 Class I areas that were the focus of the GCVTC;

Whereas section 51.309 of the Regional Haze Regulation provides for the continued work of the GCVTC, which may be accomplished through the WRAP, to establish a complete framework which can be adopted in the SIPs for addressing all sources of visibility impairment in the 16 Class I areas;

Whereas, the WRAP has set as its goal to "promote and monitor the implementation of the recommendations from the Grand Canyon Visibility Transport Commission and, with the concurrence of its members, engage in other common regional air quality issues."

Whereas, the WRAP plans to accomplish this by developing a consensus not only among its members but also others who are participants in the process, including representatives of local governments,

corporations and small businesses, academia, environmental groups and other members of the interested public.

Whereas, section 51.309 of the Regional Haze Regulation allows for an annex to the GCVTC report which will be considered in establishing specific targets, or milestones, for SO_2 emissions reductions from stationary sources in the region between 2003 and 2018;

Whereas, section 51.309(d)(4) requires monitoring and reporting of stationary source emissions of SO_2 in order to assess compliance with these milestones from 2003 to 2018;

Whereas the annex process and U.S. EPA's approval of interim emissions targets will be key in completing a series of strategies that can be deemed by U.S. EPA to meet the rule's reasonable progress goal for the Class I areas on the Colorado Plateau;

Whereas, section 51.309(f)(1)(i) requires that applicable regional haze SIPs in 2003 contain criteria and procedures for implementing a market trading program or other program documented in the SIP if triggered by emissions exceeding the milestones in 2003, 2008, 2013, and 2018;

Now, therefore, the Parties agree to the following:

I. Authority

A. The federal Clean Air Act and enabling state legislation authorize state agencies to implement these requirements. The federal Clean Air Act and Tribal Authority Rule (40 CFR sec. 49) authorize delegation of authority to implement these requirements to federally recognized tribes.

II. General Responsibilities

General comment – there is some question as to the level of detail that the MOU should contain. For instance, it is clear that the general framework needs to be in the MOU – but how much of the details regarding allowances, monitoring, administration, is needed? Would general statements about monitoring, allowances, administration etc, in this section suffice?

A. Each signatory will include a measure as a contingency plan in its 2003 Regional Haze SIP/TIP that provides for a regional emission trading program for SO_2 emissions from affected stationary sources under the jurisdiction of the signatories (contingency plan measure).

B. The contingency plan measure that is contained in the regional haze SIP for each signatory will be consistent with section 309 requirements that U.S. EPA adopts subsequent to receipt of the Annex (e.g., milestones, activation conditions, monitoring,

recordkeeping and recording, state and tribal allowances, and set-asides).

C. The contingency plan measure will include provisions for activating a market trading program within 12 months after the emissions for the region are determined to exceed the applicable emission reduction milestone. Each subsequent emission reduction milestone will serve as the aggregate cap on regional emissions for that time period.

D. The signatories will make a joint finding each year as to whether the milestone has been exceeded and the market trading program triggered.

E. The market trading program that forms the framework of the contingency plan measure will provide a uniform exchange mechanism that will allow for the seamless interchangeability of stationary source SO_2 allowances across political boundaries.

F. If activated, the market trading program will 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 emission reduction milestone.

G. Allowances that comprise the tribal set aside will be allocated by the administrator according to the allocation procedure described in Appendix Y.

H. The market trading program framework is the compliance alternative for achieving stationary source SO_2 emissions milestones required by section 51.309(f)(ii) of the Regional Haze Regulation.

I. Allowances will be allocated by the signatories in the aggregate in the amount no greater than the regional cap for each year. State and tribal budgets will be established according to the allocation procedures described in the model rule. States and tribes will distribute allocations to their sources as outlined in the applicable SIP.

J. Allowances must be enforceable, and certified and registered by the state or tribe in which the allowance is held at the time of each five year allocation. The applicable state or tribe must agree in writing that use of these allowances complies with all applicable federal, state, and local requirements, including federal guidelines that apply to interstate trading programs. At a minimum, participating states and tribes will ensure regional consistency in the following key trading program elements:

- an identification system for allowances traded between participating States and Tribes;

- sharing of required notices of trades and a compatible emission reduction tracking system;

- identification of geographic limitations or restrictions on trading;
- allowance lifetime;
- record retention requirements;
- consistent methodologies for quantifying emissions for different source categories; and
- identification of and assumptions used in calculating the emissions baseline.

K. The market trading program must, in the aggregate, result in greater SO_2 emission reductions than would otherwise have occurred in lieu of trading, consistent with applicable provisions in sections 51.309(d)(4) and 51.309(f) of the Regional Haze Regulation.

L. The market trading program framework will be written to ensure compliance with applicable federal, state and local requirements governing emissions trading through permit conditions or other enforceable instruments.

III. Emission Reduction Milestones

A. The following milestones will constitute the thresholds in which progress will be determined; failure to meet the milestones identified below will activate the market trading contingency measure:

1. 2003:
2. 2008:
3. 2013:
4. 2018:

Note: The milestones will be finalized in 2003 when the MOU is signed, based on the states and tribes that participate in the program, as outlined in the Annex. The suspended smelter provisions will also be included in this section at that time.

IV. Monitor Progress

A. The signatories will incorporate provisions in their regional haze SIP that provide for standardized minimum monitoring, recordkeeping, and reporting requirements to verify emissions of the affected sources and to determine compliance with the emissions milestones.

B. The signatories will submit information to the WRAP that will be used by the WRAP to

prepare an annual report of emissions for purposes of determining compliance with the milestones and decision to activate market trading program, if appropriate.

C. Once the program is triggered, the signatories will activate their portion of the market trading program according to procedures laid out in the SIP/TIP contingency plan measure.

Note: Additional language may be added to this section of the MOU to describe how compliance will be determined, including averaging provisions, penalty provisions in 2018, special provisions for Mojave Generation Station, and the 2013 SIP review. Further discussion is necessary to determine which elements should be addressed in the MOU, and which elements should be addressed in the model rule.

V. Assigning Allowances

A. SO_2 allowances will be proportionately distributed to states and tribes for allocation to existing sources consistent with procedures delineated in the model rule and the allocations procedures. The allowances will account for regional set-asides that are assigned to tribes in the aggregate (i.e., tribal set-aside).

B. The trading program budget for each state and tribe will ensure collective achievement of the regional cap and delineate the allocation responsibility of each signatory.

C. Each signatory will be responsible for allocating allowances to sources within their jurisdiction.

VI. Program Administration

A. For purposes of compliance determination and program assessment, the signatories will appoint an administrator that will collect, monitor, record, and report to the signatories on the registration and use of allowances.

B. The Tracking Systems Administrator will prepare a formal annual report to the signatories on compliance levels, allowance transfer and use, and banked allowances, consistent with applicable information contained in the model rule and procedures delineated in Appendix "XX," Program Administration.

VII. Program Coordination

A. The signatories will participate in the program administered under the auspices of the WRAP to improve program implementation and effectiveness, coordinate and report on emissions and progress within their states or tribes, and develop and institute procedures to coordinate and exchange interstate/tribal data collection and analysis

necessary to achieve the goals of this MOU.

B. The signatories will utilize ad hoc working groups on an "as needed" basis to implement key aspects of this agreement.

C. The signatories will meet at least annually or as otherwise deemed necessary to discuss issues of concern related to this MOU or other matters affecting compliance with the requirements of the Regional Haze Regulation.

VIII. Terms of Agreement

A. This MOU will become effective upon execution and remain in effect until December 31, 2018, unless modified as indicated below.

B. This MOU may be modified as necessary upon written consent of all parties.

C. Participation may be terminated by any party by giving thirty (30) days notice in writing to each party to this MOU.

D. Any transport region state or tribe upon signing the MOU will be part of the program.

IX. Principal Signatories

X. Other Signatory Agencies

This Agreement recognizes that other entities may be added to the agreement as amendments

XI. Required Clauses

A. Nothing in this MOU supersedes or changes any rule, regulation, or legislation pertaining to any signatory to this agreement.

B. Nothing in this MOU supersedes or changes any existing or future agreement among the signatories that is operating to the satisfaction of the signatories and in compliance with applicable federal and state requirements.

C. Nothing in this MOU precludes states or tribes from developing additional control strategies for achieving reasonable progress in other Class I areas.

D. Nothing in this MOU precludes states or tribes from adopting Regional Haze SIPs/TIPs and SIP/TIP measures that may deviate from the provisions contained in this MOU. However, the signatories agree that any SIP/TIP-related actions that substantively change the agreements contained in this MOU by any one, several, or all parties,

would, at a minimum, require a re-examination of the MOU, and may require the affected signatory(-ies) to comply with section 51.308 SIP/TIP requirements.

E. This Agreement is neither a fiscal nor funds obligation document. Any endeavor involving reimbursement or contribution of funds among the parties will be handled in accordance with applicable laws, regulations and procedures.

F. This Agreement in no way restricts any party from participating in similar activities with other public or private agencies, organizations and individuals.

Signatures:

Attachment C. Demonstration that the SO_2 Milestones Provide Greater Reasonable Progress than BART

A. Background

On July 1, 1999 the Environmental Protection Agency (EPA) published regulations to address regional haze visibility impairment. The new regulations require States to address Best Available Retrofit Technology (BART) requirements for regional haze visibility impairment. The nine Grand Canyon Visibility Transport Region States have the option to address this requirement as part of an overall strategy of emission reductions developed by the Grand Canyon Commission, including the establishment of regional sulfur dioxide (SO2) milestones.

