



## 2003 Regional SO<sub>2</sub> Emissions and Milestone Report

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## 2003 Regional SO<sub>2</sub> Emissions and Milestone Report

### Executive Summary

Under Section 309 of the federal Regional Haze Rule, nine western states and tribes within those states have the option of submitting plans to reduce regional haze emissions that impair visibility at 16 Class I national parks and wilderness areas on the Colorado Plateau. Five states – Arizona, New Mexico, Oregon, Utah and Wyoming – exercised this option by submitting plans to EPA prior to the deadline for states to opt in, December 31, 2003. The tribes were not subject to that deadline and still can opt into this program. Under the Section 309 plans, these five states have begun to implement an SO<sub>2</sub> Milestone and Backstop Trading Program. The Western Regional Air Partnership (WRAP) is assisting these states with the implementation and management of this regional emission reduction program.

As part of this program, the participating states must submit an annual Regional Sulfur Dioxide (SO<sub>2</sub>) Emissions and Milestone Report beginning in 2004 for the calendar year 2003. A milestone is a maximum level of annual emissions for a given year. The milestone for 2003 was set at 447,383 tons for the five state region. The states of Arizona, New Mexico, Oregon, Utah, and Wyoming reported 318,725 tons of actual SO<sub>2</sub> emissions for the calendar year 2003. The total emissions increase to 330,679 tons of SO<sub>2</sub> after making adjustments to account for changes in monitoring and calculation methods.

The adjustments to actual emissions were required to allow the 2003 emission estimates to be comparable to the emission monitoring or calculation method used in the base year inventory (1999 for utilities and 1998 for all other sources) in order to determine future year emission milestones. The adjustments result in an additional- 11,954 tons of SO<sub>2</sub> emissions, which is about 4% of the actual emissions. Adjustments required for changes in Part 75, Acid Rain Program, flow monitor quality assurance methods account for about 89% of the adjustment increase, with the remaining from other types of monitoring and calculation methodology changes.

Based on the preliminary adjusted annual emissions estimate, a preliminary determination has been made that the five states have met the 2003 regional SO<sub>2</sub> milestone of 447,383 tons. The 447,383 ton milestone was determined as described in Section 51.309(h)(1)(i) and the 309 State

Implementation Plans (SIPs). The milestone includes an adjustment to the base milestone to subtract emissions for western states not participating. The SIPs contain additional provisions to adjust the milestones to reflect variations in smelter operations, and to account for enforcement actions (to reduce the milestones where an enforcement action identified that emissions in the baseline period were greater than allowable emissions). Based on the states' information and SIP requirements regarding adjustments to the milestones, the 2003 period requires a 480 tons smelter adjustment, but no adjustments at this time for enforcement actions.

**Based on the adjusted milestone and emissions data, 2003 emissions were about 25% below the 2003 five state regional milestone.**

The SIPs also require the annual report to identify changes in the source population from year to year and also significant changes in a source's emissions from year to year. Because 2003 was the first year of reporting, this type of source change or exception information is not applicable for this first annual report. The states decided, however, to include in this report (for informational and tracking purposes) a list of facilities added to or removed from the list of subject sources included in the base year inventories. This information is provided in Section 6 of this report.

**Table ES-1  
 Overview of 2003 Regional Milestone and Emissions for Section 309 Participating States**

<b><u>2003 Sulfur Dioxide Milestone</u></b>	
Base Regional 2003 Milestone*	682,000 tons
Adjustments**	
States and Tribes not Participating in the Program	-235,097 tons
Smelter Operations	480 tons
Enforcement	0 tons
Adjusted 5-State 2003 Milestone	447,383 tons
<b><u>2003 Sulfur Dioxide Emissions</u></b>	
Actual 5-State 2003 Emissions	318,725 tons
Adjustments***	
Part 75 Flow Rate Procedures	10,640 tons
Other Emission Monitoring and Calculation Methods	1,314 tons
Adjusted 5-State 2003 Emissions	330,679 tons
<b><u>Comparison of Emissions to Milestone</u></b>	
Adjusted 2003 Emissions	330,679 tons
Adjusted 2003 Milestone	447,383 tons
Difference (negative value = emissions < milestone)	-116,706 tons
2003 Emissions as Percent of 2003 Milestone	74%

\* See 40 CFR 51.309(h)(1), Table 1, Column 3, and the Regional Milestones section of each state's 309 SIP. (Applies if neither the BHP San Manuel nor the Phelps Dodge smelter facilities resume operation.)

\*\* See 40 CFR 51.309(h)(1)(i), and (ii), and (v)-(viii), and the Regional Milestones section of each state's 309 SIP.

\*\*\* See 40 CFR 51.309(h)(1)(iii) and (iv), and the Annual Emissions Report section of each state's 309 SIP.

## 2003 Regional SO<sub>2</sub> Emissions and Milestone Report

### 1.0 Introduction

#### 1.1 Background

Under Section 309 of the federal Regional Haze Rule in 40 CFR Part 51, nine western states and tribes within those states have the option of submitting plans to reduce regional haze emissions that impair visibility at 16 Class I national parks and wilderness areas on the Colorado Plateau. Five states – Arizona, New Mexico, Oregon, Utah, and Wyoming – and the city of Albuquerque, New Mexico exercised this option by submitting plans to EPA prior to the deadline for states to opt in, December 1, 2003. The tribes were not subject to this deadline and still can opt into this program.

Under the Section 309 State Implementation Plans (SIPs), these five states have begun to implement an SO<sub>2</sub> Milestone and Backstop Trading Program. The Western Regional Air Partnership (WRAP) is assisting these states with the implementation and management of this regional emission reduction program.

Under the milestone phase of the program, the states have established annual SO<sub>2</sub> milestones (from 2003 to 2018) that represent reasonable progress in reducing the emissions that contribute to regional haze. These milestones represent voluntary emission reduction targets. If the sources in the program states fail to meet the milestones through this voluntary program, then the states will trigger the backstop trading program and implement a regulatory emissions cap for the states, allocate emission allowances (or credits) to the affected sources based on the emissions cap, and then require the sources to hold sufficient allowances to cover their emissions each year.

This report provides the first annual report for the milestone phase of this program. The report provides background on regional haze and the Section 309 program, the milestones established under the program, and the emissions reported for 2003. Based on the first year, the voluntary milestone phase of the program is working, and emissions are well below the target levels.

