



2021 Regional SO₂ Emissions and Milestone Report

Submitted [Date]

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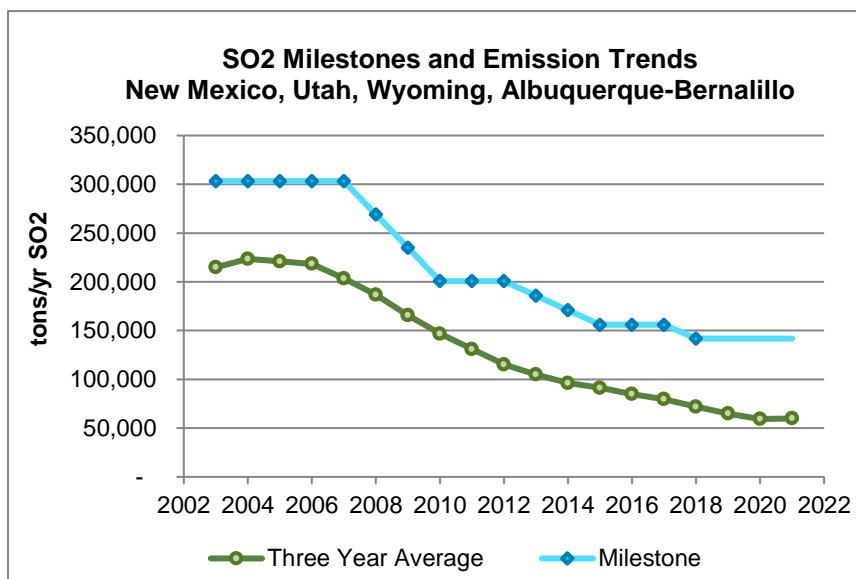
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2021 Regional SO₂ Emissions and Milestone Report

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 SO₂ 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 (SO₂) 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.

From 2003 to 2017 states compared the milestone to a three-year average of SO₂ emissions as required by their State Implementation Plans (SIP). The states' SIPs require them to compare the final 2018 regional milestone to 2018 emissions rather than the three-year average. The regional milestone for 2018 is 141,849 tons. Section 309 of the Regional Haze Rule requires that states continue showing compliance with the final 2018 milestone beyond the first Regional Haze implementation period. In this document the states report the 2021 adjusted emissions as required by Section 309 of the CAA. We compared the adjusted 2021 emissions to the final 2018

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 50,730 tons of SO₂ emissions for the calendar year 2021. The total emissions increased to 60,011 tons of SO₂ after adjusting to account for changes in monitoring, calculation methods, and enforcement actions. The adjustments result in an additional 9,282 tons of SO₂ emissions.

Based on this adjusted annual emissions estimate, the Section 309 states determined that emissions in 2021 were below the regional SO₂ milestone for 2018. 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 2020 to 2021 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 2021 Regional Milestones and Emissions for Section 309 Participating States**

<u>2018 Sulfur Dioxide Milestones</u>	
Regional 2018 Milestone*	141,849 tons
Adjusted 2018 Milestone.....	141,849 tons
<u>2021 Sulfur Dioxide Emissions</u>	
Reported 2021 Emissions	50,730 tons
Adjustments**	
Emission Monitoring, Calculation Methods, and Enforcement Actions	9,282 tons
Adjusted 2021 Emissions (rounded number).....	60,011 tons
<u>Comparison of Emissions to Milestone</u>	
2021 Adjusted Emissions.....	60,011 tons
Adjusted Three-State 2018 Milestone	141,849 tons
Difference (Negative Value = Emissions < Milestone)	-81,837 tons
2021 Emissions as Percent of 2018 Milestone.....	42%

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

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

2021 Regional SO₂ 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 SO₂ 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 SO₂ 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 SO₂ 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 nineteenth 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 2021. Based on the last eighteen years of data, 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 SO₂ 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 SO₂ related elements of the Section 309 process for the participating Section 309 states:

1. Section 309(d)(4)(i) requires SO₂ milestones in the SIP and includes provisions for adjusting 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 SO₂ emissions in order to ensure the SO₂ 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.
4. Section 309(d)(4)(vi)(A) requires that unless and until a revised implementation plan is submitted in accordance with § 51.308(f) and approved by EPA, the implementation plan shall prohibit emissions from covered stationary sources in any year beginning in 2018 that exceed the year 2018 milestone.

