



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2020-0001; FRL-10013-25-Region 4]

Air Plan Approval; NC; Blue Ridge Paper SO₂ Emission Limits

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, through parallel processing, a draft source-specific State Implementation Plan (SIP) revision submitted by the State of North Carolina Department of Environmental Quality, Division of Air Quality (DAQ) through a letter dated June 24, 2020. North Carolina's June 24, 2020, draft source-specific SIP revision requests that EPA incorporate into the SIP more stringent sulfur dioxide (SO₂) permit limits than those currently contained in the SIP for the Blue Ridge Paper Products, LLC (also known as BRPP) facility located in the Beaverdam Township Area of Haywood County, North Carolina. Specifically, EPA is proposing to approve, into the SIP, specific SO₂ permit limits and associated operating restrictions, monitoring, recordkeeping, reporting (MRR) and testing compliance requirements established in a BRPP title V operating permit as permanent and enforceable SO₂ control measures. North Carolina submitted these limits to support its recommendation that EPA designate the Beaverdam Township Area as "attainment/unclassifiable" under the 2010 primary SO₂ national ambient air quality standard (NAAQS or standard) (also referred to as the 2010 1-hour SO₂ NAAQS). The purpose of this rulemaking is not to take action on whether these SO₂ emissions limits are adequate for EPA to designate the Beaverdam Township Area as attainment under the 2010 1-hour SO₂ NAAQS.

Instead, EPA will determine the air quality status and designate remaining undesignated areas for the 2010 1-hour SO₂ NAAQS, including the Beaverdam Township Area, in a separate action.

This proposed SIP approval does not prejudice that future designation action.

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-R04-OAR-2020-0001 at www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure 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. 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 www2.epa.gov/dockets/commenting-epa-dockets.

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- I. What is Parallel Processing?**

Parallel processing refers to a process that utilizes concurrent state and Federal proposed rulemaking actions. Generally, the state submits a copy of the proposed regulation or other revisions to EPA before conducting its public hearing and completing its public comment process under state law. EPA reviews this proposed state action and prepares a notice of proposed rulemaking under Federal law. In some cases, EPA's notice of proposed rulemaking is published in the Federal Register during the same time frame that the state is holding its public hearing and conducting its public comment process. The state and EPA then provide for concurrent public comment periods on both the state action and Federal action. If, after completing its public comment process and after EPA's public comment process has run, the state changes its final submittal from the proposed submittal, EPA evaluates those changes and

decides whether to publish another notice of proposed rulemaking in light of those changes or to proceed to taking final action on the changed submittal and describing the state's changes in its final rulemaking action. Any final rulemaking action by EPA will occur only after the final submittal has been adopted by the state and formally provided to EPA.

In this case, however, EPA's and North Carolina's processes have not been perfectly concurrent. North Carolina's submittal was noticed for public comment by the State on June 24, 2020, and submitted to EPA for parallel processing on June 24, 2020; the submission has not yet been submitted in final form. The State's public comment period closed on July 27, 2020. After North Carolina submits the formal SIP revision, EPA will evaluate the submittal. If the State changes the formal submittal from the proposed submittal, EPA will evaluate those changes for significance. If EPA finds any such changes to be significant, then the Agency intends to determine whether to re-propose the action based upon the revised submission or to proceed to take final action on the submittal as changed by the State. Although EPA was unable to have a concurrent public comment process with the State, North Carolina's request for parallel processing allows EPA to begin action on the State's proposed submittal in advance of a formal, final submission.

II. What Action is EPA Proposing?

EPA is proposing to approve North Carolina's June 24, 2020, draft source-specific SIP revision to incorporate, into the North Carolina SIP, specific SO₂ permit limits and associated operating restrictions, MRR, and testing compliance requirements contained in title V operating permit number 08961T29 (T29) issued to BRPP by DAQ, on June 2, 2020. Specifically, EPA is proposing to incorporate into the North Carolina SIP the maximum permitted SO₂ emission limits and compliance requirements for the seven largest SO₂ emission sources at BRPP.

Currently, there are no source-specific SO₂ limits in the North Carolina SIP for BRPP. These permitted SO₂ emission limits that EPA proposes to approve are therefore in addition to and therefore more stringent than generally applicable SO₂ requirements currently in the SIP for BRPP. Incorporating specific SO₂ permit limits and associated operating restrictions, MRR, and testing compliance parameters for BRPP into the North Carolina SIP would establish these specific SO₂ permitted limits and associated operating and compliance parameters as permanently federally enforceable control measures and strengthen the North Carolina SIP. More detail on these emission limits and conditions is provided below.