#### What is Regional Haze?

Regional haze is air pollution that is transported long distances and reduces visibility in national parks and wilderness areas across the country. Over the years this haze has reduced the visual range from 145 kilometers (90 miles) to 24-50 kilometers (15-31 miles) in the East, and from 225 kilometers (140 miles) to 56-145 kilometers (35-90 miles) in the West. The pollutants that create this haze are sulfates, nitrates, organic carbon, elemental carbon, and soil dust. Human-caused haze sources include industry, motor vehicles, agricultural and forestry burning, and windblown dust from roads and farming practices.

### What U.S. EPA Requirements Apply?

In 1999, the Environmental Protection Agency (EPA) issued regulations to address regional haze in 156 national parks and wilderness areas across the country. These regulations were published in the Federal Register on July 1, 1999 (64 FR 35714). The goal of the Regional Haze Rule (RHR) is to eliminate human-caused visibility impairment in national parks and wilderness areas across the country. It contains strategies to improve visibility over the next 60 years, and requires states to adopt implementation plans.

EPA's RHR provides two paths to address regional haze. One is 40 CFR 51.308 (Section 308), and requires most states to develop long-term strategies out to the year 2064. These strategies must be shown to make "reasonable progress" in improving visibility in Class I areas inside the state and in neighboring jurisdictions. The other is 40 CFR 51.309 (Section 309), and is an option for nine states - Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming - and the 211 Tribes located within those States to adopt regional haze strategies for the period from 2003 to 2018. These strategies are based on recommendations from the Grand Canyon Visibility Transport Commission (GCVTC) for protecting the 16 Class I areas in the Colorado Plateau area. Adopting these strategies constitutes reasonable progress until 2018. These same strategies can also be used by the nine western states and tribes to protect the other Class I areas within their own jurisdiction.

### How Have the WRAP States Responded to EPA Requirements?

Of the nine states (and tribes within those states) that have the option under Section 309 of participating in a regional strategy to reduce SO<sub>2</sub> emissions, five states have submitted Section 309 implementation plans (SIPs) to EPA. These states are Arizona, New Mexico, Oregon, Utah, and Wyoming. To date, no tribes have opted to participate in the Section 309 option, and the other four states opted to submit SIPs under the Section 308 process.

The following summarizes a few key elements of the Section 309 process for the five states:

1. Section 309(d)(4)(i) requires SO<sub>2</sub> milestones in the SIP. Section 309(h)(1) contains the actual SO<sub>2</sub> milestones for each year from 2003 to 2018, and includes provisions for making adjustments to these milestones if necessary.
2. Section 309(d)(4)(ii) requires monitoring and reporting of actual stationary source SO<sub>2</sub> emissions in order to ensure the SO<sub>2</sub> milestones are met. The SIP must commit to reporting to the WRAP as well as to EPA. Section 309(h)(2) specifies that monitoring and reporting starts in 2003, and applies to all sources with actual SO<sub>2</sub> emissions over 100 tons per year. Section 309(h)(2) also contains provisions how to document emission calculations, record keeping, and other reporting requirements.
3. Section 309(d)(4)(iii) requires that a SIP contain criteria and procedures for activating the trading program within 5 years if an annual milestone is exceeded, and provide assessments in 2008, 2013, and 2018. Section 309(h)(3) describes the mechanism for comparing emissions to the milestones using annual emission reports, and that a regional

planning organization like the WRAP can assist in performing this function. It also includes requirements for public and independent review.

This report responds to Item 3, above, and provides the annual report that compares the 2003 emissions against the milestones for the states that have submitted Section 309 SIPs to EPA.

#### What Elements Must the Regional SO<sub>2</sub> Emissions and Milestone Report Contain?

To facilitate compliance with the Section 309 SIPs, the Western Regional Air Partnership (WRAP) has committed to compile a regional report on emissions for each year. In accordance with the SIPs, the WRAP will compile the individual state emission reports into a summary report that includes:

- (1) Actual regional SO<sub>2</sub> emissions (tons/year).
- (2) Adjustments to account for:
  - (i) Changes in flow rate measurement methods;
  - (ii) Changes in emission monitoring or calculation methods; or
  - (iii) Enforcement actions or settlement agreements as a result of enforcement actions.
- (3) As applicable, average adjusted emissions for the last three years (compare to regional milestone). (This average will not apply for this first report that covers only the milestones and the 2003 emission results.)
- (4) Regional milestone adjustments to account for states/tribes not participating in the program and the operational status of certain smelters.

#### How Is Compliance with the SO<sub>2</sub> Milestone Determined?

While the WRAP assists with the preparation of this report, each state reviews the information in the report, and proposes a draft determination that the regional SO<sub>2</sub> milestone has either been met or exceeded. The draft determination is then submitted for public review and comment during the first part of 2005, culminating in a final report sent to EPA by March 31, 2005.

## **1.2 Report Organization**

This report presents the regional SO<sub>2</sub> emissions and milestone information required by the 309 SIPs for the five states. The report is divided into the following sections and an appendix:

- ! Actual SO<sub>2</sub> Emissions in 2003
- ! Monitoring Methodology Emissions Adjustments

- ! Enforcement Milestone Adjustments
- ! Smelter Milestone Adjustments
- ! Quality Assurance (including Source Change information)
- ! Preliminary Milestone Determination
- ! Appendix - Facility Emissions and Emission Adjustments

## 2.0 Actual SO<sub>2</sub> Emissions in 2003

All stationary sources with actual emissions of 100 tons or more per year in 2000 or any subsequent year are required to report annual actual SO<sub>2</sub> emissions. Table 1 summarizes the annual actual emissions from applicable sources in each state. The 2003 actual SO<sub>2</sub> emissions for each applicable source are listed in the Appendix, Table A-1.

**Table 1**  
**Actual 2003 SO<sub>2</sub> Emissions by State**

State	Actual 2003 SO <sub>2</sub> Emissions (tons/year)
Arizona	95,919
New Mexico	39,052
Oregon	19,937
Utah	42,339
Wyoming	121,477
TOTAL	318,725

## 3.0 Monitoring Methodology Emissions Adjustments

The annual emission reports for each state include proposed emissions adjustments to ensure consistent comparison of emissions to the milestones. The adjustments account for any differences in emissions that result from changes in the monitoring or calculation methodology from the methodology used to calculate baseline year emissions. The adjustments described in the following sections will also be performed in subsequent reports until the milestones are revised in the SIPs.

