



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R10-OAR-2016-0057; FRL-10007-86-Region 10]

Air Plan Approval; OR; 2010 Sulfur Dioxide NAAQS Interstate Transport Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) proposes to approve the State Implementation Plan (SIP) submission from Oregon as meeting certain Clean Air Act (CAA) interstate transport requirements for the 2010 1-hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standards (NAAQS). Specifically, the EPA proposes to find that emissions from Oregon sources will not contribute significantly to nonattainment or interfere with the maintenance of the 2010 1-hour SO₂ NAAQS in any other state.

DATES: Comments must be received on or before [**insert date 30 days after date of publication in the Federal Register**].

ADDRESSES: Submit your comments, identified by Docket ID No EPA-R10-OAR-2016-0057 at <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from <https://www.regulations.gov>. The EPA may publish any comment received to its public docket. Do not electronically submit any information you consider to be Confidential Business Information (CBI) or other information the disclosure of which is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment

and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Kristin Hall at (206) 553-6357, or hall.kristin@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, whenever “we,” “us,” or “our” is used, it means the EPA.

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I. Background

A. Infrastructure SIPs

On June 2, 2010, the EPA established a new primary 1-hour SO₂ NAAQS of 75 parts per billion (ppb), based on a 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations (75 FR 35520, June 22, 2010). The Clean Air Act (CAA) requires that, after promulgation of a new or revised NAAQS, states must submit SIPs to meet applicable infrastructure elements of sections 110(a)(1) and (2). One of these elements, codified at CAA

section 110(a)(2)(D)(i), requires SIPs to prohibit emissions that will cause certain impacts on other states. These interstate transport requirements of the CAA are also known as “good neighbor” requirements.

CAA section 110(a)(2)(D)(i) includes four distinct components, commonly referred to as prongs. The first two prongs, codified at CAA section 110(a)(2)(D)(i)(I), require SIPs to contain adequate provisions which prohibit emissions in one state from contributing significantly to nonattainment of the relevant NAAQS in any other state (prong 1) and from interfering with maintenance of the relevant NAAQS in any other state (prong 2). The second two prongs, codified at CAA section 110(a)(2)(D)(i)(II), require SIPs to contain adequate provisions which prohibit emissions in one state from interfering with measures required to prevent significant deterioration of air quality in any other state (prong 3) and from interfering with measures to protect visibility in any other state (prong 4).

On October 20, 2015, Oregon submitted a SIP to address prongs 1 and 2 of the good neighbor requirements for the 2010 1-hour SO₂ NAAQS along with the other infrastructure requirements.¹

B. 2010 1-Hour SO₂ NAAQS Designations Background

In this action, the EPA has considered information from the 2010 1-hour SO₂ NAAQS designations process, discussed in more detail in section III of this document. For this reason, we have included a brief summary of the EPA’s designations process for the 2010 1-hour SO₂

¹ The EPA approved the October 20, 2015 Oregon submission as it relates to other requirements in final rulemakings published May 16, 2016 (81 FR 30181), May 24, 2018 (83 FR 24034), and September 18, 2018 (83 FR 47073).

NAAQS.²

After the promulgation of a new or revised NAAQS, the EPA is required to designate areas as “nonattainment,” “attainment,” or “unclassifiable” pursuant to section 107(d)(1) of the CAA. The process for designating areas following promulgation of a new or revised NAAQS is contained in section 107(d) of the CAA. The CAA requires the EPA to complete the initial designations process within two years of promulgating a new or revised standard. If the Administrator has insufficient information to make these designations by that deadline, the EPA has the authority to extend the deadline for completing designations by up to one year.

The EPA promulgated the 2010 1-hour SO₂ NAAQS on June 2, 2010. *See* 75 FR 35520 (June 22, 2010). The EPA completed the first round of designations (“round 1”)³ for the 2010 1-hour SO₂ NAAQS on July 25, 2013, designating 29 areas in 16 states as nonattainment for the 2010 1-hour SO₂ NAAQS. *See* 78 FR 47191 (August 5, 2013). The EPA signed **Federal Register** documents of promulgation for round 2 designations⁴ on June 30, 2016 (81 FR 45039,

² While designations may provide useful information for purposes of analyzing transport, particularly for a more source-specific pollutant such as SO₂, the EPA notes that designations themselves are not dispositive of whether or not upwind emissions are impacting areas in downwind states. The EPA has consistently taken the position that CAA section 110(a)(2)(D)(i)(I) addresses “nonattainment” anywhere it may occur in other states, not only in designated nonattainment areas nor any similar formulation requiring that designations for downwind nonattainment areas must first have occurred. *See e.g.*, Clean Air Interstate Rule, 70 FR 25162, 25265 (May 12, 2005); Cross-State Air Pollution Rule, 76 FR 48208, 48211 (August 8, 2011); Final Response to Petition from New Jersey Regarding SO₂ Emissions From the Portland Generating Station, 76 FR 69052 (November 7, 2011) (finding facility in violation of the prohibitions of CAA section 110(a)(2)(D)(i)(I) with respect to the 2010 1-hour SO₂ NAAQS prior to issuance of designations for that standard).

³ The term “round” in this instance refers to which “round of designations.”

⁴ The EPA and state documents and public comments related to the round 2 final designations are in the docket at regulations.gov with Docket ID No. EPA-HQ-OAR-2014-0464 and at the EPA’s website for SO₂ designations at <https://www.epa.gov/sulfur-dioxide-designations>.

