DRAFT
2008 Regional SO_2 Emissions and Milestone Report

December 18, 2009

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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 -- initially exercised this option by submitting plans to EPA by December 31, 2003. Oregon elected to cease participation in the program in 2006. The tribes were not subject to the deadline and still can opt into the program at any time. Under the Section 309 plans, the four participating states have tracked the emissions of the applicable stationary sources as part of the pre-trigger portion of the SO_2 Milestone and Backstop Trading Program. The Western Regional Air Partnership (WRAP) is assisting these states with the implementation and management of the regional emission reduction program.

As part of this program, the participating states must submit an annual Regional Sulfur Dioxide (SO_2) Emissions and Milestone Report that compares emissions to milestones. A milestone is a maximum level of annual emissions for a given year. The first report was submitted in 2004 for the calendar year 2003.

The four-state region milestone for 2008 is 378,398 tons under the revised SIPs. To determine whether or not the milestone was met, the 2006, 2007, and 2008 adjusted emissions from the four reporting states were averaged, and this average was compared to the 2008 milestone. The adjustments to reported emissions were required to allow the basis of current emission estimates to be comparable to the emissions monitoring or calculation method used in the most recent base year inventory (2006).

Based on the adjusted milestone and emissions data, the average of 2006, 2007, and 2008 emissions is about 30% below the 2008 four state regional milestone.

The states of Arizona, New Mexico, Utah, and Wyoming reported 243,124 tons of SO_2 emissions for the calendar year 2008. The total emissions only increased to 244.189 tons SO_2 after making adjustments to account for changes in monitoring and calculation methods. The adjustments result in an additional 1,065 tons of SO_2 emissions, which is insignificant compared to the reported total emissions. Emissions adjustments are much smaller than in previous reports because of the updated 2006 baseline year used for this year's milestone. The adjusted emissions values for 2006 and 2007 were 279,134 tons and 273,663 tons, respectively. The average of 2006, 2007, and 2008 adjusted emissions is 265,662 tons.

Based on this average annual emissions estimate, a preliminary determination has been made that the four states have met the 2008 regional SO_2 milestone under the revised plan. The plans contain 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 emissions data received from the states and plan requirements regarding adjustments to the milestones, no smelter or enforcement action adjustment is required.

The plans also require that the annual report identify changes in the source population from year to year and significant changes in a source's emissions from year to year. The significant emission changes from 2007 to 2008 are included in Section 7 of this report. A list of facilities added to or removed from the list of subject sources included in the original base year inventories is included in Appendix B.

Table ES-1
Overview of 2008 Regional Milestones and Emissions for Section 309 Participating States

2008 Sulfur Dioxide Milestones	
Regional 2008 Milestone*	378,398 tons
Smelter-Specific Set-Aside*	0 tons
Adjusted Four-State 2007 Milestone	378,398 tons
2008 Sulfur Dioxide Emissions	
Reported Four-State 2008 Emissions	243,124 tons
Adjustments**	
Emission Monitoring and Calculation Methods	1,065 tons
Adjusted Four-State 2008 Emissions (rounded number)	244,189 tons
Average Sulfur Dioxide Emissions (2006, 2007, & 2008)	
Adjusted Four-State 2008 Emissions	244,189 tons
Adjusted Four-State 2007 Emissions	273,663 tons
Adjusted Four-State 2006 Emissions	279,134 tons
Average of 2006, 2007, & 2008 Adjusted Four-State Emissions	265,662 tons
Comparison of Emissions to Milestone	
Average of 2006, 2007, & 2008 Adjusted Four-State Emissions	265,662 tons
Adjusted Four-State 2008 Milestone	378,398 tons
Difference (Negative Value = Emissions < Milestone)	-112,736 tons
2006 – 2008 Emissions Average as Percent of 2008 Milestone	70.2%

* See the Regional Milestones section of each state's revised 309 plan.
** See the Annual Emissions Report section of each state's revised 309 plan.

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2008 Regional SO_2 Emissions and Milestone Report

1.0 Introduction

1.1 Background

Under Section 309 of the federal Regional Haze Rule (40 CFR Part 51), nine western states and the 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 by December 1, 2003. Oregon has since elected to cease participation in the SO_2 Milestone and Backstop Trading Program by not resubmitting a Section 309 State Implementation Plan (SIP). The tribes were not subject to this deadline and still can opt into the program at any time.

Under the Section 309 SIPs, these four states have been tracking emissions under the pre-trigger requirements of the SO_2 Milestone and Backstop Trading Program since 2003. 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_2 emissions targets (from 2003 to 2018). These voluntary emissions reduction targets represent reasonable progress in reducing the emissions that contribute to regional haze. If the participating sources 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 emissions allowances (or credits) to the affected sources based on the emissions cap, and require the sources to hold sufficient allowances to cover their emissions each year.