### 3.1 Changes in Part 75 Flow Rate Methodology

The 309 SIPs and Section 51.309(h)(1)(iv) spell out three specific methods for adjusting Part 75 Acid Rain Program electric generating unit emissions due to changes in quality assurance procedures for the flow monitor component of SO<sub>2</sub> continuous emission monitoring systems. These changes involve the use of new flow reference methods in the Relative Accuracy Test Audit (RATA) which were not available in the 1999 baseline year. The use of these new

methods (reference methods 2F, 2G, and 2H) are expected to result in a decrease in the SO<sub>2</sub> emission measurement.

The three methods in the SIPs for adjusting for flow RATA reference method changes are outlined below:

- (1) Directly determine the difference in flow rate through a side-by-side comparison of data collected with the new and old flow reference methods during a RATA test.
- (2) Compare the annual average heat rate using Acid Rain heat input data (MMBtu) and total generation (MWhrs) as reported to the federal Energy Information Administration (EIA). Under this approach, the flow adjustment factor shall be calculated using the following ratio:

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

- (3) Compare the standard CFM per MW before and after the new flow reference method based on CEM data submitted in the Acid Rain Program, as follows:

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

New Mexico, Utah, and Arizona provided adjusted emissions for changes in the Part 75 flow RATA reference method for the Public Service Corp of New Mexico San Juan plant and the Tri-State Escalante plant in New Mexico, three PacifiCorp plants in Utah (the Carbon, Hunter, and Huntington power plants), the Intermountain Power Service Corporation plant in Utah, and the AEPCO Apache Station in Arizona. In addition, the WRAP calculated adjusted emissions for a number of plants for which the state information was incomplete. These include four PacifiCorp plants in Wyoming (Dave Johnston, Jim Bridger, Naughton, and Wyodak). Changes in the RATA flow reference method result in an upward adjustment for the 2003 SO<sub>2</sub> emissions of 10,640 tons.

The adjustment for each of these plants is listed below in Table 2. The Appendix table provides additional information on the flow RATA reference method changes, and which adjustment method was used for each plant.

**Table 2**  
**Adjustments for Changes in Part 75 Flow RATA**

State	Source	Actual 2003 SO <sub>2</sub> Emissions (tons)	Flow RATA Adjustment (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)
AZ	AEPCO - Apache Station	7,859	40	7,899
NM	Public Service Co of New Mexico/San Juan Generating Station	14,569	1,379	15,948
NM	Tri-State Gen & Transmission/Escalante Station	1,184	225	1,409
UT	Intermountain Power Service Corporation-Intermountain Generation Station	3,400	17	3,417
UT	PacifiCorp - Carbon Power Plant	5,488	-1	5,487
UT	PacifiCorp - Hunter Power Plant	6,132	451	6,583
UT	PacifiCorp - Huntington Power Plant	18,286	2,419	20,705
WY	PacifiCorp - Dave Johnston	19,041	1,817	20,858
WY	PacifiCorp - Jim Bridger	20,975	1,671	22,646
WY	PacifiCorp - Naughton	20,099	2,180	22,279
WY	PacifiCorp - Wyodak	7,810	442	8,252

### 3.2 Changes in Emission Monitoring and Calculation Methodology

In addition to the specific flow reference method related requirement for Part 75 program sources, there is also a general requirement to account for any changes in emission monitoring or calculation methods. The actual emissions are adjusted so that the adjusted emission levels are comparable to the levels that would result if the state used the same emission monitoring or calculation method that was used in the base year inventory (1999 for utilities and 1998 for all other sources). The net impact throughout the region as a result of these adjustments is an increase of 1,314 tons from the actual 2003 emissions. Table 3 summarizes these results, and Appendix A provides additional source information. Some key aspects of the adjustments include:

- ! Oregon and Utah adjusted their 2003 SO<sub>2</sub> emissions inventory upwards by 2 tons and 612 tons, respectively.
- ! Wyoming adjusted their emissions downward by 501 tons.
- !
- ! Arizona did not report any emission adjustments.

- ! The city of Albuquerque, New Mexico reported that plant baseline emissions were incorrect for two facilities which should not have been included in milestone calculations. In each case the 1998 baseline emissions were based on the facility potential to emit, not actual emissions, which were less than 100 tons per year in 1998 and in each year since then. Thus, their emissions would not typically be included in this report, but until the milestones can be revised in the next SIP revision to correct the baseline error, these sources will be included and adjusted up to their potential to emit so that “paper decreases” in emissions are not counted towards meeting the milestones.
- ! New Mexico did not have information on the baseline year emission calculation and monitoring methodologies, and thus did not make any adjustments for facilities under the state's jurisdiction. The 1998 baseline year corresponded to a period when New Mexico's inventory relied on the sources to calculate and report emissions. Also during that period New Mexico prepared an emission inventory every other odd year (1997 and 1999), so the industrial baseline emissions are actually 1997 emissions.

**Table 3**  
**Adjustments for Changes in Monitoring Methodology**  
**(Oregon, Utah, Wyoming, and Albuquerque, New Mexico)**

State	Source	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Monitoring Methodology Adjustment (tons)	Comment
NM	GCC Rio Grande Cement	22	1,103	1,081	Facility potential to emit was used for the baseline year calculation. Adjustment is equal to the difference between actual and potential.
NM	Southside Water Reclamation Plant	0.2	120	120	Facility potential to emit was used for the baseline year calculation. Adjustment is equal to the difference between actual and potential.
OR	Weyerhaeuser Company	198	200	2	State emission factor changed, methodology did not.
UT	Brigham Young University - Main Campus	142	161	18	AP42 emission factor changed, methodology did not.
UT	Chevron Products - Salt Lake Refinery	1,191	1,236	46	Reflects change in emission factor.
UT	Holcim Devil's Slide Plant	58	279	221	New stack test changed emission factor.

State	Source	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Monitoring Methodology Adjustment (tons)	Comment
UT	Holly Ref. - Phillips Refinery	489	816	327	Changed from AP42 emission factor to CEM.
WY	Anadarko E&P – Brady	97	154	57	Thermal oxidizer used stack test and hours of operation in 1998; went to CEM in 2002.
WY	Black Hills - Neil Simpson I	1,128	714	-414	Mass balance approach replaced the 1990 stack test results used in the baseline year.
WY	Frontier Oil & Refining - Cheyenne	1,657	1,459	-198	Source 43 coker flare used stack test and coke cycle time for hours in 1998; went to permitted limit and ratio of actual/permitted throughput in 2001.
WY	Solvay Minerals – Soda Ash Plant	46	100	54	Coal boilers used stack test and hours in 1998; went to a CEM in 2002.

