

**BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

IN THE MATTER OF THE PROPOSED )  
TITLE V/STATE OPERATING PERMIT NO. 561209 )  
SIGNIFICANT MODIFICATION FOR )  
 )  
TENNESSEE VALLEY AUTHORITY )  
GALLATIN FOSSIL PLANT, )  
SUMNER COUNTY, TENNESSEE )  
 )  
ISSUED BY THE TENNESSEE )  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION )  
\_\_\_\_\_ )

**PETITION TO THE EPA ADMINISTRATOR TO OBJECT TO ISSUANCE OF THE  
PROPOSED TITLE V OPERATING PERMIT SIGNIFICANT MODIFICATION  
FOR THE GALLATIN FOSSIL PLANT**

Pursuant to Section 505 of the Clean Air Act, the Sierra Club hereby petitions the Administrator of the United States Environmental Protection Agency (“EPA”) to object to the proposed significant modification to Title V operating permit No. 561209 (hereinafter “Gallatin Permit”) issued by the Tennessee Department of Environment and Conservation (“TDEC”) for the Tennessee Valley Authority Gallatin Fossil Plant (hereinafter “Gallatin”) in Sumner County, Tennessee. The Clean Air Act (“CAA”) mandates that EPA shall grant or deny any such petition within sixty days of its filing and that the Administrator “shall issue an objection . . . if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of [the Clean Air Act].” 42 U.S.C. § 7661d(b)(2).

As demonstrated below, the Gallatin Permit is not in compliance with applicable requirements; therefore, objection by EPA is proper. *See id.* Specifically, the Gallatin Permit lacks appropriate testing and monitoring conditions and terms necessary to assure compliance with the applicable requirements limiting visible emissions and particulate matter (“PM”) from the Plant’s coal-fired units. In addition, the sulfur dioxide (“SO<sub>2</sub>”) emissions limit for these units is based on an improper 30-operating day rolling average basis.

These objections were timely raised in Sierra Club’s comments on the Gallatin Permit, submitted to TDEC on August 9, 2017. *See* Sierra Club Comments Concerning the Draft TVA Gallatin Title V and Acid Rain Permit Nos. 83-0025/561209 and 83-0025/863258 (hereinafter “Sierra Club Comments”), attached hereto as Exhibit 1. EPA’s 45-day review period on the

Gallatin Permit ended on November 5, 2017, and the 60-day public petition period ends January 4, 2018, making this petition timely. *See* EPA Webpage: Tennessee Proposed Title V Permits, <https://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits>, screenshot attached hereto as Exhibit 2.

## **I. The Gallatin Permit Fails to Satisfy Part 70 Requirements**

CAA section 504(c), and implementing regulations in 40 C.F.R. 70.6(a)(3)(i) and 70.6(c)(1), require all Title V permits to contain compliance certification, testing, monitoring, reporting, and recordkeeping requirements to assure compliance with permit terms and conditions. Particularly, monitoring requirements must “assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement.” 40 C.F.R. § 70.6(a)(3)(i)(B); 40 C.F.R. § 70.6(c)(1) (requiring “compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit”) (emphasis added). These Part 70 requirements consist of both “periodic” and “umbrella” monitoring rules and describe the steps permitting authorities must take to fulfill the monitoring requirement under CAA section 504(c). *See* 40 C.F.R. §§ 70.6(a)(3)(i)(A), 70.6(a)(3)(i)(B), 70.6(c)(1); *see also In re TVA Bull Run*, Petition No. IV-2015-14 (EPA Nov. 10, 2016) at 7-8, available at [https://www.epa.gov/sites/production/files/2016-11/documents/tva\\_bull\\_run\\_order\\_granting\\_petition\\_to\\_object\\_to\\_permit\\_.pdf](https://www.epa.gov/sites/production/files/2016-11/documents/tva_bull_run_order_granting_petition_to_object_to_permit_.pdf).