This report responds to Item 2, above, and provides the annual report that compares the 2021 emissions against the milestones for the states and city that have submitted Section 309 SIPs to EPA.

What Elements Must the Regional SO₂ 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 SO₂ 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, it is understood that a single year of emissions are used in the report beginning in 2018.

How Is Compliance with the SO₂ 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 SO₂ milestone is either met or exceeded for that year. Each state submits the draft determination for public review and comment, in accordance with its SIP, during the first part of 2023, culminating in a final report sent to EPA by March 31, 2023.

1.2 Report Organization

This report presents the regional SO₂ 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 SO₂ Emissions in 2021;
- Emissions Adjustments Related to Monitoring Methodology or Enforcement Actions;
- 2021 Adjusted Emissions;
- Enforcement Milestone Adjustments;
- Quality Assurance (Including Source Change Information);
- Milestone Determination;
- Appendix A -- Facility Emissions and Emissions Adjustments; and
- Appendix B -- Changes to SO₂ Emissions and Milestone Source Inventory.

2.0 *Reported SO₂ Emissions in 2021*

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 SO₂ emissions. Table 1 summarizes the annual reported emissions from applicable sources in each state. The 2021 reported SO₂ emissions for each applicable source are in Appendix A, Table A-1.

Table 1. Reported 2021 SO₂ Emissions by State

State	Reported 2021 SO ₂ Emissions (tons/year)
Albuquerque-Bernalillo	82
New Mexico	3,374
Utah	10,422
Wyoming	36,852
TOTAL	50,730

3.0 *Emissions Adjustments Related to Monitoring Methodology or Enforcement Actions*

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 adjustments related to the monitoring methodology, is an increase of 1,277 tons from the reported 2021 emissions.

Utah adjusted the emissions from the Carbon Power Plant due to an enforcement action. As part of Utah's BART alternative for NO_x, they required that the Carbon Power Plant shut down. Though there is an actual emissions reduction of 8,005 tons of SO₂ per year, the Utah Air Quality Board approved a Commitment SIP stating that the emissions reductions from the closure will not be counted for both the SO₂ Milestone program and the BART alternative controls. Therefore, an additional 8,005 tons of SO₂ are included in the calculations for this milestone report. Table 2 summarizes the emissions adjustments made for changes in monitoring methodology or enforcement actions.

Table 2. Adjustments for Changes in Monitoring Methodology or Enforcement Actions

State	Source	Reported 2021 SO ₂ Emissions (tons)	Adjusted 2021 SO ₂ Emissions (tons)	Monitoring Methodology Adjustment (tons)	Enforcement Action Adjustment (tons)	Description
UT	Chevron Products Co. -- Salt Lake Refinery	41	811	770	--	Increase in Adjusted SO ₂ Emissions is due to a correction in the calculation of Adjusted SO ₂ Emissions. The previous formula used to calculate SO ₂ included flowmeters and engineering judgement etc. The current formula for calculating now incorporates CEM data.
UT	Big West Oil Company - Flying J Refinery	56	206	151	--	Now using CEM data
UT	PacifiCorp -- Carbon Power Plant	0	8,005	--	8,005	A Utah Enforceable Commitment SIP resolves that SO ₂ emissions reductions from the closure of the Carbon plant will not be counted as part of achieving the SO ₂ Milestones and as part of the Alternative to BART SIP for NO _x . Therefore, 8,005 tons of SO ₂ are included in the emissions totals.
UT	Materion Natural resources - Delta Mill (was Brush Resources)	1	0	-1	--	Increased mobile emissions from Routine Mill and TSF2 construction
UT	Holcim-Devil's Slide Plant	113	470	357	--	Now using CEM data

4.0 2021 Adjusted Emissions

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. For this milestone report the SIPs require a comparison of 2021 emissions with the 2018 milestone. The adjusted emissions for 2021 are 60,011 tons. The following report sections describe the adjusted milestone determination.