This report is the sixth 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 2008. Based on the first six years, 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 these 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 on the Colorado Plateau. 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 jurisdictions.

EPA revised the RHR on July 6, 2005 (70 FR 39104), and again on October 13, 2006 (71 FR 60612) in response to two legal challenges. The October 13, 2006 revisions modified Section 309 to provide a methodology consistent with the Court's decision for evaluating the equivalence of alternatives to Best Available Retrofit Technology (BART), like the strategy based on the GCVTC recommendations.

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_2 emissions, five states had originally submitted Section 309 SIPs to EPA. These states were Arizona, New Mexico, Oregon, Utah, and Wyoming. In addition, the City of Albuquerque had also submitted a Section 309 SIP. EPA, however, never approved these SIPs due to the legal challenges.

Oregon has opted out of submitting a revised Section 309 SIP under the modified RHR, which leaves four participating states. The four remaining states have revised, or are in the process of revising, their SIPs. To date, no tribes have opted to participate under Section 309, and the other four states of the original nine opted to submit SIPs under Section 308 of the RHR.

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

1. Section 309(d)(4)(i) requires SO_2 milestones in the SIP, and includes provisions for making adjustments to these milestones if necessary. The milestones must provide for steady and continuing emission reductions through 2018, and greater reasonable progress than BART.

2. Section 309(d)(4)(iii) requires monitoring and reporting of stationary source SO_2 emissions in order to ensure the SO_2 milestones are met. The SIP must commit to reporting to the WRAP as well as to EPA.

3. Section 309(d)(4)(iv) requires that a SIP contain criteria and procedures for activating the trading program within five years if an annual milestone is exceeded. A Section 309 SIP also must provide assessments in 2013 and 2018.

This report responds to Item 2, above, and provides the annual report that compares the 2008 emissions against the milestones for the states that have submitted Section 309 SIPs to EPA.

What Elements Must the Regional SO_2 Emissions and Milestone Report Contain?

To facilitate compliance with the Section 309 SIPs, the WRAP has committed to compiling 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. Reported regional SO_2 emissions (tons/year).

2. Adjustments to account for:

   - Changes in emissions monitoring or calculation methods; or
   - Enforcement actions or settlement agreements as a result of enforcement actions.

3. As applicable, average adjusted emissions for the last three years (which are compared to the regional milestone). Since this is the sixth report, 2006, 2007, and 2008 emissions are averaged.

4. Regional milestone adjustments to account for production increases at certain smelters.

How Is Compliance with the SO_2 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_2 milestone has either been met or exceeded. The draft determination is then submitted for public review and comment during the first part of 2010, culminating in a final report sent to EPA by March 31, 2010.

1.2 Report Organization

This report presents the regional SO_2 emissions and milestone information required by the 309 SIPs for the four states. The report is divided into the following sections, including two appendices:

- Reported SO_2 Emissions in 2008;
- Monitoring Methodology Emissions Adjustments;
- Three-Year Average Emissions;
- Enforcement Milestone Adjustments;
- Smelter Milestone Adjustments;
- Quality Assurance (Including Source Change Information);
- Milestone Determination;
- Appendix A -- Facility Emissions and Emissions Adjustments; and
- Appendix B -- Changes to SO_2 Emissions and Milestone Source Inventory.

2.0 Reported SO_2 Emissions in 2008

All stationary sources with reported emissions of 100 tons or more per year in 2000 or any subsequent year are required to report annual SO_2 emissions. Table 1 summarizes the annual reported emissions from applicable sources in each state. The 2008 reported SO_2 emissions for each applicable source are in Appendix A, Table A-1.

Table 1
Reported 2008 SO_2 Emissions by State

State	Reported 2008 SO_2 Emissions (tons/year)
Arizona	78,594
New Mexico	28,358
Utah	27,802
Wyoming	108,370
TOTAL	243,124

3.0 Monitoring Methodology Emissions Adjustments

The annual emissions reports for each state include proposed emissions adjustments to ensure consistent comparison of emissions to the milestone. The reported emissions are adjusted so that the adjusted emissions levels are comparable to the levels that would result if the state used the same emissions monitoring or calculation method that was used in the base year inventory (now 2006 for all sources). The net impact throughout the region as a result of these adjustments is an increase of 1,065 tons from the reported 2008 emissions. Table 2 summarizes

the emissions adjustments made for a total of three facilities. The state of Arizona did not report any emissions adjustments.

Table 2
Adjustments for Changes in Monitoring Methodology

State	Source	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	Monitoring Methodology Adjustment (tons)	Description
NM	Giant Industries/Ciniza Refinery (Gallup) [Old name: GIANT REFINING/CINIZA]	316	889	573	Removed annual usage factors from heaters and boilers and calculated using actual fuel usage.
UT	Holcim-Devil's Slide Plant	242	456	214	Facility changed emissions calculation methodology from stack test to CEMS.
WY	Simplot – Rock Springs Fertilizer Plant	1,409	1,687	278	9a and 9b acid plants were calculated using CEMS data in 2008, compared to the base year, which used test data and hours of operation.

