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October 18, 2012

VIA FEDEX OVERNIGHT

Lisa P. Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Kathleen Cox
U.S. Environmental Protection Agency
Region III
Air Protection Division
1650 Arch Street (3AP01)
Philadelphia, PA 19103

RE: Petition to Object to the Proposed Title V Permit for
FirstEnergy Generation's Bruce Mansfield Power Station Issued by the
Pennsylvania Department of Environmental Protection (TVOP 04-00235)

Dear Administrator Jackson and Manager Cox:

Enclosed please find a copy of a petition from the Sierra Club, Little Blue Regional Action Group, Environmental Integrity Project, Group Against Smog and Pollution, and Clean Air Council to EPA seeking EPA's objection to the proposed Title V permit for FirstEnergy Bruce Mansfield Power Station issued on May 25, 2012, by Pennsylvania Department of Environmental Protection, No. 04-00235. Also enclosed is a disc containing an electronic copy of the petition, and all exhibits cited therein.

Please let me know if there is anything further we can provide.

Respectfully submitted,

/s Kathryn Amirpashaie

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cc via FedEx. Mark Wayner, Air Quality Program Manager, Pennsylvania Department of Environmental Protection, Southwest Region, 400 Waterfront Drive, Pittsburgh, PA 15222 (with attachments)

Michael J. Rawlings, Plant Director, First Energy Generation Corp, 128 Ferry Hill Rd., Shippingport, PA 15077 (with attachments)

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

IN THE MATTER OF THE PROPOSED TITLE V)	
PERMIT FOR)	
)	
FIRSTENERGY GENERATION, LLC)	ID NO. 04-00235
BRUCE MANSFIELD POWER STATION)	
)	
PROPOSED TITLE V/STATE OPERATING PERMIT)	
IN BEAVER COUNTY, PA)	
)	
ISSUED BY THE PENNSYLVANIA)	
DEPARTMENT OF ENVIRONMENTAL PROTECTION)	
_____)	

**PETITION TO OBJECT TO THE PROPOSED TITLE V PERMIT FOR
FIRSTENERGY GENERATION, LLC'S BRUCE MANSFIELD POWER STATION
ISSUED BY THE PENNSYLVANIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

**PETITION TO OBJECT TO THE PROPOSED TITLE V PERMIT FOR
FIRSTENERGY GENERATION, LLC'S BRUCE MANSFIELD POWER STATION**

As per Section 505 of the Clean Air Act ("CAA"), the Sierra Club, Little Blue Regional Action Group, Environmental Integrity Project, Group Against Smog and Pollution, and Clean Air Council ("the Citizen Groups") hereby respectfully petition the Environmental Protection Agency ("EPA") to object to the Proposed Title V Permit for the FirstEnergy Generation, LLC ("FirstEnergy") Bruce Mansfield Power Station in Beaver County, Pennsylvania ("Bruce Mansfield" or "the Plant"), issued by Pennsylvania Department of Environmental Protection ("PaDEP"). The Proposed Permit, as issued, contains provisions that are not in compliance with applicable requirements under the CAA and, accordingly, objection by the EPA is proper. 42 U.S.C. § 7661d(b). Specifically: (1) the Proposed Permit fails to include numerical emission limits and monitoring sufficient to prevent the Plant from causing impermissible air pollution in the form of harmful concentrations of sulfur dioxide ("SO₂") as well as violations of an applicable acid rain provision;¹ (2) the Proposed Permit fails to require adequate monitoring to assure compliance with its particulate matter ("PM") emission limits;² and (3) the Proposed Permit fails to require adequate monitoring to assure compliance with its opacity limits.³ These objections to the Proposed Permit, as well as a number of other grounds for objection, were timely raised in our comments to PaDEP on the Proposed Permit (hereinafter "Sierra Club Comments"), attached hereto as Exhibit 1. Accordingly, the EPA should object to the Permit's issuance by PaDEP.

Additional grounds for objection which were also raised in our comments include the following: the Proposed Permit lacks adequate requirements to ensure consistency with the averaging period and monitoring necessary under the one-hour nitrogen dioxide ("NO₂") NAAQS; the Proposed Permit lacks certain necessary reporting requirements; the Proposed Permit fails to set separate emissions limits for PM_{2.5}; the Proposed Permit fails to consider both filterable and condensable PM when determining compliance with its particulate emissions limitations; the Proposed Permit fails to assure compliance with the applicable interstate air pollution rule; the Proposed Permit fails to ensure that its Best Available Retrofit Technology ("BART") analyses for its coal-fired boilers are appropriate; the Proposed Permit impermissibly claims to apply a permit shield to unidentified future projects; and the Proposed Permit fails to provide for consideration of all credible evidence when determining compliance with the Permit's terms. These are independent grounds for objection to the Proposed Permit, and we, therefore, incorporate by reference the discussion of these issues contained in our July 20, 2012, comments into this Petition and ask that EPA object to the Permit's issuance on these grounds as well.

