2013 Regional SO_2 Emissions and Milestone Report

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2013 Regional SO_2 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 areas on the Colorado Plateau. Five states -- Arizona, New Mexico, Oregon, Utah, and Wyoming -- and Albuquerque-Bernalillo County initially exercised this option by submitting plans to EPA by December 31, 2003. Oregon elected to cease participation in the program in 2006 and Arizona elected to cease participation in 2010. The tribes were not subject to the deadline and still can opt into the program at any time. Under the Section 309 plans, the three participating states and Albuquerque-Bernalillo County 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 and city with the implementation and management of the regional emission reduction program. As used in this document, "Section 309 states" means the states of New Mexico, Utah, and Wyoming and Albuquerque-Bernalillo County. (For CAA purposes, Albuquerque-Bernalillo County is treated as a state, because it has authority under federal and state law to administer the CAA separately from the rest of New Mexico.)

As part of this program, the Section 309 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 regional milestone for 2013 is 185,795 tons. The 2011, 2012, and 2013 adjusted emissions from the Section 309 states were averaged, and this average was compared to the 2013 milestone to determine whether the milestone was met. 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.

Based on the adjusted milestone and emissions data, the average of 2011, 2012, and 2013 emissions is about 43% below the 2013 three-state regional milestone.

As presented in Table Es-1, the Section 309 states reported 100,391 tons of SO_2 emissions for the calendar year 2013. The total emissions increased to 101,381 tons of SO_2 after making adjustments to account for changes in monitoring and calculation methods. The adjustments result in an additional 990 tons of SO_2 emissions. The adjusted emissions values for 2011 and 2012 were 118,395 and 96,430 tons, respectively. The average of 2011, 2012, and 2013 adjusted emissions is 105,402 tons.

Based on this average annual emissions estimate, the Section 309 states determined that emissions in 2013 were below the regional SO_2 milestone for 2013. The states' Section 309 plans contain provisions to adjust the milestones 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 enforcement action adjustment is required.

The plans also require that the annual report identify, first, changes in the total number of sources from year to year and, second, significant changes in a source's emissions from year to year. The significant emission changes from 2012 to 2013 are included in Section 6 of this report. A list of facilities added to or removed from the list of subject sources in the original base year inventories is included in Appendix B.

Table ES-1
Overview of 2013 Regional Milestones and Emissions for Section 309 Participating States*

2013 Sulfur Dioxide Milestones	
Regional 2013 Milestone**	185,795 tons
Adjusted 2013 Milestone	185,795 tons
2013 Sulfur Dioxide Emissions	
Reported 2013 Emissions	100,391 tons
Adjustments***	
Emission Monitoring and Calculation Methods	990 tons
Adjusted 2013 Emissions (rounded number)	101,381 tons
Average Sulfur Dioxide Emissions (2011, 2012, &2013)	
Adjusted 2013 Emissions	101,381 tons
Adjusted 2012 Emissions	96,430 tons
Adjusted 2011 Emissions	118,395 tons
Average of, 2011, 2012, & 2013 Adjusted Emissions	105,402 tons
Comparison of Emissions to Milestone	
Average of 2011, 2012, & 2013 Adjusted Emissions	105,402 tons
Adjusted Three-State 2013 Milestone	185,795 tons
Difference (Negative Value = Emissions < Milestone)	-80,393 tons
2011 – 2013 Emissions Average as Percent of 2013 Milestone	57%

* Section 309 participating states means the states of New Mexico, Utah, and Wyoming and Albuquerque-Bernalillo County.
** See the Regional Milestones section of each state's 309 plan.
*** See the Annual Emissions Report section of each state's 309 plan.

2013 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 areas on the Colorado Plateau. Five states -- Arizona, New Mexico, Oregon, Utah, and Wyoming -- and Albuquerque-Bernalillo County exercised this option by submitting plans to EPA by December 1, 2003. In October 2006, when EPA modified Section 309, Oregon elected to cease participation in the SO_2 Milestone and Backstop Trading Program by not resubmitting a Section 309 State Implementation Plan (SIP). In 2010, Arizona elected to cease participation in the Program. The tribes were not subject to this deadline and still can opt into the program at any time.