July 12, 2016) and on November 29, 2016 (81 FR 89870, December 13, 2016), and round 3 designations⁵ on December 21, 2017 (83 FR 1098, January 9, 2018).⁶

On August 21, 2015 (80 FR 51052), the EPA separately promulgated air quality characterization requirements for the 2010 1-hour SO₂ NAAQS in the Data Requirements Rule (DRR). The DRR requires state air agencies to characterize air quality, through air dispersion modeling or monitoring, in areas associated with sources that emitted 2,000 tons per year (tpy) or more of SO₂, or that have otherwise been listed under the DRR by the EPA or state air agencies. In lieu of modeling or monitoring, state air agencies, by specified dates, could elect to impose federally enforceable emissions limitations on those sources restricting their annual SO₂ emissions to less than 2,000 tpy, or provide documentation that the sources have been shut down. The EPA expected that the information generated by implementation of the DRR would help inform designations for the 2010 1-hour SO₂ NAAQS that must be completed by December 31, 2020 (“round 4”).

In round 3 of designations, the EPA designated Morrow County and all other areas in Oregon as attainment/unclassifiable for the 2010 1-hour SO₂ NAAQS.⁷ There are no remaining areas within Oregon that have yet to be designated.

⁵ The EPA and state documents and public comments related to round 3 final designations are in the docket at regulations.gov with Docket ID No. EPA-HQ-OAR-2017-0003 and at the EPA’s website for SO₂ designations at <https://www.epa.gov/sulfur-dioxide-designations>.

⁶ Consent Decree, *Sierra Club v. McCarthy*, Case No. 3:13-cv-3953-SI (N.D. Cal. March 2, 2015). This consent decree requires the EPA to sign for publication in the **Federal Register** documents of the EPA’s promulgation of area designations for the 2010 1-hour SO₂ NAAQS by three specific deadlines: July 2, 2016 (“round 2”); December 31, 2017 (“round 3”); and December 31, 2020 (“round 4”).

⁷ See Technical Support Document: Chapter 34 Final Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for Oregon at <https://www.epa.gov/sites/production/files/2017-12/documents/34-or-so2-rd3-final.pdf> See also Technical Support Document: Chapter 34 Intended Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for Oregon at https://www.epa.gov/sites/production/files/2017-08/documents/34_or_so2_rd3-final.pdf

II. Relevant Factors to Evaluate 2010 SO₂ Interstate Transport SIPs

Although SO₂ is emitted from a similar universe of point and nonpoint sources, interstate transport of SO₂ is unlike the transport of fine particulate matter (PM_{2.5}) or ozone, in that SO₂ is not a regional pollutant and does not commonly contribute to widespread nonattainment over a large (and often multi-state) area. The transport of SO₂ is more analogous to the transport of lead (Pb) because its physical properties result in localized pollutant impacts very near the emissions source. However, ambient concentrations of SO₂ do not decrease as quickly with distance from the source as Pb because of the physical properties and typical release heights of SO₂. Emissions of SO₂ travel farther and have wider ranging impacts than emissions of Pb but do not travel far enough to be treated in a manner similar to ozone or PM_{2.5}. The approaches adopted by the EPA for ozone and PM_{2.5} transport are too regionally focused and the approach for Pb transport is too tightly circumscribed to the source to serve as a model for SO₂ transport. SO₂ transport is therefore a unique case and requires a different approach.

In this proposed rulemaking, as in prior SO₂ transport analyses, the EPA focuses on a 50 km-wide zone because the physical properties of SO₂ result in relatively localized pollutant impacts near an emissions source that drop off with distance. Given the physical properties of SO₂, the EPA selected the “urban scale” – a spatial scale with dimensions from 4 to 50 kilometers (km) from point sources – given the usefulness of that range in assessing trends in both area-wide air quality and the effectiveness of large-scale pollution control strategies at such point sources.⁸ As such, the EPA utilized an assessment up to 50 km from point sources in order to assess trends in area-wide air quality that might impact downwind states.

⁸ For the definition of spatial scales for SO₂, please see 40 CFR part 58, appendix D, section 4.4 (“Sulfur Dioxide (SO₂) Design Criteria”). For further discussion on how the EPA is applying these definitions with respect to

As discussed in section III of this document, the EPA first reviewed Oregon's analysis to assess how the State evaluated the transport of SO₂ to other states, the types of information used in the analysis and the conclusions drawn by the State. The EPA then conducted a weight of evidence analysis, including review of Oregon's submission and other available information, including air quality, emission sources and emission trends within the State and in bordering states to which it could potentially contribute or interfere.⁹

III. Oregon SIP Submission and EPA Analysis

A. State Submission

On May 12, 2015, Oregon submitted a revision to the Oregon SIP addressing prongs 1 and 2 of CAA section 110(a)(2)(D)(i)(I) for the 2010 1-hour SO₂ NAAQS. Oregon conducted a weight of evidence analysis to examine whether SO₂ emissions from the State adversely affect attainment or maintenance of the 2010 1-hour SO₂ NAAQS in downwind states. Oregon's analysis included a review of: SO₂ emissions source categories; downwind monitoring sites that are potential receptors in neighboring states; industrial point sources located near the border with neighboring states; and SIP-approved controls that limit SO₂ emissions from existing and future Oregon sources. Oregon concluded that SO₂ emissions from Oregon sources will not contribute significantly to nonattainment or interfere with maintenance of the 2010 1-hour SO₂ NAAQS in any other state.

interstate transport of SO₂, *see* the EPA's proposal on Connecticut's SO₂ transport SIP. 82 FR 21351, 21352, 21354 (May 8, 2017).