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 2021.

6.0 Quality Assurance

The states provided 2021 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 SO₂ 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 3 provides explanations for the emissions variations from applicable sources from 2020 – 2021 that are greater than 20%. Plants with variations greater than 20% but reported emissions of less than 20 tons in both 2020 and 2021, are not included in Table 3. 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 this and previous reporting years.

Table 3. Sources with an Emissions Change of > ±20% from the Previous Year

State	County FIPS	State Facility Identifier	Plant Name	Reported 2020 SO ₂ Emissions (tons)	Reported 2021 SO ₂ Emissions (tons)	% Change	Description Change > ±20% 2020 to 2021
ABQ NM	1	3500100008	GCC Rio Grande Inc. - Portland Cement Manufacturer	103	82	-21%	GCC Rio Grande installed a new baghouse and stack and 2015 and began conducting annual stack tests in 2016. Each year, GCC updates its emission factor by incorporating the latest stack test results into the calculation. The emission factor used to determine the facility's 2021 SO ₂ emissions includes 2016-2021 stack test results and is lower than the emission factor used to determine its 2020 SO ₂ emissions, which only included 2016-2020 stack test results. The facility also produced less clinker in 2021 than it did in 2020, contributing to the decrease in emissions.
NM	15	350150024	Agave Energy Co./Agave Dagger Draw Gas Plant	2	30	1466%	The emission unit is the Acid Gas Flare which did not operate in 2020. In April 2021, the plant was started up to test the AGI well resulting in flaring of the Amine Still Overhead Stream which averages ~38% H ₂ S when sour gas is coming into the plant. This concentration yields high SO ₂ emissions in a short time when combusted which is why we see the increase in 2021 vs. 2020.
NM	25	350250060	VERSADO GAS PROCESSORS, LP/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	485	241	-50%	The redundant AGI compressor added at Eunice GP in 2020 continues to reduce the SO ₂ emissions. In the past AGI downtime caused excessive SO ₂ emissions at the acid gas flare.
NM	25	350250004	Frontier Field Services/Maljamar Gas Plant	80	36	-55%	Maljamar had a significant decrease in use of acid gas flare. It decreased the overall facility SO ₂ emissions.
NM	45	350450902	Public Service Co of New Mexico/San Juan Generating Station	1,355	936	-31%	The sulfur weighted average for the coal at San Juan Generating Station decreased between years 2020 and 2021. Therefore, the reduction in SO ₂ emission from 2020 to 2021 was due to the change in coal quality
NM	25	569	Regency Field Services/Jal #3 [Old Name Southern Union Gas] /Jal #3	618	755	22%	The main cause of the increase in SO ₂ emissions from 2020 to 2021 reporting year is an increase in acid gas flare (approximately 279.2 tons SO ₂ increase) operation.
NM	25	350250061	Versado Gas Processors, LLC / Monument Plant [Old name(s) TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	117	89	-24%	During normal operations, the acid gas is routed to the acid gas injection (AGI) well. There were less periods of acid gas flaring this year.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2020 SO ₂ Emissions (tons)	Reported 2021 SO ₂ Emissions (tons)	% Change	Description Change > ±20% 2020 to 2021
NM	25	350250063	Versado Gas Processors, LLC/Saunders Plant [Old name(s): TARGA MIDSTREAM SERVICES, LP, WARREN PETROLEUM/SAUNDERS PLANT]	26	0	-100%	Shutdown in 2021
NM	31	350310032	Tri-State Gen & Transmission/Escalante Station	399	0	-100%	Closed
NM	25	350250113	ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	25	17	-32%	In February 2021, the Propane Recovery System experienced significant freeze damaged during the Uri Storm and was out of service for the year. This reduced production from the plant and reduced the associated SO2 emissions.
UT	29	10007	Holcim-Devil's Slide Plant	337	113	-67%	SO2 values are directly from the CEMS and can change depending on the combination of raw materials used to make clinker and cement.
UT	7	10096	Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	373	461	23%	Emissions change is proportional to throughput change.
UT	15	10237	PacifiCorp -- Hunter Power Plant	2,957	3,848	30%	10237 uses CEMS to calculate their two boiler SO2 emissions, which are also the largest of their SO2 sources. The coal sulfur content was slightly higher for 2021.
UT	15	10238	PacifiCorp -- Huntington Power Plant	1,626	2,690	65%	10238 uses CEMS to calculate their two boiler SO2 emissions, which are also the largest of their SO2 sources. Emissions followed throughput increases; unit one throughput increased by 37% and unit two throughput increased by 45%.
UT	35	10346	Kennecott Utah Copper Corp. -- Smelter & Refinery	429	643	50%	Units 13969 and 14180 had lower emissions in 2020 because the smelter was offline for 6 months for a planned maintenance shutdown and projects required following the earthquake in March 2020. The emission factor for 13969 is lower than other years because the smelter stack was still operating, or registering flow, even though the smelter was not operating. The emission factor is an average of the entire year's CEMS measurements, so because there was no product in the smelter for part of the year, the SO2 average lbs/hour was lower. Units 13969 and 14180 are the two largest sources of SO2 at the facility.
WY	5	146	Black Hills Corporation - Wygen 1	426	265	-38%	Extended outage in late Q3 through most of Q4 Caused a Significant reduction of SO ₂ this year
WY	5	281	Black Hills Corporation - Wygen III	316	163	-49%	