¹ See Comments submitted by Sierra Club, et al. on Bruce Mansfield Draft Title V Permit (hereinafter "Sierra Club Comments") at 17, attached hereto as Exhibit 1.

² See Sierra Club Comments at 19.

³ See Sierra Club Comments at 24.

INTRODUCTION

I. Procedural Background – The Bruce Mansfield Plant and its Title V Permitting

Bruce Mansfield consists of three 850-megawatt pulverized coal-fired boilers and is located on the Ohio River in Shippingport, PA, about 25 miles northwest of Pittsburgh, PA.⁴ The largest emissions sources at the facility are three pulverized coal-fired electric generating units (“EGUs”), each with a maximum fuel heat input of 7,914 MMBtu/hr. Units 1, 2, and 3 began commercial operation in 1976, 1977, and 1980, respectively. Construction on Unit 3 did not begin until after the applicability date of August 17, 1971 established in 40 CFR 60, Subpart D; therefore, Unit 3 is subject to the Standards of Performance for New Fossil-Fuel-Fired Steam Generators. Last year, in 2011, Bruce Mansfield emitted a reported 21,195.7 tons of sulfur dioxide, 11,550.1 tons of nitrogen oxides, and 17,839,800.5 tons of carbon dioxide.⁵ The plant’s 1694.9 acre Little Blue Run Coal Ash Impoundment is the nation’s largest coal ash impoundment.⁶

Bruce Mansfield’s current Title V Permit was issued on November 22, 2002, and expired on November 22, 2007. On May 22, 2007, PaDEP received from FirstEnergy an application for renewal of the Plant’s Title V Permit. Pa Dep’t of Env’tl. Prot., *Review of Operating Permit Renewal Application, FirstEnergy Generation, LLC, Bruce Mansfield Power Station* (May 24, 2012) (hereinafter “the Review Memo”) at 9, attached hereto as Exhibit 2. Five years later, on May 25, 2012, PaDEP issued a Proposed Permit for public notice and comment.⁷ See Proposed Permit, attached hereto as Exhibit 3. On July 20, 2012, the Citizen Groups submitted timely comments on that Proposed Permit. Sierra Club Comments, Exhibit 1.

According to the CAA, within 45 days of receipt of a proposed Title V permit, the Administrator of the EPA “shall . . . object” to the permit’s issuance if it “contains provisions that are determined by the Administrator as not in compliance with the applicable requirements” of the CAA and “the requirements of an applicable implementation plan.” 42 U.S.C. § 7661d(b)(1). If EPA does not object during this period, any person may petition the

⁴ PaDEP’s review memo for the Proposed Permit states that each coal-fired EGU is 850 MW. The accompanying public notice published by PaDEP states that the three coal-fired EGUs are each 914 MW.

⁵ EPA’s Clean Air Markets Database, Preliminary Quick Reports, 2011, *available at* <http://ampd.epa.gov/ampd/>

⁶ See Bureau of Waste Management, PaDEP, Form 13-1: Modification to Solid Waste Disposal and/or Processing Permit No. 300558 (issued Oct. 11, 2005), at 5 (providing that the permit area is 1,694.9 acres); U.S. Env’tl. Prot. Agency (“EPA”), Database of Survey Results Excel Sheet, *available at* <http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys/index.htm> (providing that the Little Blue impoundment is the largest coal ash impoundment in the country based on *either* surface area or storage capacity). The agency agreed that coal ash contains low concentrations of a range of metals that raise health and environmental concerns, such as arsenic, selenium, cadmium, lead, and mercury, *available at* <http://news.nationalgeographic.com/news/energy/2012/08/120809-little-blue-run-coal-ash-pond-to-close/>

⁷ On April 6, 2012, the Sierra Club, along with other organizations, filed an administrative appeal with the Pennsylvania Environmental Hearing Board, objecting to PaDEP’s failure to timely issue Title V permits for nine coal-fired power plants in Pennsylvania, including the Bruce Mansfield Plant. See Notice of Appeal, *Sierra Club v. Commonwealth of Pennsylvania Department of Environmental Protection* (Pa Env’tl. Hearing Bd. April 6, 2012), attached hereto as Exhibit 4.

Administrator for issuance of an objection. *Id.* at § 7661d(b)(2). EPA's 45-day review period for Bruce Mansfield's Proposed Permit began on July 6, 2012, and ended on August 20, 2012. The 60-day public petition period end date is set for October 19, 2012.⁸

II. Statutory and Regulatory Background

A. *The SO₂ NAAQS*

Under the CAA, EPA is required to promulgate National Ambient Air Quality Standards ("NAAQS") for SO₂ and other pollutants to protect public health and welfare. 42 U.S.C. § 7409. As per Section 109 of the CAA, the NAAQS are standards requisite to protect the public health, allowing an adequate margin of safety. 42 U.S.C. § 7409(b). In June of 2010, EPA issued a new SO₂ NAAQS, recognizing that the prior 24-hour and annual SO₂ standards did not adequately protect the public against adverse respiratory effects associated with short term (5 minutes to 24 hours) SO₂ exposure. Final Rule, Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. 35,520 (June 22, 2010) (hereinafter "Final Rule").