⁹ This proposed approval action is based on the information contained in the administrative record for this action and does not prejudice any other future EPA action that may make other determinations regarding any of the subject state's air quality status. Any such future actions, such as area designations under any NAAQS, will be based on their own administrative records and the EPA's analyses of information that becomes available at those times. Future available information may include, and is not limited to, monitoring data and modeling analyses conducted pursuant to the SO₂ Data Requirements Rule (80 FR 51052, August 21, 2015) and information submitted to the EPA by states, air agencies, and third-party stakeholders such as citizen groups and industry representatives.

B. EPA Evaluation Methodology

The EPA believes that a reasonable starting point for determining which sources and emissions activities in Oregon are likely to impact downwind air quality in other states with respect to the 2010 1-hour SO₂ NAAQS is by using information in the EPA's National Emissions Inventory (NEI).¹⁰ The NEI is a comprehensive and detailed estimate of air emissions for criteria pollutants, criteria pollutant precursors, and hazardous air pollutants from air emissions sources, that is updated every three years using information provided by the states and other information available to the EPA. The EPA evaluated data from the 2014 NEI, the most recently available, complete, and quality assured dataset of the NEI.

In the submission, Oregon assessed SO₂ emissions source categories in the State using 2011 NEI data, which was the most recent, complete data at the time the submission was developed. Oregon found that power plants and other industrial facilities that combust fossil fuel are the primary emitters of SO₂ in the State. Smaller sources include processes to extract metal from ore and the combustion of sulfur-containing fuels in locomotives, ships, and non-road equipment.¹¹ Because most SO₂ is emitted from industrial facilities, Oregon focused its analysis on the potential for SO₂ emissions from industrial point sources in the State to contribute significantly to nonattainment or interfere with maintenance of the 2010 1-hour SO₂ NAAQS in any other state.

The EPA's review of more recent NEI data confirms the State's findings. We note that the EPA released a complete set of NEI data for 2014 addressing all source categories. However,

¹⁰ The EPA's NEI is available at <https://www.epa.gov/air-emissions-inventories/national-emissions-inventory>.

¹¹ See page 26 of the Oregon State Implementation Plan Revision, Attachment C, Addressing the Interstate Transport of Nitrogen Dioxide, Sulfur Dioxide, Lead, Fine Particulate Matter, dated May 12, 2015, in the docket for this action (the submission).

the EPA has, to date, released a limited set of emissions data for 2017 addressing stationary sources only. Because the data for 2014 are complete, we reviewed and summarized 2014 NEI data in Table 1 of this document. The data indicate that the majority of SO₂ emissions in Oregon originate from fuel combustion at either electric utilities or other stationary sources such as industrial boilers, in addition to industrial and other processes. These source categories account for approximately 90% of SO₂ emissions in 2014, therefore, we find it reasonable to focus our evaluation on potential downwind impacts of SO₂ emissions from stationary fuel combustion or industrial point sources in Oregon, consistent with the State’s submission.

Table 1: Summary of 2014 NEI SO₂ Data for Oregon¹²

Source Category	Emissions (tons)
Mobile - non-road	471
Mobile - on-road	307
Fuel combustion - electric generation	7,535
Fuel combustion - other	2,607
Industrial and other processes	1,604
Total	12,524

Based on the information detailed in sections III.C.1 through 3 and III.D of this document (available data on emissions sources and emissions trends, ambient air quality data, and permit requirements, available dispersion modeling results, and enforceable regulations) we propose that it is reasonable to conclude that SO₂ sources in Oregon will not contribute significantly to nonattainment (prong 1 of section 110(a)(2)(D)(i)(I)) or interfere with maintenance of the 2010 1-hour SO₂ NAAQS in any other state (prong 2). We evaluate each prong separately, as discussed in the following paragraphs.

¹² We derived the emissions information from the EPA’s Web page <https://www.epa.gov/air-emissions-inventories>.

C. EPA Prong 1 Evaluation – Significant Contribution to Nonattainment

Prong 1 of the good neighbor provision requires SIPs to prohibit emissions that will contribute significantly to nonattainment of a NAAQS in another state. Oregon asserts in its SIP submission that emissions from Oregon will not contribute significantly to nonattainment in any other state with respect to the 2010 1-hour SO₂ standard. To evaluate Oregon's satisfaction of prong 1, the EPA assessed the State's SIP submission with respect to the following information: 1) SO₂ emissions information from Oregon and neighboring state sources; 2) SO₂ ambient air quality for Oregon and neighboring states; and 3) Analysis of Permit Requirements, Dispersion Modeling, and Source-Specific Controls. A detailed discussion of Oregon's SIP submission with respect to each of these points follows.¹³ As a result of our analysis of this information, we believe that the following factors indicate emissions from Oregon are unlikely to impact a violation in any other state and thus are unlikely to contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in any other state: (1) the combination of low ambient concentrations of SO₂ in Oregon and neighboring states and the downward trend in monitored concentrations; (2) our conclusions from our qualitative analysis of the identified sources of SO₂ emissions in Oregon and neighboring states; (3) the downward trend in SO₂ emissions from Oregon sources; (4) available modeling information for specific SO₂ point sources in Oregon; and (5) SIP-approved controls that limit SO₂ emissions from current and future sources. The EPA proposes, based on the information available at the time of this rulemaking, that these factors, taken together, support the EPA's proposed determination that Oregon will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in another state. In