State	County FIPS	State Facility Identifier	Plant Name	Reported 2020 SO ₂ Emissions (tons)	Reported 2021 SO ₂ Emissions (tons)	% Change	Description Change > ±20% 2020 to 2021
WY	13	28	Burlington Resources -- Lost Cabin Gas Plant	337	2,093	521%	Facility reconstruction and maintenance completed; normal operations resumed.
WY	41	9	Chevron USA -- Carter Creek Gas Plant	86	37	-58%	No emergency shutdown of facility compared to last year leads to reduction in escaped emissions.
WY	5	225	Cheyenne Light Fuel and Power Company -- Wygen II	206	125	-39%	A lower demand for load caused a decrease in generation which in turn resulted in a decrease in emissions over 2020.
WY	37	48	Tronox Alkali Wymoing Corporation -- Green River Sodium Products (Westvaco facility)	1,269	1,685	33%	Increased Hours of operation
WY	23	1	Exxon Mobil Corporation -- Labarge Black Canyon Facility	34	24	-30%	Less well work in 2021 which resulted in reduced SO2 emissions from flaring at Black Canyon
WY	23	13	Exxon Mobil Corporation -- Shute Creek	2,249	1,305	-42%	Decreased throughput for the cogeneration turbines and reduced flaring as a result of fewer unavoidable equipment malfunctions than in 2020
WY	21	1	Holly Frontier Oil & Refining Company -- Cheyenne Refinery	120	0	-100%	Units shut down due to operating changes.
WY	29	7	Marathon Oil Co -- Oregon Basin Gas Plant	309	230	-25%	Reduction in flaring compared to 2020
WY	1	2	Mountain Cement Company -- Laramie Plant	135	97	-28%	Reduced operating hours
WY	37	49	Tronox Alkali Wyoming Corporation -- Granger Soda Ash Plant	35	0	-100%	Facility temporarily shut down last year and remains shut down
WY	29	12	Vanguard Operating, LLC -- Elk Basin Gas Plant	660	505	-24%	Decrease in flaring
WY	56043	397	Washakie Midstream Services - Worland Gas Plant (WMS)	40	19	-53%	Significantly less pigging of the acid gas line, as well as less lengthy maintenance of the compressors
WY	45	1	Wyoming Refining -- Newcastle Refinery	91	8	-91%	

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 69% of the region's reported emissions in 2021. We compared Acid Rain Program power plant emission data from EPA's Clean Air Markets Program Data 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 except for one source. The source whose reported emissions did not match EPA's data is in Table 4.