#### 4.0 Enforcement Milestone Adjustments

The SIPs require that each state report on proposed milestone adjustments that are due to enforcement actions which affect baseline year emissions. The purpose of this adjustment is to remove emissions that occurred above the allowable level in the baseline year from the baseline and the annual milestones. The enforcement milestone adjustments require an approved SIP revision before taking effect (See Section 51.309(h)(1)(v) of the Regional Haze Rule).

##### Enforcement Milestone Adjustment

There were no proposed enforcement action related milestone adjustments reported for 2003.

#### 5.0 Smelter Milestone Adjustments

##### Smelter Adjustment Scenarios

There are two general milestone adjustment scenarios for smelters in the 309 SIPs and 40 CFR 51.309(h)(1)(ii). First, if either the BHP San Manuel (Arizona) or Phelps Dodge Hidalgo (New Mexico) smelter resumes operation, the milestones will be increased. Once the adjustments have been made for each smelter, the milestones would not be changed due to future

suspensions or changes in plant operations, except as specifically provided in the regulations. At this point neither of these smelters has resumed operation, so this type of adjustment does not apply for the 2003 period.

The second type of adjustment applies to the operations at the remaining smelters. If one or both of the BHP San Manuel or Phelps Dodge Hidalgo smelters do not resume operation, the state or tribe will determine the amount of facility specific set-aside, if any, that will be added to the milestone to account for operational increases at the remaining smelters. This set-aside is only available for use if the annual sulfur input and emissions from the copper smelters are above the baseline levels listed in the applicable SIP. The increase to the milestone is based on a smelter's proportional increase above its baseline sulfur input.

### 2003 Smelter Adjustment

A comparison of smelter 2003 emissions to baseline levels in Table 3B of Section 51.309 is provided in Table 4 and shows that the Phelps Dodge Miami smelter in Arizona is the only operating smelter with actual 2003 SO<sub>2</sub> emissions above the baseline emissions. The derivation of the Miami smelter emissions is provided beneath Table 4.

**Table 4**  
**Smelter 2003 SO<sub>2</sub> Emissions and Baseline SO<sub>2</sub> Emissions**

State	Source	Actual 2003 SO <sub>2</sub> Emissions (tons)	Baseline Emissions (tons)
AZ	BHP San Manuel	0	16,000
AZ	Asarco Hayden	18,977	23,000
AZ	Phelps Dodge Miami	8,005	8,000
NM	Phelps Dodge Chino	0	16,000
NM	Phelps Dodge Hidalgo	0	22,000
UT	Kennecott Salt Lake	973	1,000

### **Emissions Calculation for Phelps Dodge Miami**

Emissions By Unit (tons)		Total
ISA & ELF	CEMS	1,243
Smelting Converters	CEMS	670
Collected Fugitives	CEMS	146
By Pass Stack	CEMS	176
Smelting Fugitives	S Balance	5,770
<b>Total Emissions</b>		<b>8,005</b>

<b>Sulfur Balance (tons)</b>	<b>Total</b>
Sulfur in Non Metal Bearing Materials (NMBM)	217,383
Sulfur increases in secondaries *	898
Sulfur in non-NMBM	2,627
Total sulfur input	220,908
Total sulfur recovered	216,906
Total Sulfur Emissions	4,002
<b>Total SO<sub>2</sub> Emissions**</b>	<b>8,004</b>

\* Sulfur increases are the sulfur left over from the previous batch process

\*\* The difference in the total SO<sub>2</sub> calculated from sulfur-balance methodology and that obtained from CEMS is due to rounding off the numbers.

The sulfur throughput for the Phelps Dodge Miami smelter in 2003 is also greater than the baseline throughput, triggering the smelter adjustment. The emissions and throughput comparisons and the smelter adjustment calculation for Phelps Dodge Miami are shown in Table 5. The adjustment is 480 tons, which is less than the available set-aside of 2,000 tons, and thus the entire adjustment is allowable per the Arizona SIP.

**Table 5**  
**Phelps Dodge Miami - Smelter Adjustment**

<b><u>SO<sub>2</sub> Emission Comparison</u></b>	
2003 Actual Emissions.....	8,005 tons
Baseline Emissions.....	8,000 tons
Actual 2003 emissions are 5 tons greater than baseline emissions.	
<b><u>Sulfur Throughput Comparison</u></b>	
2003 Sulfur Throughput.....	221,230 tons
Baseline Sulfur Throughput* .....	208,700 tons
2003 throughput is 12,530 tons greater than baseline throughput.	
2003 Throughput as a Percent of Baseline Throughput.....	6%
<b><u>Smelter Adjustment</u></b>	
2003 Calculated Adjustment (Baseline Emissions x Percent Throughput Increase)** .....	480 tons
Smelter Set-Aside* .....	2,000 tons
2003 Adjustment (The lesser of the Calculated Adjustment or Set-aside)** .....	480 tons

\* See the Arizona SIP, Table 8-3 (Table 3 in the Model SIP)

\*\* See Arizona SIP, Section 8.1.3(4)(e)

## 6.0 Quality Assurance

The states provided 2003 emissions data based on their state emission inventories. For this report, additional quality assurance (QA) procedures were used to supplement the normal QA procedures the states follow for their emission inventories. First, each state submitted a source change report, and second, the states compared their inventory data for utility sources against 40 CFR Part 75 Acid Rain Program monitoring data.

## 6.1 Source Change Report

Section 51.309(v) and the SIPs require that this annual SO<sub>2</sub> emission and milestone report include a description of source changes or exceptions report to identify:

- (1) Any new sources that were not contained in the previous calendar year's emissions report, and an explanation of why the sources are now included in the program;
- (2) Identification of any sources that were included in the previous year's report and are no longer included in the program, and an explanation of why this change has occurred; and
- (3) An explanation for emissions variations at any applicable source that exceeds  $\pm 20$  percent from the previous year.

Because 2003 was the first year of the program, these provisions do not apply for this first annual report. The states decided instead, for tracking purposes, to identify applicable sources in the 2003 report which were not in the baseline year inventory, as well as sources in the baseline year inventory which were not applicable sources included in the 2003 report. An applicable source is a source which emits 100 tons per year in 2000 or subsequent years.

