



## **2015 Regional SO<sub>2</sub> Emissions and Milestone Report**

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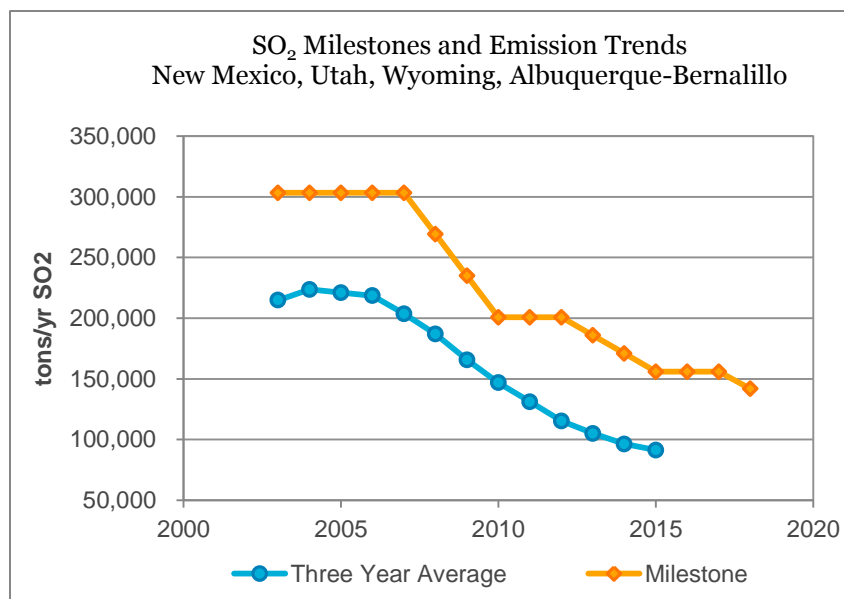
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## 2015 Regional SO<sub>2</sub> Emissions and Milestone Report

### 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 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 the Environmental Protection Agency (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<sub>2</sub> Milestone and Backstop Trading Program. The Western Regional Air Partnership (WRAP) is assisting these states and county 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, this report treats Albuquerque-Bernalillo County 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<sub>2</sub>) Emissions and Milestone Report that compares emissions to milestones. A milestone is a maximum level of annual emissions for a given year. The states submitted the first report in 2004 for the calendar year 2003. Over the course of the program, the states have consistently stayed below the milestones.



The regional milestone for 2015 is 155,940 tons. The states averaged the 2013, 2014, and 2015 adjusted emissions as required by Section 309 of the CAA. We compared this average to the 2015 milestone to determine whether the states met the 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.

As presented in Table ES-1, the Section 309 states reported 80,279 tons of SO<sub>2</sub> emissions for the calendar year 2015. The total emissions increased to 81,454 tons of SO<sub>2</sub> after making adjustments to account for changes in monitoring and calculation methods. The adjustments result in an additional 1,175 tons of SO<sub>2</sub> emissions. The adjusted emissions values for 2013 and 2014 were 100,193 and 92,284 tons, respectively. The average of 2013, 2014, and 2015 adjusted emissions was 91,310 tons.

Based on this average annual emissions estimate, the Section 309 states determined that emissions in 2015 were below the regional SO<sub>2</sub> milestone for 2015. 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 2014 to 2015 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 2015 Regional Milestones and Emissions for Section 309 Participating States**

<b><u>2015 Sulfur Dioxide Milestones</u></b>	
Regional 2015 Milestone*	155,940 tons
Adjusted 2015 Milestone	155,940 tons
<b><u>2015 Sulfur Dioxide Emissions</u></b>	
Reported 2015 Emissions	80,279 tons
Adjustments**	
Emission Monitoring and Calculation Methods	1,175 tons
Adjusted 2015 Emissions (rounded number)	81,454 tons
<b><u>Average Sulfur Dioxide Emissions (2013, 2014, &amp; 2015)</u></b>	
Adjusted 2015 Emissions	81,454 tons
Adjusted 2014 Emissions	92,284 tons
Adjusted 2013 Emissions	100,193 tons
Average of 2013, 2014, & 2015 Adjusted Emissions	91,310 tons
<b><u>Comparison of Emissions to Milestone</u></b>	
Average of 2013, 2014, & 2015 Adjusted Emissions	91,310 tons
Adjusted Three-State 2015 Milestone	155,940 tons
Difference (Negative Value = Emissions < Milestone)	-64,630 tons
2013 – 2015 Emissions Average as Percent of 2015 Milestone	59%

\* See the Regional Milestones section of each state's 309 plan.

