



August 8, 2016

Administrator Regina McCarthy
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460 1101A
mccarthy.gina@epa.gov
titleVpetitions@epa.gov

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Air Quality Policy Division
Operating Permits Group Leader
109 T.W. Alexander Dr. (C-504-01)
Research Triangle Park, NC 27711

Via certified mail, electronic mail, and electronic filing

Greg Forte
Tennessee Air Pollution Control Division
Tennessee Department of Environment and Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243
air.pollution.control@tn.gov

Tom Waddell
Senior Manager, Air Permits, Compliance, and Monitoring
Environmental Permits & Compliance
Tennessee Valley Authority
1101 Market Street, BR4
Chattanooga, TN 37402
jtwaddell@tva.gov

Via certified mail and electronic mail

Re: Sierra Club Petition Seeking EPA Objection to Gallatin Title V Permit, I.D. No. 83-0025/561209

Dear Administrator Regina McCarthy, Greg Forte, and Tom Waddell,

Enclosed please find a copy of the Sierra Club's Petition seeking objection to the Title V permit, I.D. No. 83-0025/561209, issued for Tennessee Valley Authority's Gallatin Fossil Plant by Tennessee Department of Environment and Conservation; also included are all exhibits cited therein.

Thank you,

/s/
Lane A. Johnson
Environmental Law Program Fellow
The Sierra Club
50 F Street NW, 8th Floor
Washington, D.C. 20001
(202) 495-3051
Lane.Johnson@sierraclub.org

Zachary M. Fabish
Staff Attorney
The Sierra Club
50 F Street NW, 8th Floor
Washington, D.C. 20001
(202) 675-7917
Zachary.Fabish@sierraclub.org

Cc via electronic mail
Randy Terry (terry.randy@epa.gov)
Arthur Hofmeister (hofmeister.arthur@epa.gov)
Keri Powell (powell.keri@epa.gov)

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

IN THE MATTER OF THE PROPOSED TITLE V)
PERMIT FOR)
)
TENNESSEE VALLEY AUTHORITY) PERMIT ID NO.
) 83-0025/561209
)
GALLATIN FOSSIL PLANT)
PROPOSED TITLE V/STATE OPERATING PERMIT)
IN GALLATIN, TENNESSEE)
)
ISSUED BY THE TENNESSEE DEPARTMENT)
OF ENVIRONMENT & CONSERVATION)
)
_____)

**PETITION TO OBJECT TO THE PROPOSED TITLE V PERMIT FOR
TENNESSEE VALLEY AUTHORITY’S GALLATIN FOSSIL PLANT,
ISSUED BY THE TENNESSEE DEPARTMENT OF
ENVIRONMENT & CONSERVATION**

As per Section 505 of the Clean Air Act (“CAA”), the Sierra Club hereby respectfully petitions the Environmental Protection Agency (“EPA”) to object to the proposed Title V permit issued by the Tennessee Department of Environment & Conservation (“TDEC”) for Tennessee Valley Authority’s (“TVA”) Gallatin Fossil Plant (“Gallatin”) at 1499 Steam Plant Road, Gallatin, Tennessee. As discussed in comments timely filed by Sierra Club before TDEC concerning the draft permit, the proposed Title V permit contains provisions that are not in compliance with applicable requirements under the CAA, and consequently objection by the EPA is proper. 42 U.S.C. § 7661d(b). Specifically, the proposed permit includes impermissibly lax compliance requirements for opacity, particulate matter (“PM”), and fugitive dust, fails to incorporate reporting requirements to ensure compliance with the governing 2011 Consent Decree,¹ includes startup/shutdown provisions that are inconsistent with the CAA, and imposes an unreasonably permissive limit for sulfur dioxide (“SO₂”). Accordingly, EPA should object to the permit’s issuance by TDEC.

¹ Consent Decree in *Alabama v. Tennessee Valley Authority*, Civil Action No. 3:11-cv-00170, ¶ 107 (E.D. Tenn., June 30, 2011), available at <http://www2.epa.gov/sites/production/files/documents/tvacoal-fired-cd.pdf> [hereinafter 2011 Consent Decree].

Sierra Club timely submitted comments on the Draft Permit on March 11, 2016. A copy of these comments is attached hereto as Exhibit 1 (hereinafter “Sierra Club Comments”). To date, TDEC has offered no response.² EPA received TVA’s proposed Title V permit no sooner than March 11, 2016. EPA’s 45-day review period expired on June 27, 2016, and the 60-day public petition period will end on August 26, 2016.³ Accordingly, this petition is timely.