§309(f)(1)(I) of the regional haze rule establishes the requirements for regional milestones to meet the stationary source obligations for the first long-term planning period. The rule states, "The emission reduction milestones must be shown to provide for greater reasonable progress than would be achieved by application of best available retrofit technology (BART) pursuant to section 51.308(e)(2) and would be approvable in lieu of BART." The requirements for BART are described in greater detail in section 51.308(e)(2) as follows:

> "A State may opt to implement an emissions trading program or other alternative measure rather than to require sources subject to BART to install, operate, and maintain BART. To do so, the State must demonstrate that this emissions trading program or other alternative measure will achieve greater reasonable progress than would be achieved through the installation and operation of BART. To make this demonstration, the State must submit an implementation plan containing the following plan elements and include documentation for all required analyses:
>
> > (I) A demonstration that the emissions trading program or other alternative measure will achieve greater reasonable progress than would have resulted from the installation and operation of BART at all sources subject to BART in the State. This demonstration must be based on the following:
> >
> > > (A) A list of all BART-eligible sources within the State.
> > >
> > > (B) An analysis of the best system of continuous emission control technology available and associated emission reductions achievable for each source within the State subject to BART. In this analysis, the State must take into consideration the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any pollution control equipment in use at the source, and the remaining useful life of the source. The best system of continuous emission control technology and the above factors may be determined on a source category basis. The State may elect to

consider both source-specific and category-wide information, as appropriate, in conducting its analysis.

(C) An analysis of the degree of visibility improvement that would be achieved in each mandatory Class I Federal area as a result of the emission reductions achievable from all such sources subject to BART located within the region that contributes to visibility impairment in the Class I area, based on the analysis conducted under section 51.308(e)(2)(I)(B)."

In order to address these BART requirements, the WRAP used the following process:

- Develop a list of BART-eligible sources for the region.
- Estimate emission reductions that could be made by BART-eligible sources through "appropriate retrofit technology".
- Estimate baseline emissions in the year 2018.
- Evaluate the visibility improvement that could occur in the region if the "appropriate retrofit technology" emission reductions were implemented.
- Evaluate additional factors that would contribute to "greater reasonable progress" than regional haze BART
- Establish 2018 SO_2 emissions milestone

Each of these steps is addressed in greater detail in the following sections of this report. This process was developed through the best efforts of the WRAP through a stakeholder based process and is based on the WRAP's reading of the regional haze rule language and preamble. It is important to note that EPA guidance for determining regional haze BART is under development and so the WRAP had to make a number of assumptions about the analysis.

B. List of BART-eligible sources.

Each of the nine Transport Region States developed a preliminary list of BART-eligible sources for SO_2. EPA identified BART-eligible sources on tribal lands. EPA guidance for regional haze BART is still under development which leaves many unanswered applicability questions. The WRAP developed a draft methodology that was used to identify all of the BART-eligible sources in the region. When final guidance is issued, the Transport Region States and Tribes recognize that changes to their initial lists of BART-eligible sources may be necessary, however the WRAP believes that all sources that emit significant levels of SO_2 have been identified. The preliminary list compiled by the states is included as **Attachment D** to the Annex. The draft methodology used the following assumptions:

- Where appropriate, BART-eligible sources were identified on a unit-by-unit basis. Only individual units that met the BART criteria were included on the list. For some sources, such as copper smelters, this approach did not work because the units were so inter-related. In those cases the entire source was examined to determine if it was BART-eligible.

- Pollutants were treated independently. Therefore, only units that qualified as BART-eligible for SO_2 were included on the list.
- Modifications during the 15-year BART window were not considered, unless the modification qualified as reconstruction for that unit.
- Units were not considered BART-eligible if the only modification that was made during the 15-year window was the installation of pollution control equipment.
- BART-eligible sources that had, were in the process of, or were slated to have new emissions controls installed (Navajo Generating Station, Page, Arizona; Hayden Generating Station, Hayden, Colorado; Mojave Generating Station, Laughlin, Nevada) were not included in the spreadsheet that was used to calculate the BART level emission reductions. In addition, BART-eligible sources that will be controlled as part of the voluntary reductions for the Front Range power plants in Colorado were not included in the spreadsheet (Cherokee Generating Station in Denver and Valmont Generating Station in Boulder). Emission reductions from these sources were treated as downward adjustments to the baseline.

C. Appropriate Retrofit Technology Estimates

The next step in the process was the identification of appropriate retrofit technologies for the BART-eligible sources. BART has traditionally been developed through a case-by-case analysis that considers the unique situation of the source, including costs and the impacts that the source has on a particular mandatory Class I area. As provided in the following passage, the regional haze rule provides flexibility to states in developing, for comparative purposes, a method for calculating the emission reductions that would result from the installation of source-specific BART:

> To compare the emissions reductions and visibility improvement that would result from the application of source specific BART to that resulting from implementation of alternative measures, such as a regional emissions trading program, the state must estimate the emissions reductions that would result from the use of BART-level controls. To do this, the states could undertake a source specific review of the sources in the state subject to BART or it could use a modified approach that simplifies analysis...the states accordingly have flexibility in developing a method to determine the emissions reductions that could be achieved through the application of BART.[8]

The WRAP recognized that a case-by-case analysis of potential controls for each of the BART-eligible sources in the region would be very resource intensive and require more time than allotted for the development of the Annex. Because the goal was to use these estimates to establish a regional emission cap, the individual BART reductions were less important than the overall regional number. The WRAP therefore approached the analysis at the regional level, using a more simplified analysis, as provided for in the regional haze rule.

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[8] 40 CFR part 51, page 35742 (July 1, 1999).

The WRAP used the following assumptions to estimate the regional emission reductions due to appropriate retrofit controls on the BART-eligible sources in the region. It should be noted that the WRAP methodology was only used to obtain a regional estimate for BART-level emission reductions to calculate the 2018 milestone. It was not intended to be a source-by-source BART analysis.

- Appropriate retrofit technologies were estimated for source categories rather than individual sources.
- Emission reductions were estimated at the regional level.
- All estimates of the level of control constitute an assumed average for that industry sector in the WRAP region.
- The BART factors, including cost, energy and non-air environmental impact, 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. Some consideration of the technical feasibility of installing control equipment at particular sources (site constraints, special conditions, etc.) was considered. However, a comprehensive analysis was not completed for individual sources. Instead, the MTF looked at ranges of potential retrofit controls and established a level that was expected to be valid as a regional average.

Table 1 outlines the estimated appropriate retrofit technology for specific source categories in the region.

TABLE 1

Source Category	Retrofit Technologies or Percentage Reduction
Copper Smelters	Due to the uniqueness of the existing smelters, retrofit technology analysis must be performed on a smelter-by-smelter basis. Currently, the Hidalgo smelter is the only BART-eligible source on the list in this category. A double-contact acid plant will be considered the appropriate retrofit control equipment (all smelters in the region are currently equipped with double-contact acid plants). On August 21, 2000 New Mexico completed an engineering analysis that verified earlier determinations by the MTF that the fugitive SO_2 capture system at Hidalgo satisfies BART at **96% overall capture**.
Refineries	There are three sources of SO_2 emissions at the refinery level: Description — Assumed Average Control Level SRU (pollution control for fuel gas combustion units) — **98% control** or the equivalent of 3-stage Claus units (most already have this in place). Catalytic crackers — 90% control. States will query these sources as to whether or not they have had to comply with subpart J with low sulfur catalyst or hydro-treating, which would amount to 90% control. If not already subject to part J, then 90% control will be required. Flares — no additional controls (Approximately 70% of refinery emissions come from Claus unit, 25% from cat crackers if uncontrolled, and remaining 5% from all other sources)
Lime Plants and Cement Kilns	**No additional reduction**. Approximately 50% control inherent in the process. Additional SO_2 controls are not typically applied to these kinds of sources.
Utility Boilers	Technology determination dependent upon current level of control. Description — Assumed Average Level of Control Uncontrolled units — 85% Units controlled at less than 70% — Treat as uncontrolled (see above). Units controlled between 70-80% — Increase reductions by 5% (i.e., if a unit is at 72%, would be assumed to control to 77%). Units controlled greater than 80% — No additional reductions.
Industrial Boilers	Same as utility boilers.
Pulp and Paper	Sulfur sources are recovery furnaces and boilers. Boiler discussions covered with industrial boilers. **Recovery furnaces: No additional reduction.** Low emissions coupled with lack of more than one example of scrubbing.

The technology assumptions listed above were incorporated into a spreadsheet (Allstat7.xls) to estimate the regional emission reductions due to appropriate retrofit technologies. The spreadsheet used the following assumptions:

- Existing utility generating units operating at an average capacity factor of less than 85% of nameplate capacity during 1999 were assumed to increase their capacity factor to a maximum level of 85% of nameplate capacity by 2018. Utility units operating at a capacity factor higher than 85% during 1999 were assumed to continue operating at that level.
- All other source categories were assumed to continue operating at their current level of actual emissions, based on an average of 1996-1998 emissions.
- The BART-eligible units were assumed to reduce actual emissions by the applying the control efficiency listed in Table 1 for each specific source category.
- The total emission reductions were then added to obtain a regional estimate. The individual source estimates were only calculated as part of the regional estimate, and are not intended to be used as a BART estimate for those individual sources.