Table 6 identifies the sources which were included in the baseline year inventory, but which are not currently required to report emissions for this program (e.g., annual emissions have been less than 100 tons or have permanently shutdown since 2000). Emissions for 2003 are included to verify that these sources are not subject to the milestone reporting requirement. In addition, their operational status and emissions for 2000-2002 were also checked. The WRAP "Year 2000 Point Source SO<sub>2</sub> Emissions Analysis" report was also checked to ensure the emissions and status of these sources. Sources which have temporarily shut down are not included in Table 6 but are included in Table A-1 and are included in the regional total for comparison to the milestone. Copper smelters are not included in Table 6, but are tracked separately for the smelter milestone adjustment (see Section 5, above).

Table 7 identifies sources which were not in the baseline inventory, but have now been added to the program because they have emitted 100 tons or more in at least one year since 1999.

**Table 6**  
**Sources in the Baseline Which Are Not Included**  
**in the Regional Total for Comparison to the Milestone**  
**(e.g., have not emitted 100 tpy or more or have permanently shutdown since 2000)**

State	County FIP Code	State Facility ID	Facility Name	Baseline Emissions (tons/year)	Actual 2003 SO2 Emissions (tons)	Reason for Change
OR	019	0007	Glenbrook Nickel Co	113	0	Closed since 2000
OR	019	0036	International Paper	1,006	0	Program did not meet 100 TPY program criteria
OR	051	1851	Reynolds Metals Co	503	0	Closed since 2001
WY	043	0001	Western Sugar Company - Worland	154	3	Emissions did not meet 100 TPY program criteria
WY	017	0006	KCS Mountain Resources - Golden Eagle	942	56	Emissions did not meet 100 TPY program criteria
WY	003	0017	KCS Mountain Resources - Ainsworth	845	0	Closed since 2000
WY	017	0002	Marathon Oil - Mill Iron	260	30	Emissions did not meet 100 TPY program criteria

**Table 7**  
**Sources Included in This Emissions Report Which Were Not in the Baseline Inventory**  
**(e.g., new sources or existing sources with increased emissions)**

State	County FIP Code	State Facility ID	Actual 2003 SO2 Emissions (tons)	Facility Name
OR	005	2145	380	West Linn Paper Company
UT	043	10676	109	Utelite Corporation - Shale processing
WY	011	0002	58	American Colloid Mineral Company - East Colony
WY	011	0003	54	American Colloid Mineral Company - West Colony
WY	005		187	Anadarko E&P Company LP - Table Rock Gas Plant
WY	005	0146	432	Black Hills Corporation - Wygen 1

State	County FIP Code	State Facility ID	Actual 2003 SO <sub>2</sub> Emissions (tons)	Facility Name
WY	041		0	BP America Production Company - Whitney Canyon Gas Field
WY	013		3,284	Burlington Resources - Bighorn Wells
WY	037		232	Chevron USA - Table Rock Field
WY	041		867	Chevron USA - Whitney Canyon/Carter Creek Wellfield
WY	013	0008	70	Devon Energy Corp. - Beaver Creek Gas Plant
WY	035		241	Exxon Mobil Corporation - Black Canyon Dehy Facility

## 6.2 Part 75 Data

Federal Acid Rain Program emission monitoring data (required by 40 CFR Part 75) were used to check actual power plant emissions, and whether or not a monitoring method adjustment was required for changes in Part 75 quality assurance procedures as described in section 3.1 of this report.

Sources in the region subject to Part 75 emitted about two thirds of the region's actual emissions in 2003. EPA's Data and Maps website was queried to obtain power plant SO<sub>2</sub> emissions in the five states which were then compared to totals reported by each state for those plants. The regional haze rule requires the use of Part 75 methods for Part 75 sources, so the reported emissions should match. This check identified one significant discrepancy for a specific plant, and this report includes the corrected data.

EPA's database for the Acid Rain program also was queried to obtain the flow reference method used in the RATAs reported by the plants since the 1999 baseline year. This information was used to check if there had been a change in flow reference methods since the 1999 baseline year.

## 7.0 Preliminary Milestone Determination

The 2003 adjusted emissions were determined to be 330,679 tons. Therefore, the participating states have met the regional 2003 milestone of 447,383 tons.

The 2003 milestone for the five participating states was determined as provided in Section 51.309(h)(1) of the rule and the Section 309 SIPs. First, the 682,000 ton milestone in Table 1 (column 3) of the rule is adjusted for states and tribes that have not yet opted to participate in the 309 program by subtracting the amount, as provided in Section 51.309(h)(1)(i), Table 2, for each state or tribe. Then, the milestone is adjusted to account for both changes in smelter operations and certain enforcement actions. This results in a milestone of 447,383 tons. Table 8 shows each element of the 2003 milestone calculation.

**Table 8**  
**Regional 2003 SO<sub>2</sub> Emission Milestone for the Five States**

<b>Base Regional 2003 Milestone*</b> .....	682,000 tons
<b>Milestone Adjustments**</b>	
States and Tribes not participating in the backstop program:	
California .....	-37,343 tons
Colorado .....	-98,897 tons
Idaho .....	-18,016 tons
Nevada .....	-20,187 tons
Shoshone-Bannock Tribe of the Fort Hall Reservation .....	-4,994 tons
Navajo Nation .....	-53,147 tons
Ute Indian Tribe of the Uintah and Ouray Reservation .....	-1,129 tons
Wind River Reservation .....	-1,384 tons
Potential Smelter Set-Aside (38,000 tons)	
Actual Smelter Set-Aside .....	480 tons
Enforcement .....	0 tons
<b>Adjusted 5-State 2003 Milestone</b>	
(Arizona, New Mexico, Oregon, Utah, Wyoming) .....	447,383 tons

\* See 40 CFR 51.309(h)(1), Table 1, Column 3, and the Regional Milestones section of each state's 309 SIP (applies if neither the BHP San Manuel nor the Phelps Dodge smelter facilities resume operation).

\*\* See 40 CFR 51.309(h)(1)(i), and (ii), and (v)-(viii), and the Regional Milestones section of each state's 309 SIP.