I. INTRODUCTION

A. Legal Background

1. General Requirements

The CAA is intended to protect and enhance the public health and public welfare of the nation. *See* 42 U.S.C. § 7401(b)(1). All major stationary sources of air pollution are required to apply for operating permits under Title V of the CAA. 40 C.F.R. § 70.5(a); *see* 42 U.S.C. § 7661a(a) (“[I]t shall be unlawful . . . to operate . . . a major source . . . except in compliance with a permit issued by a permitting authority under this subchapter.”). Title V permits must provide for all federal and state regulations in one legally enforceable document, thereby ensuring that all CAA requirements are applied to the facility and that the facility is in compliance with those requirements. *See* 42 U.S.C. §§ 7661a(a) and 7661c(a); 40 C.F.R. § 70.6(a)(1). These permits must include emission limitations and other conditions necessary to assure a facility’s continuous compliance with all applicable requirements of the CAA, including the requirements of any applicable state implementation plan (“SIP”). *See id.* Title V permits must also contain monitoring, recordkeeping, reporting, and other requirements to assure continuous compliance by sources with emission control requirements. *See* 40 C.F.R. § 70.6. It is unlawful for any person to violate any requirement of a Title V operating permit. *See* 42 U.S.C. § 7661a(a).

A Title V permit is issued for a term of no more than five years, 40 C.F.R. § 70.6(a)(2), with a timely and complete application for renewal filed by the source at least six months prior to the date of permit expiration. 40 C.F.R. § 70.5(a)(1)(iii). Once a complete renewal application has been submitted, the existing permit governs the source’s operation until the application is acted upon by the permitting agency. *See* 40 C.F.R. § 70.7(b); 40 C.F.R. § 70.7(a)(2) (“[T]he program shall provide that the permitting authority take final action on each permit application (including a request for permit

² Sierra Club accordingly reserves the right to supplement or revise this Petition based on any comment response document TDEC prepares, should one such document be forthcoming.

³ *See Tennessee Proposed Title V Permits*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits#sequential> (last visited Aug. 8, 2016); *see also* 42 U.S.C. § 7661d(b) (Following the submission of a Title V permit application, EPA has 45 days to review that application. If the Administrator does not object to the permit in that time, “any person may petition the Administrator within 60 days after the expiration of the 45-day review period . . . to take such action.”).

modification or renewal) within 18 months . . . after receiving a complete application.”). Permit modifications and renewals are subject to the same procedural requirements, including those for public participation and federal review, which apply to initial permit issuance. *See* 40 C.F.R. §§ 70.7(c)(1)(i) and 70.7(h).

The EPA has delegated to Tennessee, through the Tennessee Department of Environment and Conservation (“TDEC”), the authority to administer the Title V operating permit program within the State. Title V permits issued by TDEC must include enforceable emission limitations and standards and such other conditions as are necessary to assure compliance with all applicable requirements at the time of permit issuance. *See* 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1). “All applicable requirements” include standards or other requirements in state or federal regulations required under the CAA, including those that have been promulgated or approved by EPA through rulemaking at the time of issuance of a permit but that have future effective compliance dates, as well as standards provided for in Tennessee’s SIP that are effective at the time of permit issuance. *See* 40 C.F.R. § 70.2.

2. Monitoring Requirements

In addition to necessary emission limitations and standards, each Title V permit must contain sufficient monitoring, recordkeeping, reporting, and inspection and entry requirements to assure compliance with those limits. *See* 40 C.F.R. §§ 70.6(a)(1), 70.6(a)(3), and 70.6(c)(2). 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 monitoring requirements consist of both “periodic” and “umbrella” monitoring rules. *See generally Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2011).

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). 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. 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 In re U. S. Steel Corp.*, Petition No. V-2009-03, 2011 WL 3533368, at *6 (EPA Jan. 31, 2011) (concluding that “[t]he rationale for the monitoring requirements . . . must be clear and documented in the permit record” and that adequate monitoring is determined by careful, content-specific inquiry into the nature and variability of the emissions at issue); *see also* U.S. EPA, *Order Granting in Part and Denying in Part Three Petitions for Objection to Permits*, Petitions Nos. III-2012-06, III-2012-07, and III-20 13-02 (July 30, 2014) at 45.⁴

B. Factual and Procedural Background

Owned and operated by TVA, Gallatin is a four-boiler coal-fired plant, with a nameplate capacity of 1,255 megawatts. Gallatin began operation in 1956 and is located on the north bank of the Cumberland River in Sumner County, Tennessee. Gallatin is a major source of air pollution for both inhalable coarse particulate matter and fine particulate matter (PM10 and PM2.5), sulfur dioxide, nitrogen oxides, volatile organic compounds, carbon monoxide, and hazardous air pollutants. In February 2016 TEDC released a draft permit document (draft Title V Permit No. 83-0025/561209 and draft Phase II Acid Rain Permit No. 83-0025/863258) for Gallatin (“Draft Permit”).

The Draft Permit imposes short-term standards for opacity, fugitive dust, and PM.⁵ For each of these standards the Draft Permit contemplates compliance demonstration through either annual or semiannual testing.⁶ The Draft Permit requires the operation of a continuous opacity monitoring system, but evaluates compliance through

⁴ Available at http://www.epa.gov/sites/production/files/2015-08/documents/homer_response2012.pdf.

⁵ Draft Permit at E3-8 (“Visible emissions from each stack of this fuel burning installation shall not exceed twenty (20) percent opacity except for one six (6) minute period per one (1) hour of not more than forty (40) percent opacity”); *Id.* at D7 (“The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment”); *Id.* at E3-4 (“Particulate matter emitted from this fuel burning installation shall not exceed 0.100 pounds per million British Thermal Units (lb/MMBtu) of heat input as determined by stack testing As of December 31, 2017, the permittee shall maintain a particulate matter emission rate for Units 1-4 of no greater than 0.030 lb/MMBtu as determined by stack testing.”).