The analysis described above led to an estimated emission reduction of 168,176 tons SO_2 due to the application of appropriate control technologies. For the purposes of this discussion, this number will be rounded to 168,000 tons.

D. Baseline Inventory for 2018

As part of the process of developing the end-point for this program, an inventory of expected actual emissions in 2018 was estimated. The baseline inventory was calculated separately for utilities and non-utilities using the following methods and assumptions:

1. Utilities. 1999 emissions data that were submitted to EPA for the acid rain program were used as the base inventory for the utility projections to 2018. In addition, data for several small power plants that were not in the acid rain data base were added to the inventory list. The 1999 inventory was then grown to account for increased capacity utilization as described below. Known emission reductions that have already been agreed to by the Public Service Company of Colorado (a number of power plants along the Front Range that will be controlled in 2003) and by the Mojave Generating Station in Nevada (controls will be installed by 2006) were subtracted from the emission projections.

a. Capacity Factor. Western utilities are increasing their utilization to meet increasing electricity demand. In addition, deregulation of the power industry is expected to further increase utilization of existing plants because it will be more cost-effective to achieve peak performance from existing plants than to expend the capital to build new plants. Even though utilization is increasing, it is not realistic to estimate that plants will consistently operate at 100% capacity because units will require maintenance throughout the year. In addition, power demand fluctuates throughout the year, and full

utilization may not be needed every day of the year.

The WRAP has assumed that all coal fired power plants in the west will be operating at an average of 85% of nameplate capacity in the year 2018. Any new growth in demand, beyond this capacity factor assumption, is assumed to be met by new power generation at an approximate control efficiency of 98% for SO_2.

b. Retirement Adjustment for Colorado Front Range Power Plants. Public Service Company of Colorado (PSCO) has made a voluntary agreement with the State of Colorado to control a number of Front Range power plants by the year 2003. Several of the plants that will install controls are assumed to retire before the year 2018 according to the assumptions of the model. It is no longer realistic to assume that these plants will retire, because the capital investment in the plants will extend their lifetime. Therefore, a 4,000 ton adjustment was made to the inventory to account for the continued operation of these plants.

2. Co-generation Facilities. 1998 inventory data provided by the nine transport region states were used as the base inventory for future year projections. It was assumed that emissions from these sources would remain constant through the year 2018 (no growth or retirements would occur).

3. Smelters. 1998 inventory data provided by the nine transport region states were used as the base inventory for future year projections. There are two smelters that were operating in 1998 that have temporarily suspended operations due to economic conditions. For this reason, the inventory was projected both with these smelters in operation, and without. The milestones developed by the WRAP contain provisions for an automatic adjustment if one or both of the smelters come back on line. The 2018 inventory for smelters in the region if neither smelter resumes operation is assumed to be 48,000 tons. This inventory number assumes that emissions from smelters would remain constant (no growth or retirements would occur). The 2018 inventory if both smelters resume operation is assumed to be 78,000 tons. This estimate assumes that there will be additional retirement of emissions from the smelter sector, equivalent to the estimates made by the Integrated Assessment System (IAS) used by the Grand Canyon Visibility Transport Commission for the year 2020.

4. Other sources. 1998 inventory data provided by the nine transport region states were used as the base inventory for future year projections. The growth and retirement assumptions developed for the IAS were used to project these emissions to the year 2018. The IAS did not assume any increase in capacity for existing sources, instead, their emissions were retired at a set percentage per year. Any increase in demand for the sector's product, as predicted by the REMI economic model, was assumed to be met by new sources, operating at a controlled emission rate. The growth and retirement rates, as well as the control efficiency for new sources, vary between sectors.

5. 2018 Baseline Inventory of Projected Actual Emissions (rounded to nearest 1,000)

Utility Emissions	421,000
Front Range Retirement Adjustment	4,000
Co-Gen Units	8,000
Smelter Emissions	48,000
Other Source Emissions	141,000
TOTAL 2018 Baseline	**622,000**

D. 2018 Inventory with Estimated Emission Reductions. The emission reductions estimated for appropriate control technologies applied to BART-eligible sources were then subtracted from the 2018 baseline.

1. CEMs Bias. The federal acid rain program requires coal-fired utilities to monitor SO_2 emissions using continuous emission monitors (CEMs). These monitors measure SO_2 concentration at a point in the stack, and also measure the volume of the gas stream passing through the stack. The combination of the two measurements provides total mass emissions from the stack in tons/year. Prior to the use of CEMs, utilities calculated their emissions using a mass-balance methodology. The sulfur content of the coal was measured, and then total SO_2 emissions were determined by tracking the amount of coal burned.

Two sources of bias result in an over-estimation of emissions as compared to a mass-balance estimation.

- If two-dimensional probes are used to measure the volume of gas passing through the stack, gas volume will, on average, be over-estimated.

- If a CEMS malfunctions, the rules require the use of a high-bias estimate in the place of missing data.

The bias varies from plant to plant depending on the specific configuration of the stack, and other variables.

In mid-1999, EPA published a new flow measurement technique that could be used for CEMs under the acid rain program. This new technique is voluntary, and it is not known how many sources will install the equipment (it is significantly more expensive than the existing equipment). The new flow measurement technique is expected to reduce the CEM bias, but bias will never be completely eliminated because of the way emissions are required to be counted when data are missing.

The WRAP recognized that current CEM measurements are biased high, and that compliance measurements to future milestones will be made with CEMs that have less bias than those that

were in use in the 1999 base inventory that was used for projecting future utility emissions. However, it is difficult to estimate how many sources will install the new measurement devices, and how much CEM bias will still remain after these changes. Utility emissions in the year 2018 are predicted to be approximately 269,000 tons (after the emission reductions due to appropriate control technology applied to BART-eligible sources). Therefore the WRAP assumed an adjustment of 10,000 tons to account for the CEMs bias.

The WRAP also acknowledges that CEMs are the "gold standard" for determining compliance with the federal Acid Rain Program requirements. A protocol will be developed to make appropriate adjustments to the operation of this component of the regional haze program for participating states and Tribes as improvements in CEMs technology and procedures are implemented. This protocol is necessary to prevent a system of dual book-keeping and to maintain the integrity of compliance with both the federal Acid Rain Program and this proposed backstop cap-and-trade program. The CEMs adjustment protocol is discussed in more detail in the Annex.

2. Operational headroom and uncertainty. The GCVTC agreements and recommendations contain two tenets that have uniquely informed the establishment of operational headroom and uncertainty under the market trading program. First, the Commission recommended that the market trading program "contain specific provisions to encourage and reward early emission reductions, including reductions achieved before 2000."[9] The GCVTC committed to achieve a 13% reduction in SO2 emissions from stationary sources by the year 2000. The GCVTC also recognized that there was a good possibility that actual emission reductions would be greater than this 13% goal. A general plan was derived to give some early reductions credit to the region and some to the environment. The emission reductions that were greater than 13% were to be split, with ½ going to the environment (through the establishment of milestones) and the other ½ providing headroom.[10]

The WRAP currently expects that emissions in the region will show greater reductions than the 13% commitment of the GCVTC. The WRAP has sought to preserve the Commission's approach to early reductions by setting aside as headroom some intermediate portion of the expected reductions in excess of 13%.

Second, the Commission recommended allocations to tribes that are of practical benefit.[11] This recognized the concern that "tribes, by and large, have not contributed to the visibility problem in the region" and that "[t]ribal economies are much less developed than those of states, and tribes must have the opportunity to progress to reach some degree of parity with

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[9] Recommendations for Improving Western Vistas at 33 (June 1996) (emphasis added).

[10] *Id.* at 34.

[11] *Id.* at 35.

states in this regard."[12] The tribes specifically recommended that if an emission trading strategy is adopted to achieve SO2 reductions from stationary sources that allocations be based on considerations of equity rather than historical emissions:

> Credits should not be based on historical emissions, but should be based on equitable factors, including the need to preserve opportunities for economic development on tribal lands. In general, these lands are currently lacking in economic bases and have not contributed to the visibility problems.[13]

Accordingly, the market trading program proposed by the WRAP contains a 20,000 allocation to tribes.

These two considerations – to reward emission reductions occurring between 1990 and 2000, and to provide an equitable allocation to the tribes – originate from the GCVTC recommendations. They reflect distinct policy concerns of the Commission that are unique to the program under section 309 of the regional haze rule incorporating the Commission's recommendations.

In addition, because the baseline emissions inventory is a projection of actual emissions, uncertainty exists in the projection method including, for example, fluctuations in weather and changing economic conditions.

There are inherent uncertainties in the inventory calculation that need to be recognized.

> Inherent measurement uncertainties. CEMs are calibrated daily to a relative accuracy of 20% using calibration gases. Fluctuations in measurements can occur due to the measurement techniques that are not indicative of actual changes in emissions. Pluses and minuses will cancel out to a certain degree, but some consideration of these fluctuations is needed.
>
> Projections. Projections of future “actual” emissions are based on the best information available, but are inherently uncertain. This uncertainty increases further out in time. Growth rates may be underestimated, impacts of new technologies or regulatory requirements may have unexpected effects, etc.