This adjustment is much smaller than in previous reports due to the updated baseline of 2006. Previous reports used a baseline of 1999 for utility sources and 1998 for all other sources. With the updated baseline, utility sources subject to the federal Acid Rain Program monitoring requirements in 40 CFR Part 75 are no longer required to adjust emissions to account for changes in continuous emission monitoring quality assurance requirements implemented after the earlier 1999 baseline. These Part 75 sources accounted for the majority of past emission adjustments.

4.0 Three-Year Average Emissions (2006, 2007, and 2008)

The SIPs require multi-year averaging of emissions from 2004 to 2017 for the milestone comparison. From 2005 to 2017, a three-year average (which includes the reporting year and the two previous years) will be calculated to compare with the milestone. The average of the three-years' emissions from 2006 to 2008 is 265,662 tons. Table 3 shows the adjusted emissions for each year and three-year average emissions. The following report sections describe the adjusted milestone determination.

Table 3
Average Sulfur Dioxide Emissions (2006, 2007, & 2008)

Year	Adjusted SO_2 Emissions (tons/year)
2006	279,134
2007	273,663
2008	244,189
Three-Year Average (2006, 2007, 2008)	265,662

5.0 Enforcement Milestone Adjustments

The SIPs require that each state report on proposed milestone adjustments 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.

Enforcement Milestone Adjustment

There were no proposed enforcement action related milestone adjustments reported for 2008.

6.0 Smelter-Specific Set-Aside Milestone Adjustments

Smelter Adjustment Scenarios

Each state or tribe determines 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 in the region. This set-aside is only available for use if the annual sulfur input and emissions from a copper smelter is 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.

The revised Section 309 SIPs establish new updated milestones for the years 2008 – 2018. This update revised the baseline year and changed the smelter-specific set-aside. The smelter baseline has decreased, from 86,000 tons SO_2 in the 2003 SIPs to 24,000 tons SO_2 in the revised SIPs, due to the permanent closure of the BHP San Manuel, Phelps Dodge Chino, and Phelps Dodge Hidalgo smelters. The revised set-aside is only available if sulfur input and emissions from an individual smelter is above the baseline level in Table 4 in any particular year as a result of increased capacity. The Phelps Dodge Miami smelter is not included in Table 4 because the smelter is currently operating at its permitted limit, and therefore does not have a smelter-specific set-aside.

Table 4
Revised SIP -- Smelter Baselines and Set-Aside

State	Source	Baseline Sulfur Input (tons S)	Reported 2008 SO_2 Emissions (tons)	Baseline Allocation (tons SO_2)	Smelter-Specific Set-Aside (tons SO_2)
AZ	Asarco Hayden	235,000	21,742	23,000	3,000
UT	Kennecott Salt Lake	340,269	970	1,000	100
Total		575,269	22,712	24,000	3,100

A smelter set-aside is not available in 2008 because Asarco Hayden and Kennecott are below the baseline allocations.

7.0 Quality Assurance

The states provided 2008 emissions data based on their state emissions inventories. For this report, additional quality assurance (QA) procedures were used to supplement the normal QA procedures the states follow for their emissions 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.

7.1 Source Change Report

The SIPs require that this annual SO_2 emissions and milestone report include a description of source changes or exceptions report to identify:

- 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;
- 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
- An explanation for emissions variations at any applicable source that exceeds ± 20% from the previous year.

The Black Hills Corporation Wygen II in Wyoming is the only facility to have been added to the program inventory for 2008. In its first year of operation in 2008, Wygen II reported 221 tons of SO_2 emissions.

The Phelps Dodge Hidalgo smelter and Phelps Dodge Hurley smelter/concentrator in New Mexico have been removed from the inventory. Both were closed in 2006, but were included in last year's report for the smelter adjustment under the 2003 SIPs. Appendix B provides a list of all sources added or removed from the program inventory in previous reporting

years. Table 5 provides explanations for the emissions variations from 2007 – 2008 that are greater than 20%. Plants with variations greater than 20%, but reported emissions of less than 20 tons in both 2007 and 2008, are not included in Table 5. Information on these plants is provided in Appendix A.