⁶ *Id.* at E3-8 (“[C]ompliance with the applicable visible emissions standards shall be determined by a certified reader using Method 9. Each stack shall be evaluated biannually unless a valid reading cannot be made due to merging plumes or other reasons.”); *Id.* at E2-3(b) (“Compliance with the fugitive emission requirements . . . shall be made semiannually.”); *Id.* at E3-4 (“The permittee shall perform stack testing of this fuel burning installation to demonstrate compliance with the applicable particulate emissions limits. Testing shall be performed every calendar year”).

visual inspection for opacity and stack testing for PM. Draft Permit at E3-4 and E3-8. The draft permit also contemplates an exemption for opacity compliance testing whenever “a valid reading cannot be made due to merging plumes or other reasons.” *Id.* at E3-8.

EPA issued a finding in 2015 (“EPA SIP Call”) that the SIPs of 36 states, including Tennessee, were insufficient with respect to their treatment of startup, shutdown, and malfunction (“SSM”) procedures, and is requiring the states to update these rules by November 22, 2016. 80 Fed. Reg. 33,840, 965. With respect to these SSM procedures, the Draft Permit states that “due allowance shall be made for visible emissions in excess of that allowed in Condition E3-8 which are necessary or unavoidable due to routine startup and shutdown conditions,” but makes no mention of the forthcoming SIP updates. Draft Permit at E3-9. The Draft Permit also allows TVA to choose among “startup” definitions and compliance options under EPA’s Mercury and Air Toxics Standards (“MATS”) Rule.⁷

Also included in the Draft Permit are requirements that TVA comply with stipulations in the 2011 Consent Decree, including the requirement that Gallatin install and run a flue gas desulfurization system (“FGD”) and selective catalytic reduction system (“SCR”) continuously no later than December 1, 2017.⁸ The Draft Permit includes an SO₂ emissions standard of 5.0 lb/MMBtu of heat input, but also requires TVA to demonstrate compliance with the hydrogen chloride hazardous air pollutant standards with a surrogate SO₂ standard of 0.20 lb/MMBtu. *Id.* at E2-5 and E2-6.

II. GROUNDS FOR OBJECTION TO TENNESSEE VALLEY AUTHORITY’S PROPOSED PERMIT

The Gallatin proposed Title V permit fails to comply in key respects with the applicable requirements of the Clean Air Act and the Tennessee state implementation plan, and as such objection by the Administrator is warranted. *See* 42 U.S.C. § 7661d(b); 40 C.F.R. §70.8(c). The Sierra Club hereby petitions EPA to object to the Gallatin proposed Title V permit on the following grounds: A) The permit’s stated compliance mechanisms for opacity, PM, and fugitive dust are unacceptably lax, B) the permit’s SSM provisions are inconsistent with the CAA and EPA’s SIP Call, and are otherwise

⁷ *Id.* at E2-6 (“The source will comply with the work practice standards in Table 3 to Subpart UUUUU, using Definition 1 or 2 for “startup” provided in §63.10042. The source reserves the right to select from among the compliance options and compliance methods set out in Tables 2 and 3 of Subpart UUUUU at the time it submits the Notification of Compliance Status under §63.10030.”); *see also* 40 C.F.R. §§ 63.10042, 63.10000, and 63.10020.

⁸ *Id.* at E2-5; *see also* 2011 Consent Decree at ¶ 85 (“TVA shall install and commence Continuous Operation” of FGD at Gallatin as of “December 31, 2017”); 2011 Consent Decree at ¶ 69 (“TVA shall install and commence Continuous Operation” of SCR (or repower to renewable biomass or retire) at Gallatin as of “December 31, 2017”).

impermissible, C) the permit includes no provisions to ensure compliance with the 2011 Consent Decree, and D) the permit's SO₂ emissions limit is unreasonably high.⁹

A. EPA Must Object to Gallatin's Proposed Permit because the Compliance Evaluation Requirements Therein are Impermissibly Lax for Opacity, PM and Fugitive Dust

TDEC's proposed Gallatin Title V permit requires exceedingly infrequent reporting of opacity, PM, and fugitive dust emission rates. The proposed permit also allows for extremely lenient exceptions for opacity compliance reporting. TDEC is obligated under the CAA and Title V implementing regulations to ensure that compliance assessments are designed to adequately and accurately assure compliance with applicable requirements. These exceptionally lax compliance standards are improper and must be rectified.

As noted above and in the Sierra Club Comments, Title V permits must contain sufficient monitoring, recordkeeping, reporting, and inspection and entry requirements to assure compliance with permit limits. *See* 40 C.F.R. § 70.6(a)(1), § 70.6(a)(3), and § 70.6(c)(2). Accordingly, the permit writer must incorporate 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).