Under the Section 309 SIPs, these three states and one city 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, Section 309 states have established annual SO_2 emissions targets (from 2003 to 2018). These voluntary emissions reduction targets represent reasonable progress in reducing 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 eleventh 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 2013. Based on the first eleven years, the voluntary milestone phase of the program is meeting its reasonable progress targets, and emissions are well below the target levels.

<u>What is Regional Haze</u>?

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), such as the alternative Section 309 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 originally submitted Section 309 SIPs to EPA. These states were Arizona, New Mexico, Oregon, Utah, and Wyoming. In addition, Albuquerque-Bernalillo County also submitted a Section 309 SIP. Due to legal challenges, EPA did not approve the initial SIP submittals. EPA did, however, fully approve the regional milestone and backstop trading program in 2012.

Oregon and Arizona have opted out of submitting a revised Section 309 SIP under the modified RHR, which leaves three participating states and Albuquerque-Bernalillo County. 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 SO_2 related elements of the Section 309 process for the participating Section 309 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 for assessments of the state's progress in 2013 and 2018.

This report responds to Item 2, above, and provides the annual report that compares the 2013 emissions against the milestones for the states and city 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). Per requirements in the Section 309 SIPs, 2011, 2012, and 2013 emissions are averaged.

How Is Compliance with the SO_2 Milestone Determined?

While the WRAP assists with the preparation of this report, each Section 309 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 2015, culminating in a final report sent to EPA by March 31, 2015.

1.2 Report Organization

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

- Reported SO_2 Emissions in 2013;
- Emissions Adjustments Related to Monitoring Methodology;
- Three-Year Average Emissions;
- Enforcement 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 2013

The Section 309 SIPs require all stationary sources with reported emissions of 100 tons or more per year in 2000 or any subsequent year to report annual SO_2 emissions. Table 1 summarizes the annual reported emissions from applicable sources in each state. The 2013 reported SO_2 emissions for each applicable source are in Appendix A, Table A-1.

Table 1. Reported 2013 SO_2 Emissions by State

State	Reported 2013 SO_2 Emissions (tons/year)
New Mexico	17,515
Utah	24,609
Wyoming	58,267
TOTAL	100,391

3.0 Emissions Adjustments Related to Monitoring Methodology

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 (2006). The net impact throughout the region as a result of these adjustments is an increase of 990 tons from the reported 2013 emissions. Table 2 summarizes the emissions adjustments made for a total of three facilities.

Table 2. Adjustments for Changes in Monitoring Methodology

State	Source	Reported 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	Monitoring Methodology Adjustment (tons)	Description
UT	Chevron Products Co. – Salt Lake Refinery	26	711	685	Increase in Adjusted 2013 SO2 Emissions is due to a correction in the calculation of Adjusted 2013 SO2 Emissions. The formula used to calculate SO2 was corrected and updated.
UT	Big West Oil-Flying J Refinery	45	198	153	Now using CEM data
UT	Holcim – Devil's Slide Plant	172	324	152	Facility changed emissions calculation methodology from stack tests to CEM

4.0 Three-Year Average Emissions (2011, 2012, and 2013)

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 2011 to 2013 is 105,402 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 (2011, 2012, & 2013)

Year	Adjusted SO_2 Emissions (tons/year)
2011	118,395
2012	96,430
2013	101,381
Three-Year Average (2011, 2012, 2013)	105,402

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 EPA-approved SIP revision before taking effect.

<u>Enforcement Milestone Adjustment</u>

There were no proposed enforcement action related milestone adjustments reported for 2013.

6.0 Quality Assurance

The states provided 2013 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.

6.1 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 the following:

- 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.

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

Table 4 provides explanations for the emissions variations from applicable sources from 2012 – 2013 that are greater than 20%. Plants with variations greater than 20%, but reported emissions of less than 20 tons in both 2012 and 2013, are not included in Table 4. Information on these plants is provided in Appendix A.