Table 4. Reported facility emissions that do not match information in the Acid Rain Database

State	Facility Name	Facility ID (ORISPL)	Year	2021 Acid Rain Database Emissions (tons SO ₂)	2021 Reported Emissions (tons SO ₂)
WY	Laramie River	6204	2021	5,401	7,716

7.0 Milestone Determination

The Section 309 regional 2018 milestone is 141,849 tons SO₂. The 2021 adjusted emissions are 60,011 tons SO₂; therefore, the participating states met the 141,849 tons SO₂ milestone.

8.0 Public Comments

New Mexico, Albuquerque-Bernalillo, Utah, and Wyoming each published a draft of this report for public review and comment. The draft was also available on the WRAP website.

[Insert summary of comments here.]

Appendix A

Table A-1
2021 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 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
ABQ NM	1	3500100008		GCC Rio Grande Inc. - Portland Cement Manufacturer	3241	327310	82	82	0
NM	15	350150024		Agave Energy Co./Agave Dagger Draw Gas Plant	1311	21112	30	30	0
NM	15	350150002		Frontier Field Services /Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant; BP America Production]	1321	21113	18	18	0
NM	15	350150011		DCP Midstream/Artesia Gas Plant	1321	211112	1	1	0
NM	25	350250044		DCP Midstream/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	1321	21113	442	442	0
NM	25	350250035		DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	1321	21113	5	5	0
NM	15	350150138		Duke -- Magnum/Pan Energy -- Burton Flats	1321	211112	NA	NA	0
NM	15	350150285		Duke Energy/Dagger Draw Gas Plant	1321	211112	NA	NA	0
NM	25	350250060	609	VERSADO GAS PROCESSORS, LP/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	1321	21113	241	241	0

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
NM	25	350250004		Frontier Field Services/Maljamar Gas Plant	1321	21113	36	36	0
NM	31	350310008		Western Refining Southwest Inc-Gallup Refinery (Old names:Western Refinery/Ciniza Refinery (Gallup) and GIANT REFINING/CINIZA]	2911	236220	15	15	0
NM	25	350250007		Davis Gas Processing/Denton Plant	1311	21113	633	633	0
NM	15	350150008		OXY USA WTP Limited Partnership - Indian Basin Gas Plant [Old Name -Marathon Oil/Indian Basin Gas Plant]	1321	211112	2	2	0
NM	15	350150010		Navajo Refining Co/Artesia Refinery	2911	32411	47	47	0
NM	45	350450902	2451	Public Service Co of New Mexico/San Juan Generating Station	4911	221112	936	936	0
NM	7	350070001		Raton Pub. Service/Raton Power Plant	4911	221112			0
NM	25	569		Regency Field Services/Jal #3 [Old Name Southern Union Gas] /Jal #3	1321	21113	755	755	0
NM	25	350250051		Versado Gas Processors, LP/Eunice South Gas Plant	1321	211112			0
NM	25	350250061		Versado Gas Processors, LLC / Monument Plant [Old name(s):TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	1321	21113	89	89	0
NM	25	350250063		Versado Gas Processors, LLC/Saunders Plant [Old name(s): TARGA MIDSTREAM SERVICES, LP, WARREN PETROLEUM/SAUNDERS PLANT]	1321	21113	0	0	0