¹³ The EPA has reviewed Oregon's submission, and where new or more current information has become available, is including this information as part of the EPA's evaluation of this submission.

addition, 2017 SO₂ emissions for Oregon's sources emitting over 100 tons of SO₂ within 50 km of another state are at distances that make it unlikely that these SO₂ emissions could interact with SO₂ emissions from the neighboring states' sources in such a way as to contribute significantly to nonattainment in neighboring states. Finally, the downward trends in SO₂ emissions and relatively low DVs for air quality monitors in Oregon and neighboring states, combined with federal regulations and SIP-approved regulations affecting SO₂ emissions of Oregon's sources, further support the EPA's proposed conclusion.

1. SO₂ Emissions Analysis

- a. State Submission

As discussed in section II of this document, Oregon assessed SO₂ emissions source categories using 2011 NEI data. Oregon found that power plants and other industrial facilities that combust fossil fuel are the primary emitters of SO₂ in the State. Because most SO₂ is emitted from industrial facilities, Oregon focused its analysis on the potential for SO₂ emissions from industrial point sources in the State to contribute significantly to nonattainment or interfere with maintenance of the 2010 1-hour SO₂ NAAQS in any other state.

Oregon's submission also included an analysis of specific sources located near the Oregon border. The State focused its evaluation on three large facilities located near the border with Washington, that are also listed in Table 3 of this document: the Boardman Plant, the Wauna Mill, and the Owens-Brockway Glass facility.

- b. EPA Analysis

The EPA also analyzed SO₂ emissions trends in Oregon. Between 2002 and 2014, SO₂ emissions from Oregon sources were reduced significantly. NEI data summarized in Table 2 of this document illustrate this trend. SO₂ emissions from Oregon sources fell approximately 72%

overall, and emissions from specific source categories also declined over this time period. These trends are due in part to the combustion of lower sulfur content fuels.

Table 2: SO₂ Emission Trends in Oregon (tons)¹⁴

Source Category	2002	2005	2008	2011	2014	SO₂ reduction, 2002-2014
Mobile - non-road	12,470	5,746	2,058	340	471	96%
Mobile - on-road	3,760	1,796	532	333	307	92%
Fuel combustion - electric generation	12,344	452	11,410	13,169	7,535	40%
Fuel combustion - other	10,142	12,911	1,739	3,164	2,607	74%
Industrial and other processes	6,341	14,103	3,573	4,046	1,604	75%
Total	45,057	35,008	19,312	21,052	12,524	72%

Emissions trends, while important, do not by themselves demonstrate that sources in Oregon will not contribute significantly to nonattainment in neighboring states.

As discussed in section II of this document, the EPA finds it appropriate to examine the impacts of emissions from stationary sources in Oregon in distances ranging from 0 km to 50 km from the facility, based on the “urban scale” definition contained in appendix D to 40 CFR part 58, section 4.4. Therefore, we reviewed NEI data for Oregon point sources with SO₂ emissions greater than 100 tpy¹⁵ in 2017 that are located up to 50 km from State borders, as summarized in the following table, Table 3.

¹⁴ We derived the emissions trends information from the EPA’s Web page <https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data>.

¹⁵ We have limited our analysis to Oregon sources emitting at least 100 tpy of SO₂ because in the absence of special factors, for example the presence of a nearby larger source or unusual physical factors, Oregon sources emitting less than 100 tpy can appropriately be presumed to not be causing or contributing to SO₂ concentrations above the NAAQS.

Table 3: SO₂ Emissions Trends at Oregon Sources within 50 km of Border¹⁶

Source Name	Distance* (km)	2008 (tons)	2011 (tons)	2014 (tons)	2017 (tons)
Portland General Electric Power Plant (Boardman Plant)	17	11,303	13,103	7,439	3,298
Georgia-Pacific Consumer Products LP (Wauna Mill)	1	858	707	571	540
Portland International Airport	2	96	115	125	215
EP Minerals, LLC	33	1	141	66	182
Owens-Brockway Glass Container Inc. (Owens-Brockway Glass)	4	142	119	119	118

*approximate distance to nearest Oregon border.

The EPA assessed this information to evaluate whether the SO₂ emissions from these sources could interact with SO₂ emissions from the nearest source in a neighboring state in such a way as to impact a violation of the 2010 1-hour SO₂ NAAQS in that state. The following Table 4 lists the five sources in Oregon that emitted greater than 100 tpy of SO₂ in 2017 and are located within 50 km of the State’s border.

Table 4: Oregon SO₂ Sources Emitting Greater Than 100 tpy Near Neighboring States

Oregon Source	2017 Annual SO₂ Emissions (tons)	Approximate Distance to Oregon Border (km)	Closest Neighboring State	Approximate Distance to Nearest Neighboring State SO₂ Source (km)	Nearest Neighboring State SO₂ Source & 2017 Emissions (>100 Tons SO₂)
Portland	3,298	17	Washington	83	Boise Paper

¹⁶ We derived the emissions information from the EPA’s Web page <https://www.epa.gov/air-emissions-inventories>.