Appendix B provides a list of all sources added or removed from the program inventory in previous reporting years. There were two sources added since the 2012 report. During a quality assurance evaluation, New Mexico identified the need to include the ConocoPhillips-Midland Office MCA Tank Battery No. 2 facility and the ConocoPhillips-Midland Office East Vacuum Liquid Recovery and CO_2 Plant facility in this report because their reported emissions meet the emissions threshold criteria.

Table 4. Sources with an Emissions Change of > ±20% from the Previous Year

State	County FIPS	State Facility Identifier	Plant Name	Reported 2012 SO_2 Emissions (tons)	Reported 2013 SO_2 Emissions (tons)	Description Change > 20% 2012 to 2013
NM	15	350150002	Frontier Field Services /Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant; BP America Production]	860	478	2013 Emissions from one of the acid gas process flares and the SRU were greatly reduced.
NM	15	350150011	DCP Midstream/Artesia Gas Plant	229	284	2013 Emissions from SSM events were increased.
NM	25	350250035	DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	441	648	2013 Emissions from the Amine Sweetening Units were greatly increased.
NM	15	350150008	OXY USA WTP Limited Partnership - Indian Basin Gas Plant [Old Name - Marathon Oil/Indian Basin Gas Plant]	27	44	2013 Emissions from Residue Gas Flare (Pilot, Purge and SSM) and SSM flare (Pilot, Purge and SSM) were greatly increased.
NM	45	350450902	Public Service Co of New Mexico/San Juan Generating Station	4,624	6,076	2013 Emissions from coal-fired boilers were greatly increased. The percent Sulfur content of the fuel and the amount of fuel consumed by the boilers were increased.
NM	25	350250008	Regency Field Services/Jal #3 [Old Name Southern Union Gas] /Jal #3	666	1,002	2013 Emissions greatly increased from the SRU unit with thermal oxidizer.
NM	25	350250061	Versado Gas Processors, LLC / Monument Plant [Old name(s):TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	115	723	The Acid Gas Injection System and the SRU had greatly increased SSM emissions in 2013 which were routed to the Acid Gas Flare.
NM	45	350450247	Western Gas Resources/San Juan River Gas Plant	42	58	2013 Emissions from the tail gas incinerator of the SRU were increased.
NM	25	350250075	ConocoPhillips-Midland Office / MCA Tank Battery No. 2	118	195	The process flare had greatly increased emissions in 2013.
NM	25	350250113	ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	66	156	The process flare had greatly increased emissions in 2013.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2012 SO_2 Emissions (tons)	Reported 2013 SO_2 Emissions (tons)	Description Change > 20% 2012 to 2013
UT	49	10790	Brigham Young University -- Main Campus	97	120	Increase in SO2 emissions due to increase in sulfur content of coal.
UT	11	10119	Chevron Products Co. -- Salt Lake Refinery	20	26	Increased SO2 due to increased CEM value at Sulfur Plant #2.
UT	11	10122	Big West Oil Company - Flying J Refinery	92	45	Decrease in SO2 emissions due to decrease in sulfur content.
UT	27	10313	Graymont Western US Inc. -- Cricket Mountain Plant	38	52	Increase in SO2 emissions due to increase in amount of coal burned.
UT	29	10007	Holcim-Devil's Slide Plant	87	172	Increase in SOx emissions due to increase amount of fuel burned.
UT	11	10123	Holly Refining and Marketing Co. -- Phillips Refinery	129	101	Decreased SO2 due to decreased CEM value.
UT	27	10327	Intermountain Power Service Corporation -- Intermountain Generation Station	3,551	4,724	Increase in SO2 emissions due to increase amount of coal burned.
UT	35	10572	Kennecott Utah Copper Corp. -- Power Plant/Lab/Tailings Impoundment	1,413	1,810	Increase in SO2 emissions due to more coal burned in 2013 than in 2012.
UT	35	10346	Kennecott Utah Copper Corp. -- Smelter & Refinery	560	727	Increased SO2 due to increased CEM Value
UT	7	10096	Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	586	917	Increase due to increase in CEM value of SO2 due to increased sulfur content in coal.
UT	35	10335	Tesoro West Coast -- Salt Lake City Refinery	852	664	Decrease due to decrease from 357 days in 2012 to 285 days at FCU