\*\* See the Annual Emissions Report section of each state's 309 plan.

## 2015 Regional SO<sub>2</sub> 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 State Implementation Plans (SIPs) 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 SIPs to the EPA by December 1, 2003. In October 2006, when EPA modified Section 309, Oregon elected to cease participation in the SO<sub>2</sub> Milestone and Backstop Trading Program by not resubmitting a Section 309 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 local air agency have been tracking emissions under the pre-trigger requirements of the SO<sub>2</sub> 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<sub>2</sub> 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 thirteenth 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 2015. Based on the first twelve years, the voluntary milestone phase of the program is meeting its reasonable progress targets, 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 EPA issued regulations to address regional haze in 156 national parks and wilderness areas across the country. EPA published these regulations 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 six decades, and requires states to adopt implementation plans.

The 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. States must show that these strategies 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 nine western states and tribes can also use the same strategies to protect the other Class I areas within their own jurisdictions.

The 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<sub>2</sub> 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<sub>2</sub> related elements of the Section 309 process for the participating Section 309 states:

1. Section 309(d)(4)(i) requires SO<sub>2</sub> 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<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.

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 must also 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 2015 emissions against the milestones for the states and city 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 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<sub>2</sub> 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, 2013, 2014, and 2015 emissions are averaged.

### **How Is Compliance with the SO<sub>2</sub> 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<sub>2</sub> milestone is either met or exceeded for that year. Each state submits the draft determination for public review and comment during the first part of 2017, culminating in a final report sent to EPA by March 31, 2017.

## ***1.2 Report Organization***

This report presents the regional SO<sub>2</sub> 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<sub>2</sub> Emissions in 2015;
- 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<sub>2</sub> Emissions and Milestone Source Inventory.

## ***2.0 Reported SO<sub>2</sub> Emissions in 2015***

The Section 309 SIPs require all stationary sources with reported emissions of 100 tons or more per year in the year 2000, or any subsequent year, to report annual SO<sub>2</sub> emissions. Albuquerque-Bernalillo County reported that they have no emissions sources over 100 tons per

year. Table 1 summarizes the annual reported emissions from applicable sources in each state. The 2015 reported SO<sub>2</sub> emissions for each applicable source are in Appendix A, Table A-1.

**Table 1. Reported 2015 SO<sub>2</sub> Emissions by State**

State	Reported 2015 SO <sub>2</sub> Emissions (tons/year)
New Mexico	11,944
Utah	18,484
Wyoming	49,851
TOTAL	80,279

### 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. Each state adjusted the reported emissions levels so that they are comparable to the levels that would result if the state used the same emissions monitoring or calculation method used in the base year inventory (2006). The net impact throughout the region, because of these adjustments, is an increase of 1,175 tons from the reported 2015 emissions. Table 2 summarizes the emissions adjustments made for these facilities.

**Table 2. Adjustments for Changes in Monitoring Methodology**

State	Source	Reported 2015 SO <sub>2</sub> Emissions (tons)	Adjusted 2015 SO <sub>2</sub> Emissions (tons)	Monitoring Methodology Adjustment (tons)	Description
UT	Chevron Products Co. -- Salt Lake Refinery	24	827	803	Increase in Adjusted 2015 SO <sub>2</sub> Emissions is due to a correction in the calculation of Adjusted 2015 SO <sub>2</sub> Emissions. The formula used to calculate SO <sub>2</sub> was corrected and updated.
UT	Big West Oil Company - Flying J Refinery	47	201	154	Now using CEM data.
UT	Holcim-Devil's Slide Plant	208	426	218	Facility changed emissions calculation methodology from stack tests to CEM.

#### 4.0 *Three-Year Average Emissions (2013, 2014, and 2015)*

The SIPs require multi-year averaging of emissions from 2004 to 2017 for the milestone comparison. From 2005 to 2017, states compare a three-year average (which includes the reporting year and the two previous years) with the milestone. The average of the three years' emissions from 2013 to 2015 is 91,310 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 SO<sub>2</sub> Emissions (2013, 2014, & 2015)**

Year	Adjusted SO <sub>2</sub> Emissions (tons/year)
2013	100,193
2014	94,284
2015	81,454
Three-Year Average (2013, 2014, 2015)	91,310

#### 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. There were no proposed enforcement action related milestone adjustments reported for 2015.