The WRAP recognizes that there are some competing uncertainties that the future "actual" emissions may be over-predicted. However, in light of the Commission's specific recommendation to reward early reductions occurring between 1990 and 2000, the WRAP specifically set aside 15,000 tons in 2018 for uncertainty/headroom in addition to the allocation

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[12] *Id.* at 66-67.

[13] *Id.* at 71.

described above for tribes. The 15,000 tons represents 2% of the current SO2 emissions inventory (652,000 tons) encompassed within the trading program.

The WRAP also believes the likelihood exists that the full complement of emissions set aside for uncertainty and headroom will not be utilized. All sources in the region operate below their allowable emissions to ensure that they are in compliance with emission limits. The regional milestones are comparable to allowable emissions because an exceedance of the milestone will trigger regulatory consequences. Individual sources will be tracking their emissions, as well as the overall regional emissions, and the possibility of avoiding a regulatory program will provide a powerful incentive for sources to keep emissions below the cap. This will also provide a disincentive for keeping regional emissions close to the cap, because that will increase the risk that an unexpected event (such as increased production from one sector) will trigger the regulatory program. The incentive to operate below the cap should be especially powerful in 2018 when individual sources will face penalties if the cap is exceeded and a source has emitted SO2 in excess of its allowances.

3. 2018 SO_2 Milestone Calculation

2018 Baseline	622,000
Appropriate Technology Emission Reductions	-168,000
CEM Bias adjustment	-10,000
Uncertainty/Headroom	35,000
Total	**479,000 . 480,000**

In the event the suspended smelters commence operation or the production from those facilities is shifted to other smelters, as much as 30,000 tons may be added to this milestone.

E. Visibility Improvement

Section 169A of the Clean Air Act lists a number of factors that must be considered as part of the BART determination. These factors are addressed in the regional haze rule in a two-step process. First, an analysis of the best system of continuous emission control technology available is performed, considering the statutory factors of cost of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use at the source, and the remaining useful life of the source. Second, an analysis of the degree of visibility improvement that would be achieved in each mandatory Class I federal area as a result of the emission reductions achievable from all sources subject to BART located within the region. The preamble to the regional haze rule indicates that the visibility analysis should be conducted using the cumulative emission reductions from all BART-eligible sources in the transport region, not the impact of individual sources. The preamble also indicates that the States and Tribes should use this estimated degree of visibility improvement in determining the

appropriate BART emission limitations for specific sources.[14]

When defining the visibility impact, the regional haze rule identifies the deciview metric as the appropriate measure of visibility impairment, and improvement. The regional haze rule preamble discusses the value of measuring visibility using a metric that takes into account both measurement of physical changes (i.e., changes in air quality) and human perception.[15] A one deciview change in haziness is a small but noticeable change in haziness under most circumstances when viewing scenes in Mandatory Class I areas.[16] The preamble also recognizes that in some cases a visibility change of less than one deciview is perceptible, while under other conditions a change of more than one deciview might be required in order for the change to be perceptible.[17]

The Regional Haze Rule requires the assessment of reasonable progress in terms of average annual visibility improvement overall, and for each of the 20% of the days in a year with the best and the worst visibility (the first and last quintiles). Regional haze is the product of a wide variety of sources, generally associated with area sources and long-range transport of emissions. Regional haze is, therefore, best assessed using averages, and addressed by strategies that reduce emissions on a region-wide scale.

In keeping with this requirement, the WRAP conducted modeling of the degree of visibility improvement that would occur on average and for the 20% best and worst visibility days. The WRAP used the transfer coefficients developed as part of the Integrated Assessment System (IAS) and used by the Grand Canyon Visibility Transport Commission. This modeling has limitations which must be considered when interpreting the results.

The IAS models were designed to assess regional transport of emissions, and therefore only offers limited insight into the impact of local emission sources. The models are best at demonstrating the relative effects of changes in regional emissions on visibility. One other important limitation involves the number of receptors where pollution data were available. The GCVTC collected data from only six receptors, and ultimately scaled its modeling for only four of these: Hopi Point, Mesa Verde, Canyonlands, and Bryce Canyon. The most detailed information came from one receptor, Hopi Point in Grand Canyon National Park.

Although the IAS has limitations, it was the only tool that could realistically be used in the short time frame that was provided to develop an Annex to the Grand Canyon Visibility Transport Commission report. Prior to the development of the IAS, little was understood about the contribution of various emission sources to regional haze. The GCVTC expended considerable time and energy developing

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[14] 64 FR 35741

[15] 64 FR 35726

[16] 64 FR 35725

[17] 64 FR 35726-35727

the tools that are used today to evaluate the sources of regional haze. The WRAP intends to keep refining and improving the technical tools that are available to better inform policy decisions.

The visibility modeling measured the degree of visibility improvement that would occur at each of the 16 Class I areas due to four different emission reduction scenarios and in comparison to the absence of any regional haze program (i.e., as compared to the baseline emissions inventory). The four scenarios were developed to show the changes in visibility that would occur due to increasingly stringent emission reductions. Table 2 presents the visibility improvements for the scenario that best matches the original WRAP estimate of SO_2 reductions associated with the application of controls on BART-eligible sources, at 155,000 tons, as modeled by ICF in their economic impacts study.

When comparing the results of the visibility analysis for the "Command and Control" scenario to the "MTF" scenario, it is important to recognize the following facts:

- The emission inventory for the "Command and Control" scenario was developed as part of the economic impacts study by ICF to compare the cost of achieving various levels of emission reduction using a market approach with the cost of achieving similar reductions using a source-specific command and control program.

- Both the Command and Control and MTF scenarios started with the same baseline emissions inventory for 2018 (648,000 tons)[18].

- For the Command and Control scenario, ICF applied the MTF BART assumptions to this inventory and calculated 139,000 tons of emissions reductions in 2018. These reductions were subtracted from the baseline, yielding an inventory of 509,000 tons.

- For the MTF scenario, ICF subtracted the MTF's best estimate of BART reductions at the time (155,000 tons) and added back 35,000 tons for headroom/uncertainty, consistent with the GCVTC recommendations discussed in section D.2., above. This yielded an inventory of 528,000 tons.

- Rounding to the nearest tenth of a deciview -- a level of accuracy beyond which the results cannot be compared with any confidence -- the average visibility benefit of the MTF scenario equals that of the Command and Control scenario -- 0.1 dv.

The use of the "Command and Control" scenario as a surrogate for comparing the visibility benefits of the Annex to a true "BART" scenario is limited because it does not recognize the overall air quality

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[18]Note that the baseline inventory used by ICF is different from that used by the MTF. This is an artifact of the way the economic model was implemented. The important consideration is that the same baseline is used to assess the differences among the options. For details, refer to the ICF final report, Economic Impacts of Implementing a Regional SO_2 Emissions Cap for Stationary Sources in the Western United States (September 2000).

benefits of the emissions caps. Some of the air quality benefits of the emissions caps as compared to a source-by-source BART approach are described in Section F, beginning on page D-17. These benefits include setting caps that limit increased utilization and emission rates at BART and non-BART sources, setting caps based on the assumption that 47,000 tons of emissions from existing non-utility/non-smelter sources will be retired between 1998 and 2018, and setting caps based on the assumption that new source growth will be limited to 27,000 tons between 2003 and 2018. While the "Command and Control" scenario used for the visibility modeling has these same assumptions included, in actuality these benefits would not accrue to a BART program under Section 308 of the Regional Haze Rule. For these reasons , the use of the "Command and Control" scenario as a surrogate for comparing the benefits of the Annex to a true BART scenario is of limited value.

As can be seen, the maximum visibility improvement expected from installation of appropriate control technology for SO_2 on BART-eligible sources in the Western United States, amounts to about one third of a deciview, which is not perceptible to the average person.

Table 3 provides the results of the visibility modeling for an approximation of the four 2018 milestones offered for public comment in May 2000. The modeling distinguishes among the milestones based on the estimated BART level emissions reductions.

These visibility results show that, even under the most aggressive emissions reduction scenario, no perceptible change in visibility will accrue. Further, the visibility improvements of all of the different approaches would be indistinguishable for regional haze purposes. ***This is not intended to imply that the lack of perceptible visibility improvement is a justification for taking no action to reduce SO_2 emissions from stationary sources.*** To the contrary, it emphasizes the need to develop a comprehensive plan that reduces visibility impairing emissions from all types of sources if the goals of Subpart C of Title I of the Clean Air Act are to be achieved in the West.