State	County FIPS	State Facility Identifier	Plant Name	Reported 2012 SO_2 Emissions (tons)	Reported 2013 SO_2 Emissions (tons)	Description Change > 20% 2012 to 2013
UT	43	10676	Utelite Corporation -- Shale processing	127	80	Decrease due to decrease in amount of coal burned.
WY	11	3	American Colloid Mineral Co -- West Colony	69	96	Increased emissions due to a higher overall tonnage of coal being used. The Colony East and Colony West plants have been merged under one permit.
WY	5	63	Black Hills Corporation - Neil Simpson II	420	511	20% Difference caused by an abnormal amount of 40CFR75 SO2 monitor downtime which resulted in additional data. Additionally, there was a 12.9% increase in coal consumption and a 2% increase in the sulfur content of the coal consumed.
WY	5	146	Black Hills Corporation - Wygen 1	394	566	20% Difference caused by an abnormal amount of 40CFR75 SO2 monitor downtime which resulted in additional data. Additionally, there was a 2.8% increase in coal consumption and a 7.7% increase in the sulfur content of the coal consumed.
WY	41	9	Chevron USA -- Carter Creek Gas Plant	37	596	Plant underwent a turnaround from July 17th to Sept 7th.
WY	13	8	Devon Gas Services, L.P. -- Beaver Creek Gas Plant	142	49	Less gas was Flared in 2013
WY	23	1	Exxon Mobil Corporation -- Labarge Black Canyon Facility	7	139	Increased flaring emissions due to September shutdown/turnaround
WY	23	13	Exxon Mobil Corporation -- Shute Creek	494	885	Increased flaring emissions due to September shutdown/turnaround
WY	21	1	Frontier Oil & Refining Company -- Cheyenne Refinery	174	267	upset/excess emissions were much more frequent in 2013 at the Coker Unit and Main Flare
WY	29	7	Marathon Oil Co -- Oregon Basin Gas Plant	233	182	Emissions from the Clause Plant Gas Incinerator have decreased by 28% from 2012 due to improved catalyst material and improved process controls

State	County FIPS	State Facility Identifier	Plant Name	Reported 2012 SO_2 Emissions (tons)	Reported 2013 SO_2 Emissions (tons)	Description Change > 20% 2012 to 2013
WY	29	0010	Marathon Oil Co -- Oregon Basin Wellfield	162	40	Emissions decreased due to OBGP not performing turnaround and maintenance activities in 2013
WY	37	8	Merit Energy Company - Brady Gas Plant (formerly Anadarko E&P Co LP)	1,136	316	Emissions from the Benfield Regenerator Heater (H-100B) and the Inlet Gas Regenerator Heater (H-10) increased due to an increase in operating hours
WY	7	1	Sinclair Oil Company -- Sinclair Refinery	964	154	Less gas was Flared in 2013
WY	37	5	Solvay Chemicals -- Soda Ash Plant (Green River Facility)	33	42	% change is due to an average of 0.018lb/MMBTU SO2 in 2013 compared to an average of 0.010 lb/MMBTU SO2 in 2012

6.2 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 66% of the region's reported emissions in 2013. 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 EPA's emission data[a].

[a] The reported emissions for Pacificorp's Naughton Plant in WY contain an extra 26 tons of SO_2 emissions due to wastewater ponds that are not included in the acid rain data. The reported emissions for the San Juan Generating Station in NM contain an extra 20 tons of SO_2 emissions due to emission points that are not included in the acid rain data.

7.0 Preliminary Milestone Determination

The Section 309 regional 2013 milestone is 185,795 tons SO_2, which represents the average regional emissions milestone for the years 2011, 2012, and 2013. The average of 2011, 2012, and 2013 adjusted emissions was determined to be 105,402 tons SO_2. Therefore, the participating states have met the 185,795 tons SO_2 milestone.