## Appendix A

**Table A-1  
2003 Actual and Adjusted SO<sub>2</sub> Emissions for Sources Subject to Section 309 - Regional Haze Rule**

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Part 75 Flow RATA Emission Adjustment (tons)	General New Monitoring Calculation Method Adjustment (tons)	Description/Comments
AZ	017	1807		Abitibi - Snowflake Pulp Mill	2621	322121	1,987	1,987			
AZ	003	3532	160	AEPCO - Apache Generating Station	4911	221112	7,859	7,899	40		Default wall effects adjustment determined using Method 2H table 2H-2. Current flow rate method is D2H. Flow adjustment determined by using side-by-side comparison of data from new and old flow reference methods during RATA test.
AZ	007	2435		ASARCO - Hayden Smelter	3331	331411	18,977	18,977			
AZ	021	15582		BHP - San Manuel Smelter	3331	331411	0	0			Facility has been temporarily shutdown.
AZ	003	2148		CLC - Douglas Lime Plant	3274	32741	0	0			Facility was shutdown in 2003.
AZ	015	5992		CLC - Nelson Lime Plant	3274	32741	1,038	1,038			
AZ	007	5129		Phelps Dodge - Miami Smelter	3331	331411	8,005	8,005			
AZ	025	2393		Phoenix Cement	3241	32731	6	6			Shut down and dismantled 3 old kilns.
AZ	017	447	113	Pinnacle West - Cholla Generating Station	4911	221112	17,147	17,147			
AZ	001	4477	6177	SRP - Coronado Generating Station	4911	221112	18,820	18,820			
AZ	019		126	TEP - Irvington Generating Station	4911	221112	2,772	2,772			
AZ	001	3222	8223	TEP - Springerville Generating Station	4911	221112	19,308	19,308			
NM	001			GCC Rio Grande Cement			22	1,103		1,081	Facility potential to emit was used for the baseline year calculation. Adjustment is equal to the difference between actual and potential.
NM	001			Southside Water Reclamation Plant			0.2	120		120	Facility potential to emit was used for the baseline year calculation. Adjustment is equal to the difference between actual and potential.
NM	017	350170001		Phelps Dodge Hidalgo	3331		0	0			Facility temporarily shutdown
NM	023	350230003		Phelps Dodge Chino	3331		0	0			Facility temporarily shutdown

(cont.)

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Appendix A  
April 21, 2005

**Table A-1  
2003 Actual and Adjusted SO<sub>2</sub> Emissions for Sources Subject to Section 309 - Regional Haze Rule (cont.)**

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Part 75 Flow RATA Emission Adjustment (tons)	General New Monitoring Calculation Method Adjustment (tons)	Description/Comments
NM	007	350070001		Raton Pub. Service/Raton Power Plant	4911		196	196			
NM	045	350450023		Giant Industries/San Juan Refinery (Bloomfield) [old name: GIANT INDUSTRIES/BLOOMFIELD REF]	2911		393	393			
NM	031	350310008		Giant Industries/Ciniza Refinery [Old name: GIANT REFINING/CINIZA]	2911		1,061	1,061			
NM	025	350250051		Dynegy Midstream Services/Eunice South Gas Plant	1321		1	1			Emissions in 2000 were 1,664 tons. In June of 2000 the SRU was removed and the facility has since only operated as a compressor station.
NM	025	350150138		Duke - Magnum/Pan Energy - Burton Flats	1321		0	0			Emissions in 2000 were 246 tons. Amine unit not operated since 2000.
NM	025	350250060		Dynegy Midstream Services/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	1321		1,109	1,109			
NM	045	350450247		Western Gas Resources/San Juan River Gas Plant	1321		452	452			
NM	015	350150010		Navajo Refining Co/Artesia Refinery	2911		702	702			
NM	025	350250063		Dynegy Midstream Services/Saunders Plant [Old name: WARREN PETROLEUM/SAUNDERS PLANT]	1321		486	486			
NM	025	350250061		Dynegy Midstream Services/Monument Plant [Old name: WARREN PETROLEUM/MONUMENT PLANT]	1321		872	872			
NM	015	350150285		Duke Energy/Dagger Draw Gas Plant	1321		180	180			
NM	015	350150008		Marathon Oil/Indian Basin Gas Plant	1321		1,228	1,228			
NM		350450902		Public Service Co of New Mexico/San Juan Generating Station	4911		14,569	15,948	1,379		Flow adjustment determined by comparing Method 2 to Method 2F results. Units 1, 2, 3. Default wall effects factor of 0.9900 used for part of the year was not included in the 2003 adjustment.
NM	025	350250008		Sid Richardson Gasoline/Jal #3	1321		1,360	1,360			
NM		350310032		Tri-State Gen & Transmission/Escalante Station	4911		1,184	1,409	225		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current method is 2FH.
NM	015	350150002		BP America Production/Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant]	1321		1,956	1,956			
NM	015	350150024		Agave Energy/Agave Gas Plant	1311		2,333	2,333			
NM	025	350250044		Duke Energy Field Services/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	1321		1,598	1,598			

(cont.)

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Appendix A  
April 21, 2005

**Table A-1  
2003 Actual and Adjusted SO<sub>2</sub> Emissions for Sources Subject to Section 309 - Regional Haze Rule (cont.)**

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Part 75 Flow RATA Emission Adjustment (tons)	General New Monitoring Calculation Method Adjustment (tons)	Description/Comments
NM	015	350150011		Duke Energy Field Services/Artesia Gas Plant	1321		1,080	1,080			
NM	025	350250007		J L Davis Gas Processing/Denton Plant	1311		1,158	1,158			
NM	025	350250035		Duke Energy Field Services/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	1321		3,539	3,539			
NM	025	350250004		Frontier Field Services/Maljamar Gas Plant	1321		3,574	3,574			
OR	045	0002	54612	Amalgamated Sugar Company, The	2063	311313	905	905			
OR	009	1849		Boise Cascade Corporation	2611	322121	2,496	2,496			
OR	007	0004		Fort James Operating Company	2621	322121	1,434	1,434			
OR	041	0005		Georgia-Pacific West, Inc.	2631	322130	486	486			
OR	065	0001		Northwest Aluminum Company, Inc.	3334	331312	0	0			
OR	051	1876		Owens-Brockway Glass Container Inc.	3221	327213	113	113			
OR	043	3501		Pope & Talbot, Inc.	2611	322121	231	231			
OR	049	0016	6106	Portland General Electric Company	4911	221121	13,121	13,121			
OR	071	6142		Smurfit Newsprint Corporation	2611	322122	573	573			
OR	005	2145		West Linn Paper Company	2621	322121	380	380			
OR	043	0471	54944	Weyerhaeuser Company	2621	322130	198	200		2	State emission factor changed. Methodology did not.
UT	049	10790		Brigham Young University - Main Campus	8221	611310	142	161		18	AP42 emission factors changed. Methodology did not.
UT	027	10311		Brush Resources Inc. - Delta Mill	1099	212299	16	16			Changed the type of fuel used.
UT	011	10119		Chevron Products Co. - Salt Lake Refinery	2911	324110	1,191	1,236		46	Reflect changes in emission factors.
UT	011	10122		Flying J Refinery - (Big West Oil Company)	2911	324110	398	398			
UT	049	10796		Geneva Steel - Steel Manufacturing Facility	3312	331221	0	0			Source is closing.
UT	027	10313		Graymont Western US Inc. - Cricket Mountain Plant	1422	212312	345	345			
UT	029	10007		Holcim-Devil's Slide Plant	3241	327310	58	279		221	New stack test changed emission factor.
UT	011	10123		Holly Refining and Marketing Co.-Phillips Refinery	2911	324110	489	816		327	Changed from using AP42 emission factor to CEM.
UT	027	10327	6481	Intermountain Power Service Corporation-Intermountain Generation Station	4911	221112	3,400	3,417	17		Default wall effects adjustment determined using Method 2H table 2H-2. Current flow rate method is D2H. Flow adjustment determined by using side-by-side comparison of data from new and old flow reference methods during RATA test.