#### 6.0 *Quality Assurance*

The states provided 2015 emissions data based on their state emissions inventories. States used additional quality assurance (QA) procedures for this report 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<sub>2</sub> 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  $\pm 20\%$  from the previous year.



Table 4 provides explanations for the emissions variations from applicable sources from 2014 – 2015 that are greater than 20%. Plants with variations greater than 20%, but reported emissions of less than 20 tons in both 2014 and 2015, 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. The states have not added any sources since the 2012 report.

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

State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
NM	15	350150024	Agave Energy Co./Agave Dagger Draw Gas Plant	256	69	The acid gas compressor mechanical issues experienced in 2014 have been resolved resulting in more stable operation of the AGI system.
NM	25	350250035	DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	192	493	The majority of the increase is related to power outages resulting in gas that normally is sent to the acid gas injection system being flared. The power outages are primarily weather related. The AGI is located about one mile from the gas processing plant. Outages can also occur at the plant which causes flaring too because electric compressors are used to move the acid gas to the AGI.
NM	25	350250004	Frontier Field Services/Maljamar Gas Plant	177	291	The facility handled a new stream of gas that had higher than historical levels of H <sub>2</sub> S. This resulted in abnormal operating conditions that culminated in November when it was determined that the existing amine contact tower was inadequate and needed to be replaced in order to meet residue gas specifications. Prior to the installation of the new amine contactor, non-spec gas would be shut-in and sent to the flare.
NM	15	350150008	OXY USA WTP Limited Partnership - Indian Basin Gas Plant [Old Name - Marathon Oil/Indian Basin Gas Plant]	74	17	There were fewer flaring events at this facility and 2014 was impacted by one major event resulting in 23 tons of sulfur dioxide.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
NM	45	350450902	Public Service Co of New Mexico/San Juan Generating Station	4,989	3,499	There was a decrease in the inherent sulfur content in the coal starting in the latter part of 2014 and it has remained consistently lower through 2016 year to date.
NM	25	350250008	Regency Field Services/Jal #3 [Old Name Southern Union Gas] /Jal #3	798	1,895	The facility was subject to inclement weather events that compromised power being supplied to the plant resulting in upsets and malfunctions with associated flaring.
NM	25	350250061	Versado Gas Processors, LLC / Monument Plant [Old name(s):TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	716	378	The facility had fewer maintenance activities in 2015 resulting in less acid gas flaring.
NM	45	350450247	CCI San Juan, LLC /San Juan River Gas Plant	91	297	CCI Purchased the San Juan River Gas Plant in May 2014 from Anadarko. CCI San Juan had reduced available acid gas compression which caused a higher than normal anticipated volume. The reduced available compression caused the higher than normally anticipated volume of acid gas to be diverted to the incinerator. The 2015 calculated values are based on the incinerator operation and we believe are valid. The acid gas diverted to the incinerator was redirected to the flare in the fall of 2015 and has subsequently been shut down and removed from the air permit. Additionally, the concentration of H <sub>2</sub> S in the gas varies over time and has a direct impact on the estimated emissions of SO <sub>2</sub> .