In *Sierra Club*, the D.C. Circuit considered the very question of whether or not permitting authorities were precluded from developing appropriate monitoring regimes, even where there were specified monitoring requirements flowing from extant regulations that are nonetheless inadequate to ensure compliance.¹⁰ There the Court resoundingly determined that, far from being precluded from setting appropriate monitoring regimes, the permit writer "*must* fix these inadequate monitoring requirements." 536 F.3d at 678 (emphasis added). Reading the plain language of the Clean Air Act itself, the Court determined that, under Title V, "[e]ach permit . . . shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." *Id.* at 677 (quoting 42 U.S.C. § 7661c(c)). Thus, the Court reasoned that "Title V requires that every one of the permits issued by permitting authorities include adequate monitoring

⁹ All of these issues were raised with reasonable specificity during the public comment period for the draft Gallatin Title V permit. *See* Sierra Club Comments; 40 C.F.R. §70.8(c).

¹⁰ As the Court put it: "[H]ow should a permitting authority respond to an emission standard that has a periodic monitoring requirement inadequate to the task of assuring compliance? . . . Where *annual* testing cannot assure compliance with a *daily* emission limit, may the permitting authority supplement the monitoring requirement 'to assure compliance with the permit terms and conditions,' as the Act commands?" 536 F.3d at 675. The court answered its question by finding that, yes, the permitting authority must so supplement. *Id.*

requirements.” *Id.* at 678 (internal citations omitted). Characterizing this as the “each permit” mandate, the Court then looked to the implementing regulations for Title V, noting that, while subsections 70.6(a)(3)(i)(A) and (B) do not explicitly require gap-filling to assure monitoring regimes are sufficient, subsection 70.6(c) does:

To save § 70.6(c)(1) from becoming surplusage, we must interpret the provision to require something beyond what is already required by § 70.6(a)(3)(i)(A) and § 70.6(a)(3)(i)(B). The most reasonable reading is that it serves as a gap-filler to those provisions. In other words, § 70.6(c)(1) ensures that all Title V permits include monitoring requirements “sufficient to assure compliance with the terms and conditions of the permit,” even when § 70.6(a)(3)(i)(A) and § 70.6(a)(3)(i)(B) are not applicable. This reading provides precisely what we have concluded the Act requires: a permitting authority may supplement an inadequate monitoring requirement so that the requirement will “assure compliance with the permit terms and conditions.

Id. at 680. Accordingly, the presence of a provision for biannual visual inspections in its opacity regulation does not relieve TDEC from the obligation to assure compliance with that regulation through effective monitoring requirements.

With respect to opacity, the proposed permit contemplates a requirement that visible pollution not exceed 20% opacity except for periods of no longer than 6 minutes occurring no more often than once per hour where opacity may rise to 40%. Draft Permit at E3-8. However, the proposed permit requires compliance with this hourly standard to be verified through visual inspection only twice per year. *Id.* Furthermore, the proposed permit creates an exception for the already impermissibly lenient standard whenever “a valid reading cannot be made due to merging plumes or **other reasons.**” *Id.* (emphasis added). Not only is this exception impermissibly vague (the proposed permit fails to specify what those “other reasons” might be), it means that the proposed permit contemplates in practice evaluating the 6-minute standard potentially even less frequently than twice a year.

The proposed permit similarly requires improperly infrequent compliance monitoring for both PM and fugitive dust. For PM, the proposed permit includes a standard of 0.100 lb/MMBtu of heat input until December 31, 2017, when the standard becomes 0.030 lb/MMBtu as required by the 2011 Consent Decree. *Id.* at E3-4. Despite these standards being based on an hourly calculation, *see* Tenn. Comp. R. & Regs. 1200-03-06-.02, the proposed permit contemplates compliance demonstration through only annual stack testing. Draft Permit at E3-4. The compliance standards, for PM as well as opacity, are especially improper given that the proposed permit already requires TVA to operate a continuous opacity monitoring system. *Id.* The proposed permit also imposes an hourly fugitive dust standard, *id.* at D7, but again only requires compliance determination through semiannual visual inspection. *Id.* at E2-3(b).

Evaluating compliance with short-term emissions standards only once or twice per year is entirely incompatible with the requirement that the permit include compliance mechanisms “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), particularly where, as here, the permit requires continuous generation of emissions data for PM and opacity. The proposed permit’s compliance shortfalls are especially egregious with respect to opacity, which only requires visual inspection despite the availability of more accurate data and allows for extremely lenient exceptions to the already lax standard. EPA should object to these provisions and direct TDEC to correct these compliance defects by setting shorter more accurate terms for evaluation and removing overly broad exceptions.