The periodic monitoring rule provides that where an applicable requirement does not, itself, “require periodic testing or instrumental or noninstrumental monitoring,” the permit-writer must develop terms directing “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B); 40 C.F.R. § 70.6(c)(2)(iv) (requiring that substances and parameters are to be sampled and monitored at reasonable intervals so as to assure compliance with the permit or applicable requirements); *see, e.g., Sierra Club v. EPA*, 536 F.3d 673, 675 (D.C. Cir. 2008) (noting that a yearly monitoring requirement would not likely adequately address a daily maximum emission limit).<sup>1</sup> In other words, if compliance with a given applicable requirement is a condition of the permit, the permit must contain monitoring of a frequency and type sufficient to assure compliance to the emitter, to the permitting authority, and to the public.

In instances where governing regulations set forth monitoring requirements inadequate to ensure compliance with certain applicable standards, the Title V permit must supplement those requirements to the extent necessary to ensure compliance with the permit’s terms and conditions. *See Sierra Club*, 536 F.3d at 678 (setting forth the steps and reiterating the necessity to supplement monitoring requirements: “[w]e read Title V to mean that someone must fix these inadequate

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<sup>1</sup> *See also* U.S. EPA, Objection to Proposed Title V Operating Permit for TriGen-Colorado Energy Corporation (Sept. 13, 2000) (“a one-time test does not satisfy the periodic [PM] monitoring requirements” under the CAA), available at <https://www.epa.gov/sites/production/files/2015-07/documents/trigen.pdf>.

monitoring requirements.”). This “umbrella” monitoring rule, 40 C.F.R. § 70.6(a)(3)(C), backstops the periodic requirement by making clear that permit writers must also correct “a periodic monitoring requirement inadequate to the task of assuring compliance,” *Sierra Club*, 536 F.3d at 675. EPA has confirmed the rigor of Title V permit monitoring requirements. *See Bull Run* at 8 (concluding that “[t]he rationale for the monitoring requirements selected by a permitting authority must be clear and documented in the permit record” and that adequate monitoring is determined by careful, context-specific inquiry into the nature and variability of the emissions at issue); *see also* In the Matter of EME Homer City Generation LP Indiana County, Penn, Order on Petition Nos. III-2012-06, III-2012-07, III-2013-02 (Jul. 30, 2014) at 45, available at [https://www.epa.gov/sites/production/files/2015-08/documents/homer\\_response2012.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/homer_response2012.pdf). As explained below, the Gallatin Permit fails to meet these Part 70 requirements with regard to its limits and standards for visible emissions and PM emissions.

**A. The Gallatin Permit Includes Impermissibly Lax Compliance Requirements for Visible Emissions from Coal-Fired Units 1-4**

The Gallatin permit improperly contemplates opacity compliance being assessed twice a year through visual emissions inspection, despite the applicable requirement setting short-term limits on opacity—opacity must never exceed 20%, except for one six minute period per hour of no more than 40% opacity. *See* Gallatin Permit at 28. TDEC is obligated under the CAA and Title V implementing regulations to ensure that compliance assessments for this opacity standard are designed to adequately and accurately assure compliance with the applicable requirement. However, semiannual visual inspections, amounting to observation during less than a tenth of a percent of Gallatin’s operating time, are simply not adequate.<sup>2</sup>

As noted above and in Sierra Club’s comments on the Gallatin Permit, Title V permits must contain sufficient monitoring and reporting requirements to assure compliance with emission limits. *See* 40 C.F.R § 70.6(a)(1), § 70.6(a)(3), and § 70.6(c)(2). Again, in instances where an applicable requirement does not, itself, “require periodic testing or instrumental or noninstrumental monitoring,” the permit-writer must develop terms directing “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B); 40 C.F.R. § 70.6(c)(2)(iv). Where governing regulations set forth monitoring requirements inadequate to ensure compliance with certain applicable standards, a permit writer must supplement those requirements to the extent necessary to ensure compliance with the permit’s terms and conditions. *See* 40 C.F.R. § 70.6(a)(3)(C); *see also Sierra Club*, 536 F.3d at 675.