Table 2

Modeled Visibility Improvement in 2018: Command and Control Scenario

Class I Area	Deciview Improvement		
	20% Best Days	20% Worst Days	Annual Average
Arches National Park	0.17	0.28	0.22
Bryce Canyon	0.02	0.16	0.08
Black Canyon of the Gunnison	0.08	0.08	0.10
Canyonlands	0.16	0.26	0.21
Capitol Reef	0.06	0.21	0.13
Flat Tops	0.09	0.23	0.16
Hopi Point	0.03	0.15	0.09
Maroon Bells	0.10	0.07	0.10

Class I Area	Deciview Improvement		
	20% Best Days	20% Worst Days	Annual Average
Mesa Verde National Park	0.09	0.35	0.19
Mt. Baldy	0.04	0.20	0.12
Petrified Forest	0.07	0.14	0.11
San Pedro Parks	0.08	0.32	0.21
Sycamore Canyon	0.05	0.08	0.07
Weminuche Wilderness	0.06	0.34	0.18
West Elk	0.10	0.07	0.10
Zion National Park	0.02	0.10	0.06
Average	0.08	0.19	0.13
Min	0.02	0.07	0.06
Max	0.17	0.35	0.22

Table 3

Modeled Visibility Improvement in Deciviews, for 2018: Trading Programs for Four Proposed 2018 Milestones

	Minority Report 95,000 ton reduction			Market Trading Forum 155,000 ton reduction			EPA 177,000 ton reduction			Environmental Groups 220,0000 ton reduction		
Class I Area	20% Best Days	20% Worst Days	Annual Average	20% Best Days	20% Worst Days	Annual Average	20% Best Days	20% Worst Days	Annual Average	20% Best Days	20% Worst Days	Annual Average
Arches National Park	0.03	0.05	0.04	0.13	0.20	0.17	0.14	0.24	0.19	0.19	0.37	0.28
Bryce Canyon	0.01	0.03	0.02	0.02	0.11	0.06	0.02	0.13	0.08	0.04	0.22	0.12
Black Canyon of the Gunnison	0.03	0.03	0.03	0.07	0.07	0.08	0.09	0.08	0.10	0.16	0.15	0.18
Canyonlands	0.03	0.04	0.04	0.13	0.18	0.15	0.13	0.22	0.17	0.19	0.35	0.25
Capitol Reef	0.02	0.04	0.03	0.05	0.15	0.10	0.06	0.18	0.11	0.08	0.27	0.17
Flat Tops	0.04	0.08	0.06	0.07	0.17	0.12	0.08	0.22	0.15	0.12	0.33	0.23
Hopi Point	0.01	0.03	0.02	0.02	0.10	0.06	0.03	0.13	0.08	0.05	0.21	0.13
Maroon Bells	0.03	0.03	0.04	0.08	0.06	0.08	0.10	0.08	0.10	0.15	0.12	0.16
Mesa Verde National Park	0.02	0.05	0.03	0.07	0.25	0.14	0.08	0.31	0.17	0.13	0.47	0.26
Mt. Baldy	0.01	0.04	0.03	0.03	0.13	0.08	0.04	0.17	0.11	0.05	0.28	0.17
Petrified Forest	0.02	0.02	0.02	0.06	0.11	0.08	0.07	0.13	0.10	0.11	0.19	0.15
San Pedro Parks	0.02	0.05	0.04	0.06	0.23	0.15	0.08	0.29	0.19	0.11	0.43	0.29
Sycamore Canyon	0.01	0.01	0.01	0.03	0.04	0.04	0.05	0.07	0.06	0.08	0.12	0.10
Weminuche Wilderness	0.02	0.06	0.04	0.05	0.24	0.13	0.06	0.30	0.16	0.09	0.47	0.26
West Elk	0.03	0.03	0.04	0.08	0.06	0.08	0.10	0.08	0.10	0.15	0.13	0.16
Zion National Park	0.01	0.02	0.02	0.02	0.08	0.05	0.02	0.10	0.06	0.04	0.15	0.10
Average	0.02	0.04	0.03	0.06	0.14	0.10	0.07	0.17	0.12	0.11	0.27	0.19
Minimum	0.01	0.01	0.01	0.02	0.04	0.04	0.02	0.07	0.06	0.04	0.12	0.10
Maximum	0.04	0.08	0.06	0.13	0.25	0.17	0.14	0.31	0.19	0.19	0.47	0.29

F. Other Considerations

There are a number of other considerations that must be taken into account in the overall determination as to whether or not the 2018 milestone developed by the WRAP achieves greater reasonable progress than would be achieved by the application of BART.

1. Remedy and Prevention. When Congress established the visibility program in 1977 it declared as a national goal "the prevention of any future, and the remedying of any existing" anthropogenic visibility impairment in mandatory class I federal areas.[19] BART is an emission limitation established at a specific source and is designed as a remedy to impairment at specific mandatory Class I areas. By contrast, the market trading program proposed by the WRAP serves the dual purpose of remedying existing impairment and preventing future impairment by requiring regional SO2 emissions reductions and capping emissions for stationary sources. Future impairment is prevented by capping emissions growth from sources not eligible under the BART requirements, from BART sources that are expected to significantly increase utilization, and from entirely new sources in the region.

2. Additional Sources Included. The backstop trading program designed by the WRAP will include all stationary sources with emissions higher than 100 tons/year of SO_2. The WRAP designed this program as part of an overall strategy to address all sources of visibility impairing pollutants, rather than focusing on a subset of stationary sources.

	Number of Sources	2018 SO_2 Emissions*
BART-Eligible	47	201,615
Other Stationary Sources	157 +	246,570

**Note: The 2018 Emission estimate does not include 2 shut down smelters, or a CEM's bias adjustment. The estimate includes an emission reduction estimate of 168,000 from BART-eligible sources.*

The inclusion of all major SO_2 sources in the program is necessary to create a viable trading program, and also serves a broader purpose to ensure that growth in emissions from non-BART-eligible sources does not undermine the progress that has been achieved. BART applied on a case-by-case basis would not affect these sources, and there would be no limitation on their future operations under their existing permit conditions. Because the milestones will cap these sources at actual emissions (which are less than current allowable emissions), the overall effect of their inclusion is to provide greater reasonable progress than would have been achieved if only BART-eligible sources were included in the program.

3. Cap on New Source Growth. The milestones designed by the WRAP will cap the growth

[19] CAA § 169A(a)(1).

of SO_2 emissions in the west. These milestones include estimates for growth, but then lock these estimates in as an enforceable emission cap. The WRAP strategy is consistent with the statutory goal of preventing any future visibility impairment that results from man-made air pollution. The entire region is experiencing rapid growth which could erode the progress that has been achieved in the last two decades towards improving visibility. BART applied on a case-by-case basis would have no impact on future growth, and in the long run would not achieve the regional emission reductions that are guaranteed by the program.

4. Actual vs. Allowable Emissions. The baseline emission projections, and assumed reductions due to the application of appropriate retrofit controls to BART-eligible sources, are all based on actual emissions, using either 1998 or 1999 as the baseline. The use of actual emissions has an effect in several ways. If the BART process was applied on a case-by-case basis to individual sources, emission limitations would be established based on the maximum level of operation of the unit. The "allowable emissions" are typically higher than actual emissions, because sources do not always run under full load conditions, over the full year's available time. In addition, the allowable emissions would account for variations in the sulfur content of fuel and alternative operating scenarios. The difference between actual emissions and allowable emissions is particularly large when a source is permitted to burn two different fuel types, such as oil and natural gas, or when the source is part of a cyclical industry where production varies from year to year due to the changing demand for their product.

The WRAP's method of emission projections allows for some increase in capacity for the electric utility industry which will partially address this difference between actual and allowable emissions. Even in this case, the utilities are assumed to operate at an average of 85% of nameplate capacity, even though they are permitted to operate at 100% capacity. Non-utility sources, on the other hand, are assumed to retire at a certain percentage rate each year with no provision for emission growth from existing sources. Any growth that is projected for those industries (refineries, pulp and paper, cement, etc.) is assumed to be met by new sources at highly controlled emission rates.

In addition to the cap on growth of actual emissions, the difference between an emission projection for future years, and a regional emission cap must also be considered. The milestones will act as a regulatory trigger that will be converted into an enforceable emission cap if the milestones are not met. This essentially creates a regional "allowable" emission level. When sources are managing their operations they have a large incentive to maintain headroom under any enforceable limit to ensure that they stay in compliance. This process is expected to happen on a voluntary basis prior to the program trigger, and will be strengthened if the milestones become enforceable emission caps. The net effect is that compliance with the milestones should lead to actual emissions that are below the milestone. The difference between actual emissions and allowable emissions is commonly referred to as headroom.

5. Mass-based Cap vs. Rate-Based Emission Limits for BART. Emission limitations for

stationary sources (including BART limits) are typically expressed as emission rates (lbs/hour or lbs/MMBtu), while the WRAP milestones are expressed as total mass during a given year (tons/year). One effect of this difference is that rate-based limits can lead to higher emissions when production is increased or when higher sulfur fuel is used, as explained in the discussion of actual vs. allowable emissions above. Another difference is that mass-based limits will include excess emissions that may occur due to malfunctions or during the start-up or shut-down of emission units. A good example of this difference is the requirement in the acid rain program that emissions must be assumed to be the highest value recorded from the past year during the time period that continuous emission monitors are not functioning on a stack. These higher emissions are calculated as part of the overall tons/year, and must be accounted for under the mass-based cap for the acid rain program.

6. 1990 as a baseline for Section 309 Regional Haze Plans. The regional haze rule recognized the significant work that had been completed by the Grand Canyon Commission, and section 309 of the rule was therefore designed to incorporate the Commission recommendations. A key element of this section of the rule is the use of 1990 as a baseline for measuring progress. There have been significant emission reductions in the west since 1990, and this improvement needs to be considered when measuring the overall effects of the Commission's strategies. The Commission established a goal of a 13% reduction from 1990 emissions. It is anticipated that the actual emission reductions in the region will be closer to 20%. Emission reductions due to the application of appropriate retrofit technology on BART-eligible sources between 1990 and 2018 are estimated to be 287,176 tons of SO_2 (See Table 4). This estimate includes a reduction of 119,000 tons of SO_2 from BART-eligible sources that have occurred or have been legally committed to between 1990 and 2000 (assuming that these plants are operating at 85% of nameplate capacity). The 2018 milestone of 510,000 represents a regional emission reduction of around 321,000 tons of SO_2 from the 1990 baseline emissions of 831,000 tons. This overall reduction due to the milestones is approximately 35,000 tons greater than what has been estimated due to the application of appropriate retrofit technology to BART-eligible sources.