Table 5
Sources with an Emissions Change of > ± 20% from the Previous Year

State	County FIPS	State Facility Identifier	Reported 2007 SO_2 Emissions (tons)	Reported 2008 SO_2 Emissions (tons)	Plant Name	Description/ Comments
AZ	017	1807	1,504	2,556	Catalyst Paper (Snowflake) Inc.	Used coal with higher sulfur content.
AZ	019	2869	48	6	Arizona Portland Cement	The reason for this change has not been reported.
AZ	007	5129	9,111	7,091	Phelps Dodge -- Miami Smelter	Reduced operations in 2008.
AZ	017	447	23,522	16,421	Pinnacle West -- Cholla Generating Station	100% of flue gas is now controlled due to installation of new SO_2 control in May 2008.
NM	015	350150024	65	0	Agave Energy/Agave Dagger Draw Gas Plant	Plant did not produce sour gas in 2008.
NM	015	350150002	300	1,201	BP America Production/Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant]	Operations were abnormal. A hurricane caused the plant to flare a lot of product since there was no place to move the gas.
NM	025	350250044	1,063	3,325	DCP Midstream/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	The reason for this change has not been reported- possibly due to excess emissions events (see DCP Midstream/Linam Ranch Gas Plant).
NM	025	350250035	253	1,584	DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	A series of excess emissions events caused an increase in SO_2 emitted.

(cont.)

Table 5
Sources with an Emissions Change of > ± 20% from the Previous Year (cont.)

State	County FIPS	State Facility Identifier	Reported 2007 SO_2 Emissions (tons)	Reported 2008 SO_2 Emissions (tons)	Plant Name	Description/ Comments
NM	025	350250060	2,355	3,020	Dynegy Midstream Services/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	A series of excess emissions events caused an increase in SO_2 emitted.
NM	031	350310008	1,278	316	Giant Industries/Ciniza Refinery (Gallup) [Old name: GIANT REFINING/CINIZA]	Removed annual usage factors from heaters and boilers and calculated using actual fuel usage.
NM	025	350250007	354	146	J L Davis Gas Processing/Denton Plant	Better maintenance, decrease in plant upsets.
NM	045	350450902	15,305	10,649	Public Service Co of New Mexico/San Juan Generating Station	Decrease due to consent decree and environmental upgrades.
NM	025	350250008	2,895	1,609	Sid Richardson Gasoline/Jal #3	Significant events resulting from SRU malfunctions.
NM	025	350250061	1,235	656	Targa Midstream Services/Monument Plant [Old name: WARREN PETROLEUM/MONUMENT PLANT]	Decrease in flaring during SRU and plant shutdown and startup due to better cooperation from producers shutting in wells during plant shut downs.
NM	045	350450247	393	571	Western Gas Resources/San Juan River Gas Plant	Decrease in SRU efficiency in 2008 causing more H2S to be combusted at the incinerator.
UT	049	10790	97	122	Brigham Young University -- Main Campus	More natural gas was burned in 2007 due to an expected shortage of coal.

(cont.)

Table 5
Sources with an Emissions Change of > ± 20% from the Previous Year (cont.)

State	County FIPS	State Facility Identifier	Reported 2007 SO_2 Emissions (tons)	Reported 2008 SO_2 Emissions (tons)	Plant Name	Description/ Comments
UT	011	10119	1,104	592	Chevron Products Co. -- Salt Lake Refinery	SO_2 controls were implemented in 2008.
UT	029	10007	454	242	Holcim-Devil's Slide Plant	Changed methodology from stack test emission factor to CEM.
UT	011	10123	579	453	Holly Refining and Marketing Co. -- Phillips Refinery	Plant was shut down for two months (2008).
UT	007	10081	6,511	5,057	PacifiCorp -- Carbon Power Plant	Sulfur and heat content of coal, and hours burning coal decreased. Fuel oil consumption increased.
UT	015	10238	4,351	3,362	PacifiCorp -- Huntington Power Plant	SO_2 controls installed.
UT	007	10096	447	537	Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	Coal sulfur content increased.
WY	011	0002	65	41	American Colloid Mineral Co -- East Colony	Decrease in emissions due to decreased emissions in fluid bed dryer.
WY	011	0003	46	58	American Colloid Mineral Co -- West Colony	Calculation method based on 65% bentonite retention in 2008 as opposed to 70% in 2007.
WY	005	0063	613	782	Black Hills Corporation -- Neil Simpson II	Facility burned 531,635 tons coal in 2008 vs. 509,847 tons in 2007.

(cont.)

Table 5
Sources with an Emissions Change of > ± 20% from the Previous Year (cont.)