B. EPA Must also Object to the Proposed Permit on Grounds that its SSM Allowances are Inconsistent with the CAA and Otherwise Impermissible

TDEC impermissibly includes in the proposed permit SSM provisions that have been specifically rejected by EPA. As noted above, EPA’s SIP Call found that Tennessee’s SIP was insufficient to meet CAA requirements with respect to their treatment of excess emissions during SSM events. *See generally* 80 Fed. Reg. 33,840. EPA specifically took issue with Tennessee regulations stating that “due allowance may be made for visible emissions in excess of that permitted in this chapter which are necessary or unavoidable due to routine startup and shutdown conditions.” *Id.* at 33,965; Tenn. Comp. R. & Regs. 1200-03-05-.02(1). Finding this and another provision of Tennessee’s SSM regulations “substantially inadequate,” EPA’s SIP Call requires the state to update these rules by November 22, 2016. 80 Fed. Reg. 33,840, 33,965. Despite this mandate, the proposed permit includes language identical to that which was rejected by EPA. Draft Permit at E3-9. The proposed permit makes no mention of the SIP Call and includes no requirements that TVA comply with Tennessee’s updated regulations to be released later this year. Again, a Title V permit must include any operational conditions necessary to ensure compliance with all applicable requirements at the time of permit issuance, including those requirements in Tennessee’s SIP and “including requirements that have been promulgated or approved by EPA through rulemaking at the time of issuance but have future-effective compliance dates.” 40 C.F.R. §§ 70.2 and 70.6(a)(1). Accordingly, EPA should object to the proposed permit unless it is revised to include compliance with Tennessee’s updated SSM SIP provision. In the absence of an updated and approved SSM SIP revision, no approved SSM exemption exists that may be included in a final permit except those set forth by federal law.

On November 19, 2014, EPA finalized its reconsideration of the MATS rule’s startup and shutdown provisions. *See* 79 Fed. Reg. 6,877. The rule provides specific definitions of startup and shutdown (40 C.F.R. § 63.10042) and a set of specific work practice and recordkeeping requirements for startup and shutdown periods. As described above, these include compliance monitoring requirements (40 C.F.R. §§ 63.10000 and 63.10020), work practice standards for periods of startup and shutdown (40 C.F.R. Pt. 63, Subpt. UUUUU, Tbl. 3), including requirements that TVA use clean fuel as defined in

the rule (40 C.F.R. § 63.10042), and requirements for recording certain data during periods of startup and shutdown (40 C.F.R. § 63.10020(e)). Rather than impose specific requirements under these rules, the proposed permit allows TVA to choose between two definitions of “startup” and states that Gallatin “reserves the right to select from among the compliance options and compliance methods set out in Tables 2 and 3 of Subpart UUUUU at the time it submits the Notification of Compliance Status under §63.10030.” Draft Permit at E2-6. These requirements are impermissibly vague as they fail to put the public on notice with respect to what procedures and standards Gallatin must follow in order to be in compliance with the law.

In sum, TDEC cannot rely on a called SIP and any final permit must not incorporate Tennessee’s invalidated SSM exemptions, and should instead adhere to governing federal regulations. Additionally the final permit should include only one clear “startup” definition and compliance option for MATS compliance. The failure of the proposed permit to so do necessitates objection by EPA.

C. The Proposed Permit Fails to Include Any Reporting Requirements to Ensure Compliance with the 2011 Consent Decree

Again, Title V permits must include all applicable requirements to which the permitted major source is subject. *See* 42 U.S.C. §§ 7661a(a) and 7661c(a); 40 C.F.R. § 70.6(a)(1). For Gallatin, these requirements include those imposed by the 2011 Consent Decree that the plant operate its FGD and SCR continuously. *See* 2011 Consent Decree at ¶ 85; 2011 Consent Decree at ¶ 69; *see also id.* at ¶ 132 (noting that the obligations of the Consent Decree resolve civil claims arising, in part, from “Section 111 of the Act”); 40 C.F.R. § 70.2 “Applicable Requirements” at (3). The proposed permit does in fact impose these obligations. *See* Draft Permit at E2-15. However, as discussed above and in the Sierra Club Comments, Title V permits must also include adequate monitoring and reporting requirements to ensure compliance with the terms of the permit. *See* 40 C.F.R. § 70.6(a)(3)(i)(B) and § 70.6(c)(1). The proposed permit includes no mention of any monitoring or reporting obligations to ensure that TVA actually runs those controls continuously as required by the 2011 Consent Decree. EPA should object to the proposed permit on these further grounds, and require inclusion of monitoring or reporting sufficient to ensure that Gallatin complies with these control installation and operation requirements.

D. EPA should Object to The Proposed Permit’s Impermissibly High SO₂ Emissions Limit

Finally, the proposed permit imposes an SO₂ limit of 5.0 lb/MMBtu with compliance demonstrated through use of continuous in-stack monitoring. Draft Permit at E3-5. This standard is nonsensical in light of other limitations SO₂ within the permit. Specifically, the permit requires that TVA demonstrate compliance with the hydrogen chloride hazardous air pollutant standards with a surrogate standard of 0.20 lb/MMBtu. Draft Permit at E2-6. Furthermore the requirement that Gallatin run FGD controls continuously should result in significantly lower SO₂ emissions—a well-operated

scrubber should result in reductions of well over 95% in emissions.¹¹ Thus the SO₂ emissions limit as written is inconsistent with other SO₂ requirements and should be considerably lower. EPA should accordingly object to the inclusion of the 5.0 lb/MMbtu SO₂ limit.