State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
NM	25	350250075	ConocoPhillips-Midland Office / MCA Tank Battery No. 2	223	167	Emissions decrease is attributed to less gas production, less flaring, and lower H2S content of processed gas.
NM	25	350250113	ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	99	41	Emissions decrease is attributed to less flaring, and replacement of gas compressors with electric compressors that are more reliable and efficient.
UT	49	10790	Brigham Young University -- Main Campus	118	152	Increase in SO2 emissions was due to increased throughput of coal and a current stack test that has a higher value.
UT	27	10313	Graymont Western US Inc. -- Cricket Mountain Plant	33	13	Decrease in SO2 emissions was due to a decrease in hours of operation at Rotary Lime Kiln #4, as well as a current Stack Test that has a lower value.
UT	29	10007	Holcim-Devil's Slide Plant	128	208	Increase in SO2 emissions was due to higher fuel throughput and therefore higher CEM values.
UT	11	10123	Holly Refining and Marketing Co. -- Phillips Refinery	102	144	Increase in SO2 emissions was due to higher fuel throughput as well as higher CEM values, which would indicate a higher sulfur content.
UT	35	10572	Kennecott Utah Copper Corp. -- Power Plant/Lab/Tailings Impoundment	1,500	1,922	Increase in SO2 emissions was due to increased throughput of coal and a higher sulfur content in the coal.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
UT	35	10346	Kennecott Utah Copper Corp. -- Smelter & Refinery	704	846	Increase in SO2 emissions was due to an increase in the sulfur content of the ore.
UT	7	10081	PacifiCorp -- Carbon Power Plant	9,241	2,816	Decrease in SO2 emissions was due to a drastic drop in coal consumption (burned).
UT	37	10034	CCI Paradox Midstream LLC (was Patara Midstream LLC, and was EnCana Oil & Gas (USA) Incorporated and Tom Brown Incorporated) - Lisbon Natural Gas Processing Plant	500	665	Increase in SO2 emissions was due to overall higher Mole% H2S values indicating a higher sulfur content in the throughput material.
UT	7	10096	Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	1,054	569	Decrease in SO2 emissions was due to a decrease in % Sulfur and lower CEM values.
UT	35	10335	Tesoro West Coast -- Salt Lake City Refinery	708	431	Decrease in SO2 emissions due to decrease in refinery feed at the FCUU Regenerator as well as lower CEM values at the FCUU Regenerator and SRU. At the end of 2014, we installed a Tail Gas Unit on the back end of the SRU, which reduced our emissions significantly from the unit. The big difference is attributed to this operational change; we now achieve 99.8%+ efficiency on our overall sulfur recovery where historically we were at approximately 95%.
UT	43	10676	Utelite Corporation -- Shale processing	95	117	Increase in SO2 emissions was due to increased coal consumption at Kiln #3 and #4.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
WY	11	2	American Colloid Mineral Co -- East & West Colony	155.08	112.29	The BH-08, RD-1 emission points at colony east have decreased in 2015 due to a low overall tonnage of coal being used from the previous year. Natural gas was used in place of coal for most of 2015. The DC-1, DC-2 colony west emission points have decreased in 2015 due to a slightly lower overall tonnage produced. The BHTRS emission point has decreased due to the fact the colony east and colony west both ran for less hours than in 2014.
WY	13	28	Burlington Resources -- Lost Cabin Gas Plant	3,186.30	1,298.60	Train 2 incinerator (INC002) emission were lower by 20.58 in 2015 than 2014 due to decreased run time on Train 2. (7904 hours in 2014 vs 6576 in 2015) Train 1 & 3 flare decreased in emissions by 35.8% due to fewer upsets in 2015. Train 3 flare decreased by 91% due to fewer significant upsets events in 2015. Train 3 sulfur pit decreased in emissions 97% as it was routed to incinerator for a greater duration in 2015.
WY	41	9	Chevron USA -- Carter Creek Gas Plant	343.58	206.34	2014 SO <sub>2</sub> emissions were 42% lower than 2013 due to the fact that 2013 was a turnaround year resulting in higher than normal SO <sub>2</sub> emissions: however 2014 was higher in SO <sub>2</sub> emissions than 2012 due to multiple plant upsets.
WY	23	1	Exxon Mobil Corporation -- Labarge Black Canyon Facility	21.10	11.00	Higher SO <sub>2</sub> emissions from flaring in 2013 due to plant TAR/shutdown in Sept/Oct of 2013.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
WY	23	13	Exxon Mobil Corporation -- Shute Creek	361.60	523.00	Higher SO2 emissions from turbines in 2015 due to more operating hours than in previous years. Higher SO2 emissions from flaring in 2015 due to increased maintenance activities.
WY	29	7	Marathon Oil Co -- Oregon Basin Gas Plant	188.60	275.80	On June 22,2016, Donna Stevison emailed response- The reason for the change in Sulfur emissions is due to extensive maintenance on the site.
WY	29	0010	Marathon Oil Co -- Oregon Basin Wellfield	101.00	1.80	The change is because marathon modified its turnaround schedule in 2012 at the Oregon basin gas plant from annual to biennial event and turnarounds are now conducted in even years. As a result, turnaround was not completed in 2015.
WY	37	3	P4 Production, L.L.C. -- Rock Springs Coal Calcining Plant	753.70	569.50	Self-imposed feed limit started in 2015.
WY	23	4	PacifiCorp -- Naughton Plant	6,234.90	4,733.50	On April 16, 2015, new mercury and air toxic standards became effective. The new MATS rule requires that the 30 rolling sulfur average for SO2 emissions from 1, 2, and 3 cannot exceed 0.2 approximately 0.38 lb/mmBtu. With new MATS rule SO2 emissions were reduced around 24%.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
WY	37	22	Simplot Phosphates LLC -- Rock Springs Plant	1,153.90	1,545.00	The sulfur dioxide emissions from the Lurgi and MEC sulfuric acid plants were calculated by totaling the emissions from the continuous emissions monitors located on these units. The calculations from the other sources were calculated by using AP-42 factors multiplied by hours of operation.
WY	25	5	Sinclair Wyoming Refining Company -- Casper Refinery	226.42	167.75	The decrease was due to lower fuel oil usage (#4 Boiler, #5 Boiler and B-1 #4 Crude Heater), a slightly lower crude charge rate, and lower emissions from the FCC Regenerator include process rats and variations in the sulfur content of feed stocks.
WY	15	1	The Western Sugar Cooperative -- Torrington Plant	169.63	4.49	Several emissions units did not operate due to business changes.
WY	1	5	University of Wyoming - Heat Plant	82.50	61.70	Difference in volume of coal burned.
WY	29	12	Vanguard Operating, LLC -- Elk Basin Gas Plant	1,262.40	752.00	A permitted plant 2014 turnaround and a Chapter 1 section 5 malfunction in November caused higher emissions in 2014 compared to 2015.
WY	56043	397	Worland Gas Plant (WMS)	26.10	14.40	There were fewer plant upsets, which resulted in the flaring of less acid gas in 2015, compared with 2014.