The new 2010 SO₂ NAAQS is a one-hour standard set at 196 micrograms per cubic meter (or 75 ppb). 40 C.F.R. § 50.17(a). The standard was established in the form of the 99th percentile of the annual distribution of the daily maximum one-hour average concentrations. *Id.* at § 50.17(b). Due to both the shorter averaging time and the numerical difference, the new one-hour SO₂ NAAQS is far more stringent than the prior SO₂ NAAQS and is projected to have enormous beneficial effects for public health—EPA has estimated that 2,300 to 5,900 premature deaths and 54,000 asthma attacks a year will be prevented by the new standard. Env'tl. Prot. Agency, *Final Regulatory Impact Analysis (RIA) for the SO₂ National Ambient Air Quality Standards (NAAQS) tbl. 5.14* (2010), attached hereto as Exhibit 5. Put another way, the presence of concentrations of SO₂ air pollution above the standard in the NAAQS causes thousands of premature deaths and tens of thousands of asthma attacks every year.

In its final rule, EPA recognized the "strong source-oriented nature of SO₂ ambient impacts," Final Rule, 75 Fed. Reg. at 35,370, and concluded that the appropriate methodology for purposes of determining compliance, attainment, and nonattainment with the new NAAQS is modeling. *See* Final Rule, 75 Fed. Reg. at 35,551 (describing dispersion modeling as "the most technically appropriate, efficient, and readily available method for assessing short-term ambient SO₂ concentrations in areas with large point sources."). In promulgating the new SO₂ NAAQS, EPA explained further that, for the one-hour standard, "it is more appropriate and efficient to principally use modeling to assess compliance for medium to larger sources" *Id.* at 35,570; *see also Montana Sulphur & Chemical Co. v. EPA*, 666 F.3d 1174 (9th Cir. 2012) (affirming use of modeling to ascertain SO₂ pollution impacts); U.S. EPA, Final Response to Petition From New Jersey Regarding SO₂ Emissions From the Portland Generating Station, 76 Fed. Reg. 69,052 (Nov. 7, 2011) (using modeling to set emission limits sufficient to prevent air pollution).

⁸ *See* U.S. EPA, Deadlines for Public Petitions to the Administrator for Permit Objections (permit number 04-00235), available at <http://www.epa.gov/reg3artd/permitting/petitions3.htm>; 42 U.S.C. § 7661d(b).

B. *Regulation of Sulfur Dioxide in Pennsylvania*

The CAA, federal regulations, and Pennsylvania regulations incorporated into the SIP demand that Bruce Mansfield’s Title V Permit 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.⁹ See 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1); 25 Pa. Code § 127.512. Included among the applicable requirements is the federally-approved Pennsylvania SIP requirement that “[n]o person shall cause, suffer, or permit air pollution” in Pennsylvania. 25 Pa. Code §121.7 (emphasis added). Pennsylvania regulations, as incorporated into the federally approved SIP, define “air pollution” as:

[t]he presence in the outdoor atmosphere of **any form of contaminant**, including, but not limited to, the discharging from stacks, chimneys, openings, buildings, structures, open fires, vehicles, processes or any other source of any smoke, soot, fly ash, dust, cinders, dirt, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, toxic, hazardous or radioactive substances, waste or other matter in a place, manner or **concentration inimical or which may be inimical to public health, safety or welfare or which is or may be injurious to human, plant or animal life** or to property or which unreasonably interferes with the comfortable enjoyment of life or property.

25 Pa. Code § 121.1 (emphasis added).¹⁰

As a standard or limitation under the SIP, Pennsylvania’s prohibition on air pollution constitutes an “emission standard or limitation” with which the Plant’s Title V Permit must assure compliance. See 25 Pa. Code §§ 121.7, 127.512(h), 121.1 (“applicable requirements”) (ii). In order to assure compliance with Pennsylvania’s prohibition on air pollution, Title V permits issued by PaDEP must: explicitly reference the prohibition on air pollution, and include terms that assure the Plant will not cause or permit air pollution by emitting SO₂ in concentrations which are or may be inimical to public health. See 35 P.S. § 4008; see also 25 Pa. Code §§ 121.7, 121.1 (defining “air pollution”); 40 C.F.R. § 70.6(a)(1).

Title V permits in Pennsylvania must also assure compliance with Pennsylvania’s acid rain program, which also meets the Pennsylvania SIP definition of an “applicable requirement.” See 25 Pa. Code § 121.1 (defining “applicable requirements” as “[r]equirements which apply to any source at a Title V facility including the following: . . . A standard or other requirement of the acid rain program under Title IV of the Clean Air Act (42 U.S.C.A. § § 7641-7651o) or the

⁹ Indeed, EPA may not approve a state’s Title V program unless it is persuaded that the permitting authority will “assure that upon issuance or renewal permits incorporate emissions limitations and other requirements in an applicable implementation plan.” 42 U.S.C. § 7661a(b)(5)(C).