The purpose of this rulemaking is to act on North Carolina's request to approve into the SIP specific SO₂ permit limits (listed in Table 1 below), and associated operating, MRR, and testing requirements established in permit T29 at section 2.2.J thereby making these limits permanently federally enforceable to strengthen the North Carolina SIP. This rulemaking does not address whether the specific SO₂ permit limits and compliance permit conditions from operating permit T29 are adequate for EPA to promulgate an attainment/unclassifiable designation of the 2010 1-hour SO₂ NAAQS for the Beaverdam Township Area near BRPP, and EPA does not seek and will not respond to comments on that issue in taking final action on this SIP. EPA intends to designate the Beaverdam Township Area near BRPP under a separate national action for all remaining undesignated areas in the country, and any comments on the adequacy of the new limits to provide for attainment should be directed to EPA's docket for that action. See docket number EPA-HQ-OAR-2020-0037.

III. What is the Background for this Proposed Action?

The following provides the relevant background related to the 2010 1-hour SO₂ NAAQS and this proposed action.

A. 2010 1-hour SO₂ NAAQS

On June 22, 2010, EPA published notice of a revision of the primary SO₂ NAAQS, establishing a new 1-hour SO₂ standard of 75 parts per billion (ppb). *See* 75 FR 35520.¹ Under EPA's regulations at 40 CFR part 50, the 2010 1-hour SO₂ NAAQS is met at a monitoring site when the 3-year average of the annual 99th percentile of daily maximum 1-hour average concentrations is less than or equal to 75 ppb (based on the rounding convention in 40 CFR part 50, appendix T). *See* 40 CFR 50.17. The 2010 1-hour SO₂ NAAQS is violated at an ambient air quality monitoring site (or in the case of dispersion modeling, at an ambient air quality receptor location) when the 3-year average of the annual 99th percentile of the daily maximum 1-hour average concentrations exceeds 75 ppb, as determined in accordance with Appendix T of 40 CFR part 50. The existing primary (health-based) standard provides health protection for at-risk groups against respiratory effects following short-term (e.g., 5-minute) exposures to SO₂ in ambient air.

B. SO₂ NAAQS Implementation

After EPA promulgates a new or revised NAAQS, EPA is required to designate all areas of the country as either "nonattainment," "attainment," or "unclassifiable," for that NAAQS pursuant to section 107(d)(1) of the Clean Air Act (CAA or Act). 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 EPA to complete the initial designations process within 2 years of promulgating a new or revised standard. If the Administrator has insufficient information to

¹ On February 25, 2019, based on a review of the full body of currently available scientific evidence and exposure/risk information, EPA retained the existing 2010 1-hour SO₂ primary NAAQS. *See* 84 FR 9866.

make these designations by that deadline, EPA has the authority to extend the deadline for completing designations by up to 1 year.

Through a Federal Register notice published on August 3, 2012, EPA announced that the Agency had insufficient information to complete the designations for the 2010 1-hour SO₂ standard within 2 years anticipated by the CAA and extended the designations deadline to June 3, 2013. *See* 77 FR 46295. EPA completed the first round of designations (“Round 1”)² 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 based on violating ambient air monitors. *See* 78 FR 47191 (August 5, 2013). At that time, EPA was not yet prepared to issue designations for the remaining areas of the country.

Subsequently, three lawsuits were filed against EPA in different United States (U.S.) District Courts alleging that the Agency had failed to perform a nondiscretionary duty under the CAA by not designating all portions of the country by the June 3, 2013, deadline. Under a consent decree entered by the court on March 2, 2015, in one of those cases, EPA was required to complete the remaining area designations according to a specific schedule with the following deadlines: July 2, 2016 (“Round 2”), December 31, 2017 (“Round 3”), and December 31, 2020 (“Round 4”).^{3,4}

² The term “Round” in this instance refers to which “round of designations.”

³ EPA signed Federal Register notices of promulgation for Round 2 designations on June 30, 2016 (*see* 81 FR 45039 (July 12, 2016)) and on November 29, 2016 (*see* 81 FR 89870 (December 13, 2016)). 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 EPA’s website for SO₂ designations at <https://www.epa.gov/sulfur-dioxide-designations>.

⁴ EPA signed Federal Register notices of promulgation for Round 3 designations on December 21, 2017 (*see* 83 FR 1098)(January 9, 2018) and on March 28, 2018 (*see* 83 FR 14597 (April 5, 2018)). EPA and state documents and public comments related to the Round 3 final designations are in the docket at regulations.gov with Docket ID No. EPA-HQ-OAR-2017-0003 and at EPA’s website for SO₂ designations at <https://www.epa.gov/sulfur-dioxide-designations>.

On August 21, 2015 (80 FR 51052), EPA separately promulgated air quality characterization requirements in a final rule entitled “Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standards,” also known as the DRR. The DRR required 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 EPA or state air agencies⁵ and to provide this information to inform EPA’s future designations. For states that chose to use ambient air monitoring to characterize air quality in areas with large SO₂ sources and satisfy the DRR, air agencies were required to deploy and begin operation of the monitors by January 1, 2017. EPA is required, pursuant to the March 2, 2015, court order, to finalize designations for the last remaining areas in the country (i.e., for those areas that deployed SO₂ monitors to characterize SO₂ air quality or Round 4) by December 31, 2020.