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
NM	31	350310032	87	Tri-State Gen & Transmission/Escalante Station	4911	221112	0	0	closed
NM	45	350450247		CCI San Juan, LLC /San Juan River Gas Plant	1321	21113	0	0	0
NM	45	350450023		Western Refining Southwest Inc./Bloomfield Products Terminal [Old name: GIANT INDUSTRIES/BLOOMFIELD REF]	2911	42471	0	0	0
NM	25	350250075		ConocoPhillips-Midland Office / MCA Tank Battery No. 2	1311	21113	106	106	0
NM	25	350250113		ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	1311	21112	17	17	0
UT	29	10007		Holcim-Devil's Slide Plant	3241	327310	113	470	357
UT	37	10034		Paradox Midstream, LLC (was CCI Paradox Midstream LLC and Patara Midstream LLC and EnCana Oil & Gas (USA) Incorporated and Tom Brown Incorporated) - Lisbon Natural Gas Processing Plant	2911	211120	0	0	0
UT	7	10081	3644	PacifiCorp -- Carbon Power Plant	4911	221112	0	8,005	8,005
UT	7	10096		Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	4911	221112	461	461	0
UT	11	10119		Chevron Products Co. -- Salt Lake Refinery	2911	324110	41	811	770
UT	11	10122		Big West Oil Company - Flying J Refinery	2911	324110	56	206	151
UT	11	10123		Holly Refining and Marketing Co. -- Phillips Refinery	2911	324110	17	17	0

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
UT	15	10237	6165	PacifiCorp -- Hunter Power Plant	4911	221112	3,848	3,848	0
UT	15	10238	8069	PacifiCorp -- Huntington Power Plant	4911	221112	2,690	2,690	0
UT	27	10311		Materion Natural resources - Delta Mill (was Brush Resources)	1099	212299	1	0	-1
UT	27	10313		Graymont Western US Inc. -- Cricket Mountain Plant	1422	212312	7	7	0
UT	27	10327	6481	Intermountain Power Service Corporation -- Intermountain Generation Station	4911	221112	2,415	2,415	0
UT	35	10335		Tesoro West Coast -- Salt Lake City Refinery	2911	324110	24	24	0
UT	35	10346		Kennecott Utah Copper Corp. -- Smelter & Refinery	3331	331410	643	643	0
UT	35	10572		Kennecott Utah Copper Corp. -- Power Plant/Lab/Tailings Impoundment	1021	212230	0	0	0
UT	43	10676		Utelite Corporation -- Shale processing	3295	212325	106	106	0
UT	49	10790		Brigham Young University -- Main Campus	8221	611310	0	0	0
WY	11	2		American Colloid Mineral Co -- Colony East & West Plants	1459	212325	17	17	0
WY	5	45	56609	Basin Electric -- Dry Fork Station	4911	22112	908	908	0
WY	31	1	6204	Basin Electric -- Laramie River Station	4911	221112	7,716	7,716	0

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
WY	3	12		Big Horn Gas Proc -- Big Horn/Byron Gas Plant	1311	22121	0	0	0
WY	5	2	4150	Black Hills Corporation - Neil Simpson I	4911	22112	0	0	0
WY	5	63	7504	Black Hills Corporation - Neil Simpson II	4911	22112	374	374	0
WY	45	5	4151	Black Hills Corporation - Osage Plant	4911	22112	0	0	0
WY	5	146	55479	Black Hills Corporation - Wygen 1	4911	22112	265	265	0
WY	5	281	56596	Black Hills Corporation - Wygen III	4911	221112	163	163	0
WY	13	0009		Burlington Resources -- Bighorn Wells	1300	21111	0	0	0
WY	13	28		Burlington Resources -- Lost Cabin Gas Plant	1311	211111	2,093	2,093	0
WY	41	9		Chevron USA -- Carter Creek Gas Plant	1311	211111	37	37	0
WY	37	0177		Chevron USA -- Table Rock Field	1300	21111	0	0	0
WY	37	14		Chevron USA -- Table Rock Gas Plant (Formerly Anadarko E&P Co LP)	1321	211111	0	0	0
WY	41	0008		Chevron USA -- Whitney Canyon/Carter Creek Wellfield	1300	21111	0	0	0
WY	5	225	56319	Cheyenne Light Fuel and Power Company -- Wygen II	4911	22112	125	125	0