¹⁰ EPA approved these portions of Pennsylvania’s SIP, without specific comment, decades ago. 37 Fed. Reg. 10,842, 10,889 (May 31, 1972). They are still part of the SIP today. See 40 C.F.R. §52.2020(c)(1) (listing the “Prohibition of Air Pollution” provision as “EPA-approved”).

regulations thereunder”). Pennsylvania’s Title IV acid rain provisions include a condition that, “[i]n addition to the other requirements of [Chapter 127], permits issued under this section shall prohibit . . . [e]xceeding applicable emission rates or standards, including ambient air quality standards.” 25 Pa. Code § 127.531(f)(2) (emphasis added); *see also* 42 U.S.C. § 7651g(d)(3) (mandating that states issue permits that satisfy the requirements of both Title V and Title IV); U.S. EPA, Clean Air Act Final Full Approval of Operating Permits Program, 61 Fed. Reg. 39,597, 39,598 (July 30, 1996) (noting the requirement that “Pennsylvania’s Title V program be operated in accordance with the requirements of Title IV and its implementing regulations,” including 25 Pa. Code § 127.531).

C. Title V Permit Terms Sufficient to Assure Compliance with Applicable Requirements

In addition to converting applicable requirements to specific permit terms, Title V permits must also require adequate monitoring to assure compliance with the terms of the permit and all applicable requirements. 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) (hereinafter “*Sierra Club*”) (discussing these rules). 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)(B). In other words, if NAAQS compliance is a condition of the permit, the permit must contain monitoring of a frequency and type sufficient to assure compliance.

The “umbrella” monitoring rule, 40 C.F.R. § 70.6(a)(3)(C), backstops this 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. This “gap-filler” makes doubly clear that adequate monitoring is required. *Id.* at 680.

EPA has since affirmed, in a post-*Sierra Club* Title V petition ruling, that these requirements are quite rigorous, making clear that permit writers must develop and “supplement monitoring to assure . . . compliance” on the basis of an extensive record. *In re United States Steel Corp.*, Petition No. V-2009-03, 2011 WL 3533368, at *5 (EPA Jan. 31, 2011). (“The rationale for the monitoring requirements . . . must be clear and documented in the permit record,” and adequate monitoring is determined by careful, content-specific inquiry into the nature and variability of the emissions at issue). Relevant Pennsylvania regulations are in accord: applications must include all relevant compliance information, 25 Pa. Code § 127.503(3), and periodic monitoring “sufficient to yield accurate and reliable data from the relevant time that are representative of a source’s compliance with the permit,” 25 Pa. Code § 127.511(a)(2), and the permit, as a whole, must contain “compliance certification, testing, monitoring, reporting and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit.” 25 Pa. Code § 127.513(1).

Thus, where there exists analysis sufficient to determine monitoring requirements and emission limits as a numerical translation of the prohibition on air pollution or the prohibition on violating ambient air quality standards as part of the acid rain provision under Title IV of the CAA, those limits must be incorporated in Title V permitting in Pennsylvania.

D. *Particulate Matter*

Particulate matter is treated under the CAA as two distinct air pollutants: PM₁₀ (PM that is equal to or less than 10 micrometers in diameter) and PM_{2.5} (PM that is equal to or less than 2.5 micrometers in diameter). See National Ambient Air Quality Standards, *available at* <http://www.epa.gov/air/criteria.html>. Not only do these two pollutants have different physical and behavioral characteristics,¹¹ PM₁₀ and PM_{2.5} pose different levels of risk to human health. While PM₁₀ particles are small enough to be inhaled and accumulate in the respiratory system, PM_{2.5} particles, because of their extremely small size, can penetrate deep into the lungs, enter the blood stream, and cross the blood-brain barrier. See Basic Information on Fine Particle (2.5) Designations, <http://www.epa.gov/pmdesignations/basicinfo.htm>. As a result, PM_{2.5} pollution is arguably even more dangerous and can cause even more severe and long-term adverse health effects than PM₁₀. See L.K Fonken et al., *Air Pollution Impairs Cognition, Provokes Depressive-like Behaviors and Alters Hippocampal Cytokine Expression and Morphology*, *Molecular Psychiatry* 16, 988 (2011), *available at* <https://ckm.osu.edu/sitetool/sites/neuroscience/documents/AirPollution.pdf>.