General Electric Power Plant (Boardman Plant)					(885 tons)
Georgia-Pacific Consumer Products LP (Wauna Mill)	540	1	Washington	33	Nippon Dynawave Packaging Co. (390 tons)
Portland International Airport	215	2	Washington	61	Longview Fibre Paper and Packaging, Inc. (198 tons)
EP Minerals, LLC	182	33	Idaho	286	The Amalgamated Sugar Company LLC - Twin Falls (635 tons)
Owens-Brockway Glass Container Inc. (Owens-Brockway Glass)	118	4	Washington	66	Longview Fibre Paper and Packaging, Inc. (198 tons)

Only one source emitting greater than 100 tpy in Oregon located within 50 km of the State border is also within 50 km of a source also emitting greater than 100 tpy in a neighboring state. The Georgia Pacific Wauna Mill facility (discussed in the following paragraphs) is located 1 km from the State border and 33 km from the nearest out-of-state source emitting greater than 100 tpy, Nippon Dynawave Packaging in Washington. The EPA believes that the distances

greater than 50 km between all remaining Oregon sources and the nearest out-of-state source make it unlikely that SO₂ emissions from these Oregon sources could interact with SO₂ emissions from these out-of-state sources in such a way as to contribute significantly to nonattainment in Washington and Idaho. Further discussion of all Oregon sources in Table 4 can be found in section III.C.2.b of this document.

2. Ambient Air Quality Data Analysis

a. State Submission

In its submission, Oregon identified SO₂ monitoring sites in the neighboring states of California, Idaho, Nevada, and Washington that are most likely to be impacted by SO₂ emissions from sources in Oregon. The submission lists each SO₂ monitoring site considered to be a potential downwind receptor and the most recent monitoring data at the receptor.¹⁷ Oregon found that the 2011-2013 design value¹⁸ at each identified receptor was well below the 2010 1-hour SO₂ NAAQS (75 ppb) and that SO₂ emissions from Oregon were therefore not significantly contributing to nonattainment in any other state.

b. EPA Analysis

The EPA also evaluated ambient air quality data in Oregon and neighboring states to determine whether there were any monitoring sites, particularly near the Oregon border, with elevated SO₂ concentrations that might warrant further investigation with respect to interstate transport of SO₂ from emission sources in Oregon. We reviewed the most recent SO₂ monitoring data available from the EPA's Air Quality System for the following set of receptors: (1) all monitors in Oregon; (2) the monitor with the highest design value in each neighboring state; (3)

¹⁷ See page 14 (Table 2) of the submission.

¹⁸ The design value is a statistical representation of SO₂ in ambient air based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations, measures in parts per billion (ppb).

the monitor in each neighboring state located closest to the Oregon border; and (4) all monitors in each neighboring state within 50 km of the Oregon border.

The following table, Table 5, shows that the Multnomah County, Oregon monitoring site is the only SO₂ monitor in Oregon and is within 50 km of the Oregon border. The most recent design value at this monitor, for the years 2016-2018, is 3 ppb. This design value is well below the 2010 1-hour SO₂ NAAQS (75 ppb). In addition, all monitors identified in neighboring states are below the 2010 1-hour SO₂ NAAQS.

Table 5: SO₂ Design Values for Monitors in Oregon and Neighboring States¹⁹

State / County	Site ID	Distance* (km)	2014-2016 (ppb)	2015-2017 (ppb)	2016-2018 (ppb)
California / Contra Costa	060131001	433	14	14	16
California / Humboldt	060231004	135	1	1	1
Idaho / Ada	160010010	55	4	3	3
Idaho / Pocatello	160050004	366	39	38	38
Nevada / Clark	320030540	668	7	6	6
Nevada / Washoe	320310016	275	5	5	5
Oregon / Multnomah	410510080	12	3	3	3
Washington / Skagit	530570011	327	5	4	3

*approximate distance to nearest Oregon border.

¹⁹ We compiled the monitoring data from the EPA's Web page <https://www.epa.gov/air-trends/air-quality-design-values#report>.

These air quality data do not, by themselves, indicate any particular location that would warrant further investigation with respect to SO₂ emissions sources that might contribute significantly to nonattainment in the neighboring states. Because the monitoring network is not necessarily designed to find all locations of high SO₂ concentrations, this observation indicates an absence of evidence of impact at these locations but is not sufficient evidence by itself of an absence of impact at all locations in the neighboring states.

3. Analysis of Permit Requirements, Dispersion Modeling, and Source-Specific Controls

As previously discussed, Oregon identified three sources (Boardman Plant, the Wauna Mill, and the Owens-Brockway Glass facility), for which the State reviewed existing permitting information and available dispersion modeling, in addition to SIP-approved controls that apply to the sources to limit SO₂ emissions. In the following paragraphs, we have summarized the source-specific analysis in the State's submission followed by the EPA's supplemental analysis where necessary or where new information became available after the submission was developed.

a. State Submission

i. Boardman Plant

The Boardman Plant is a 575-megawatt coal-fired power plant operated by Portland General Electric, located approximately 17 km from the border with Washington. In its submission, Oregon stated that the Boardman Plant is subject to SIP-approved SO₂ controls established to meet regional haze planning requirements for Best Available Retrofit Technology (BART) (76 FR 38997, July 5, 2011). The SIP requires the Boardman Plant to cease burning coal by December 31, 2020 and requires the use of dry sorbent injection controls to further limit SO₂ emissions from the plant during the time period leading up to the shutdown date (2018 through 2020). Based on this information, Oregon concluded that SO₂ emissions from the