State	County FIPS	State Facility Identifier	Reported 2007 SO_2 Emissions (tons)	Reported 2008 SO_2 Emissions (tons)	Plant Name	Description/ Comments
WY	041	0012	1,205	133	BP America Production Company -- Whitney Canyon Gas Plant	The plant shut down permanently on September 4, 2007, decreasing emissions from the incinerator and plant flare. The inlet flare emissions deceased due to reduced flaring. Inlet water treating flare emissions were calculated in 2008 using the amount of produced water.
WY	013	0028	2,461	3,203	Burlington Resources -- Lost Cabin Gas Plant	Emissions from the Train 3 Flare increased from 1,427 tons in 2007 to 2,284 tons in 2008 from upsets due to problems with a reducing gas generator, a faulty pressure safety valve at the inlet to the reaction furnace, and a plugged catalyst bed and plugged sulfur dip legs in the SRU.
WY	041	0009	46	59	Chevron USA -- Carter Creek Gas Plant	Increase in emissions due to increased flaring.
WY	037		328	180	Chevron USA -- Table Rock Field	Decrease in emissions due to decreased flaring.
WY	037	0014	153	103	Chevron USA -- Table Rock Gas Plant (Formerly Anadarko E&P Co LP)	Power boiler failures and power outages resulted in increased flaring.
WY	041		1	61	Chevron USA -- Whitney Canyon/Carter Creek Wellfield	Increase in emissions due to increased flaring.

(cont.)

Table 5
Sources with an Emissions Change of > ± 20% from the Previous Year (cont.)

State	County FIPS	State Facility Identifier	Reported 2007 SO_2 Emissions (tons)	Reported 2008 SO_2 Emissions (tons)	Plant Name	Description/ Comments
WY	013	0008	84	44	Devon Gas Services, L.P. -- Beaver Creek Gas Plant	Decrease in emissions due to decreased flaring.
WY	023	0001	133	37	Exxon Mobil Corporation -- Labarge Black Canyon Facility	Decrease in emissions due to decreased flaring.
WY	023	0013	846	1,538	Exxon Mobil Corporation -- Shute Creek	Tail Gas incinerators did not operate in 2007.
WY	037	0049	249	305	FMC Wyoming Corporation -- Granger Soda Ash Plant	SO_2 emissions increased due to a planned increase in soda ash production.
WY	021	0001	1,033	786	Frontier Oil & Refining Company -- Cheyenne Refinery	The FCCU regenerator operated 700 fewer hours in 2008 than in 2007, resulting in 33.44 fewer tons of SO_2 emitted. FCCU regenerator and sulfur incinerator upsets were responsible for 291 tons in 2007, compared to 73.4 tons in 2008.
WY	029		164	367	Marathon Oil Co -- Oregon Basin Wellfield	Increase in emissions due to increased flaring.
WY	001	0002	94	147	Mountain Cement Company -- Laramie Plant	The company reports that the higher SO_2 emissions are due to "industry fluctuations".

(cont.)

Table 5
Sources with an Emissions Change of > ± 20% from the Previous Year (cont.)

State	County FIPS	State Facility Identifier	Reported 2007 SO_2 Emissions (tons)	Reported 2008 SO_2 Emissions (tons)	Plant Name	Description/ Comments
WY	037	0022	2,052	1,409	Simplot Phosphates LLC -- Rock Springs Plant	The 2008 inventory was calculated using CEMS data instead of source test operating hours, as in previous years. Also, source 9b was shut down for 1,196 hours in 2008, compared to 491 in 2007.
WY	007	0001	1,035	1,448	Sinclair Oil Company -- Sinclair Refinery	712 tons of SO_2 was flared in 2008 compared to 73 tons in 2007.
WY	025	0005	792	622	Sinclair Wyoming Refining Company -- Casper Refinery	As measured by the CEM, the FCC Unit emitted 481 tons of SO_2 is 2008, compared to 306 tons of SO_2 in 2007.
WY	037	0005	56	44	Solvay Chemicals -- Soda Ash Plant (Green River Facility)	The reason for this change has not been reported.

7.2 Part 75 Data

Federal Acid Rain Program emissions monitoring data (required by 40 CFR Part 75) were used to check reported power plant emissions.

Sources in the region subject to Part 75 emitted about 65% of the region's reported emissions in 2008. We compared Acid Rain Program power plant emission data from EPA's Data and Maps website to plant totals reported by each state. The SIPs require the use of Part 75 methods for Part 75 sources. The reported emissions matched with EPA's emission data.

8.0 Preliminary Milestone Determination

The four state 2008 milestone in the revised SIPs is 378,398 tons. No adjustment is required for changes in smelter operation. The average of 2006, 2007 and 2008 adjusted emissions was determined to be 265,662 tons SO_2. Therefore, the participating states have met the 378,398 tons SO_2 milestone.