Table 4
Calculation of BART-Level Emissions Reductions from the 1990 Baseline

Facility and Unit	1990 Emissions	1990 Capacity	1990 level of control	Emissions at 85% capacity	Level of control	Emissions after Controls	Emissions Reductions
Navajo #1	20,497	62%	0%	27,952	90%	2,050	18,447
Navajo #2	26,101	81%	0%	27,252	90%	2,610	23,491
Navajo #3	29,621	90%	36%	29,621	90%	2,962	26,659
Hayden #1	4,857	77%	0%	5,344	85%	729	4,128
Hayden #2	6,420	78%	0%	7,039	85%	963	5,457
Cherokee #4	4,689	55%	38%	7,298	85%	703	3,986
Valmont #5	3,007	65%	0%	3,924	85%	451	2,556
Mojave #1	21,605	56%	0%	32,834	85%	3,241	18,364
Mojave #2	18,720	68%	0%	23,297	85%	2,808	15,912
Total Effected and Planned Emission Reductions from BART-eligible sources							**119,000**
WRAP Calculated BART-level reductions (rounded to nearest 1,000, from allstat7.xls)							168,000
TOTAL							**287,000**

7. Commission Strategies are a Total Package. The GCVTC recommendations go well beyond stationary sources, and include strategies to address mobile sources, prescribed fire, pollution prevention, and emissions in and near Mandatory Class I areas. The reductions from these additional strategies have not yet been quantified, but are expected to be significant. The stationary source strategies need to be viewed as part of this overall package. Visibility impairment in the west is caused by multiple sources and pollutants, and a narrow focus on stationary sources may not achieve the same results as a broad-based program. The WRAP is in the process of quantifying the effect of the rest of the Commission's strategies, and the entire package will be included in the State and Tribal Implementation Plans in 2003.

G. Comparison of Trading vs Command and Control BART Requirements. One additional issue that must be considered when determining if the 2018 milestone achieves greater reasonable progress than BART is the geographic location where emission reductions will occur. For example, if all of the emission reductions under a trading program scenario are concentrated in one small part of the region, the visibility improvement may be less than what would be achieved if reductions occurred at specific locations under a command and control approach.

To address this question, the WRAP modeled the improvement in visibility impairment that would occur under two different scenarios: a command-and-control scenario where the emission reductions due to the application of appropriate retrofit controls on BART-eligible sources were assumed to occur at locations, and a second scenario where least-cost modeling was used to identify where these same emission reductions would occur under a trading program. The visibility transfer coefficients and control cost assumptions developed as part of the Integrated Assessment System were used for this analysis. Tables 2 and 3 provide the data for the comparison of the visibility improvement associated

with these two approaches

The results of this analysis showed that there would be an imperceptible improvement in visibility impairment under the command-and-control scenario. The maximum difference between the two scenarios at any of the 16 Class I areas was only 0.1 deciview.

Attachment D. Preliminary List of BART-Eligible Sources in the Grand Canyon Visibility Transport Region

Note: The following list of BART-Eligible sources is still preliminary. EPA guidance regarding BART applicability is still under development, and the final guidance may add or remove individual units from this list. Public review may result in additional changes to this draft list. The summary for each state was drawn from a number of sources, primarily the Excel spreadsheets that were prepared by the states to estimate BART emission reductions in the region.

Arizona

AEPCO Apache - Unit 2
AEPCO Apache - Unit 3
Arizona Public Service, Cholla - Unit 2
Arizona Public Service, Cholla - Unit 3
Arizona Public Service, Cholla - Unit 4
Chemical Lime - Nelson: Kiln 1
Chemical Lime - Nelson: Kiln 2
Chemical Lime - Douglas: Kiln 4
Chemical Lime - Douglas: Kiln 5
Chemical Lime - Douglas: Kiln 6
SRP - Coronado UB1
SRP - Coronado UB2
Abitibi Consolidated Sales Corporation, Snowflake Division; #1 power boiler
Abitibi Consolidated Sales Corporation, Snowflake Division; #2 power boiler
Abitibi Consolidated Sales Corporation, Snowflake Division; #2 recovery boiler

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California

No BART-eligible sources have been identified in California

Colorado

Public Service CO - Cherokee #4
Conoco Inc - Denver; FCC Unit Regenerator
Conoco Inc - Denver;
Public Service CO - Valmont #5
Southwestern Portland Cement
Colorado Springs Utilities - Drake #5

Colorado Springs Utilities - Drake #6
Colorado Springs Utilities - Drake #7
Colorado Springs Utilities - Nixon #1
Holnam Portland Cement #3
Tristate Generation - Craig #1
Tristate Generation - Craig #2
Public Service CO - Comanche #1
Public Service CO - Comanche #2
Public Service CO - Hayden #1
Public Service CO - Hayden #2
Tri-Gen Energy - #4
Tri-Gen Energy - #5

Idaho

No BART-Eligible sources have been identified in Idaho

Nevada

Nevada Cement Co., Fernley Plant, Kiln #1
Nevada Cement Co., Fernley Plant, Kiln #2
Nevada Power Co., Reid Gardner Station, Unit #1
Nevada Power Co., Reid Gardner Station, Unit #2
Nevada Power Co., Reid Gardner Station, Unit #3
Southern California Edison, Mojave Station, Unit #1
Southern California Edison, Mojave Station, Unit #2

New Mexico

PNM, San Juan, Boiler #1
PNM, San Juan, Boiler #2
PNM, San Juan, Boiler #3
PNM, San Juan, Boiler #4
Phelps Dodge, Hidalgo Smelter
Giant Industries, Bloomfield Refinery, 1 FCCP ESP stack
Giant Refining, Ciniza Refinery, 4 B&W CO boiler
Raton Public Service, Raton Pwr. Plt., 1 Erie
El Paso Electric, Rio Grande Gen. Sta., 3

Oregon

Fort James Operating Company, PR808 Recovery Furnace, ESP Outlet
Fort James Operating Company, PR831 Power Boiler, Conventional - 6 Burner
Boise Cascade Corporation, No. 2 Recovery Furnace
Boise Cascade Corporation, No. 3 Recovery Furnace
Boise Cascade Corporation, Power Boiler 6-9
Portland General Electric - Beaver, Six combustion turbines for electric power generation
International Paper - Gardner, PRB 047 Power Boiler Stack
International Paper - Gardner, PRB 048 Combined Recovery Boilers Stack
Collins Products LLC, Boiler 7
Collins Products LLC, Boiler 8
Willamette Industries, Inc. - Albany, Recovery Boiler #4 Black Liquor Solids
Wah Chang, Boilers 1-3
Pope & Talbot, Inc., Power Boiler 1 Oil Use
Amalgamated Sugar Co. -Nyssa, S-B3, Foster - Wheeler Boiler (coal-fired)
Amalgamated Sugar Co. -Nyssa, S-B2, Foster Riley Boiler (coal-fired)
Portland General Electric Company - Boardman, Main Boiler
Reynolds Metals Co., Potrooms Rimary Collection System

Utah

PacifiCorp-Huntington Plant Unit#1
PacifiCorp-Huntington Unit #2
PacifiCorp-Hunter Unit #1
PacifiCorp-Hunter Unit #2

Wyoming

Pacificorp Wyodak Coal Power Plant (U1)
Black Hills Neil Simpson Coal Power Plant (U1)
Pacificorp Naughton Coal Power Plant (U1)
Pacificorp Naughton Coal Power Plant (U2)
Pacificorp Naughton Coal Power Plant (U3)
Pacificorp Dave Johnston Coal Power Plant (U3)
Pacificorp Dave Johnston Coal Power Plant (U4)
Pacificorp Jim Bridger Coal Power Plant (U1)
Pacificorp Jim Bridger Coal Power Plant (U2)
Pacificorp Jim Bridger Coal Power Plant (U3)
Pacificorp Jim Bridger Coal Power Plant (U4)
Basin Electric Laramie River Coal Power Plant (U1)

Basin Electric Laramie River Coal Power Plant (U2)
Basin Electric Laramie River Coal Power Plant (U3)
Wyoming Refining TCC Feed Heater (H-03)
Wyoming Refining TCC Plume Burner (H-05)
Little America Oil Refinery #7 Boiler (BL-1415)
FMC Corp. Trona Plant NS-1A Coal Boiler
FMC Corp. Trona Plant NS-1B Coal Boiler
General Chemical Trona Plant GR-2-L Coal Boiler
General Chemical Trona Plant GR-3-W Coal Boiler
FMC - Granger (Tg) Trona Plant #1 Coal Boiler (14)
FMC - Granger (Tg) Trona Plant #2 Coal Boiler (15)

Navajo Nation

Arizona Public Service, 4-Corners, Unit #1
Arizona Public Service, 4-Corners, Unit #2
Arizona Public Service, 4-Corners, Unit #3
Arizona Public Service, 4-Corners, Unit #4
Arizona Public Service, 4-Corners, Unit #5

ATTACHMENT E
PRELIMINARY ESTIMATE OF STATE AREA ALLOCATIONS

The following table is a preliminary estimate of how the allocations for existing sources may be distributed among the state areas, including sources located within Indian Nations (e.g., Navajo Generating Station is within the Navajo Nation and the geographic boundaries of Arizona) for the purposes of providing an indication of the impact of jurisdictions opting in or out of the backstop cap-and-trade program. This is not intended to presume or prescribe assignment of allocations to states. The actual distribution will be based upon the location of sources according to the state or tribe having jurisdiction over those sources. Final distribution of allocations by state and tribal jurisdiction will be determined based on the final allocations to existing sources, as submitted in the section 309 SIP revisions. Note that this includes the smelter set-aside. How those emissions will be distributed if one or both of the two suspended smelters close will be dependent on if or how the other smelters absorb the production from the closed ones, as described in the body of the Annex. In addition, with the exception of the emissions reductions at the Mohave Generating Station in Laughlin, Nevada, known reductions expected to occur beyond 2003, such as the 20,000 ton reduction from the Colorado front range power plants, are not included.