State	County FIPS	State Facility Identifier	Plant Name	Reported 2014 SO <sub>2</sub> Emissions (tons)	Reported 2015 SO <sub>2</sub> Emissions (tons)	Description Change > ±20% 2014 to 2015
WY	45	1	Wyoming Refining -- Newcastle Refinery	70	47	WRC began treating all fuel gas during the 4th quarter in 2013. Boiler #3 (H-09), Prefract heater (H-01) and crude heater (H-03) have been physically removed from service. FCCU (S-21) SO <sub>2</sub> emissions are controlled by the addition of an SO <sub>2</sub> reducing catalyst agent and by a wet gas scrubber. Wyoming Refining Company experienced a total facility decrease in SO <sub>2</sub> emissions for calendar year 2015. Primary reason for the change was a reduction in throughput.

## 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 67% of the region's reported emissions in 2015. 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<sup>a</sup>.

## 7.0 *Milestone Determination*

The Section 309 regional 2015 milestone is 155,940 tons SO<sub>2</sub>, which represents the average regional emissions milestone for the years 2013, 2014, and 2015. The average of 2013, 2014, and 2015 adjusted emissions is 96,392 tons SO<sub>2</sub>; therefore, the participating states have met the 155,940 tons SO<sub>2</sub> milestone.

## 8.0 *Public Comments*

New Mexico, Utah, Wyoming, and Albuquerque-Bernalillo County each published a draft of this report for public review and comment. No comments were received.

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<sup>a</sup> The reported emissions for the San Juan Generating Station in NM contain an extra 16 tons of SO<sub>2</sub> emissions due to emission points that are not included in the acid rain data.

**Appendix A**

**Table A-1  
2015 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 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
NM	15	350150024		Agave Energy Co./Agave Dagger Draw Gas Plant	1311	211111	69	69	
NM	15	350150002		Frontier Field Services /Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant; BP America Production]	1321	211112	459	459	
NM	15	350150011		DCP Midstream/Artesia Gas Plant	1321	211112	346	346	
NM	25	350250044		DCP Midstream/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	1321	211112	1,682	1,682	
NM	25	350250035		DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	1321	211112	493	493	
NM	15	350150138		Duke -- Magnum/Pan Energy -- Burton Flats	1321	211112	0	0	GCP-4 owned by DCP
NM	15	350150285		Duke Energy/Dagger Draw Gas Plant	1321	211112	0	0	Closed