Here, TDEC’s election to require visual inspections just twice a year to evaluate an applicable opacity limit that could be violated in as little as six minutes undeniably and egregiously

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<sup>2</sup> This is particularly the case given that continuous opacity monitoring technology is readily available, and is indeed already installed at Gallatin, as discussed more below.

fails the CAA requirement that such monitoring be “sufficient to yield reliable data . . . that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B). Plainly, a permit limit applicable *every six minutes* is hardly meaningful if the pollutant to be limited is not monitored more than once *every six months* (or longer where the regulated source alleges that “a valid reading cannot be made”). See Gallatin Permit at 28. The Permit’s biannual Method 9 visual evaluations are clearly inadequate to assure compliance with the Permit’s applicable visible emissions limit. See *Bull Run* at 11 (finding that biannual Method 9 visual evaluations are inadequate to assure compliance with the applicable Tennessee SIP opacity limit of 20% (6-minute average) except for one six-minute period per hour of not more than 40% opacity); see also *In the Matter of Pacificorp’s Jim Bridger and Naughton Electric Utility Steam Generating Plants*, Order on Petition No. VIII-00-I (Nov. 16, 2011) at 19 (finding that quarterly Method 9 observations are inadequate to assure compliance with a SIP opacity limits within the meaning of 40 C.F.R. § 70.6(c)(1), available at <https://www.epa.gov/sites/production/files/2015-08/documents/woc020.pdf>). Thus, the Proposed Permit fails to satisfy the monitoring requirements of 40 C.F.R. § 70.6(a)(3)(i)(A), (B), (c)(1).

Indeed, TDEC has failed to explain how the Gallatin Permit’s biannual Method 9 observations assure compliance with the applicable visible emissions limit.<sup>3</sup> See Gallatin Permit at 28; see also *Homer City* at 45 (finding that the permitting authority did not adequately explain how a weekly Method 9 observation assured compliance with the opacity limits in the permit); *In the Matter of Public Service Co. of Colorado, dba Xcel Energy, Pawnee Station*, Order on Petition No. VIII-2010-XX (Jun. 30, 2011) at 20-21 (finding authority did not adequately explain how annual Method 9 testing assured compliance with the opacity limits in the permit), available at [https://www.epa.gov/sites/production/files/2015-08/documents/xcel\\_pawnee\\_response2010.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/xcel_pawnee_response2010.pdf).

TDEC’s inclusion in the Gallatin Permit of a requirement to “operate the continuous opacity monitoring system (COMS) to provide an indication of good operational and maintenance practices” for the Plant’s coal-fired units and associated control device, Gallatin Permit at 28, is insufficient to remedy the Permit’s supremely inadequate Method 9 visible emissions monitoring requirements. The Plant’s COMS data must not be used simply as an indicator of proper operation to *presume* compliance with the Permit’s opacity limit. For sure, it is illogical to have a monitoring system that is capable of directly and continuously monitoring opacity and provides absolute evidence of compliance with the applicable visible emissions standards and then only use that monitoring data as an *indicator* of whether the Plant’s units and pollution controls are being

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<sup>3</sup> Tellingly, TDEC nowhere argues that biannual visual inspections are adequate to ensure compliance with a six-minute standard. Nor could it. Plainly, looking at the plume emitted from a smokestack once every six months fails to tell either the emitter, TDEC, members of the public, or EPA anything about whether or not the facility had complied or failed to comply with a six-minute standard over the 262,800 minutes in the preceding six months and fails to assure compliance with the limit over the next 262,800 minutes.

properly operated at levels that *should* assure compliance with the applicable visible emissions limits.