8.0 Public Comments

New Mexico, Utah, Wyoming and Albuquerque-Bernalillo County will each hold public review and comment periods. Comments made during those periods will be responded to in the final report.

Appendix A

Table A-1
2013 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 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	2013 General New Monitoring Calculation Method Adjustment (tons)
NM	15	350150024		Agave Energy Co./Agave Dagger Draw Gas Plant	1311	211111	14	14	
NM	15	350150002		Frontier Field Services /Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant; BP America Production]	1321	211112	478	478	
NM	15	350150011		DCP Midstream/Artesia Gas Plant	1321	211112	284	284	
NM	25	350250044		DCP Midstream/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	1321	211112	3,044	3,044	
NM	25	350250035		DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	1321	211112	648	648	
NM	15	350150138		Duke -- Magnum/Pan Energy -- Burton Flats	1321	211112	0	0	
NM	15	350150285		Duke Energy/Dagger Draw Gas Plant	1321	211112	0	0	
NM	25	350250060		VERSADO GAS PROCESSORS, LP/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	1321	211112	184	184	
NM	25	350250004		Frontier Field Services/Maljamar Gas Plant	1321	211112	2,244	2,244	
NM	31	350310008		Western Refining Southwest Inc-Gallup Refinery {Old names:Western Refinery/Ciniza Refinery (Gallup) and GIANT REFINING/CINIZA]	2911	32411	34	34	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	2013 General New Monitoring Calculation Method Adjustment (tons)
NM	25	350250007		Davis Gas Processing/Denton Plant	1311	211111	972	972	
NM	15	350150008		OXY USA WTP Limited Partnership - Indian Basin Gas Plant [Old Name - Marathon Oil/Indian Basin Gas Plant]	1321	211112	44	44	
NM	15	350150010		Navajo Refining Co/Artesia Refinery	2911	32411	39	39	
NM	45	350450902	2451	Public Service Co of New Mexico/San Juan Generating Station	4911	221112	6,076	6,076	
NM	7	350070001		Raton Pub. Service/Raton Power Plant	4911	221112	0	0	
NM	25	350250008		Regency Field Services/Jal #3 [Old Name Southern Union Gas] /Jal #3	1321	211112	1,002	1,002	
NM	25	350250051		Versado Gas Processors, LP/Eunice South Gas Plant	1321	211112	0	0	
NM	25	350250061		Versado Gas Processors, LLC / Monument Plant [Old name(s):TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	1321	211112	723	723	
NM	25	350250063		Versado Gas Processors, LLC/Saunders Plant [Old name(s): TARGA MIDSTREAM SERVICES, LP, WARREN PETROLEUM/SAUNDERS PLANT]	1321	211112	369	369	
NM	31	350310032	87	Tri-State Gen & Transmission/Escalante Station	4911	221112	951	951	
NM	45	350450247		Western Gas Resources/San Juan River Gas Plant	1321	211112	58	58	
NM	45	350450023		Western Refining Southwest Inc./Bloomfield Products Terminal [Old name: GIANT INDUSTRIES/BLOOMFIELD REF]	2911	32411	0	0	
NM	25	350250075		ConocoPhillips-Midland Office / MCA Tank Battery No. 2	1311	211111	195	195	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	2013 General New Monitoring Calculation Method Adjustment (tons)
NM	25	350250113		ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	1311	211111	156	156	
UT	49	10790		Brigham Young University -- Main Campus	8221	611310	120	120	
UT	11	10119		Chevron Products Co. -- Salt Lake Refinery	2911	324110	26	711	685
UT	11	10122		Big West Oil Company - Flying J Refinery	2911	324110	45	198	153
UT	27	10313		Graymont Western US Inc. -- Cricket Mountain Plant	1422	212312	52	52	
UT	29	10007		Holcim-Devil's Slide Plant	3241	327310	172	324	152
UT	11	10123		Holly Refining and Marketing Co. -- Phillips Refinery	2911	324110	101	101	0
UT	27	10327	6481	Intermountain Power Service Corporation -- Intermountain Generation Station	4911	221112	4,724	4,724	
UT	35	10572		Kennecott Utah Copper Corp. -- Power Plant/Lab/Tailings Impoundment	1021	212234	1,810	1,810	
UT	35	10346		Kennecott Utah Copper Corp. -- Smelter & Refinery	3331	331411	727	727	
UT	27	10311		Materion Natural resources - Delta Mill (was Brush Resources)	1099	212299	0	0	
UT	7	10081	3644	PacifiCorp -- Carbon Power Plant	4911	221112	7,702	7,702	
UT	15	10237	6165	PacifiCorp -- Hunter Power Plant	4911	221112	5,055	5,055	
UT	15	10238	8069	PacifiCorp -- Huntington Power Plant	4911	221112	2,409	2,409	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	2013 General New Monitoring Calculation Method Adjustment (tons)