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
NM	25	350250060		VERSADO GAS PROCESSORS, LP/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	1321	211112	115	115	
NM	25	350250004		Frontier Field Services/Maljamar Gas Plant	1321	211112	291	291	
NM	31	350310008		Western Refining Southwest Inc-Gallup Refinery {Old names:Western Refinery/Ciniza Refinery (Gallup) and GIANT REFINING/CINIZA}	2911	32411	37	37	
NM	25	350250007		Davis Gas Processing/Denton Plant	1311	211111	865	865	
NM	15	350150008		OXY USA WTP Limited Partnership - Indian Basin Gas Plant [Old Name - Marathon Oil/Indian Basin Gas Plant]	1321	211112	17	17	
NM	15	350150010		Navajo Refining Co/Artesia Refinery	2911	32411	32	32	
NM	45	350450902	2451	Public Service Co of New Mexico/San Juan Generating Station	4911	221112	3,499	3,499	
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	1,895	1,895	
NM	25	350250051		Versado Gas Processors, LP/Eunice South Gas Plant	1321	211112	0	0	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
NM	25	350250061		Versado Gas Processors, LLC / Monument Plant [Old name(s):TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	1321	211112	378	378	
NM	25	350250063		Versado Gas Processors, LLC/Saunders Plant [Old name(s): TARGA MIDSTREAM SERVICES, LP, WARREN PETROLEUM/SAUNDERS PLANT]	1321	211112	416	416	
NM	31	350310032	87	Tri-State Gen & Transmission/Escalante Station	4911	221112	847	847	
NM	45	350450247		CCI San Juan, LLC /San Juan River Gas Plant	1321	211112	297	297	
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	167	167	
NM	25	350250113		ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	1311	211111	41	41	
UT	49	10790		Brigham Young University -- Main Campus	8221	611310	152	152	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
UT	11	10119		Chevron Products Co. -- Salt Lake Refinery	2911	324110	24	827	803
UT	11	10122		Big West Oil Company - Flying J Refinery	2911	324110	47	201	154
UT	27	10313		Graymont Western US Inc. -- Cricket Mountain Plant	1422	212312	13	13	
UT	29	10007		Holcim-Devil's Slide Plant	3241	327310	208	426	218
UT	11	10123		Holly Refining and Marketing Co. -- Phillips Refinery	2911	324110	144	144	
UT	27	10327	6481	Intermountain Power Service Corporation -- Intermountain Generation Station	4911	221112	3,768	3,768	
UT	35	10572		Kennecott Utah Copper Corp. -- Power Plant/Lab/Tailings Impoundment	1021	212234	1,922	1,922	
UT	35	10346		Kennecott Utah Copper Corp. -- Smelter & Refinery	3331	331411	846	846	
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	2,816	2,816	
UT	15	10237	6165	PacifiCorp -- Hunter Power Plant	4911	221112	4,238	4,238	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
UT	15	10238	8069	PacifiCorp -- Huntington Power Plant	4911	221112	2,524	2,524	
UT	37	10034		CCI Paradox Midstream LLC (was Patara Midstream LLC, and was EnCana Oil & Gas (USA) Incorporated and Tom Brown Incorporated) - Lisbon Natural Gas Processing Plant	2911	211111	665	665	
UT	7	10096		Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	4911	221112	569	569	
UT	35	10335		Tesoro West Coast -- Salt Lake City Refinery	2911	324110	431	431	
UT	43	10676		Utelite Corporation -- Shale processing	3295	212399	117	117	
WY	11	2		American Colloid Mineral Co -- East & West Colony	1459	212325	112	112	
WY	5	45	56609	Basin Electric -- Dry Fork Station	4911	22112	870	870	
WY	31	1	6204	Basin Electric -- Laramie River Station	4911	221112	8,152	8,152	
WY	3	12		Big Horn Gas Proc -- Big Horn/Byron Gas Plant	1311	22121			
WY	5	2	4150	Black Hills Corporation - Neil Simpson I	4911	22112			