III. CONCLUSION

For the reasons cited above, the Sierra Club respectfully requests that the Administrator of EPA grant this Petition to Object to the Gallatin Title V Permit. The Sierra Club further requests that the Administrator of EPA order TDEC to include in a new permit more frequent monitoring provisions to assure compliance with the permit's opacity, PM, and fugitive dust limits, more specific SSM procedure requirements under MATS and a provision compelling compliance with EPA's SIP Call, reporting requirements to ensure compliance with the 2011 Consent Decree, and a significantly lower SO₂ emissions limit consistent with other provisions in the permit.

Respectfully submitted on August 8, 2016,

/s/
Lane A. Johnson
Environmental Law Program Fellow
The Sierra Club
50 F Street NW, 8th Floor
Washington, D.C. 20001
(202) 495-3051
Lane.Johnson@sierraclub.org

Zachary M. Fabish
Staff Attorney
The Sierra Club
50 F Street NW, 8th Floor
Washington, D.C. 20001
(202) 675-7917
Zachary.Fabish@sierraclub.org

¹¹ See, e.g., Power Engineering "Best Coal-Fired Project," identifying SO₂ removal rates of 98%, available at <http://www.power-eng.com/articles/slideshow/2013/10/2011-projects-of-the-year-awards/pg001.html>; see also EIA Form 860, FGD tab, column W (identifying numerous FGD-equipped boilers capable of SO₂ removal rates of 97% or higher).

Exhibit 1



Mr. Greg Forte
Tennessee Air Pollution Control Division
Tennessee Department of Environment and Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243
Air.Pollution.Control@tn.gov

Via Electronic Mail

March 11, 2016

Re: Sierra Club Comments Concerning the Draft TVA Gallatin Title V and Acid Rain Permit Nos. 83-0025/561209 and 83-0025/863258

Dear Mr. Forte,

The Sierra Club submits the following comments on the draft Title V Permit (No. 83-0025/561209) and draft Phase II Acid Rain Permit (No. 83-0025/863258) (collectively “the Draft Permit”) for Tennessee Valley Authority’s (“TVA”) Gallatin Fossil Plant. As explained in more detail below, the Draft Permit includes impermissibly lax compliance requirements for opacity, particulate matter (“PM”), and fugitive dust, fails to incorporate reporting requirements to ensure compliance with the governing 2011 Consent Decree,¹ includes startup/shutdown provisions that are inconsistent with the Clean Air Act (“CAA”), and imposes an unreasonably permissive limit for sulfur dioxide (“SO₂”).

The public notice for the Draft Permit was published on February 11, 2016, for a 30-day public comment period. Accordingly, these comments are timely.

I. Regulatory Background

A. General Requirements

The CAA is intended to protect and enhance the public health and public welfare of the nation. *See* 42 U.S.C. § 7401(b)(1). All major stationary sources of air pollution are

¹ Consent Decree in *Alabama v. Tennessee Valley Authority*, Civil Action No. 3:11-cv-00170, ¶ 107 (E.D. Tenn., June 30, 2011), *available at* <http://www2.epa.gov/sites/production/files/documents/tvacoal-fired-cd.pdf>.

required to apply for operating permits under Title V of the CAA. 40 C.F.R. § 70.5(a); *see* 42 U.S.C. § 7661a(a) (“[I]t shall be unlawful . . . to operate . . . a major source . . . except in compliance with a permit issued by a permitting authority under this subchapter.”). Title V permits must provide for all federal and state regulations in one legally enforceable document, thereby ensuring that all CAA requirements are applied to the facility and that the facility is in compliance with those requirements. *See* 42 U.S.C. §§ 7661a(a) and 7661c(a); 40 C.F.R. § 70.6(a)(1). These permits must include emission limitations and other conditions necessary to assure a facility’s continuous compliance with all applicable requirements of the CAA, including the requirements of any applicable state implementation plan, or SIP. *See id.* Title V permits must also contain monitoring, recordkeeping, reporting, and other requirements to assure continuous compliance by sources with emission control requirements. *See* 40 C.F.R. § 70.6. It is unlawful for any person to violate any requirement of a Title V operating permit. *See* 42 U.S.C. § 7661a(a).

A Title V permit is issued for a term of no more than five years, 40 C.F.R. § 70.6(a)(2), with a timely and complete application for renewal filed by the source at least six months prior to the date of permit expiration. 40 C.F.R. § 70.5(a)(1)(iii). Once a complete renewal application has been submitted, the existing permit governs the source’s operation until the application is acted upon by the permitting agency. *See* 40 C.F.R. § 70.7(b); 40 C.F.R. § 70.7(a)(2) (“[T]he program shall provide that the permitting authority take final action on each permit application (including a request for permit modification or renewal) within 18 months . . . after receiving a complete application.”). Permit modifications and renewals are subject to the same procedural requirements, including those for public participation and federal review, which apply to initial permit issuance. *See* 40 C.F.R. §§ 70.7(c)(1)(i) and 70.7(h).

The EPA has delegated to Tennessee, through the Tennessee Department of Environment and Conservation (“TDEC”), the authority to administer the Title V operating permit program within the State. Title V permits issued by TDEC must include enforceable emission limitations and standards and such other conditions as are necessary to assure compliance with all applicable requirements at the time of permit issuance. *See* 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1). “All applicable requirements” include standards or other requirements in state or federal regulations required under the CAA, including those that have been promulgated or approved by EPA through rulemaking at the time of issuance of a permit but that have future effective compliance dates, as well as standards provided for in Tennessee’s SIP that are effective at the time of permit issuance. *See* 40 C.F.R. § 70.2.