On September 5, 2019, EPA issued a guidance memorandum, from Peter Tsirigotis, Director of the Office of Air Quality Planning and Standards, entitled “Area Designations for 2010 Primary Sulfur Dioxide National Ambient Air Quality Standard – Round 4” (also known as Round 4 SO₂ Designation Guidance) to provide information on the schedule and process for Round 4 area designations, which will address areas such as the Beaverdam Township Area that have not yet been designated under the NAAQS. In EPA’s Round 4 SO₂ Designation Guidance, the Agency explained that EPA might consider, on a case-by-case basis, a designation other than nonattainment for areas with violating monitors where the source impacting the monitor has recently become subject to and is complying with permanent and federally enforceable SO₂

⁵ 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.

emission limits and modeling of those limits shows attainment of the 2010 SO₂ NAAQS, but the monitored design value does not yet account for these recent emissions reductions. EPA further explained that such new SO₂ emissions limits would need to be permanently federally enforceable and in effect before EPA finalizes the designation for the area for them to be considered in determining what available information is representative of the current air quality conditions in the area. EPA stated that in such circumstances, modeling of the new allowable emissions, which should follow the *Guideline on Air Quality Models* (Appendix W to 40 CFR part 51), can provide a more accurate characterization of current conditions at the time of designation than would monitoring of past conditions.

C. BRPP - Haywood County (Beaverdam Township)

BRPP, a subsidiary of Evergreen Packaging, is located in the City of Canton in Beaverdam Township, Haywood County, North Carolina, 25 kilometers (km) west of Asheville, North Carolina. The facility is located on a 200-acre site in downtown Canton on the Pigeon River. BRPP is a vertically integrated pulp and paper mill that produces specialty paperboard packaging products, and its primary operations are classified under North American Industry Classification System 322121 (Paper Except Newsprint Mills). The facility utilizes multiple boilers to produce steam for energy generation and provide heat for the pulping and paper making processes. The power boilers include two natural gas-fired package boilers: No.1 and No. 2 Natural Gas Package Boilers (Unit ID G11050 and G11051); two coal-fired boilers: Riley Coal (G11039) and Riley Bark Boiler (G11042); and one coal/biomass fired boiler: No. 4 Power Boiler (G11040). The facility also operates two recovery boilers. Through cogeneration, by utilization of steam-driven turbines, the facility produces most of the electricity and steam required to run internal operations. Product paper is produced from the pulp on four paper

machines. For additional facility process description, please see North Carolina's June 24, 2020, draft source-specific SIP revision.

BRPP was determined to be a source subject to further characterization pursuant to EPA's SO₂ DRR because the source emitted more than 2,000 tpy of SO₂ in 2014.⁶ In accordance with the DRR, through a letter dated June 30, 2016,⁷ DAQ chose the monitoring pathway to characterize SO₂ air quality in the vicinity of BRPP. In the Round 3 designation recommendation to EPA,⁸ North Carolina requested EPA designate the Beaverdam Township Area for the 2010 1-hour SO₂ NAAQS by the court-ordered December 31, 2020 (Round 4) deadline based on 3 years (2017-2019) of ambient air quality monitoring data at the Canton DRR site monitor (AQS ID: 37-087-0013).

Pursuant to the DRR, DAQ sited the Canton DRR site monitor near the area of maximum concentration (i.e., approximately 150 feet west of BRPP's fence line) in accordance with EPA's draft monitoring technical assistant documents (TADs)⁹ and regulatory monitoring requirements at 40 CFR part 58. The Canton DRR site monitor began operation on November 15, 2016, but did not begin reporting data until January 1, 2017.

IV. Why Did North Carolina Submit the Draft Source-Specific SIP Revision for BRPP?

⁶ Pursuant to the DRR, on January 15, 2016, North Carolina submitted to EPA a final list identifying DRR sources in the State (i.e., sources that emitted greater than 2,000 tpy of SO₂ emissions) including the BRPP facility in the Beaverdam Township Area.

⁷ Letter entitled "Characterization of Air Quality Near Facilities Subject to SO₂ Data Requirements Rule" from Pat McCrory, Governor of North Carolina, to Heather McTeer Toney, Regional Administrator for EPA Region 4. This letter is included in the docket for this proposed rulemaking and can be found at https://www.epa.gov/sites/production/files/2016-07/documents/north_carolina_source_characterization.pdf.

⁸ January 13, 2017, letter entitled "North Carolina's Recommendation on Boundaries for the 2010 1-hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standard" This letter can be found at <https://www.epa.gov/sites/production/files/2017-08/documents/nc-rec-3.pdf>.