UT	37	10034		Patara Midstream LLC (was EnCana Oil & Gas (USA) Incorporated and Tom Brown Incorporated) - Lisbon Natural Gas Processing Plant	2911	211111	5	5	
UT	7	10096		Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	4911	221112	917	917	
UT	35	10335		Tesoro West Coast -- Salt Lake City Refinery	2911	324110	664	664	
UT	43	10676		Utelite Corporation -- Shale processing	3295	212399	80	80	
WY	11	2		American Colloid Mineral Co -- East Colony	1459	212325	96	96	
WY	11	3		American Colloid Mineral Co -- West Colony	1459	212325	0	0	
WY	5	45		Basin Electric -- Dry Fork Station	4911	22112	830	830	
WY	31	1	6204	Basin Electric -- Laramie River Station	4911	221112	9,286	9,286	
WY	3	12		Big Horn Gas Proc -- Big Horn/Byron Gas Plant	1311	22121	0	0	
WY	5	2	4150	Black Hills Corporation - Neil Simpson I	4911	22112	879	879	
WY	5	63	7504	Black Hills Corporation - Neil Simpson II	4911	22112	511	511	
WY	45	5	4151	Black Hills Corporation - Osage Plant	4911	22112	0	0	
WY	5	146	55479	Black Hills Corporation - Wygen 1	4911	22112	566	566	
WY	5	225		Cheyenne Light Fuel and Power Company – Wygen II	4911	22112	172	172	
WY	5	281		Black Hills Corporation - Wygen III	4911	221112	315	315	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	2013 General New Monitoring Calculation Method Adjustment (tons)
WY	13	0009		Burlington Resources -- Bighorn Wells	1300	21111	0	0	
WY	13	28		Burlington Resources -- Lost Cabin Gas Plant	1311	211111	1,998	1,998	
WY	41	9		Chevron USA -- Carter Creek Gas Plant	1311	211111	596	596	
WY	37	0177		Chevron USA -- Table Rock Field	1300	21111	0	0	
WY	37	14		Chevron USA -- Table Rock Gas Plant (Formerly Anadarko E&P Co LP)	1321	211111	22	22	
WY	41	0008		Chevron USA -- Whitney Canyon/Carter Creek Wellfield	1300	21111	3	3	
WY	13	0007		Devon Energy Production Co., L.P. -- Beaver Creek Gas Field	1300	21111	2	2	
WY	13	8		Devon Gas Services, L.P. -- Beaver Creek Gas Plant	1311	211111	49	49	
WY	29	12		Encore Operating LP -- Elk Basin Gas Plant	1311	211111	824	824	
WY	23	1		Exxon Mobil Corporation -- Labarge Black Canyon Facility	1300	21111	139	139	
WY	23	13		Exxon Mobil Corporation -- Shute Creek	1311	211111	885	885	
WY	37	48		FMC Corp -- Green River Sodium Products (Westvaco facility)	2812	327999	2,942	2,942	
WY	37	49		FMC Wyoming Corporation -- Granger Soda Ash Plant	1474	212391	344	344	
WY	21	1		Frontier Oil & Refining Company -- Cheyenne Refinery	2911	32411	267	267	
WY	56043	397		Worland Plant (Formely Hiland Partners, LLC -- Hiland Gas Plant)	1321	48621	25	25	
WY	29	7		Marathon Oil Co -- Oregon Basin Gas Plant	1321	211112	182	182	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	2013 General New Monitoring Calculation Method Adjustment (tons)
WY	29	0010		Marathon Oil Co -- Oregon Basin Wellfield	1300	21111	40	40	
WY	37	8		Merit Energy Company - Brady Gas Plant (formerly Anadarko E&P Co LP)	1321	211112	316	316	
WY	41	12		Merit Energy Company -- Whitney Facility	1311	211111	1	1	
WY	41	0002		Merit Energy Company -- Whitney Canyon WellField	1300	21111	0	0	
WY	1	2		Mountain Cement Company -- Laramie Plant	3241	23571	273	273	
WY	37	3		P4 Production, L.L.C. -- Rock Springs Coal Calcining Plant	3312	331111	754	754	
WY	9	1	4158	Pacificorp - Dave Johnston Plant	4911	221112	8,648	8,648	
WY	37	1002	8066	Pacificorp -- Jim Bridger Plant	4911	221112	11,397	11,397	
WY	23	4	4162	Pacificorp -- Naughton Plant	4911	221112	6,741	6,741	
WY	5	46	6101	Pacificorp -- Wyodak Plant	4911	221112	2,236	2,236	
WY	37	22		Simplot Phosphates LLC -- Rock Springs Plant	2874	325312	1,222	1,222	
WY	7	1		Sinclair Oil Company -- Sinclair Refinery	2911	32411	154	154	
WY	25	5		Sinclair Wyoming Refining Company -- Casper Refinery	2911	32411	225	225	
WY	37	5		Solvay Chemicals -- Soda Ash Plant (Green River Facility)	1474	325181	42	42	
WY	37	2		TATA Chemicals (Soda Ash Partners)-- Green River Plant (formerly General Chemical)	1474	327999	4,662	4,662	
WY	15	1		The Western Sugar Cooperative -- Torrington Plant	2063	311313	203	203	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2013 SO_2 Emissions (tons)	Adjusted 2013 SO_2 Emissions (tons)	2013 General New Monitoring Calculation Method Adjustment (tons)
WY	1	5		University of Wyoming - Heat Plant	8221	61131	160	160	
WY	45	1		Wyoming Refining -- Newcastle Refinery	2911	32411	263	263	