B. Monitoring Requirements

In addition to necessary emission limitations and standards, each Title V permit must contain sufficient monitoring, recordkeeping, reporting, and inspection and entry requirements to assure compliance with those limits. *See* 40 C.F.R. §§ 70.6(a)(1), 70.6(a)(3), and 70.6(c)(2). 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 monitoring requirements consist of both “periodic” and “umbrella” monitoring rules. *See generally Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2011).

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). 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. 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 In re U. S. Steel Corp.*, Petition No. V-2009-03, 2011 WL 3533368, at *6 (EPA Jan. 31, 2011) (concluding that “[t]he rationale for the monitoring requirements . . . must be clear and documented in the permit record” and that adequate monitoring is determined by careful, content-specific inquiry into the nature and variability of the emissions at issue); *see also* U.S. EPA, *Order Granting in Part and Denying in Part Three Petitions for Objection to Permits*, Petitions Nos. III-2012-06, III-2012-07, and III-20 13-02 (July 30, 2014) at 45.²

II. Substantive Comments

A. The Evaluation Requirements for Opacity, PM, and Fugitive Dust in the Draft Permit Are Impermissibly Lax

As currently written, the Draft Permit requires exceedingly infrequent reporting of opacity, PM, and fugitive dust emission rates. The Draft Permit also allows for extremely lenient exceptions for opacity compliance reporting. These exceptionally lax compliance standards are improper and must be rectified any final permit issued by TDEC.

² Available at http://www.epa.gov/sites/production/files/2015-08/documents/homer_response2012.pdf.

As noted above, Title V permits must contain sufficient monitoring, recordkeeping, reporting, and inspection and entry requirements to assure compliance with permit limits. *See* 40 C.F.R. § 70.6(a)(1), § 70.6(a)(3), and § 70.6(c)(2). Accordingly, the permit writer must incorporate 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). Where pre-existing monitoring requirements are inadequate to yield such data and assure compliance, the permit writer is obligated to impose more stringent measures. *See Sierra Club*, 536 F.3d at 678 (“We read Title V to mean that somebody must fix these inadequate monitoring requirements.”).

With respect to opacity, the Draft Permit contemplates a requirement that visible pollution not exceed 20% opacity except for periods of no longer than 6 minutes occurring no more often than once per hour where opacity may rise to 40%. Draft Permit at 28. However, the Draft Permit requires compliance with this hourly standard to be verified through visual inspection only twice per year. *Id.* Furthermore, the Draft Permit creates an exception for the already impermissibly lenient standard whenever “a valid reading cannot be made due to merging plumes or **other reasons**.” *Id.* (emphasis added). Not only is this exception impermissibly vague (the Draft Permit fails to specify what those “other reasons” might be), it means that the Draft Permit contemplates in practice evaluating the 6-minute standard potentially even less frequently than twice a year.

The Draft Permit similarly requires improperly infrequent compliance monitoring for both PM and fugitive dust. For PM, the Draft Permit includes a standard of 0.100 lb/MMBtu of heat input until December 31, 2017, when the standard becomes 0.030 lb/MMBtu as required by the 2011 Consent Decree. *Id.* at 26-27. Despite these standards being based on an hourly calculation, *see* Tenn. Comp. R. & Regs. 1200-03-06-.02, the Draft Permit contemplates compliance demonstration through only annual stack testing. Draft Permit at 27. The compliance standards, for PM as well as opacity, are especially improper given that the Draft Permit already requires the permittee to operate a continuous opacity monitoring system. *Id.* The Draft Permit also imposes an hourly fugitive dust standard, *id.* at 15, but again only requires compliance determination through semiannual visual inspection. *Id.* at 22.

Evaluating compliance with short-term emissions standards only once or twice annually is entirely incompatible with the requirement that the permit include compliance mechanisms “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), particularly where, as here, the permit requires continuous generation of emissions data for PM and opacity. The Draft Permit’s compliance shortfalls are especially egregious with respect to opacity, which only requires visual inspection despite the availability of more accurate data and allows for extremely lenient exceptions to the already lax standard. TDEC is obligated to correct these compliance defects by setting shorter more accurate terms for evaluation and removing overly broad exceptions.