Boardman Plant will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in any other state.

ii. Wauna Mill

In its submission, Oregon evaluated permit information for the Wauna Mill including the air quality analysis conducted during the prevention of significant deterioration (PSD) permitting process for the facility. A PSD air quality analysis assesses the predicted impacts to ambient air associated with the construction and operation of a proposed major source or major modification. The analysis is designed to determine whether new emissions from a proposed major stationary source or major modification, in conjunction with other applicable emissions from existing sources (competing sources), will or will not cause or contribute to a violation of any applicable NAAQS. PSD dispersion modeling is conducted at a 50 km range and includes any portion of the range that may extend into neighboring states. In its submission, Oregon stated that a review of the modeling concluded predicted impacts from the Wauna Mill to ambient air were not expected to cause or contribute to a violation of any applicable NAAQS within Oregon or in neighboring states.

iii. Owens-Brockway Glass

Owens-Brockway Glass Container Inc. is located in Portland, Oregon, 4 km from the border with Washington. Oregon's submission stated that Owens-Brockway Glass was evaluated during PSD analyses for other major source permitting actions.²⁰ Oregon reviewed the permitting analyses and stated that the analyses demonstrated the proposed source's emissions considered in conjunction with the emissions from Owens-Brockway Glass and other sources in the area do not cause or contribute to a violation of any applicable NAAQS within the 50-km area evaluated.

²⁰ See page 26 of the submission.

Oregon concluded that this source will not contribute significantly to nonattainment or interfere with maintenance of the 2010 1-hour SO₂ NAAQS.

b. EPA Analysis

i. Boardman Plant

In accordance with the EPA's SO₂ Data Requirements Rule, Oregon characterized the Boardman Plant by conducting air dispersion modeling. Oregon modeled the area using a receptor grid that extended 50 km from the source (which extended into the neighboring State of Washington). Oregon's modeling accounted for allowable potential emissions from the Boardman Plant and 11 other Oregon SO₂ emissions sources in the area. The State submitted the resulting model data to the EPA and indicated that Oregon found no modeled exceedances of the 2010 1-hour SO₂ NAAQS within 50 km of the Boardman Plant. The maximum modeled concentration was found to be 73 ppb and was projected to occur southeast of the Boardman Plant, in the opposite direction of the border with Washington. The State recommended the EPA designate the area around the Boardman Plant as unclassifiable/attainment.²¹ The EPA agreed and designated the entire State of Oregon attainment/unclassifiable for the 2010 1-hour SO₂ NAAQS (83 FR 1098, January 9, 2018).²²

Based on the information provided by the State and the additional information available to the EPA, specifically the modeling results for the area around the Boardman Plant, we propose to concur with the State's conclusion that SO₂ emissions from the Boardman Plant will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in any other state.

ii. Wauna Mill

²¹ See designation technical support document at https://www.epa.gov/sites/production/files/2017-08/documents/34_or_so2_rd3-final.pdf.

²² See 40 CFR 81.338.

The Georgia-Pacific Consumer Products LP (Wauna Mill) is in Clatskanie, Oregon and is located within 50 km of the Oregon border and within 50 km of two SO₂ sources emitting greater than 100 tpy in Longview, Washington. Elevated levels of SO₂, to which SO₂ emitted in Oregon may have a downwind impact, are most likely to be found near such sources. Therefore, we believe it is appropriate to further review permit information for the Wauna Mill and SIP-approved provisions that limit SO₂ emissions from the Wauna Mill, which we have summarized in the following paragraphs.

In 2010, the Wauna Mill was evaluated as part of the Oregon Regional Haze Plan and determined to be a BART-eligible source. The Wauna Mill underwent BART analysis by Oregon and elected to take federally enforceable SO₂ limits to comply with BART requirements promulgated in Oregon Administrative Rules (OAR) and approved by the EPA as part of the Oregon Regional Haze Plan.²³ The limits were added to the facility's title V operating permit, and to achieve the limits, the mill permanently reduced the use of fuel oil and limited production rates.²⁴ Emissions at the Wauna Mill, as shown in Table 3 of this document, are declining. Based on this information and the information provided by the State, the EPA believes it is reasonable to conclude that the Wauna Mill will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in Washington or any other state.

iii. Portland International Airport

The Portland International Airport is located approximately 2 km from the border with Washington. Oregon's submission did not specifically address the airport; therefore, we have

²³ See Oregon Regional Haze Plan submitted on December 20, 2010, approved by the EPA on July 5, 2011 (76 FR 38897).

²⁴ See title V operating permit number 04-0004-TV-01, issued June 18, 2009 and modified on December 2, 2010, available online at: <https://www.deq.state.or.us/aq/aqpermitsonline>.

conducted our own evaluation. In 2017, SO₂ emissions at the airport totaled approximately 215 tons, as shown in Table 4 of this document. While these emissions are greater than some of the industrial point sources evaluated, it is important to distinguish SO₂ emissions at an airport from those at a typical industrial point source, in part because airport-related emissions tend to be spread across large areas and operations, including emissions from airplanes departing from and arriving at the airport and support vehicles that service airplanes and transport passengers.