⁹ See Draft SO₂ NAAQS Designations Source-Oriented Monitoring Technical Assistance Document, - February 2016 (<https://www.epa.gov/sites/production/files/2016-04/documents/so2monitoringtad.pdf>). North Carolina's 2016-2017 Monitoring Network Plan at <https://www.epa.gov/sites/production/files/2017-10/documents/ncplan2016.pdf>.

Subsequent to the Canton DRR site monitor commencing operation, the monitor measured a number of exceedances of the 2010 1-hour SO₂ standard in 2017. In an effort to address the SO₂ exceedances, North Carolina and BRPP entered into a Special Order by Consent 2017-002 (SOC)¹⁰ on October 9, 2017, to implement facility process modifications, upgrade existing control equipment, as well as to install new control equipment to comply with the Boiler Maximum Achievable Control Technology (MACT) standard¹¹ by May 20, 2019, that cumulatively resulted in control and reduction of facility-wide SO₂ emissions. The MACT standards control hazardous air pollutants (HAPs), and BRPP's planned facility improvements for HAPs also reduced SO₂ emissions. Specific to SO₂, the SOC required BRPP to submit to DAQ a permit application and modeling analysis by March 1, 2018, to characterize the facility's emission sources and develop allowable SO₂ emission limitations based on modeled predictions of ambient SO₂ concentrations.

On September 12, 2019, DAQ issued a modification to BRPP's title V permit (Permit No. 08961T26 or T26) reflecting the requirements of the SOC with DAQ regarding development of SO₂ allowable emission limits supported by DAQ's modeled prediction of those limits resulting in attainment of the SO₂ standard.¹² Subsequent title V permit modifications resulted in the current title V permit - 08961T29 or T29.¹³ North Carolina is requesting EPA incorporate

¹⁰ See Attachment 1 in DAQ's June 24, 2020, source-specific SIP revision found in the docket for this proposed action. SOC 2017-002 was entered into pursuant to North Carolina General Statute 143-215.110 by and between BRPP and the Environmental Management Commission.

¹¹ 40 CFR part 63 subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63.7480 - 63.7575).

¹² On February 28, 2018, BRPP submitted to DAQ a permit application for the significant modification of its title V operating permit in accordance with the SOC. See DAQ's June 24, 2020, source-specific SIP revision Attachment 2 entitled "Air Permit Application for Incorporation of SO₂ Emission Limits into the Canton Mill's Permit February 2018, Updated March 2019."

¹³ Permit T29 and other versions issued after T26 permit did not modify any SO₂ emissions limitations or significantly change the monitoring, recordkeeping, reporting, or testing requirements established in T26. See Footnote #1 above. For a description of permit modifications, see Table 2 in North Carolina's June 24, 2020 draft SIP submission (pages 13 through 16).

specific SO₂ emission limits and compliance parameters from permit T29 into the source-specific portion of the North Carolina SIP. DAQ established these specific SO₂ emission limits and compliance parameters pursuant to North Carolina's SIP-approved Rule 15A.NCAC.02D.0501(c), Compliance with the National Ambient Air Quality Standards. As stated in Section 2.2.J of permit T29, pursuant to 15A NCAC 02D .0501(c), when controls more stringent than named in the applicable emission standards in Section .0500 are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

V. What Criteria are EPA Using to Review this SIP Revision?

EPA is evaluating North Carolina's June 24, 2020, draft source-specific SIP revision on the basis of whether it strengthens North Carolina's SIP. As mentioned above, there are no source-specific SO₂ requirements for BRPP in North Carolina's SIP. The new SO₂ permit limits and associated operating restrictions, MRR, and testing compliance parameters in BRPP's title V operating permit number T29 are authorized under 15A NCAC 02D .0501(c), which expressly requires more stringent controls to prevent violations of ambient air standards. EPA preliminarily concurs that these requirements are in addition to and more stringent than generally applicable SO₂ control requirements in the SIP for BRPP and will therefore strengthen North Carolina's SIP. The adequacy of these SO₂ permit limits and compliance parameters for providing for attainment is not a prerequisite for approval of these requirements into the SIP. However, EPA is working with North Carolina in the context of the separate area designations action to analyze whether modeling of these new permitted emission limits, once made permanently federally enforceable, would demonstrate attainment of the NAAQS and provide a

more accurate characterization of current air quality conditions in the Beaverdam Township Area at the time of final designation than would the 3-year design value of the air quality monitor for the period of 2017-2019. If EPA approves these SO₂ permit limits and associated compliance parameters into the SIP in a timely fashion, EPA could evaluate a modeling demonstration that these limits provide for attainment as part of the rulemaking on the 2010 1-hour SO₂ NAAQS designation for the Beaverdam Township Area in Haywood County, North Carolina. However, if EPA approves this SIP under CAA section 110, such approval would not prejudge the outcome of EPA's forthcoming designation of the Beaverdam Township Area, as that future determination is occurring as part of a separate national notice and comment rulemaking under CAA section 107.¹⁴