The claim that Gallatin’s COMS may measure opacity for individual boilers rather than the “fuel burning installation” in no way relieves TDEC of its duty to produce a permit that includes “compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit.” 40 C.F.R. § 70.6(c)(1). The apparent failure of TVA to install COMS at a point at which they would provide useful information about compliance with the Permit’s visible emissions limit simply does not excuse TDEC from its obligation to sufficiently assure compliance with the applicable Tennessee SIP standard for visible emissions. Indeed, to do so would create perverse incentives on the part of regulated major sources to deliberately install monitoring equipment in improper places. Rather, TDEC still must include in the Gallatin Permit a set of monitoring requirements sufficient to assure that TVA, TDEC, the public, and EPA are able to ascertain whether or not Gallatin is complying with its visible emissions limit. The fact that Gallatin actually *has* equipment to continuously monitor its opacity (albeit in the wrong place) and thereby could readily provide information detailing its compliance with the six-minute opacity standard is, contrary to TDEC’s suggestion, a powerful testament to the conclusion that the Gallatin Title V permit should require such continuous monitoring to demonstrate compliance with the applicable visible emissions limit. Having COMS in the wrong place does not negate TDEC’s obligation to require COMS in the right place. Accordingly, EPA should object to TDEC’s permit.

Finally, the Permit grants an exemption from its already deficient opacity monitoring requirements, allowing the permittee to forego even the infrequent biannual Method 9 readings where “a valid reading cannot be taken.” *See* Gallatin Permit at 28. As a result, the Permit’s awfully inadequate monitoring method for visible emissions is essentially meaningless. Allowing the permittee to forego the biannual Method 9 readings for Units 1-4, conditioned only the permittee’s reporting of “its efforts to obtain valid readings, and the reasons it could not,” *id.*, fails to assure compliance with the applicable emissions standard, invites manipulation, is wholly improper, and finds no justification in law. Failure to conduct sufficient monitoring or testing for visible emissions constitutes an enforceable violation of the CAA. Thus, EPA should object to the Gallatin Title V Permit on these grounds, as well.

**B. The Gallatin Permit Includes Impermissibly Lax Compliance Requirements for Particulate Matter Emissions from Coal-Fired Units 1-4**

Similarly, the Gallatin Permit fails to require monitoring of PM emissions from its coal-fired boilers adequate to assure compliance with the applicable emissions limits. Specifically, the Title V permit lacks testing and monitoring for PM sufficient to assure compliance with the continuous 0.100 lbs/MMBtu PM limit and the 0.030 lb/MMBtu limit applicable on and after December 31, 2017, set forth in Permit Condition E3-4(SM1). *See* Gallatin Permit at 26. This permit condition requires source testing to determine compliance with the applicable PM

emissions limits within 180 days of December 31, 2017 and, otherwise, only once every calendar year. *See* Gallatin Permit at 26.

The only other emissions monitoring requirement in Permit Condition E3-4 supposedly meant to assure compliance with the permit's continuous 0.100 lb/MMBtu and 0.030 lb/MMBtu PM emissions limits is the requirement that the Plant operate its COMs to provide an indication of good operational and maintenance practices. *Id.* However, even with consideration of COMS data as an indicator of "proper operation and maintenance of the control device and associated capture system," TDEC Response to Comments at 6, the contemplated monitoring scheme for PM emissions from the Plant's boilers (i.e. annual stack testing + COMS as an indicator of proper PM control) is inadequate. Without direct continuous monitoring of PM emissions or, at the very least, an appropriately robust set of secondary performance indicators in addition to COMS data to ensure adequate PM control, the terms of the Gallatin Permit fail to comply with the Clean Air Act.

**1. *The Compliance Requirements for Particulate Matter Emissions from the Plant's Coal-Fired Boilers Are Inadequate***

In accordance with the CAA and its implementing regulations, the monitoring requirements of 40 C.F.R. § 70.6(a)(3)(i)(A) and (B) and (c)(1) must be satisfied in regards to the applicable PM emission limits for Gallatin's coal-fired units. However, the terms and conditions in the Gallatin Permit fail to meet these essential requirements.