Appendix A

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
AZ	003	3532	160	AEPCO -- Apache Generating Station	4911	221112	2,454	2,454	-
AZ	019	2869		Arizona Portland Cement	3241	32731	6	6	-
AZ	007	2435		ASARCO -- Hayden Smelter	3331	331411	21,742	21,742	-
AZ	017	1807		Catalyst Paper (Snowflake) Inc.	2621	322121	2,556	2,556	-
AZ	003	2148		CLC -- Douglas Lime Plant	3274	32741	1,013	1,013	-
AZ	015	5992		CLC -- Nelson Lime Plant	3274	32741	1,955	1,955	-
AZ	007	5129		Phelps Dodge -- Miami Smelter	3331	331411	7,091	7,091	-
AZ	025	2393		Phoenix Cement	3241	32731	10	10	-
AZ	017	447	113	Pinnacle West -- Cholla Generating Station	4911	221112	16,421	16,421	-
AZ	001	4477	6177	SRP -- Coronado Generating Station	4911	221112	15,900	15,900	-
AZ	019	1052	126	TEP -- Irvington Generating Station	4911	221112	2,884	2,884	-
AZ	001	3222	8223	TEP -- Springerville Generating Station	4911	221112	6,562	6,562	-
NM	015	350150024		Agave Energy/Agave Dagger Draw Gas Plant	1311	211111	0	0	-
NM	015	350150002		BP America Production/Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant]	1321	211112	1,201	1,201	-
NM	015	350150011		DCP Midstream/Artesia Gas Plant	1321	211112	78	78	-

(cont.)

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule (cont.)

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
NM	025	350250044		DCP Midstream/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	1321	211112	3,325	3,325	-
NM	025	350250035		DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	1321	211112	1,584	1,584	-
NM	025	350150138		Duke -- Magnum/Pan Energy -- Burton Flats	1321	211112	0	0	-
NM	015	350150285		Duke Energy/Dagger Draw Gas Plant	1321	211112	0	0	-
NM	025	350250060		Dynegy Midstream Services/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	1321	211112	3,020	3,020	-
NM	025	350250004		Frontier Field Services/Maljamar Gas Plant	1321	211112	2,499	2,499	-
NM	031	350310008		Giant Industries/Ciniza Refinery (Gallup) [Old name: GIANT REFINING/CINIZA]	2911	32411	316	889	573
NM	025	350250007		J L Davis Gas Processing/Denton Plant	1311	211111	146	146	-
NM	015	350150008		Marathon Oil/Indian Basin Gas Plant	1321	211112	722	722	-
NM	015	350150010		Navajo Refining Co/Artesia Refinery	2911	32411	50	50	-
NM	045	350450902	2451	Public Service Co of New Mexico/San Juan Generating Station	4911	221112	10,649	10,649	-

(cont.)

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule (cont.)

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
NM	007	350070001		Raton Pub. Service/Raton Power Plant	4911	221112	0	0	-
NM	025	350250008		Sid Richardson Gasoline/Jal #3	1321	211112	1,609	1,609	-
NM	025	350250051		Targa Midstream Services/Eunice South Gas Plant	1321	211112	0	0	-
NM	025	350250061		Targa Midstream Services/Monument Plant [Old name: WARREN PETROLEUM/ MONUMENT PLANT]	1321	211112	656	656	-
NM	025	350250063		Targa Midstream Services/Saunders Plant [Old name: WARREN PETROLEUM/SAUNDERS PLANT]	1321	211112	309	309	-
NM	031	350310032	87	Tri-State Gen & Transmission/Escalante Station	4911	221112	1,202	1,202	-
NM	045	350450247		Western Gas Resources/San Juan River Gas Plant	1321	211112	571	571	-
NM	045	350450023		Western Refining Southwest Inc./San Juan Refinery (Bloomfield) [Old name: GIANT INDUSTRIES/BLOOMFIELD REF]	2911	32411	421	421	-
UT	049	10790		Brigham Young University -- Main Campus	8221	611310	122	122	-
UT	027	10311		Brush Resources Inc. -- Delta Mill	1099	212299	0	0	-
UT	011	10119		Chevron Products Co. -- Salt Lake Refinery	2911	324110	592	592	-

(cont.)

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule (cont.)

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
UT	037	10034		EnCana Oil & Gas (USA) Incorporated (was Tom Brown Incorporated) -- Lisbon Natural Gas Processing Plant	2911	211111	85	85	-
UT	011	10122		Flying J Refinery -- (Big West Oil Company)	2911	324110	377	377	-
UT	049	10796		Geneva Steel -- Steel Manufacturing Facility	3312	331221	0	0	-
UT	027	10313		Graymont Western US Inc. -- Cricket Mountain Plant	1422	212312	31	31	-
UT	029	10007		Holcim-Devil's Slide Plant	3241	327310	242	456	214
UT	011	10123		Holly Refining and Marketing Co. -- Phillips Refinery	2911	324110	453	453	-
UT	027	10327	6481	Intermountain Power Service Corporation -- Intermountain Generation Station	4911	221112	5,692	5,692	-
UT	035	10572		Kennecott Utah Copper Corp. -- Power Plant/Lab/Tailings Impoundment	1021	212234	3,145	3,145	-
UT	035	10346		Kennecott Utah Copper Corp. -- Smelter & Refinery	3331	331411	970	970	-
UT	007	10081	3644	PacifiCorp -- Carbon Power Plant	4911	221112	5,057	5,057	-
UT	015	10237	6165	PacifiCorp -- Hunter Power Plant	4911	221112	6,072	6,072	-
UT	015	10238	8069	PacifiCorp -- Huntington Power Plant	4911	221112	3,362	3,362	-

(cont.)