VI. What Did North Carolina Submit in the Draft Source-Specific SIP Revision for BRPP?

North Carolina's June 24, 2020, draft source-specific SIP revision specifically requests that EPA incorporate into the SIP the maximum allowable SO₂ emissions limits for seven emissions sources, including operational and compliance requirements, from permit T29 because these units are the highest SO₂ emitting sources at the facility. These SO₂ emissions limits are listed in Table 1 below. Specifically, North Carolina's June 24, 2020, draft SIP revision requests that EPA incorporate specific permit conditions from section 2.2.J of permit T29 including portions of Table 2.2.J.1 and section 2.2.J.1.(c) through (i) which also include specific cross-

¹⁴ In the SIP submission, NC DAQ also references supplemental air quality modeling information NC DAQ previously provided to EPA to support approval of North Carolina's CAA section 110(a)(2)(D)(i)(I) "Good Neighbor" SIP for the SO₂ NAAQS. EPA is not taking any action regarding CAA section 110(a)(2)(D)(i)(I), nor is it prejudging any such submission or action.

reference permit conditions at section 2.2.D.1. These seven emission units are the No. 10 and 11 Recovery Furnaces (G08020 and G08021); No. 4 and 5 Lime Kilns (G09028 and G09029); and Riley Coal (G11039), Riley Bark (G11042) and No. 4 (G11040) Power Boilers.

Table 1. Permit T29 SO₂ Emission Limits Proposed for Incorporation into the North Carolina SIP

| Emission Unit ID | Emission Unit Description | SO₂ Permitted Emission Limit Title V Permit No. 08961T29 (lb/hr) |
|-------------------------|---|--|
| G08020 | No. 10 Recovery Furnace-BLS-normal Operation | 28.0 |
| | No. 10 Recovery Furnace-ULSD – startup and shutdown | 0.54 |
| G08021 | No. 11 Recovery Furnace-BLS – normal operation | 28.0 |
| | No. 11 Recovery Furnace-ULSD – startup and shutdown | 0.54 |
| G09028 | No. 4 Lime Kiln | 6.28 |
| G09029 | No. 5 Lime Kiln | 10.47 |
| G11039 | Riley Coal Boiler | 61.32 |
| G11040 | No. 4 Power Boiler | 82.22 |
| G11042 | Riley Bark Boiler | 68.00 |

BRPP implemented facility improvements and control measures to reduce SO₂ emissions and corresponding ambient SO₂ concentrations to comply with the 2010 1-hour SO₂ NAAQS. Specifically, in response to the SOC, BRPP implemented the construction, installation, and operation of multiple process improvements from March 28, 2015 to May 20, 2019. These improvements are discussed in Table 2 of North Carolina’s June 24, 2020, draft SIP revision and summarized below.

On March 29, 2016, DAQ issued an air construction permit authorizing BRPP to proceed with facility-wide modifications for purposes of compliance with the Boiler MACT standards. On May 23, 2017, BRPP began operating two new natural gas-fired boilers, No.1 and No. 2 natural gas package boilers (G11050 and G11051). BRPP permanently shut down coal-fired boiler, Big Bill (G11037) on July 12, 2017, and Peter G (G11038) on November 30, 2017, to

reduce SO₂ emissions. The two new natural gas package boilers replace these two coal-fired units. On November 17, 2017, BRPP installed natural gas burners on the No. 4 Power Boiler (G11040). BRPP commenced operation of new wet scrubbers on the Riley Coal (G11039) and the No. 4 Power Boilers on June 29, 2018, and August 1, 2018, respectively. On November 7, 2018, BRPP completed the conversion of auxiliary fuel for the recovery furnaces No. 10 and No. 11 (G08020 and G08021) from No. 6 fuel oil to ultra-low sulfur diesel (ULSD) fuel.

On November 12, 2019, DAQ issued permit T26, which established facility-wide enforceable SO₂ emission limits for 19 emission units at BRPP that emit SO₂ and associated operating restrictions, MRR and testing compliance parameters. Table 2.2.J.1 of permit T29 lists the maximum permitted SO₂ emission limits established at BRPP. These control measures implemented at BRPP between 2017 and 2019 resulted in the reduction of actual SO₂ emissions from 5,875 tons in 2017 to 405 tons in 2019, a 93 percent reduction (reduction of 5,470 tons). Between 2018-2019 the facility reduced emissions from 2,901 tons to 405 tons, respectively) or 86 percent (2,496 tons).