First, the frequency of direct testing of PM emissions required by the Gallatin Permit is inadequate to assure compliance with the continuous 0.100 and 0.030 lb/MMBtu limits. The Gallatin Permit states that stack testing shall be performed every calendar year and that the Plant may use the annual stack test requirement established in the 2011 Consent Decree to satisfy its obligation to conduct a performance test. Gallatin Permit at 26.<sup>4</sup> Such infrequent testing of PM emissions fails to satisfy the requirements of 40 C.F.R. part 70.6; monitoring PM from Units 1-4 only once a year is inadequate to assure continuous compliance with the 0.100 and 0.030 lb/MMBtu emissions limits for PM. In accordance with the CAA, the Gallatin Permit's emission limits must, instead, be accompanied by periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of Gallatin's compliance with its Title V permit and the applicable PM emissions limits.

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<sup>4</sup> Permit Condition E2-6 separately states that the Plant "will demonstrate compliance with a particulate matter (PM) limit of 0.030 lb/MMBtu on a 30 boiler operating day rolling average with a PM CEMS or based on quarterly stack testing." Gallatin Permit at 21. However, this monitoring requirement has not been included in Permit Condition E3-4, which sets forth the PM-specific limits and monitoring requirements for Units 1-4. The permit must be clear on which method Gallatin will employ and include that requirement under the Compliance Method section of Permit Condition E3-4

Second, the Permit's Compliance Assurance Monitoring ("CAM") plan for PM referenced by TDEC, *see* Response to Comments at 5-6, is likewise insufficient to yield reliable data from the relevant time period that is representative of compliance with the Permit's PM emissions limits for Units 1-4. The requirement in the Permit to operate the units' PM control device together with the CAM plan requirement to operate the COMS to provide an indication of good operational and maintenance practices, Gallatin Permit at 26, does not cure the inadequate stack testing requirements.

In addition to requiring that opacity is measured by COMS, proper operation of the PM control device for Units 1-4 must be assured in the Plant's CAM plan through: (1) the selection of representative control device operating parameters (such as pressure drop, fan amperage, voltage, flow rates, temperature, etc.); (2) establishment of indicator ranges for the operating parameters (accounting for site-specific factors such as margin of compliance, emissions control variability, correlation with emissions, historical data, similar sources, and emission testing data); and (3) establishment of appropriate data collection and averaging times. Indeed, the Plant's CAM plan must employ appropriate and robust secondary performance indicators which will serve to identify potential problems in the operation and maintenance of the units' control device and prompt the permittee to take corrective action before there is a deviation from an applicable PM emission limitation/control requirement. Sufficiently monitored particulate control is essential to assuring compliance with the applicable emissions limit where continuous direct monitoring of PM emissions is not required in the permit. Because the Gallatin Permit fails to set forth any such CAM plan requirements, the monitoring scheme for the Plant's PM emissions is inadequate. If TDEC is to rely on a CAM plan to ensure compliance with the permit's PM limit, then the CAM plan must be revised.

As demonstrated above, because the Gallatin Permit does not contain requirements that assure compliance with the PM emission limits for Units 1-4, EPA should object to the permit and require the incorporation of more appropriately robust testing and monitoring requirements for the Plant's PM emissions, in accordance with 42 U.S.C. § 7661c(c) and 40 C.F.R. §§ 70.6(a)(3), (c)(1).

**2. *Continuous, Direct Monitoring of Particulate Matter Emissions from the Plant's Coal-Fired Boilers Is Necessary***

The determination of adequate monitoring in a Title V permit is context-specific. *Bull Run* at 8. As a starting point for this determination, EPA has stated that a permitting authority should consider the following factors: (1) variability of emissions from the unit in question; (2) likelihood of violation of the requirements; (3) whether add-on controls are being used for the unit to meet the emission limit; (4) the type of monitoring, process, maintenance, or control equipment data already available for the emission unit; and (5) the type and frequency of the monitoring requirements for similar emission units at other facilities. *Id.*; *see also Homer City* at 45.