OBJECTIONS

I. The Proposed Permit Fails to Prevent Harmful Air Pollution and Violations of the Applicable Acid Rain Provision

Due to the inadequate SO₂ emissions limits set forth in the Proposed Permit, EPA should object to issuance of the Permit as drafted. This is because: (1) Pennsylvania's SIP and State law contain an explicit prohibition on air pollution, and the SO₂ NAAQS is dispositive of the level of SO₂ constituting air pollution; and (2) the SIP contains an explicit prohibition on violating the SO₂ NAAQS in accordance with the acid deposition control program (Title IV) of the CAA.¹²

A. *The Proposed Permit Fails to Include Sufficiently Stringent SO₂ Numerical Emission Limits*

As a standard or limitation under the SIP, Pennsylvania's prohibition on air pollution—which states that “[n]o person may permit air pollution as that term is defined in the act”—constitutes an “emission standard or limitation” with which the final Title V permit must assure

¹¹ See EPA “Clean Air Fine Particle Implementation Rule” 72 Fed. Reg. 20586, 20599 (April 25, 2007) (“PM_{2.5} . . . differs from PM₁₀ in terms of atmospheric dispersion characteristics, chemical composition, and contribution from regional transport”)

¹² This issue was raised on Page 10 of the comments submitted by Sierra Club on July 20, 2012.

compliance.¹³ See 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1); 25 Pa. Code §§ 127.512(h), 121.1 (“applicable requirements”) (ii), 121.7. Again, “air pollution” is defined in the Pennsylvania SIP as:

“[t]he presence in the outdoor atmosphere of any form of contaminant, including but not limited to the discharging from stacks, chimneys, openings, buildings, structures, open fires, vehicles, processes or any other source of any smoke, soot, fly ash, dust, cinders, dirt, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, toxic, hazardous or radioactive substances, waste or other matter in a place, manner or concentration inimical or which may be inimical to public health, safety or welfare or which is or may be injurious to human, plant or animal life or to property or which unreasonably interferes with the comfortable enjoyment of life or property.”

25 Pa. Code § 121.1 (emphasis added). The new primary one-hour SO₂ NAAQS was designed specifically to prevent the harmful effects of SO₂ pollution on human health. Thus, the specific limits set forth in the NAAQS are dispositive *authority* that such a level of SO₂ pollution is “inimical to public health” and “injurious” to human life. See 25 Pa. Code § 121.1. In other words, violations of the one-hour SO₂ NAAQS constitute violations of the Pennsylvania SIP’s prohibition on air pollution.¹⁴ Essentially, the NAAQS provide the numerical translation of the SIP’s prohibition on air pollution and, as an applicable requirement, must be translated into Bruce Mansfield’s Title V Permit limits in that fashion. See 25 Pa. Code §§ 127.512(h), 121.1 (“applicable requirements”).

Therefore, Bruce Mansfield’s Title V Permit must include the prohibition on air pollution and set forth SO₂ emissions limits and standards which actually assure compliance with the health-based NAAQS (thereby ensuring that the Permit’s terms will assure compliance with the prohibition on air pollution).¹⁵ See *id.* In addition, because the Pennsylvania SIP states that

¹³ The final Title V permit must explicitly reference the State’s prohibition of air pollution, see 40 C.F.R. § 70.6(a)(1)(i) (“The permit shall specify and reference the origin of authority for each term or condition . . .”), and also include terms that assure that the Plant does not allow pollution of the air by emitting SO₂ in concentrations inimical or which may be inimical to the public health. See 35 P.S. § 4008; see also 25 Pa. Code § 121.7; 25 Pa. Code § 121.1 (defining “air pollution”); 40 C.F.R. § 70.6(a)(1).

¹⁴ EPA has recently affirmed that where prohibitions on air pollution are part of a SIP, they are enforceable requirements. See Letter from Genevieve Damico, Chief, Air Permits Section EPA Region 5 to Michael Ahern, Manager, Permit Issuance, Ohio EPA (Apr. 25, 2012), attached hereto as Exhibit 6. EPA wrote that “if nuisance provisions apply to a stationary source either because it is subject to the provisions in the [state] SIP or because a permit issued pursuant to a SIP-approved program contains the requirements, *the terms must be included in the federally enforceable side of the source’s Title V permit.*” *Id.* at 1 (emphasis added). Region 5 has also at least once issued a notice of violation under Illinois’s nuisance provision, see NOV for H. Kramer & Co. (Apr. 20, 2011), attached hereto as Exhibit 7, informing a polluter that it had violated the provision because its emissions caused violations of a NAAQS standard.

¹⁵ The Pennsylvania Environmental Hearing Board has affirmed that the State’s pollution prohibition is not hortatory, but is a substantive requirement, holding that “[t]here can no longer be any doubt that at least in Pennsylvania, causing air pollution itself is a separate offense from the violation of any other specific

“applicable requirements” for Title V sources includes standards or other requirements “of the acid rain program under Title IV of the Clean Air Act . . . or the regulations thereunder”, 25 Pa. Code § 121.1 (“applicable requirements” (vi)), and Pennsylvania’s acid rain provision states that, “[i]n addition to the other requirements of [Chapter 127], permits issued under [Section 127.531] shall prohibit . . . [e]xceeding applicable emission rates or standards, including ambient air quality standards,” 25 Pa. Code § 127.531(f)(2) (emphasis added), preventing exceedances of the NAAQS is an applicable requirement with which the Plant’s permit must assure compliance.