Below is a description of the seven major SO₂-emitting units at BRPP with emissions limits that DAQ has requested EPA incorporate into the North Carolina SIP to ensure the modeled emission limits are permanently federally enforceable for each emission unit:

- **No. 10 and No. 11 Recovery Furnace (G08020 and G08021)** - These two emission units recover pulping chemicals from spent pulping liquor (black liquor). Each recovery furnace is subject to a pair of SO₂ permitted limits based on ULSD and black liquor solids (BLS) fuel usage. The ULSD is used specifically during startup and shutdown, and the BLS is used during normal operation. During start-up, fuel oil is burned for a period of time to warm up the furnace. The exhaust parameters during startup differ from

that of normal operation (i.e., the exhaust flow and temperature are lower when only startup fuel is being fired). Each recovery furnace is subject to two enforceable SO₂ emission limits for start-up and shutdown (0.54 pounds per hour (lb/hr)) firing only ULSD fuel oil (with a maximum sulfur content of 15 parts per million (ppm))(section 2.2.J.1.c.i.) and a separate enforceable emission limit of 28.0 lb/hr when firing black liquor solids. These units are not equipped with control devices and are required to conduct source testing annually under condition 2.2.J.1.d to determine compliance with the emission limits listed in Table 2.2.J.1. of title V permit T29 and are required to maintain records for start-up and shutdown operations and fuel oil supply.

- **No. 4 Power, Riley Coal, and Riley Bark** – These coal-fired boilers are subject to enforceable SO₂ emission limits of 82.22 lb/hr, 61.32 lb/hr and 68.00 lb/hr, respectively. These coal-fired boilers are operated to produce steam for energy generation and provide heat for the pulping and paper making processes. The Riley Coal and No. 4 Power Boilers are each equipped with a caustic wet scrubber, and the Riley Barker has a venturi-type wet scrubber with caustic addition. For the three boilers, the wet scrubber on each boiler is required to be operated continuously and is considered a part of the physical and operational design of the boilers. Each scrubber is subject to MRR, testing, and compliance certification requirements specified in T29 permit conditions 2.2.J.1.c.i.vii and 2.2.J.1.(d) through (i) which include Boiler MACT parametric monitoring requirements.¹⁵ These three coal-fired units are not equipped with continuous emission

¹⁵ Parametric monitoring is a common method to ensure continuous compliance with an emissions limit in lieu of continuous direct sampling/monitoring of the subject pollutant, in this case SO₂. This is a common regulatory approach used in various Federal regulations such as the MACT and New Source Performance Standards (NSPS). In parametric monitoring, certain performance parameters that are critical to the proper operation of the emission control device are continuously monitored. These parameters can include scrubber recirculation flow, pH, and

monitoring system (CEMS) to continuously collect, record, and report emission data for compliance with an array of enforceable emission standards and other regulatory requirements. In lieu of CEMS, the permit requires BRPP to install, operate, and maintain a continuous monitoring system (CMS)¹⁶ for the wet scrubbers parametric monitoring pursuant to the Boiler MACT monitoring requirements at 40 CFR 63.7525 (d) through (g) and § 63.7535.¹⁷ BRPP is required to continuously monitor the minimum scrubbing liquid pH and recirculation liquid flowrate to verify compliance with the applicable SO₂ emissions for these three boilers. Minimum parametric values for the scrubbing liquid pH and recirculation liquid flowrate are established through performance testing and shown in Table 2.2 J.2 of permit T29 for the wet scrubbers (permit conditions 2.2.J.1.c.vii.A through E). The facility is required to determine the source-specific scrubber liquid pH and flow rate calculated as 3-hour block averages based on three 1-hour source test runs to determine continuous compliance with the SO₂ permit limit in Table 2.2 J.1 as required at condition 2.2.J.1.c.vii. Condition 2.2.J.1.c.vii.E. requires BRPP to maintain the parametric scrubbing flow rate and pH levels at or above the minimum levels confirmed or re-established by the most recent performance test performed pursuant to condition 2.2.J.1.d and approved by DAQ that demonstrates

pressure drop. The compliance parameter minimum levels are typically established during emission source testing to ensure operating at those parameter levels meets the underlying emission control requirement.

¹⁶ 40 CFR 63.1 defines CMS as a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.

¹⁷ Pursuant to 63.7525 (d) through (g), BRPP must operate the CMS in accordance with the criteria on the collection of data and recordkeeping, inspection, and validation requirements at 63.7525(d) (except (d)(4)) and 63.7535; and must meet the criteria for the operation of flow and pH sensors of 63.7525(e) and (g). In lieu of the 30-day rolling average per 62.7525(d)(4), BRPP is required to maintain the 3-hour block average for the parameters in Table 2.2.J.2 at or above the levels required in the permit.