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
WY	37	48		Tronox Alkali Wymoing Corporation -- Green River Sodium Products (Westvaco facility)	2812	327999	1,685	1,685	0
WY	13	0007		Devon Energy Production Co., L.P. -- Beaver Creek Gas Field	1300	21111	0	0	0
WY	13	8		Devon Gas Services, L.P. -- Beaver Creek Gas Plant	1311	211111	0	0	0
WY	23	1		Exxon Mobil Corporation -- Labarge Black Canyon Facility	1300	21111	24	24	0
WY	23	13		Exxon Mobil Corporation -- Shute Creek	1311	211111	1,305	1,305	0
WY	43	3		Hiland Partners, LLC -- Hiland Gas Plant	1321	48621	0	0	0
WY	21	1		Holly Frontier Oil & Refining Company -- Cheyenne Refinery	2911	32411	0	0	0
WY	29	7		Marathon Oil Co -- Oregon Basin Gas Plant	1321	211112	230	230	0
WY	29	0010		Marathon Oil Co -- Oregon Basin Wellfield	1300	21111	115	115	0
WY	37	8		Merit Energy Company - Brady Gas Plant (formerly Anadarko E&P Co LP)	1321	211112	0	0	0
WY	29			Merit Energy Company - Shoshone Unit Battery		211112	0	0	0
WY	29			Merit Energy Company - Frannie Unit Battery No 1		211112	0	0	0
WY	29			Merit Energy Company - Cody Battery		211112	0	0	0

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
WY	29			Merit Energy Company - Frannie 2 Battery		211112	0	0	0
WY	41	0002		Merit Energy Company -- Whitney Canyon WellField	1300	21111	0	0	0
WY	41	12		Merit Energy Company -- Whitney Facility	1311	211111	0	0	0
WY	1	2		Mountain Cement Company -- Laramie Plant	3241	23571	97	97	0
WY	37	3		P4 Production, L.L.C. -- Rock Springs Coal Calcining Plant	3312	331111	731	731	0
WY	9	1	4158	Pacificorp - Dave Johnston Plant	4911	221112	6,328	6,328	0
WY	37	1002	8066	Pacificorp -- Jim Bridger Plant	4911	221112	8,226	8,226	0
WY	23	4	4162	Pacificorp -- Naughton Plant	4911	221112	1,640	1,640	0
WY	5	46	6101	Pacificorp -- Wyodak Plant	4911	221112	1,674	1,674	0
WY	37	22		Simplot Phosphates LLC -- Rock Springs Plant	2874	325312	633	633	0
WY	7	1		Sinclair Oil Company -- Sinclair Refinery	2911	32411	88	88	0
WY	25	5		Sinclair Wyoming Refining Company -- Casper Refinery	2911	32411	134	134	0
WY	37	5		Solvay Chemicals -- Soda Ash Plant (Green River Facility)	1474	325181	58	58	0

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2021 SO2 Emissions (tons)	Adjusted 2021 SO2 Emissions (tons)	2021 General New Monitoring Calculation Method Adjustment (tons)
WY	37	2		TATA Chemicals (Soda Ash Partners)-- Green River Plant (formerly General Chemical)	1474	327999	1,601	1,601	0
WY	15	1		The Western Sugar Cooperative -- Torrington Plant	2063	311313	0	0	0
WY	37	49		Tronox Alkali Wyoming Corporation -- Granger Soda Ash Plant	1474	212391	0	0	0
WY	1	5		University of Wyoming - Heat Plant	8221	61131	53	53	0
WY	29	12		Vanguard Operating, LLC -- Elk Basin Gas Plant	1311	211111	505	505	0
WY	56043	397		Washakie Midstream Services - Worland Gas Plant (WMS)	1321	211112	19	19	0
WY	45	1		Wyoming Refining -- Newcastle Refinery	2911	32411	8	8	0

Appendix B

Table B-1
Sources Added to the SO₂ 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 Well field	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
ABQ* NM	001	3500100008	GCC Rio Grande Inc. - Portland Cement Manufacturer	2018

* ABQ NM means Albuquerque-Bernalillo County.

Table B-2
Sources Removed from the SO₂ 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	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, this facility was removed from the inventory.