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
WY	5	63	7504	Black Hills Corporation - Neil Simpson II	4911	22112	361	361	
WY	45	5	4151	Black Hills Corporation - Osage Plant	4911	22112			
WY	5	146	55479	Black Hills Corporation - Wygen 1	4911	22112	311	311	
WY	5	281	56596	Black Hills Corporation - Wygen III	4911	221112	214	214	
WY	13	0009		Burlington Resources -- Bighorn Wells	1300	21111	1	1	
WY	13	28		Burlington Resources -- Lost Cabin Gas Plant	1311	211111	1,299	1,299	
WY	41	9		Chevron USA -- Carter Creek Gas Plant	1311	211111	206	206	
WY	37	0177		Chevron USA -- Table Rock Field	1300	21111			
WY	37	14		Chevron USA -- Table Rock Gas Plant (Formerly Anadarko E&P Co LP)	1321	211111			
WY	41	0008		Chevron USA -- Whitney Canyon/Carter Creek Wellfield	1300	21111	3	3	
WY	5	225	56319	Cheyenne Light Fuel and Power Company – Wygen II	4911	22112	173	173	



State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
WY	37	48		Tronox Alkali Wyoming Corporation -- Green River Sodium Products (Westvaco facility)	2812	327999	2,419	2,419	
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	9	9	
WY	23	1		Exxon Mobil Corporation -- Labarge Black Canyon Facility	1300	21111	11	11	
WY	23	13		Exxon Mobil Corporation -- Shute Creek	1311	211111	523	523	
WY	43	3		Hiland Partners, LLC -- Hiland Gas Plant	1321	48621			
WY	21	1		Holly Frontier Oil & Refining Company -- Cheyenne Refinery	2911	32411	377	377	
WY	29	7		Marathon Oil Co -- Oregon Basin Gas Plant	1321	211112	276	276	
WY	29	0010		Marathon Oil Co -- Oregon Basin Wellfield	1300	21111	2	2	
WY	37	8		Merit Energy Company - Brady Gas Plant (formerly Anadarko E&P Co LP)	1321	211112	0	0	
WY	41	0002		Merit Energy Company -- Whitney Canyon WellField	1300	21111	2	2	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
WY	41	12		Merit Energy Company -- Whitney Facility	1311	211111	0	0	
WY	1	2		Mountain Cement Company -- Laramie Plant	3241	23571	219	219	
WY	37	3		P4 Production, L.L.C. -- Rock Springs Coal Calcining Plant	3312	331111	570	570	
WY	9	1	4158	PacifiCorp - Dave Johnston Plant	4911	221112	8,774	8,774	
WY	37	1002	8066	PacifiCorp -- Jim Bridger Plant	4911	221112	10,264	10,264	
WY	23	4	4162	PacifiCorp -- Naughton Plant	4911	221112	4,734	4,734	
WY	5	46	6101	PacifiCorp -- Wyodak Plant	4911	221112	2,526	2,526	
WY	37	22		Simplot Phosphates LLC -- Rock Springs Plant	2874	325312	1,545	1,545	
WY	7	1		Sinclair Oil Company -- Sinclair Refinery	2911	32411	65	65	
WY	25	5		Sinclair Wyoming Refining Company -- Casper Refinery	2911	32411	168	168	
WY	37	5		Solvay Chemicals -- Soda Ash Plant (Green River Facility)	1474	325181	25	25	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2015 SO2 Emissions (tons)	Adjusted 2015 SO2 Emissions (tons)	2015 General New Monitoring Calculation Method Adjustment (tons)
WY	37	2		TATA Chemicals (Soda Ash Partners)-- Green River Plant (formerly General Chemical)	1474	327999	4,428	4,428	
WY	15	1		The Western Sugar Cooperative -- Torrington Plant	2063	311313	4	4	
WY	37	49		Tronox Alkali Wyoming Corporation -- Granger Soda Ash Plant	1474	212391	335	335	
WY	1	5		University of Wyoming - Heat Plant	8221	61131	62	62	
WY	29	12		Vanguard Operating, LLC -- Elk Basin Gas Plant	1311	211111	752	752	
WY	56043	397		Worland Gas Plant (WMS)	1321	211112	14	14	
WY	45	1		Wyoming Refining -- Newcastle Refinery	2911	32411	47	47	

## Appendix B

**Table B-1**  
**Sources Added to the SO<sub>2</sub> 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<sub>2</sub> 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	3502300 03	Phelps Dodge Hidalgo Smelter	16,000	Facility is permanently closed.	2008
NM	017	3501700 01	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.