compliance with the corresponding emission limits. Maintaining the 3-hour block averages for the pH and scrubber liquid flow at or above the minimum values is expected to result in maintaining compliance with emission rate. For the Riley Coal, Riley Bark, and No. 4 Power Boiler scrubbers, Table 2.2 J.2 identifies the parameters that BRPP is required to monitor - the minimum pH and recirculation flow rate (gpm) and provides the values for pH and recirculation flow rate (gpm) from the most recent SO₂ performance testing, and the date of the latest testing for the three coal-fired boilers. Table 2.2 J.2 simply shows the values confirmed or re-established by the most recent performance testing that demonstrated compliance at the time of permit issuance as explained in condition 2.2.J.vii.E. For purposes of the source-specific SIP revision, condition 2.2.J.vii.E provides the enforceable provision for parametric monitoring – BRPP is required to meet the minimum values confirmed or re-established in the most recent performance testing. BRPP is required to conduct periodic performance testing of the wet and venturi scrubbers. If the currently applicable parametric values are revised in subsequent performance testing,¹⁸ the newly established values are enforceable upon approval by DAQ.¹⁹ Deviations from the applicable parameters must be reported to the DAQ. For the Riley Coal and No. 4 Power Boilers, testing is required on an annual basis or, once a test is conducted such that the results of the test are less than 80 percent of the SO₂ emission limit, BRPP will be required to stack test only once every five years as

¹⁸ The initial parametric monitoring ranges identified in Table 2.2.J.2 have already been established by performance tests; any tests conducted subsequent to that time are used to either confirm that the monitoring ranges are still valid or to re-establish new ranges if the tests indicate that is necessary.

¹⁹ If revised parametric values are approved based on subsequent performance testing, the permit may be revised to change the values shown in Table 2.2 J.2, pursuant to condition 2.2.J.e.

required at condition 2.2.J.1.d Table 2.2 .J.3 in T29 identifies which units are subject to performance testing as required at condition 2.2.J.1.d.

- **No. 4 and No. 5 Lime Kilns** – The No. 4 Lime Kiln (G09028) is subject to an enforceable SO₂ emissions limit of 6.28 lb/hr and is equipped with a wet scrubber. The No. 5 Lime Kiln (G09029) is subject to an enforceable SO₂ emissions limit of 10.47 lb/hr and equipped with a venturi-type wet scrubber.²⁰ These two emission units are part of the Kraft pulp mill chemical recovery cycle and, following startup, they calcine lime mud (CaCO₃) to produce lime product (CaO). During normal operation, the kilns emit very little SO₂ because the calcium in the lime mud acts as a natural scrubbant by absorbing sulfur. The wet scrubbers are primarily in place to control emissions of particulate matter (PM) and total reduced sulfur (TRS), as required at condition 2.1.O.1, but also control emissions of SO₂ during startup and can provide some control of SO₂ during normal operation. The lime kilns burn a combination of No. 6 fuel oil and natural gas during both startup and normal operation, with the majority of the heat input coming from natural gas. The kilns go through startup approximately once per month for Kiln No. 4 and every other month for Kiln No. 5. To ensure compliance with the hourly SO₂ emissions limit, BRPP is required to continuously operate the scrubbers and comply with the operating restrictions, testing, recordkeeping, and reporting requirements set forth in conditions 2.2.J.1.d through (i) including Table 2.2 J.3. In the case of the lime kilns, the parametric monitoring requirements for SO₂ in permit T29 refer to pre-existing air permit and

²⁰ Source testing was conducted on each lime kiln during normal operation, and the source test results showed that the emission rate for each kiln was much lower than the emission rate, calculated using the emission factor that was used to establish the SO₂ limit. The permitted emission rate is therefore conservative, and normal emission rates are expected to be quite low, based on stack test results, and contribute little to the facility's ambient SO₂ impact.

regulatory requirements for proper scrubber operation and air emissions control in condition 2.2.D.1, which establish conditions for the Federal MACT Standard 40 CFR part 63 Subpart MM “*National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources.*” As such, the facility is required to operate the scrubbers for PM control (which also results in SO₂ control) by regulations that are in addition to the SO₂ control requirements specified in condition 2.2.J of permit T29. These requirements, namely conditions 2.2.D.1(f) through (r) as they apply to lime kilns #4 and 5, are cross referenced in condition 2.2.J.1 of the permit as the basis to ensure compliance with the SO₂ emission limits in Table 2.2 J.1. Thus, BRPP must install, calibrate, maintain, and operate a continuous parameter monitoring system that can be used to determine and record the pressure drop across each scrubber and the scrubbing liquid flow rates. These parameters are continuously monitored, recorded, and reduced to 3-hour averages for comparison to the minimum operating limits established in accordance with condition 2.2.D.1.h and those in Table 2.2 D.2. Parameters must be maintained above the minimum established values. Deviations from the established parameters must be reported to DAQ. To verify compliance with the emission limitations in permit T29, BRPP is required to perform annual testing or, once a test is conducted such that the results of the test are less than 50 percent of the emission limit, the facility is required to stack test only once every five years pursuant to condition 2.2.J.1.d. This reduction in testing frequency for sources with control devices, monitored operating parameter limits, and margins of compliance are consistent with the federal rules applicable to the facility (i.e., NSPS, MACT, compliance assurance monitoring, and title V) and EPA guidance. BRPP is in the process of upgrading its scrubbers for lime