Our objection is, as explained above, based on the fact that the Title V Permit will fail to assure compliance with 25 Pa. Code § 121.7—an applicable requirement—which provides that “[n]o person may permit air pollution as that term is defined in the [Pennsylvania Air Pollution Control Act].” The core test for determining whether the permit assures compliance with this requirement is whether the Plant’s emissions are “inimical” or “may be inimical” to public health, safety, or welfare, or may injure human life. 25 Pa. Code § 121.1. This test can be met even without showing a violation of a particular quantitative standard if citizens testify that they are experiencing a nuisance, *see, e.g., Rushton Mining Co. v. Commonwealth*, 328 A.2d 185, 193 (Cmwlth Ct. 1974). Thus, a showing that emissions of a contaminate—such as SO₂—are permitted by a Title V permit to exceed a health-based NAAQS is far stronger evidence that this applicable requirement is being violated. This is especially true for the SO₂ NAAQS, as the standard is based on rigorous research and extensive notice and comment and represents a definitive pollution level above which negative public health impacts will occur. Indeed, EPA has found a causal relationship between SO₂ concentrations above the NAAQS and significant human health damage, “the strongest finding” that EPA’s science advisors can make. 75 Fed. Reg. at 35,525. Because maintaining concentrations below the NAAQS is necessary to protect public health, concentrations above the NAAQS are necessarily inimical to public health and injurious to human life. *See id.* at 35,548. Therefore, if a source causes or is predicted to cause NAAQS violations, it is clearly inimical to public health and safety and in violation of Pennsylvania’s SIP prohibition of air pollution contained in 25 Pa. Code § 127.512(h).¹⁶

environmental law or regulation.” *Commonwealth v. Medusa Corp.*, 1978 EHB 149, 1978 WL 3835 at *13 (Pa. Env. Hearing Bd. 1978), *remanded in part on other grounds sub nom. Medusa Corp. v Commonwealth*, 415 A. 2d 105 (Cmwlth Ct. 1980), a case concerning particulate matter emissions from a cement kiln. In *Medusa*, Pennsylvania carried its case in large part because it could show that the kilns were causing violations of the particulate matter NAAQS. This data, combined with citizen testimony, was “substantial evidence” that Medusa had violated the air pollution prohibition of 25 Penn. Admin Code § 121.7. *Id.*

¹⁶ Pennsylvania courts have repeatedly confronted air pollution violations based on particulate emissions which impaired citizens’ quality of life, whether or not they violated quantitative air quality standards, and have consistently found such claims cognizable. *See, e.g., Commonwealth v. Locust Point Quarries*, 72 Pa. D. & C. 2d 700, 704-05 (Ct. of Common Pleas 1975) (applying nuisance test for air pollution). They hold that, “if an acceptable scientific test is available to measure the rate of emissions from a pollution source” such a test must be used, but “if no scientific test is available, proof of a violation . . . may rest on the evidence as a whole, including witnesses’ observations.” *Midway Coal Corp. v. Commonwealth*, 413 A.2d 1139, 1141 (Cmwlth. Ct. 1980). The courts continue to apply this nuanced inquiry, melding scientific testing and lived experience. *See, e.g., Scurfield Coal, Inc. v. Commonwealth*, 582 A.2d 694, 698-99 (finding prohibited air pollution occurred when coal dust interfered with “the health of some” area residents) (Cmwlth. Ct. 1990); *Diess v. Penn. Dept. of Transportation*, 935 A.2d 895, 903-

Accordingly, PaDEP must include in the final Title V permit for Bruce Mansfield appropriate SO₂ emission limitations and standards to implement the broad prohibition on air pollution of 25 Pa. Code § 121.7, since, without such limits, compliance with this SIP provision could not be assured. PaDEP’s general prohibition on air pollution recognizes that there may be times when compliance with the specific emission limitations or other requirements in the permit may be insufficient to prevent a condition of air pollution as defined by the SIP and that in such circumstances PaDEP has broad authority to impose necessary emission limitations in a Title V permit. Here, where there is refined air dispersion modeling showing that the Proposed Permit allows for violation of 25 Pa. Code § 121.7 by permitting SO₂ emissions at limits which result in concentrations of SO₂ inimical to human health, the Proposed Permit must be revised. See Wingra Engineering, S.C., *Bruce Mansfield Plant, Shippingport, Pennsylvania, Sierra Club Evaluation of Compliance with 1-hour SO₂ NAAQS* (July 12, 2012) (hereinafter the “Bruce Mansfield Modeling”), attached hereto as Exhibit 8. This dispersion modeling is based on the numerical SO₂ emission limits for the coal-fired boilers as contained in the Proposed Title V Permit, in the form of the 0.6 lb/MMBtu. See *id.* at 4. The analysis was conducted in adherence to all available EPA guidance for evaluating source impacts on attainment of the one-hour SO₂ NAAQS via aerial dispersion modeling, including the AERMOD Implementation Guide; USEPA's Applicability of Appendix W Modeling Guidance for the 1-hour SO₂ National Ambient Air Quality Standard, August 23, 2010; modeling guidance promulgated by USEPA in Appendix W to 40 CFR Part 51; and USEPA’s March 2011 Modeling Guidance for SO₂ NAAQS Designations, available at [http://www.epa.gov/ttn/scram/SO₂%20Designations%20Guidance%202011.pdf](http://www.epa.gov/ttn/scram/SO2%20Designations%20Guidance%202011.pdf).