B. The Draft Permit Fails to Include Any Reporting Requirements to Ensure Compliance with the Consent Decree

As noted above, Title V permits must include all applicable requirements to which the permitted major source is subject. *See* 42 U.S.C. §§ 7661a(a) and 7661c(a); 40 C.F.R. § 70.6(a)(1). For Gallatin, these requirements include those imposed by the 2011 Consent Decree that the plant operate its flue gas desulfurization system (“FGD”) and selective catalytic reduction system (“SCR”) continuously. *See* Consent Decree at ¶ 85 (“TVA shall install and commence Continuous Operation” of FGD at Gallatin as of “December 31, 2017”); Consent Decree at ¶ 69 (“TVA shall install and commence Continuous Operation” of SCR (or repower to renewable biomass or retire) at Gallatin as of “December 31, 2017”); *see also id.* at ¶ 132 (noting that the obligations of the Consent Decree resolve civil claims arising, in part, from “Section 111 of the Act”); 40 C.F.R. § 70.2 “Applicable Requirements” at (3). The Draft Permit does in fact impose these obligations. *See* Draft Permit at 23. However, as discussed above, Title V permits must also include adequate monitoring and reporting requirements to ensure compliance with the terms of the permit. *See* 40 C.F.R. § 70.6(a)(3)(i)(B) and § 70.6(c)(1). The Draft Permit includes no mention of any monitoring or reporting obligations to ensure that the permittee is actually runs those controls continuously as required by the 2011 Consent Decree. Such provisions must be included in any final permit to certify compliance.

C. The Draft Permit’s SSM Allowances are Inconsistent with the CAA and Otherwise Impermissible

In 2015, the Environmental Protection Agency (“EPA”) issued a finding that the state implementation plans (“SIPs”) of 36 states, including Tennessee, were insufficient to meet CAA requirements with respect to their treatment of excess emissions during startup, shutdown, or malfunction (“SSM”) events (the “SIP Call”). *See generally* 80 Fed. Reg. 33,840. EPA specifically took issue with Tennessee regulations stating that “due allowance may be made for visible emissions in excess of that permitted in this chapter which are necessary or unavoidable due to routine startup and shutdown conditions.” *Id.* at 33,965; Tenn. Comp. R. & Regs. 1200-03-05-.02(1). Finding this and another provision of Tennessee’s SSM regulations “substantially inadequate,” EPA issued a SIP call requiring the state to update these rules by November 22, 2016. 80 Fed. Reg. 33,840, 33,965. Despite this mandate, the Draft Permit includes language identical to that which was rejected by EPA. Draft Permit at 29. The Draft Permit makes no mention of the SIP Call and includes no requirements that the permittee comply with Tennessee’s updated regulations to be released later this year. Again, a Title V permit must include any operational conditions necessary to ensure compliance with all applicable requirements at the time of permit issuance, including those requirements included in Tennessee’s SIP and “including requirements that have been promulgated or approved by EPA through rulemaking at the time of issuance but have future-effective compliance dates.” 40 C.F.R. §§ 70.2 and 70.6(a)(1). Accordingly, the Draft Permit must be revised to include compliance with Tennessee’s updated SSM SIP provision.

On November 19, 2014, EPA finalized its reconsideration of the Mercury and Air Toxics Standards (“MATS”) rule’s startup and shutdown provisions. *See* 79 Fed. Reg. 6,877. The rule provides specific definitions of startup and shutdown (40 C.F.R. § 63.10042) and a set of specific work practice and recordkeeping requirements for startup and shutdown periods. As described above, these include compliance monitoring requirements (40 C.F.R. §§ 63.10000 and 63.10020), work practice standards for periods of startup and shutdown (40 C.F.R. Pt. 63, Subpt. UUUUU, Tbl. 3), including requirements that TVA use clean fuel as defined in the rule (40 C.F.R. § 63.10042), and requirements for recording certain data during periods of startup and shutdown (40 C.F.R. § 63.10020(e)). Rather than impose specific requirements under these rules, the Draft Permit allows TVA to choose between two definitions of “startup” and states that Gallatin “reserves the right to select from among the compliance options and compliance methods set out in Tables 2 and 3 of Subpart UUUUU at the time it submits the Notification of Compliance Status under §63.10030.” These requirements are impermissibly vague as they fail to put the public on notice with respect to what procedures and standards Gallatin must follow in order to be in compliance with the law.

In sum, the final permit should require compliance with Tennessee’s updated SIP and should include only one clear “startup” definition and compliance option for MATS compliance.

D. The Draft Permit’s Proposed SO₂ Emissions Limit Is Impermissibly High

The Draft Permit imposes an SO₂ limit of 5.0 lb/MMBtu with compliance demonstrated through use of continuous in-stack monitoring. Draft Permit at 27. This standard is nonsensical in light of other limitations SO₂ within the permit. Specifically, the permit requires that the permittee demonstrate compliance with the hydrogen chloride hazardous air pollutant standards with a surrogate standard of 0.20 lb/MMBtu. Draft Permit at 23. Furthermore the requirement that Gallatin run FGD controls continuously should result in significantly lower SO₂ emissions—a well-operated scrubber should result in reductions of over 90% in emissions. Thus the SO₂ emissions limit as written is inconsistent with other SO₂ requirements and should be considerably lower in the final permit.

III. Conclusion

For the foregoing reasons, the Draft Permit must be revised consistent with the arguments above before it is finalized.

Respectfully submitted on March 11, 2016,

/s/

Lane A. Johnson
Environmental Law Program Fellow
The Sierra Club
50 F Street NW, 8th Floor
Washington, D.C. 20001
(202) 495-3051
Lane.Johnson@sierraclub.org

Zachary M. Fabish
Staff Attorney
The Sierra Club
50 F Street NW, 8th Floor
Washington, D.C. 20001
(202) 675-7917
Zachary.Fabish@sierraclub.org