State	Current Estimate	2003 Allocations	2008 Allocations	2013 Allocations	2018 Allocations
Arizona	124,780	136,561	134,141	119,121	93,667
California	34,875	34,917	34,579	32,931	29,087
Colorado	97,709	93,854	91,558	81,281	55,235
Idaho	23,026	23,070	22,575	20,548	15,755
Nevada	50,365	19,911	19,719	18,758	16,487
New Mexico	149,486	159,406	156,474	141,062	112,862
Oregon	22,529	24,575	23,760	20,523	12,753
Utah	42,249	44,285	43,510	40,183	29,636
Wyoming	145,001	154,421	150,684	133,594	97,519
Subtotal	**690,020**	**691,000**	**677,000**	**608,000**	**463,000**
Tribal Allocation		20,000	20,000	20,000	20,000
New Source Allocation		9,000	18,000	27,000	27,000
Grand Total		**720,000**	**715,000**	**655,000**	**510,000**

Attachment F:
Conceptual Proposal For Re-Allocation of the Tribal Set-Aside

The Annex provides that, upon the implementation of the trading program, 20,000 tons per year will be "established as a general tribal allocation," to be distributed as determined by the tribes in the region. 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 Regional Haze Rule § 309. This Attachment describes the parameters governing the tribal re-allocation (distribution), and presents a preliminary conceptual proposal, in order to facilitate tribal comment.

This is not a consensus document. In general terms, the members and participants in the WRAP have agreed that the re-allocation of the tribal set-aside is a matter internal to the tribes. However, to the extent the methodology affects other aspects of the program, other members and participants reserve their right to comment.

XII. Parameters and Principles Governing Re-Allocation Methodology

A. Provision for Late (Post 2003) Opt-in by Tribes

The re-allocation scheme should provide for the possibility that some tribes will opt to participate in the program after the 2003 deadline applicable to states for their SIPs.

1. Policy Rationale

Several factors point to the need to allow tribes to make the decision to participate in the program after the 2003 deadline applicable to states. The more than 200 tribes in the GCVTC region will face a formidable task in deciding whether to "opt in" to § 309 over the next three years. The "backstop" emission trading program described in the Annex is in many ways an innovative and even experimental program. The program marks the first time tribes will be integrated into a multi-state regional trading scheme, raising new issues regarding tribal sovereignty, federalism, and relationships to states. Additionally, a fundamental difference between it and existing emission trading programs is the concept that voluntary measures will initially be relied on to meet emissions goals, with the actual trading program serving as a contingency measure. By design, it is structured to minimize the likelihood of "triggering" the trading program until well after 2003. Because most tribes will likely not be affected until the actual trading program is triggered, the relevance of the program to a particular tribe may be hard to gauge in 2003.

To these complicating regulatory factors are added the inherent uncertainty of future trends in technology, energy use, and economic development, both within the region as a whole and on particular tribal lands. In this regard, tribes face a different situation than states. States comprise larger

geographic areas, which lessens the need for accuracy in predicting exactly where economic development may occur – simplifying assumptions, averaging, and other "smoothing" functions can be used. Moreover, tribes will more often than states have a proprietary interest in development projects within their jurisdiction, and thus have more at stake in insuring that the regulatory strategy they employ is complementary to their development strategy.

Finally, tribes are faced with these decisions at a time when most tribes are in the early stages of establishing air programs through such activities as creating emissions inventories, implementing ambient monitoring programs, and adopting basic air quality codes. Tribal government resources are generally not available for dedication to the type of economic/air quality policy analysis required to assess prospectively the ultimate implications of the decision whether to opt into § 309.

Allowing tribes to opt into the program after 2003 will not compromise the environmental goals of the program. In fact, it would be environmentally beneficial to encourage the inclusion of new tribal sources in the program, in order to insure the integrity of the regional cap. If tribes lose the option of opting into the program after 2003, new sources on tribal lands would be regulated under § 308 of the haze rule. This means they would be subject to control requirements, but their emissions would not be mitigated by corresponding reductions elsewhere, as would occur under the trading program. (A different analysis may apply to tribes with existing sources. As noted below, EPA has the authority to utilize federal implementation where necessary to ensure reasonable progress with respect to such sources).

2. Legal Rationale

For the reasons explained below, allowing tribes to opt-in to the trading program after 2003 is consistent with the framework provided by the Clean Air Act and implementing regulations.

a. Tribes are expressly exempt from visibility implementation deadlines under the Tribal Authority Rule.

The Tribal Authority Rule (TAR), 40 CFR § 49.1 – 49.11, delineates the CAA sections for which it is appropriate to treat tribes in the same manner as states. Under the general approach of the TAR, tribes which meet certain eligibility criteria may apply for and receive treatment in the same manner states for all CAA provisions except those specifically identified as inappropriate. Among provisions identified as inappropriate for tribes are "[s]pecific visibility implementation plan submittal deadlines established under 169A of the Act." 40 CFR § 49.4(e).

This exemption applies to the deadlines contained in the RHR sections 308 and 309. Although the Regional Haze Rule originated from a process prescribed in CAA § 169B, § 169B requires that EPA respond to reports from Visibility Transport Commissions by carrying out its regulatory duties under § 169A. See 42 U.S.C. § 7492(e). Therefore the deadlines in the RHR are established under § 169A of the Act and are not applicable to tribes under the TAR.

EPA recognized this in the preamble to the RHR: "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." 64 Fed. Reg. 35714, 35759,July 1, 1999.

b. Nothing in the structure or language of the TAR or RHR suggests that the RHR § 309 option would disappear for tribes upon the passing of the state-applicable deadline.

The provisions of the TAR firmly establish that the RHR implementation deadlines are not applicable to tribes. Nevertheless, an argument could be made that a tribes' failure to submit a TIP by the state deadline of December 31, 2003 would preclude a tribe from submitting a § 309 TIP at a later date, even though the date is not a deadline in the sense that failure to meet it would invoke sanctions. Such a reading would be counter to the spirit of the TAR and the RHR.

The RHR itself is silent on this question. The only language addressing tribal implementation of § 309 is found in § 309(d)(12):

> Tribal implementation. Consistent with 40 CFR Part 49, tribes within the Transport Region may implement the required visibility programs for the 16 Class I areas, in the same manner as States, regardless of whether such tribes have participated as members of a visibility transport commission.

One might argue that phrase "in the same manner as States" implies that the tribes are also subject to the same restrictions as states. However, the preamble discussion of this language makes it clear that the purpose of this language is to emphasize the tribes independence from states. In fact, the preamble erroneously states that this provision is not included in the final rule because it would be superfluous in light of the TAR:

> The WGA called for EPA's final rule *to permit tribes within the GCVTC Transport Region to implement visibility programs, or reasonably severable elements, in the same manner as States, regardless of whether such tribes have participated as members of a visibility transport GCVTC* [sic]. The EPA *has not included* the WGA's recommended rule provision in today's action because the necessary authority for tribal organizations has already been provided in a previous EPA rulemaking .FN133 The EPA does, however, agree with the position expressed in the WGA recommendation. The EPA wishes to clarify that tribes may directly implement the requirements of this section of the regional haze rule in the same manner as States. The Tribal Authority Rule provides for this, as discussed further in unit V of today's notice. The independence of tribes means that a tribal visibility program is not dependent on strategies selected by the State or States in which the tribe is located.

64 Fed. Reg. At 35756 (emphasis added). Section 309(d)(12) was in fact included in the final rule,

notwithstanding the explanation in the preamble of why it was not. In any case, it is clear that EPA interpreted the language of § 309(d)(12) to be merely redundant to the provisions of the TAR, and not in any way limiting the options available to tribes under the TAR.

Moreover, elsewhere in the preamble, the non-applicability of visibility implementation plan deadlines to tribes is discussed at some length, concluding with the following paragraph:

> In 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 TEA-21 legislation as codified in today's rule*. . . . 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. In the interim, EPA will work with the States and tribes to ensure that achievement of reasonable progress is not delayed.