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule (cont.)

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
UT	007	10096		Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	4911	221112	537	537	-
UT	035	10335		Tesoro West Coast -- Salt Lake City Refinery	2911	324110	932	932	-
UT	043	10676		Utelite Corporation -- Shale processing	3295	212399	133	133	-
WY	011	0002		American Colloid Mineral Co -- East Colony	1459	212325	41	41	-
WY	011	0003		American Colloid Mineral Co -- West Colony	1459	212325	58	58	-
WY	031	0001	6204	Basin Electric -- Laramie River Station	4911	221112	10,745	10,745	-
WY	003	0012		Big Horn Gas Proc -- Big Horn/Byron Gas Plant	1311	22121	0	0	-
WY	005	0002	4150	Black Hills Corporation -- Neil Simpson I	4911	22112	932	932	-
WY	005	0063	7504	Black Hills Corporation -- Neil Simpson II	4911	22112	782	782	-
WY	045	0005	4151	Black Hills Corporation -- Osage Plant	4911	22112	2,509	2,509	-
WY	005	0146	55479	Black Hills Corporation -- Wygen I	4911	22112	653	653	-
WY	005			Black Hills Corporation – Wygen II	4911	22112	221	221	-
WY	041	0012		BP America Production Company -- Whitney Canyon Gas Plant	1311	211111	133	133	-
WY	041			BP America Production Company -- Whitney Canyon WellField	1311		4	4	-

(cont.)

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule (cont.)

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
WY	013			Burlington Resources -- Bighorn Wells	1311		0	0	-
WY	013	0028		Burlington Resources -- Lost Cabin Gas Plant	1311	211111	3,203	3,203	-
WY	041	0009		Chevron USA -- Carter Creek Gas Plant	1311	211111	59	59	-
WY	037			Chevron USA -- Table Rock Field	1311		180	180	-
WY	037	0014		Chevron USA -- Table Rock Gas Plant (Formerly Anadarko E&P Co LP)	1321	211111	103	103	-
WY	041			Chevron USA -- Whitney Canyon/Carter Creek Wellfield	1311		61	61	-
WY	013			Devon Energy Production Co., L.P. -- Beaver Creek Gas Field			21	21	-
WY	013	0008		Devon Gas Services, L.P. -- Beaver Creek Gas Plant	1311	211111	44	44	-
WY	029	0012		Encore Operating LP -- Elk Basin Gas Plant	1311	211111	1,106	1,106	-
WY	023	0001		Exxon Mobil Corporation -- Labarge Black Canyon Facility	1311		37	37	-
WY	023	0013		Exxon Mobil Corporation -- Shute Creek	1311	211111	1,538	1,538	-
WY	037	0048		FMC Corp -- Green River Sodium Products (Westvaco facility)	2812	327999	3,620	3,620	-
WY	037	0049		FMC Wyoming Corporation -- Granger Soda Ash Plant	1474	212391	305	305	-

(cont.)

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule (cont.)

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
WY	021	0001		Frontier Oil & Refining Company -- Cheyenne Refinery	2911	32411	786	786	-
WY	037	0002		General Chemical -- Green River Plant (Facility Name: General Chemical)	1474	327999	5,382	5,382	-
WY	043	0003		Hiland Partners, LLC -- Hiland Gas Plant	1321	48621	122	122	-
WY	029	0007		Marathon Oil Co -- Oregon Basin Gas Plant	1321	211112	408	408	-
WY	029			Marathon Oil Co -- Oregon Basin Wellfield			367	367	-
WY	037	0008		Merit Energy Company -- Brady Gas Plant (formerly Anadarko E&P Co LP)	1321	211112	85	85	-
WY	001	0002		Mountain Cement Company -- Laramie Plant	3241	23571	147	147	-
WY	037	0003		P4 Production, L.L.C. -- Rock Springs Coal Calcining Plant	3312	331111	715	715	-
WY	009	0001	4158	Pacificorp - Dave Johnston Plant	4911	221112	19,534	19,534	-
WY	037	1002	8066	Pacificorp -- Jim Bridger Plant	4911	221112	19,686	19,686	-
WY	023	0004	4162	Pacificorp -- Naughton Plant	4911	221112	22,109	22,109	-
WY	005	0046	6101	Pacificorp -- Wyodak Plant	4911	221112	8,196	8,196	-
WY	037	0022		Simplot Phosphates LLC -- Rock Springs Plant	2874	325312	1,409	1,687	278
WY	007	0001		Sinclair Oil Company -- Sinclair Refinery	2911	32411	1,448	1,448	-

(cont.)