kilns 4 and 5. Thus, in the permit T29, Table 2.2 D-2 establishes operating parameter limits for operations prior to and after the upgrades. For lime kiln #4, recirculation liquid flow and differential pressure must meet the minimum operating limits established in Table 2.2 D-2 identified as applicable prior to the upgrade. Following the upgrade, BRPP will be required to meet the minimum values for these parameters recommended by the manufacturer as an interim measure and will be required to conduct testing to establish site-specific limits. Similarly, for lime kiln #5, the permit requires BRPP to meet minimum operating limits in Table 2.2 D-2 prior to the upgrade. Lime kiln #5 uses a venturi-type scrubber and is required to meet minimum limits for venturi liquid flow, quench liquid flow, and differential pressure. Again, following the upgrade, this scrubber is required to meet manufacturer's recommended minimums for these parameters as an interim measure and conduct testing to establish site-specific limits. NC DAQ interprets condition 2.2.J.1.c.iii to require BRPP to meet the operating limits in Table 2.2 D-2, including any operating limits established through testing under 2.2.D.1.h, in accordance with the monitoring exceedance provision 2.2.D.1.j., to ensure the SO₂ emission limitations in Table 2.2 J.1 will not be exceeded for these lime kilns. The scrubber-specific minimum monitoring parameters from performance tests approved by the DAQ will supersede the manufacturer's recommended limits without requiring a permit or SIP revision.

VII. Incorporation by Reference

In this document, EPA is proposing to include, in a final EPA rule, regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing the incorporation by reference into North Carolina's SIP the conditions identified

below from title V operating Permit No. 08961T29 issued by DAQ to BRPP with an effective date of June 2, 2020. These permit conditions relate to enforcement of and compliance with SO₂ emission limitations at BRPP for seven SO₂ emitting units. Specifically, DAQ has requested EPA incorporate into the North Carolina SIP condition 2.2.J.b and the lb/hr SO₂ emission limitations in Table 2.2 J.1 for the No. 10 and No. 11 Recovery Furnaces (G08020 and G08021), No. 4 and No. 5 Lime Kilns (G09028 and G09029) and Riley Bark, Riley Coal, and No. 4 Power Boilers (G11042, G11039 and G11040). North Carolina has also requested EPA incorporate into the SIP the following operating, MRR, and testing conditions to ensure compliance with SO₂ emission limitations identified in Table 2.2 J.1 of condition 2.2.J.1.b: (1) for the No. 10 and No. 11 Recovery Furnaces (G08020 and G08021) - condition 2.2.J.1.c.i; (2) for No. 4 and No. 5 Lime Kilns (G09028 and G09029) - condition 2.2.J.1.c.iii; condition 2.2 D.1.f.ii; Table 2.2.D-2; condition 2.2 D.1.h; condition 2.2 D.1.i.ii; condition 2.2 D.1.j.ii; conditions 2.2 D.1.l.ii, 2.2 D.1.l.iii, 2.2 D.1.l.iv, 2.2 D.1.l.v, 2.2 D.1.l.vii, and 2.2 D.1.l.viii; condition 2.2 D.1.m; condition 2.2 D.1.n; condition 2.2 D.1.o, and condition 2.2 D.1.p.iii; (3) for the Riley Bark, Riley Coal and No. 4 Power Boilers (G11042, G11039 and G11040) - condition 2.2.J.1.c.vii, including Table 2.2 J.2; (4) Testing – condition 2.2.J.1.d and Table.2.2 J.3, (5) condition 2.2.J.1.e; (6) Recordkeeping - conditions 2.2 J.1.g.i, 2.2 J.1.g.ii, and 2.2 J.1.g.iii; (7) Reporting - conditions 2.2.J.1.h and 2.2.J.1.i. EPA has made, and will continue to make, these materials generally available through www.regulations.gov and at the EPA Region 4 Office (please contact the person identified in the “**FOR FURTHER INFORMATION CONTACT**” section of this preamble for more information).

VIII. Proposed Action

EPA is proposing to approve SO₂ emissions limits and associated operating restrictions,

MRR, and testing compliance parameters from BRPP's title V operating permit T29 into the North Carolina SIP. EPA confirms that the SO₂ emissions limits and associated operating restrictions, MRR, and testing compliance parameters for BRPP are more stringent than requirements that are currently approved into the North Carolina SIP for BRPP. By incorporating these SO₂ permit limits and associated operating restrictions, MRR, and testing compliance parameters into the North Carolina SIP, these requirements will become permanently federally enforceable and strengthen the North Carolina SIP.

IX. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. This action merely proposes to approve 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 application of those requirements would be inconsistent with the CAA; and
- Does not provide 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 SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference,
Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides.

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

Dated: July 31, 2020.

Mary Walker,
Regional Administrator,
Region 4.

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