The distance between Portland International Airport and the nearest out-of-state source emitting greater than 100 tons, Longview Fibre Paper and Packaging, Inc. in Longview, Washington, is 61 km. In 2017, Longview Fibre Paper and Packaging, Inc., emitted 198 tons of SO₂. Based on the distance between these sources, it is unlikely that SO₂ emissions from Portland International Airport could interact with SO₂ emissions from Longview Fibre Paper and Packaging, Inc., in such a way as to impact a violation of the 2010 1-hour SO₂ NAAQS in that state. Therefore, we believe it is reasonable to conclude that SO₂ emissions from Portland International Airport will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in Washington or any other state.

iv. EP Minerals Inc.

EP Minerals Inc. operates a diatomaceous earth processing plant in Vale, Oregon, approximately 33 km from the Idaho border. The source emitted approximately 182 tons of SO₂ in 2017, as shown in Table 4 of this document. The State submission did not address this source therefore, we have supplemented the State's review with the following assessment. EP Minerals Inc. is a title V major stationary source with kilns and dryers subject to SO₂ emission limits.²⁵

²⁵ Title V operating permit number 23-0032-TV-01, issued September 29, 2017, available online at: <https://www.deq.state.or.us/aq/aqpermitsonline>.

The source is subject to monitoring, recordkeeping, and reporting requirements, as a condition of operating the source. In addition, SIP-approved sulfur-in-fuel limits apply, as well as Federal Standards of Performance for Calciners and Dryers in Mineral Industries.

The distance between EP Minerals Inc., and the nearest out-of-state source emitting greater than 100 tons, the Amalgamated Sugar Company in Twin Falls, Idaho, is 286 km. In 2017, the Amalgamated Sugar Company – Twin Falls emitted 635 tons of SO₂. Based on the distance between these sources, it is unlikely that SO₂ emissions from EP Minerals Inc., could interact with SO₂ emissions from the Amalgamated Sugar Company – Twin Falls in such a way as to impact a violation of the 2010 1-hour SO₂ NAAQS in that state. Therefore, we believe it is reasonable to conclude that SO₂ emissions from EP Minerals Inc., will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in Idaho or any other state.

v. Owens-Brockway Glass

Owens-Brockway Glass Container Inc. is located in Portland, Oregon, 4 km from the border with Washington. The distance between Owens-Brockway Glass Container Inc., and the nearest out-of-state source emitting greater than 100 tons, the Longview Fibre Paper and Packaging, Inc., in Longview, Washington, is 66 km. In 2017, the Longview Fibre Paper and Packaging, Inc., emitted 198 tons of SO₂. Based on the distance between these sources, it is unlikely that SO₂ emissions from Owens-Brockway Glass Container Inc., could interact with SO₂ emissions from the Longview Fibre Paper and Packaging, Inc in such a way as to impact a violation of the 2010 1-hour SO₂ NAAQS in that state. Therefore, we believe it is reasonable to conclude that SO₂ emissions from Owens-Brockway Glass Container Inc., will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in Idaho or any other state.

vi. TransAlta Central Generation Power Plant

The TransAlta Central Generation Power Plant (TransAlta) in Lewis County, Washington, is located approximately 66 km from the Oregon-Washington state border. TransAlta is located approximately 78 km from the nearest source in Oregon emitting greater than 100 tons, the Wauna Mill, which was further discussed earlier. In 2017, TransAlta emitted 1,689 tons of SO₂. TransAlta was required to be characterized pursuant the DRR by the State of Washington. The State of Washington elected to characterize the area around TransAlta through air dispersion modeling. In Round 3 of SO₂ designations, the EPA determined the modeling supplied by Washington was not sufficient to determine the area as in attainment of the NAAQS. Therefore, the EPA designated Lewis and Thurston Counties in Washington as unclassifiable.²⁶ This unclassifiable area is approximately 22 km from the Oregon-Washington border. Due to the distance between the Wauna Mill and TransAlta, it is unlikely that SO₂ emissions from Wauna Mill could interact with SO₂ emissions from TransAlta in such a way as to impact a violation of the 2010 1-hour SO₂ NAAQS in that state. Therefore, we believe it is reasonable to conclude that SO₂ emissions from Wauna Mill will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in Washington or any other state.

4. Conclusion

In conclusion, for prong 1, we believe that the following factors indicate emissions from Oregon are unlikely to impact a violation in any other state and thus are unlikely to contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in any other state: (1) the combination of low ambient concentrations of SO₂ in Oregon and neighboring states and the

²⁶ See Technical Support Document: Chapter 42 Final Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for Washington at <https://www.epa.gov/sites/production/files/2017-12/documents/42-wa-so2-rd3-final.pdf>. See also Technical Support Document: Chapter 42 Intended Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for Washington at https://www.epa.gov/sites/production/files/2017-08/documents/43_wa_so2_rd3-final.pdf

downward trend in monitored concentrations; (2) our conclusions from our qualitative analysis of the identified sources of SO₂ emissions in Oregon and neighboring states; (3) the downward trend in SO₂ emissions from Oregon sources; (4) available modeling information for specific SO₂ point sources in Oregon; and (5) SIP-approved controls that limit SO₂ emissions from current and future sources. The EPA proposes, based on the information available at the time of this rulemaking, that these factors, taken together, support the EPA's proposed determination that Oregon will not contribute significantly to nonattainment of the 2010 1-hour SO₂ NAAQS in another state. In addition, 2017 SO₂ emissions for Oregon's sources emitting over 100 tons of SO₂ within 50 km of another state are at distances that make it unlikely that these SO₂ emissions could interact with SO₂ emissions from the neighboring states' sources in such a way as to contribute significantly to nonattainment in neighboring states. Finally, the downward trends in SO₂ emissions and relatively low DVs for air quality monitors in Oregon and neighboring states, combined with federal regulations and SIP-approved regulations affecting SO₂ emissions of Oregon's sources, further support the EPA's proposed conclusion. Therefore, we are proposing to approve the Oregon SIP revision as meeting CAA section 110(a)(2)(D)(i)(I) prong 1 for purposes of the 2010 1-hour SO₂ NAAQS.