(cont.)

**Table A-1  
2003 Actual and Adjusted SO<sub>2</sub> Emissions for Sources Subject to Section 309 - Regional Haze Rule (cont.)**

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Part 75 Flow RATA Emission Adjustment (tons)	General New Monitoring Calculation Method Adjustment (tons)	Description/Comments
UT	035	10572		Kennecott Utah Copper Corp. - Power Plant/Lab/Tailings Impoundment	1021	212234	2,499	2,499			
UT	035	10346		Kennecott Utah Copper Corp. - Smelter & Refinery	3331		973	973			
UT	007	10081	3644	PacifiCorp-Carbon Power Plant	4911	221112	5,488	5,487	-1		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current flow rate method is 2FH.
UT	015	10237	6165	PacifiCorp-Hunter Power Plant	4911	221112	6,132	6,583	451		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current flow rate method is 2FH.
UT	015	10238	8069	PacifiCorp-Huntington Power Plant	4911	221112	18,286	20,705	2,419		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current flow rate method is 2FH.
UT	007	10096		Sunnyside Cogeneration Associates-Sunnyside Cogeneration Facility	4911	221112	890	890			
UT	035	10335		Tesoro West Coast-Salt Lake City Refinery	2911	324110	700	700			
UT	037	10034		Tom Brown Incorporated - Lisbon Natural Gas Processing Plant	2911	211111	1,224	1,224			
UT	043	10676		Utelite Corporation - Shale processing	3295		109	109			New source in 2003.
WY	011	0002		American Colloid Mineral Company - East Colony	1459	212325	58	58			
WY	011	0003		American Colloid Mineral Company - West Colony	1459	212325	54	54			
WY	037	0008		Anadarko E&P Company LP - Brady Gas Plant	1321	211112	97	154		57	Thermal Oxidizer used stack test and hours in 1998. Went to a CEM in 2002.
WY				Anadarko E&P Company LP - Table Rock Gas Plant	1321		187	187			
WY	023	0001		Astaris Production - Coking Plant	2999	324199	0	0			Plant Shut Down 2001 (per 1998 FMC Coking Emissions Inventory).
WY	031	0001		Basin Electric - Laramie River Station	4911	221112	12,252	12,252			
WY	003	0012		Big Horn Gas Processing, LLC - Big Horn/Byron Gas Plant	1311	22121	0	0			
WY	005	0002		Black Hills Corporation - Neil Simpson I	4911	22112	1,128	714		-414	Mass balance approach now used in place of 1990 stack test results.
WY	005	0063		Black Hills Corporation - Neil Simpson II	4911	22112	585	585			

(cont.)

**Table A-1  
2003 Actual and Adjusted SO<sub>2</sub> Emissions for Sources Subject to Section 309 - Regional Haze Rule (cont.)**

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Part 75 Flow RATA Emission Adjustment (tons)	General New Monitoring Calculation Method Adjustment (tons)	Description/Comments
WY	045	0005		Black Hills Corporation - Osage Plant	4911	22112	3,075	3,075			
WY	005	0146		Black Hills Corporation - Wygen 1	4911	22112	432	432			
WY				BP America Production Company - Whitney Canyon Gas Field	1311		0	0			
WY	041	0012		BP America Production Company - Whitney Canyon Gas Plant	1311	211111	6,165	6,165			
WY				Burlington Resources - Bighorn Wells	1311		3,284	3,284			
WY	013	0028		Burlington Resources - Lost Cabin Gas Plant	1311	211111	1,332	1,332			
WY	041	0009		Chevron USA - Carter Creek Gas Plant	1311	211111	36	36			
WY				Chevron USA - Table Rock Field	1311		232	232			
WY				Chevron USA - Whitney Canyon/Carter Creek Wellfield	1311		867	867			
WY	013	0008		Devon Energy Corp. - Beaver Creek Gas Plant	1311	211111	70	70			
WY				Exxon Mobil Corporation - Black Canyon Dehy Facility	1311		241	241			
WY	023	0013		Exxon Mobil Corporation - Shute Creek	1311	211111	1,368	1,368			
WY	037	0048		FMC Corporation - Green River Sodium Products Facility	2812	327999	5,348	5,348			
WY	037	0049		FMC Wyoming Corporation - Soda Ash Plant	1474	212391	0	0			
WY	021	0001		Frontier Oil & Refining Company - Cheyenne Refinery	2911	32411	1,657	1,459		-198	Source 43 Coker Flare used Stack Test & Coke Cycle Time for Hours in 1998; Went to Permitted Limit x Actual/Permitted Throughput in 2001.
WY	037	0002		General Chemical Company - Green River Plant	1474	327999	4,796	4,796			
WY	043	0003		Hiland Partners, LLC - Hiland Gas Plant	1321	48621	161	161			
WY	029	0012		Howell Petroleum Corporation - Elk Basin Gas Plant	1311	211111	1,497	1,497			
WY	029	0007		Marathon Oil Company - Oregon Basin Gas Plant	1321	211112	321	321			
WY	001	0002		Mountain Cement Company - Laramie Plant	3241	23571	185	185			
WY	037	0003		P4 Production, L.L.C. - P4 Production, L.L.C.	3312	331111	859	859			

(cont.)