The modeling results indicate that, at the emission levels allowed by the Proposed Permit, Bruce Mansfield by itself is predicted to cause levels of SO₂ pollution severely above the NAAQS—a “concentration inimical or which may be inimical to public health, safety or welfare or which is or may be injurious to human . . . life.” See 25 Pa. Code § 121.1. Specifically, Bruce Mansfield is predicted to cause peak impacts of 328.1 µg/m³. Bruce Mansfield Modeling at 4. This is approximately 1.672 times greater than the NAAQS of 196.2 µg/m³.

Modeled One-Hour SO₂ Impacts

Emission Rates	Project Conc. (ug/m3)	Background Conc. (ug/m3)	Total Conc. (ug/m3)	NAAQS (ug/m3)	NAAQS Exceed	Percent Over NAAQS
Allowable	267.9	60.2	328.1	196.2	YES	167.2%

05 (Cmwlth. Ct. 2007) (analyzing violations of APCA under a public nuisance theory). That said, clear scientific evidence that air pollution under 25 Pa. Code § 121.7 is occurring is particularly strong evidence of a violation, as the *Medusa Corp.* Environmental Hearing Board order, noted above, makes particularly clear. That order, again, relates to particulate emissions from a cement kiln. In addition to canvassing “convincing testimony” from citizens living near the kiln, who were being deluged in dust, the Board considered evidence of “extensive air sampling,” which showed that both primary and secondary NAAQS for particulate matter were being violated, 1978 WL at *15. Although the kiln disputed these test results, they supplied “substantial evidence” of a violation, especially when combined with witness testimony. *Id.* at *16. A NAAQS violation, again, is the easy case for courts interpreting the pollution prohibition.

Based on the modeling analysis, a reduction in allowable emissions of at least 49.2% is required to ensure that ambient concentration levels of SO₂ will not cause a condition of air pollution. *Id.* at 4. In other words, to ensure that the Title V Permit will assure compliance with all applicable requirements—namely the State’s prohibition on air pollution and its acid rain provisions—the Plant’s Title V Permit must contain a facility-wide SO₂ emissions limit that is at least as restrictive as 0.30 pounds per million Btu of heat input (or 7,231.6 lbs/hr), measured on an hourly basis. *Id.* at 4. Yet, as currently drafted, the Proposed Permit limits emissions of SO₂ from the Plant’s coal-fired boilers to 0.6 pounds per million Btu of heat input.¹⁷ Proposed Permit at 39. The proposed limits are plainly insufficient to assure compliance with applicable requirements.

There is, moreover, no indication that PaDEP assessed the Proposed Permit’s SO₂ emission limits specifically to ensure that Bruce Mansfield would not cause a condition of air pollution or violate applicable requirements of the Title IV Acid Rain Program. In fact, the SO₂ emissions limits in the Proposed Permit are identical to those contained in the previous permit. In addition, the SO₂ emissions standards set forth in the Permit have been imported from 25 Pa. Code § 123.22, a regulation which has not been revised in over a quarter century. There is, accordingly, no reason to believe that the proposed SO₂ emissions limits will comply with contemporary scientific knowledge as to the concentration of SO₂ that is inimical to human health, welfare, and safety, and injurious to human life. Indeed, the air dispersion analysis performed by the modeling expert demonstrates conclusively that the limits contained in the Proposed Permit impermissibly allow harmful air pollution and violate the State’s relevant acid rain provision.

Just as is required when certain monitoring, recordkeeping, or reporting requirements are insufficient to assure compliance with an applicable requirement, here, the Agency should employ a gap-filling method to ensure Bruce Mansfield’s Permit contains numerical SO₂ limits sufficient to assure compliance with the applicable requirements. Such gap-filling is necessary since the final Title V Permit must include emissions limitations and standards that assure compliance with all applicable requirements at the time of permit issuance, including the prohibition on air pollution and acid rain provision. *See* 40 C.F.R. § 70.6(a)(1). Ensuring that the Permit contains appropriate limits is essential since the Title V Permit is the critical tool enabling the Plant, PaDEP, EPA, and the public to identify all applicable requirements that apply to the Plant’s air emissions and to determine whether the facility is complying with those requirements. Because the Proposed Permit fails to assure compliance with these applicable requirements, EPA should object.