D. EPA Prong 2 Evaluation – Interference with Maintenance

1. Summary

Prong 2 of CAA section 110(a)(2)(D)(i)(I) requires an evaluation of the potential impact of a state's emissions on areas in other states that are not violating the NAAQS. This evaluation is not limited to only former nonattainment areas with EPA-approved maintenance plans, but rather it focuses on any areas that may have trouble attaining and maintaining the standard in the future. Our prong 2 evaluation for Oregon builds on our analysis in the prior prong 1 evaluation,

regarding significant contribution to nonattainment (prong 1). Specifically, as described in our prong 1 evaluation and summarized in Table 3 of this document, we have a sufficient basis to conclude that there are no 2010 1-hour SO₂ NAAQS violations in other states near their shared borders with Oregon. Moreover, we have a sufficient basis to conclude that SO₂ emissions from sources in Oregon are highly unlikely to increase sufficiently to alter this situation, given the SIP-approved controls limiting emissions from large sources near the border.

2. Emissions Trends

Statewide SO₂ emissions from Oregon sources have decreased substantially over time, as shown in the preceding Table 2 of this document.²⁷ From 2002 to 2014, total statewide SO₂ emissions decreased by approximately 72 percent. This trend of decreasing SO₂ emissions does not by itself demonstrate that areas in Oregon and neighboring states will not have issues maintaining the 2010 1-hour SO₂ NAAQS. However, as a piece of this weight of evidence analysis for prong 2, it provides further indication (when considered alongside low monitor values in neighboring states) that such maintenance issues are unlikely.

3. SIP-Approved New Source Review Program

The EPA notes that any future major sources of SO₂ emissions will be addressed by Oregon's SIP-approved PSD program.²⁸ Future minor sources of SO₂ emissions will be addressed by Oregon's SIP-approved minor new source review permit program.²⁹ The EPA believes that the permitting regulations contained within these programs should help ensure that

²⁷ See additional emissions trends data at: <https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data>.

²⁸ The EPA recently approved revisions to the Oregon new source review permitting programs on October 11, 2017 (82 FR 47122).

²⁹ Ibid.

ambient concentrations of SO₂ in neighboring states are not exceeded as a result of new facility construction or modification occurring in Oregon.

4. Conclusion

In conclusion, for prong 2, we reviewed the technical information considered for interstate transport prong 1, additional information about emission trends, as well as the requirements of Oregon's SIP-approved new source review program. We believe that the following factors indicate emissions from Oregon will not interfere with maintenance of the 2010 1-hour SO₂ NAAQS in any other state: (1) the combination of low ambient concentrations of SO₂ in Oregon and neighboring states and the downward trend in monitored concentrations; (2) our conclusions from our qualitative analysis of the identified sources of SO₂ emissions; (3) the downward trend in SO₂ emissions from Oregon sources; (4) available modeling information for specific SO₂ point sources in Oregon; and (5) SIP-approved controls that limit SO₂ emissions from current and future sources. The EPA proposes, based on the information available at the time of this rulemaking, that these factors, taken together, support the EPA's proposed determination that Oregon will not interfere with maintenance of the 2010 1-hour SO₂ NAAQS in any other state. In addition, 2017 SO₂ emissions for Oregon's sources emitting over 100 tons of SO₂ within 50 km of another state are at distances that make it unlikely that these SO₂ emissions could interact with SO₂ emissions from the neighboring states' sources in such a way as to contribute significantly to nonattainment in neighboring states. Finally, the downward trends in SO₂ emissions and relatively low DVs for air quality monitors in Oregon and neighboring states, combined with federal regulations and SIP-approved regulations affecting SO₂ emissions of Oregon's sources, further support the EPA's proposed conclusion. Therefore,

we are proposing to approve the Oregon SIP as meeting CAA section 110(a)(2)(D)(i)(I) prong 2 for purposes of the 2010 1-hour SO₂ NAAQS.

IV. Proposed Action

The EPA is proposing to approve the October 20, 2015, Oregon SIP submission as meeting the interstate transport requirements of CAA section 110(a)(2)(D)(i)(I) for the 2010 1-hour SO₂ NAAQS. The EPA is proposing this approval based on our review of the information and analysis provided by Oregon in the State's submission, as well as additional relevant information, which indicates that in-State air emissions will not contribute significantly to nonattainment or interfere with maintenance of the 2010 1-hour SO₂ NAAQS in any other state. This action is being taken under section 110 of the CAA.

V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this proposed action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);

- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because it does not involve technical standards; and
- Does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The proposed SIP would not be approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those

areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate Matter, Reporting and recordkeeping requirements, Sulfur dioxide, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: May 7, 2020.

Christopher Hladick,
Regional Administrator,
Region 10.

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