64 Fed. Reg. 35714, 35759,July 1, 1999. (Emphasis added). Significantly, the discussion makes no distinction between development of tribal implementation plans under RHR §§ 308 and 309. Also significantly, nowhere in the quoted passage or the entire discussion of tribal implementation of the RHR is any mention made of consequences to tribes of failing to submit TIPs by the state deadlines. The integration and coordination of state and tribal planning efforts is cited as a positive incentive for early development of visibility TIPs, but nowhere is the possibility of any negative consequences discussed. If EPA had intended the state 309 deadline to serve as a cut off point for tribal implementation of § 309, it is reasonable to expect that it would have written such a provision into the rule that or at least discussed in the preamble the rationale for such an effect.

Taken together, EPA's assurances that tribes may choose between § 308 and §309 independently of state decisions, and that tribes "where necessary may take additional time to submit implementation plans," create a strong implication that tribes may submit implementation plans under § 309 after the *state* implementation plan deadline for that section.

c. Loss of the § 309 option upon failure to meet the 2003 deadline would effectively constitute a sanction to tribes and thus run counter to the spirit of the TAR.

In explaining the rationale for not subjecting tribes to SIP submittal deadlines, EPA in the preamble to the TAR noted among other things that:

> [S]ince . . . tribal authority for establishing CAA programs was expressly addressed for the first time in the 1990 CAA Amendments, in comparison to states, tribes in general are in the early stages of developing air planning and implementation expertise.

> Accordingly, EPA determined that it would be infeasible and inappropriate to subject tribes to the mandatory submittal deadlines imposed by the Act on states, and to the related federal oversight mechanisms in the Act which are triggered when EPA makes a finding that states have failed to meet required deadlines or acts to disapprove a plan submittal.

63. Fed. Reg. at 7265. The federal oversight mechanism referred to is implementation of a federal implementation plan (FIP) pursuant to CAA § 110(c)(1). Id. (providing for FIPs within 2 years of state's failure to submit SIP or SIP revision) The preamble goes on to explain that §110(c)(1) is therefore among those listed in the TAR as inappropriate for application to tribes, although EPA retains its obligation to promulgate FIPs in Indian country as necessary and appropriate. Id.

Enforcement of a FIP against a state is commonly perceived as a sanction against the state, as it represents an assertion of federal supremacy over considerations of state sovereignty. Furthermore, CAA 110 provides for additional sanctions in the event of a state's failure to submit a complete and timely SIP, in the form of withheld highway funding and emission offfset requirements. See 42 U.S.C. § 7410(m) and §7509.

EPA correctly determined that, given the relative inexperience of tribes in air regulation, and the recentness of Congressional authorization of tribal CAA implementation, it is inappropriate to subject tribes to deadlines and sanctions. For similar reasons, and for the reasons related to future uncertainty discussed in part I.A.1 above, tribes should not be punished for failure to meet the 2003 deadline by losing the option to implement § 309. Therefore, the methodology should accommodate post-2003 entry into the market by tribes.

B. Accommodation of the Multiple Purposes of the Tribal Set Aside

Tribal participants in the WRAP cited several potential uses for the tribal set aside, including retirement for the benefit of the environment, use to attract development, and sale for revenue. The allocation methodology should provide for all these needs to some degree. Naturally, there is a tension between these purposes, given the fact that there are many tribes who may have differing priorities. There are many ways of striking a balance between uses, of which the proposed methodology is but one. For example, the proposed methodology would utilize the allowances for revenue until needed for development (with individual tribes able to retire a portion at their discretion). An alternative method would be to effectively retire the allowances until needed for development or sale. The former method is put forth here under the assumption that the monetary benefit to tribes outweighs the marginal environmental benefit of retiring this small portion of the total emissions.

C. Flexibility to Allow for Changes If the New Source Set Aside Is Exhausted or in Accordance with Market Prices.

The tribal set aside is designed to help insure equitable treatment for tribal economies and to prevent barriers to economic development. It is not the only source of allowances for tribes, as tribal

sources also have access to allowances under the general existing and new source provisions. The new source set-aside is intended to be sufficient to cover all new sources in the region, whether they are tribal or non-tribal. The reallocation concept presented here is based on the assumption that the new source set aside is adequate. However, if for unanticipated reasons SO2 new source growth exceeds projections, the use of the tribal set aside should be subject to change. Similarly, the methodology should be flexible to allow changes in strategy based upon the market price of credits. For example, if credits become very valuable, tribes who have retired allowances may wish to reconsider the option of selling. Provisions for flexibility must be consistent with the general allocation methodology of the program, which provides certainty in allocations for 5 year increments.

- Maximization of Benefit to Tribes in the Aggregate.

The methodology should be structured so that the maximum benefit is gained from the allowances, and they are not so distributed as to be of no practical use to any one tribe. For this reason, a simple pro-rata distribution is not proposed. That would result in approximately 95 tons/year per tribe, not quite enough to construct a "major" source (100 tpy). It is felt that better use can be made of the allowances by pooling them and using the revenue for a common good, with the pool being dipped into as needed for individual tribal projects. Again, however, the calculus may change according to according to market prices for credits.

- Proposed Conceptual Methodology

The conceptual framework put forth here for comment is quite simple. Essentially, it consists of the following: (1) Initially the allowances would be pooled and sold, with revenue used for the benefit of common tribal interests, (2) Individual tribes could draw from the pool for the purpose of (A) SO2 emitting development projects, and (B) retirement of allowances for the environment. The allocation scheme would be subject to change at the 5 year check points built into the program, in response to changed conditions. These concepts are described in more detail below:

- "Unclaimed" allowances administered as pool for shared revenue

This provision is intended to insure that the tribal allowance is used in a manner which will provide benefits to tribes, regardless of whether individual tribes have decided to apply for an allocation of allowances.

Upon the commencement of the trading program, those tribal allowances which have not been allocated to individual tribes according to the procedures below would be sold on the open market, at a fair market price. The proceeds would be transferred to a trustee, who would use the funds for a purpose determined after consultation with the tribes in the region.

The use to which funds are put should be logically grounded in the rationale for creating the set aside. For example, they could be used to fund tribal environmental programs, to partially compensate

for the fact that the benefits of energy and industrial development have not been proportionally shared with tribes. This could be accomplished by using the monies to supply tribes with matching funds in order to meet federal grant requirements (e.g. under sections 103 or 105 of the CAA), to help tribes acquire monitoring or other equipment, or to assist tribes in establishing tribal, non-federal programs. Another promising idea which has been suggested is the establishment of a scholarship fund to encourage the development of tribal environmental professionals.

There are several fundamental issues to be resolved regarded the pooled approach, including: the mechanism by which tribal allocations would be sold on the market (e.g., by the program administrator) and the identity or method of selecting the trustee to administer revenues from sales.

- Allowances distributed to individual tribes via application process

A primary purpose of the tribal set aside is to ensure that barriers to development on tribal land are not created, where such development is desired by tribes. Many tribal participants also insisted that tribes should be able to retire credits, at their discretion. In order to accomplish these objectives, there must be means for individual tribes to acquire a quantity of credits over which the tribe has sole control. A method for doing this is proposed below:

- Retirement quota

Tribes would be able to apply for a quota of allowances for the express purpose of retiring them. The quota could be either a flat, pro rata amount for every federally recognized tribe in the region, (e.g., 20,000 tpy/211 tribes = 94.8 tpy/tribe), or it could be adjusted on a tribe-specific basis, such as tribal population. A flat amount would reflect the equality of all federally recognized tribes as sovereign domestic nations, while a population based allocation would perhaps better reflect the amount of development a tribe is willing to forego, by retiring the credits.

Some questions raised by this provision are whether tribes that retire credits should be excluded from receiving benefits from the revenue generated by the sale of the remainder of credits, and whether, tribes who retire credits would be able to pursue SO2 emitting development outside of the trading program? (E.g., under RHR § 308).

- Formula for allowances to tribal projects

A central feature of the tribal allocation scheme is the methodology for allocating allowances to tribes for the purpose of energy or economic development, so tribal development can be included in the regional cap without creating an extra economic burden on tribes. This use is supplemental to the use of allowances from the new source set aside which is available for any new sources in the region, whether tribal or not.

Under this provision, at the time a proposed new major SO2 source on tribal land applies for applicable permits (Prevention of Significant Deterioration, New Source Review, Title V, etc.), it would

also apply for a share of the tribal allowances. These allowances would be in addition to the allowances the source would receive from the general new source provisions, and would comprise an additional percentage of credits needed to operate. For example, the source would receive 100% of credits needed to operate under applicable control requirements from the new source set aside, and an additional 10% (a purely hypothetical number) from the tribal set aside. The extra allowances could not be used to circumvent applicable control requirements or permit conditions. They could be banked according to the general banking provisions of the program to provide the source with additional flexibility, or sold, in effect creating a small economic subsidy to the source, in order to encourage its location on tribal land. (Of course, this provision would only be utilized when a tribe desired to attract development).

- New distribution Methodology if new source set-aside exhausted

Under the WEB provisions, allowances would be allocated to sources for 5 year periods, in order to provide sufficient certainty for future planning. This periodic system of allocations affords an opportunity to change the tribal allocation scheme in response to changed conditions. Specifically, if the new source set aside is exhausted, use of the tribal set aside could be shifted from retirements or revenue towards tribal new source allocations, in order to ensure economic barriers are not created. By tying decisions to change the tribal methodology to the five year cycle, all parties would know how many tribal credits would be in play and how many will be retired for each five year period.