As it stands now, the Gallatin Permit's infrequent and intermittent annual compliance stack testing requirements will neither assure nor demonstrate compliance with the Plant's PM limitations, which are applicable on a continuous basis. Considering the afore-mentioned factors (1) and (3) together, the variability of emissions, especially as they relate to add-on controls used by Gallatin, strongly support more frequent stack testing and continuous PM monitoring from the Plant's coal-fired boilers. Gallatin employs a baghouse as the means of controlling PM emissions from Units 1-4. *See* Gallatin Permit at 25, Source Description. This control method, combined with the inherent variability of both the fuel burned in the Plant's boilers and the properties of flyash particles, as well as potential factors affecting baghouse performance, create a potentially significant degree of variability in Gallatin's PM emissions. As a result, it is highly unlikely that an occasional measurement (*e.g.* annual stack test) will accurately capture such variability and assure compliance with the unit's PM emission limit.

For Gallatin's coal-fired boilers, installation and operation of a continuous emissions monitoring system ("CEMS") for PM is the proper means of accurately monitoring such emissions, especially since, under factor (5) above, PM CEMS are increasingly employed for similar units at other facilities comparable to Gallatin. To truly assure compliance where emissions are variable, continuous direct monitoring of PM emissions is necessary.

In addition, stack tests are mere snapshots in time which do not indicate system performance during periods outside of the tests. As EPA is well aware, stack tests are scheduled well ahead of time. Sources equipped with add-on pollution controls such as baghouses, like Gallatin, have the opportunity to take advantage of that advance notice to perform work on their controls prior to testing in order to ensure favorable stack test results. Moreover, during stack tests, the Plant will presumably run its pollution control technology at full capacity to ensure the greatest emissions reductions, whereas normal operations may involve running those controls at reduced capacity. Hence, stack tests may not tell the public or regulatory agencies whether the source will be in compliance during the following twelve-month period when the controls may once again be operating at a substandard level. Thus, the extreme infrequency of this already subpar testing method simply cannot assure compliance with the Plant's continuous PM emission limit.

At the very least, if direct continuous PM emissions monitoring is not required in the final permit, quarterly stack testing for the unit's PM emissions limits (as noted in Permit Condition E2-6, but excluded from Permit Condition E3-4), combined with COMS, *plus* a robust set of secondary performance indicators for the units' baghouse, must be required.

## **II. The Gallatin Permit Fails to Set Forth an Emission Limit for Sulfur Dioxide Based on an Appropriate One Hour Averaging Period**

The Gallatin Permit sets forth an SO<sub>2</sub> limit of 1,971 pounds per hour as calculated on 30-boiler operating day rolling average basis. *See* Gallatin Permit at 26 (Condition E3-5). This permit

limit is meant to ensure the Plant's emissions do not cause an exceedance of the one-hour SO<sub>2</sub> national ambient air quality standard ("NAAQS"). However, the 30-day averaging period accompanying the permit limit is inadequate to ensure that the one-hour NAAQS is actually protected, as the NAAQS can only be truly protected with an appropriately stringent *one-hour* emission limit. *See* Env'tl. Prot. Agency Region 5 Comments re Monroe Power Plant Construction Permit (February 1, 2012) at 1-2 ("Compliance with emissions limits . . . should be determined based on averaging times consistent with the NAAQS. The SO<sub>2</sub> and NO<sub>2</sub> averaging times of 24-hour and annual, respectively, are much longer than the 1-hour averaging for the NAAQS and consequently, may not be protective of the standards."), attached hereto as Exhibit 3. Indeed, the Gallatin Permit's 30-boiler day averaging basis is a full 720 times longer than the one-hour NAAQS; plainly, this is incompatible with the standard.