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	0014	Chevron USA (previously owned by Anadarko E&P Company LP) -- Table Rock Gas Plant	2003
WY	005	0146	Black Hills Corporation -- Wygen 1	2003
WY	041	0002	BP America Production Company -- Whitney Canyon Well Field	2003
WY	013	0009	Burlington Resources -- Bighorn Wells	2003
WY	037	0177	Chevron USA -- Table Rock Field	2003
WY	041	0008	Chevron USA -- Whitney Canyon/Carter Creek Wellfield	2003
WY	013	0008	Devon Energy Corp. -- Beaver Creek Gas Plant	2003
WY	035	0001	Exxon Mobil Corporation -- Labarge Black Canyon Facility (also identified as Black Canyon Dehy Facility)	2003
WY	013	0007	Devon Energy Corp. -- Beaver Creek Gas Field	2004
WY	005	0225	Cheyenne Light, Fuel and Power (a subsidiary of Black Hills Corporation) -- Wygen II	2008
WY	005	0281	Black Hills Corporation – Wygen III	2010
WY	005	0045	Basin Electric – Dry Fork Station	2011
NM	025	350250075	ConocoPhillips-Midland Office / MCA Tank Battery No. 2	2013
NM	025	350250113	ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	2013

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
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
ABQ* NM	001	00008	GCC Rio Grande Cement	1,103	Not subject to program after baseline revisions.**	2008
ABQ 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
WY	003	00012	Big Horn Gas Processing – Bighorn/Byron Gas Plant	605	Facility is permanently closed and dismantled.	2011

* ABQ NM means Albuquerque-Bernalillo County.
** 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.