Table A-1
2008 Reported and Adjusted Emissions for Sources Subject to Section 309 -- Regional Haze Rule (cont.)

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2008 SO_2 Emissions (tons)	Adjusted 2008 SO_2 Emissions (tons)	General New Monitoring Calculation Method Adjustment (tons)
WY	025	0005		Sinclair Wyoming Refining Company -- Casper Refinery	2911	32411	622	622	-
WY	037	0005		Solvay Chemicals -- Soda Ash Plant (Green River Facility)	1474	325181	44	44	-
WY	015	0001		The Western Sugar Cooperative -- Torrington Plant	2063	311313	180	180	-
WY	001	0005		University of Wyoming -- Heat Plant	8221	61131	79	79	-
WY	045	0001		Wyoming Refining -- Newcastle Refinery	2911	32411	696	696	-

Appendix B

Table B-1
Sources Added to the SO_2 Emissions and Milestone Report Inventory

State	County FIP Code	State Facility ID	Facility Name	Report Year of Change
UT	043	10676	Utelite Corporation -- Shale processing	2003
WY	011	0002	American Colloid Mineral Company -- East Colony	2003
WY	011	0003	American Colloid Mineral Company -- West Colony	2003
WY	037		Anadarko E&P Company LP -- Table Rock Gas Plant	2003
WY	005	0146	Black Hills Corporation -- Wygen 1	2003
WY	041		BP America Production Company -- Whitney Canyon Well Field	2003
WY	013		Burlington Resources -- Bighorn Wells	2003
WY	037		Chevron USA -- Table Rock Field	2003
WY	041		Chevron USA -- Whitney Canyon/Carter Creek Wellfield	2003
WY	013	0008	Devon Energy Corp. -- Beaver Creek Gas Plant	2003
WY	035		Exxon Mobil Corporation -- Labarge Black Canyon Facility (also identified as Black Canyon Dehy Facility)	2003
AZ	019	2869	Arizona Portland Cement	2004
WY	013		Devon Energy Corp. -- Beaver Creek Gas Field	2004
WY	005		Black Hills Corporation – Wygen II	2008

Table B-2
Sources Removed from the SO_2 Emissions and Milestone Report Inventory

State	County FIP Code	State Facility ID	Facility Name	1998 Baseline Emissions (tons/year)	Reason for Change	Report Year of Change
WY	043	0001	Western Sugar Company -- Worland	154	Emissions did not meet 100 TPY program criteria.	2003
WY	017	0006	KCS Mountain Resources -- Golden Eagle	942	Emissions did not meet 100 TPY program criteria.	2003
WY	003	0017	KCS Mountain Resources -- Ainsworth	845	Closed since 2000.	2003
WY	017	0002	Marathon Oil -- Mill Iron	260	Emissions did not meet 100 TPY program criteria.	2003
AZ	021	15582	BHP -- San Manuel Smelter	10,409	Facility is permanently closed.	2004
UT	049	10796	Geneva Steel -- Steel Manufacturing Facility	881	Plant is shut down and disassembled.	2004
WY	023	0001	Astaris Production -- Coking Plant	1,454	Plant is permanently shut down and dismantled.	2004
NM	001	00008	GCC Rio Grande Cement	1,103	Not subject to program after baseline revisions.*	2008
NM	001	00145	Southside Water Reclamation Plant	120	Not subject to program after baseline revisions.*	2008
NM	023	350230003	Phelps Dodge Hidalgo Smelter	16,000	Facility is permanently closed.	2008
NM	017	350170001	Phelps Dodge Hurley Smelter/Concentrator	22,000	Facility is permanently closed.	2008

* 1998 baseline emissions were based on the facilities' potential to emit (PTE), and not actual emissions. Actual annual emissions have always been below 100 tons. Once the year 2006 baseline became effective, these facilities were removed from the inventory.

Plant Name	State	State FIPS	County FIPS	State Facility Identifier	Plant SIC	Plant NAICS	Reported 2003 SO2 Emissions (tons)	Reported 2004 SO2 Emissions (tons)	Reported 2005 SO2 Emissions (tons)	Reported 2006 SO2 Emissions (tons)	Reported 2007 SO2 Emissions (tons)	Reported 2008 SO2 Emissions (tons)	PTE
GCC Rio Grande Cement	NM	35	001	00008	3241	327310	21.80	17.00	16.00	16.00	16.00	23.20	1103.00
Southside Water Reclamation Plant	NM	35	001	00145	4952	22132	0.20	17.00	44.00	57.00	57.00	2.46	120.00