Notably, because exposure to SO<sub>2</sub> for even very short periods of time can be dangerous, in setting the new NAAQS, EPA not only lowered the numerical standard but critically slashed the averaging period from 24 hours to just one hour. Given the form of the standard, an emission limit with an averaging period of longer than one hour is unable to protect this short-term standard, thereby threatening the health of sensitive populations such as asthmatics, children, and the elderly. Adjusting the numerical one-hour critical emission limit slightly downward, as TDEC has done here for Gallatin, does not remedy this problem since exposure to elevated levels of SO<sub>2</sub> in very short time periods—even as short as five minutes—can have significant negative health impacts. Therefore, allowing spikes in emissions above the modeled one-hour critical emission limit through application of a longer averaging period applied to a lower numerical limit, fails to adequately protect public health from the dangerous effects of short-term exposure to the Plant's SO<sub>2</sub> pollution. Accordingly, the SO<sub>2</sub> emission limit for coal-fired boilers 1-4 must be revised to ensure an appropriate one-hour averaging basis is employed. *See* Gallatin Permit at 20 (Condition E2-4) (requiring that the Plant's emissions may not "interfere with attainment and maintenance of any primary or secondary air quality standard").

Furthermore, a downward adjustment to Gallatin's modeled one-hour critical emission limit coupled with a significantly longer 30-day averaging period (even in accordance with EPA's suggested methodology) is not justified here as actual historical data from Gallatin is not available to justify the need for a longer-term average. *See* TDEC Response to Comments at 8 (Stating that "new SO<sub>2</sub> controls have been installed at Gallatin" and "representative emissions data were not available.").

Moreover, neither TDEC's Statement of Basis nor its Response to Comments sufficiently demonstrates that the 30-day SO<sub>2</sub> emissions limit in the permit is "of comparable stringency" to the critical one-hour emission value modeled as protective of the NAAQS. Because historical data was unavailable, TDEC's Response to Comments documents indicates that TDEC used "representative" data from the Cumberland Fossil Plant in its adjustment factor analysis. Consequently, the adjustment factor applied to Gallatin's modeled one-hour critical emission value is not based on site-specific data. The accuracy of adjustment factor analysis, therefore, cannot be

assured. Given the uncertainties recognized by EPA in extrapolating emissions characteristics from data for another source, it is improper to apply “representative” data to determine expected emission variability and to derive an adjustment factor which allows for a longer averaging period for the permit’s SO<sub>2</sub> emission limits. Because long-term site-specific historical data does not exist for Gallatin under its current emissions controls, the Plant’s SO<sub>2</sub> emission limit should not be adjusted from a one-hour to a 30-day averaging basis.

Moreover, TDEC’s Statement of Basis and Response to Comments fail to demonstrate that Gallatin and Cumberland even have similar operational requirements for their SO<sub>2</sub> control equipment, or if Cumberland is even operating its SO<sub>2</sub> controls rather than relying on an alternative SO<sub>2</sub> pollution technology. If not, Cumberland’s emissions profile data could not have provided any representation of the variability of emissions that might be expected at Gallatin. Nor is there any attempt by TDEC to demonstrate that Cumberland’s operating capacity and its annual SO<sub>2</sub> emissions load are comparable to Gallatin’s or that both plants burn the same coal blends or operate under similar emission limits regime (Cumberland’s emissions may not be driven by innate and inescapable variabilities in its control technology, but by coal sulfur content and management decisions regarding control operation, reagent quantity and quality, etc.). All of this makes the use of representative emissions data from Cumberland to determine an adjustment factor for Gallatin improper.

Again, no need or justification to account for variability in one-hour emissions rates through emission limits with averaging times that are longer than one hour exists here. For all the reasons set forth above, EPA should object to the Gallatin Permit and order TDEC to revise the permit to include the appropriate one-hour modeling-informed SO<sub>2</sub> emission limit.

### **III. The State Responded to Petitioner’s Comments on the Gallatin Permit**

On November 2, 2017, TDEC notified Sierra Club, via e-mail, that the state agency had issued the final Title V significant modification for Gallatin and provided Sierra Club with a copy of the final permit, the statement of basis, and a response to comments document through which the state agency responded to each of Sierra Club’s above-objections. *See* E-Mail from Travis J. Blake, TDEC, to Zachary M. Fabish, Sierra Club (Nov. 2, 2017), attached hereto as Exhibit 4.

### **IV. Conclusion**

For the reasons set forth above, Sierra Club respectfully requests that the Administrator grant this Petition to Object.

Respectfully submitted,

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