**Table A-1  
2003 Actual and Adjusted SO<sub>2</sub> Emissions for Sources Subject to Section 309 - Regional Haze Rule (cont.)**

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Actual 2003 SO <sub>2</sub> Emissions (tons)	Adjusted 2003 SO <sub>2</sub> Emissions (tons)	Part 75 Flow RATA Emission Adjustment (tons)	General New Monitoring Calculation Method Adjustment (tons)	Description/Comments
WY	009	0001		Pacificorp - Dave Johnston Plant	4911	221112	19,041	20,858	1,817		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current flow rate method is 2FH and M2H.
WY	037	1002		Pacificorp - Jim Bridger Plant	4911	221112	20,975	22,866	1,911		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current flow rate method is 2FH.
WY	023	0004		Pacificorp - Naughton Plant	4911	221112	20,099	22,279	2,180		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current flow rate method is 2F.
WY	005	0046		Pacificorp - Wyodak Plant	4911	221112	7,810	8,252	442		Flow adjustment determined using ratio of heat input/MW observed during the new vs. old flow rate method. Current flow rate method is 2FH.
WY	037	0022		S F Phosphates, LC - Rock Springs Plant	2874	325312	2,051	2,051			
WY	025	0005		Sinclair Oil Company - Casper Refinery	2911	32411	1,165	1,165			
WY	007	0001		Sinclair Oil Company - Sinclair Refinery	2911	32411	2,903	2,903			
WY				Solvay Minerals - Soda Ash Plant	1474		46	100		54	Coal Boilers used stack test and hours in 1998. Went to a CEM in 2001.
WY	015	0001		The Western Sugar Cooperative - Torrington	2063	311313	93	93			
WY	001	0005		University of Wyoming - Heat Plant	8221	61131	159	159			
WY	045	0001		Wyoming Refining Company - Newcastle Refinery	2911	32411	848	848			

## Appendix B Summary and Response to Public Comments

Substantially identical comments were sent by the U.S. Environmental Protection Agency (EPA) to each jurisdiction included in this report. In addition one comment was received from Phelps Dodge Miami and one comment was received from Portland General Electric. These comments and any resulting changes made to the report are summarized below.

1. Phelps Dodge Miami concurred with the draft report's findings and recommended sending it to EPA as is.

RESPONSE: None.

2. Portland General Electric commented that the Boardman power plant was operating during the baseline period and should not be included in Table 7.

RESPONSE: The plant's inclusion in Table 7 resulted from a table compilation error when drafting the report. Therefore, the Portland General Electric Boardman power plant has been deleted from Table 7 in the final report.

3. The EPA commented that emissions from the GCC Rio Grande Cement facility and Southside Water Reclamation Plant, both located in Albuquerque, NM, should be adjusted upward so as not to allow a "paper decrease" in emissions to be counted towards compliance with the milestones. In the baseline inventory, which provided an important basis for establishing the milestones, emissions from these sources were erroneously estimated using their potential to emit instead of actual emissions. Specifically, GCC Rio Grande Cement was erroneously estimated at 1,103 tons per year (tpy) and Southside Water Reclamation Plant was estimated at 120 tpy. Their actual emissions are approximately 22 and 1 tpy, respectively. As pointed out by the EPA, the Western Backstop Trading Program "depends on long-term comparisons of emission inventories relative to initial expectations." If only actual emissions were considered for the two Albuquerque sources, they would not be included in the SO<sub>2</sub> Emissions and Milestone Report (because they have emitted less than 100 tpy in each year since the baseline) and it would appear as if an additional 1,223 tons of progress had been made towards meeting (or exceeding) the milestone.

RESPONSE: In the final report, emissions are included from the two Albuquerque sources and are adjusted up to their potential to emit. The adjustments can be found in Table 3 and Table A-1. Explanatory text regarding this adjustment was added to Section 3.2.

4. The EPA commented that Table 6 should be reviewed for types of errors similar to what occurred regarding the two Albuquerque sources, and that the final report should include documentation of this review. The EPA also recommended that Table 6 include the 2003 emission estimates.

RESPONSE: Year 2003 emission estimates have been added to Table 6. Also, each of the three states listed in Table 6 reviewed the data in Table 6. In addition to removing the two

5. The EPA commented that the milestone adjustment for the Phelps Dodge Miami smelter should be 5 tons rather than 480 tons. The EPA acknowledges that the 480 tons was calculated according to the procedures in the AZ SIP. However, the EPA believes the SIP should have been more clearly written to say that the adjustment should be the lesser of (i) the increase in actual emissions above baseline emissions or (ii) the proportional increase in emissions based on the increase in sulfur input above baseline sulfur input levels. The EPA states that each “smelter set-aside adjustment” is earmarked for a specific smelter based on increased production at that smelter, and that there would be no reason to increase the milestone beyond the smelter’s actual emissions. Otherwise, the milestone is increased to an extent which allows other sources to emit more than would otherwise be allowed under the regional milestone.

RESPONSE: The State of AZ, and other jurisdictions included in this report, concluded that primacy should be given to the procedures contained in the SIP. Thus, the final report maintains a milestone adjustment of 480 tons. There was also agreement that this issue should be revisited in the SIP revisions due by the end of 2007. In the meantime, the milestone adjustment, regardless of which procedure is used, is expected to have no impact on whether or not the regional milestone is met, as current emissions are 116,706 tons below the milestone.

6. The EPA commented that the final report should demonstrate how the 8,005 tons of emissions from the Phelps Dodge Miami smelter were calculated.

RESPONSE: The requested calculations have been added to Section 5 of the final report.

7. The EPA commented that permanently shut down sources appear to be included in Table 6 but not in Table A-1, and if so, that the final report should clearly state this approach.

RESPONSE: This is indeed the approach taken in the draft report, and the final report

contains text to clarify the approach.

8. The EPA commented that there are discrepancies in how temporary shutdowns are handled in the draft report, noting that Table A-1 contains temporarily shut down sources with zero emissions in AZ, but not such sources in NM. The EPA recommends that all temporarily shut down sources be tracked in Table A-1, noting zero emissions for the year.

RESPONSE: The final report conforms with the EPA's recommendation. As a result, two NM sources (the Chino and Hidalgo copper smelters) were added to Table A-1 with zero emissions.

9. The EPA commented that it is its understanding that Tables 2 and 3 will be carried forward each year until the changes can be reflected in an adjustment to the milestone during the next SIP revision.

RESPONSE: This has been the intent of the agencies included in this report, which has been clarified in the text in Section 3.0.