B. *The Proposed Permit Fails to Include Proper Averaging Periods in its SO₂ Emission Limits*

In addition to lacking sufficiently stringent numerical SO₂ emission limits, the Proposed Permit also fails to ensure that the averaging period associated with its SO₂ emission limits for

¹⁷ The Proposed Permit also sets forth an additional SO₂ limit of 1.2 lb/MMBtu for Unit 3 when burning coal. Proposed Permit at 26.

the Plant's coal-fired boilers will assure compliance with all applicable standards. As indicated above, both the applicable prohibition on harmful air pollution and acid rain provision constitute requirements that Bruce Mansfield not cause exceedances of the SO₂ NAAQS. Also as indicated above, the maximum concentration of SO₂ permitted to exist in the ambient air, so as to prevent concentrations inimical to human health, welfare, safety, and life, is set forth **as a one-hour average**. See 25 Pa. Code § 131.1; 40 C.F.R. § 50.17(a). Further, under Pennsylvania's regulations for sampling and testing, the averaging time for determining emissions of SO₂ is one hour. See 25 Pa. Code § 139.13(6). Accordingly, EPA should object to the Proposed Permit and demand that PaDEP revise the Permit so that its SO₂ emission limits are based on an hourly averaging period—an hourly averaging period is necessary to meet an hourly air quality standard.¹⁸

Additionally, the Proposed Permit fails to require compliance with the standard at all times.¹⁹ The health data relied upon by EPA in promulgating the new one-hour SO₂ NAAQS overwhelmingly indicates that increased asthma attacks and hospital visits are attributable to short term concentrations of sulfur compound concentrations in the air. Even short term spikes, as brief as five minutes, can cause severe health issues for certain at-risk individuals. See 75 Fed. Reg. at 35,524; see also EPA's Air and Radiation webpage for SO₂ and Health, available at <http://www.epa.gov/airquality/sulfurdioxide/health.html>. Due to the extreme effects of even short-term exposure to SO₂ pollution, it is vitally important to require compliance with an SO₂ emission limit at all times. A valid permit should, thus, ensure that the SO₂ emissions standard applies "at any time" or, at the very least, be based on a one-hour average. EPA should object to the Proposed Permit for its failure to assure continuous compliance.

C. *The Proposed Permit Fails to Include Monitoring Requirements Sufficient to Assure Compliance with Applicable Requirements*

As currently drafted, the monitoring requirements for SO₂ emissions in the Proposed Permit are insufficient to assure compliance with applicable standards. 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); 25 Pa. Code § 127.511(a)(2) (emphasis added).

EPA's Part 70 monitoring rules are designed to satisfy the statutory requirement of the CAA that "[e]ach permit issued under [Title V] shall set forth . . . monitoring . . . requirements to

¹⁸ This of course makes logical sense. Even if the SO₂ emission limit was numerically appropriate (which here, in the Proposed Permit, it is not), meeting the limit on, for instance, a 24-hour average would mean that the facility could violate the standard for numerous hours a day, as long as the day were balanced out with a few hours of operation below the emission limit; a three-day or 30-day averaging period would result in even more absurd results. This would be entirely contrary to the entire genesis of the one-hour SO₂ NAAQS, which was recognition that short-term exposure to SO₂ for time periods as low as five minutes could cause serious health problems. See 75 Fed. Reg. at 35,524.

¹⁹ For instance, note that the Proposed Permit states that for purposes of determining compliance with Unit 3's SO₂ limitation, excess emissions will be based on a three hour average. See Proposed Permit at 31.

assure compliance with the permit terms and conditions.” 42 U.S.C. § 7661c(c); 40 C.F.R. §§ 70.6(a)(3)(i)(A)-(B), (c)(1). Permitting authorities must take three steps to satisfy the monitoring requirements in the Part 70 regulations. First, under 40 C.F.R. § 70.6(a)(3)(i)(A), permitting authorities must ensure that Title V permits contain all applicable monitoring requirements. Second, if an applicable CAA requirement contains no periodic monitoring, permitting authorities must add “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). Third, if there is some periodic monitoring in the applicable requirement, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance. 40 C.F.R. § 70.6(c)(1). In all cases, the rationale for the selected monitoring requirements must be clear and documented in the permit record. *See* 40 C.F.R. § 70.7(a)(5).

Bruce Mansfield’s Proposed Title V Permit lacks a monitoring/testing method for SO₂ emissions that will assure compliance with the Plant’s SO₂ emissions limits. Because Pennsylvania’s sampling and testing methods for SO₂ fail to set forth an averaging period for determining emissions of SO₂, Bruce Mansfield’s Title V Permit must include supplemental monitoring requirements for SO₂ which include adequate frequency to determine compliance with the one-hour SO₂ standard. *See* 25 Pa. Code § 139.13. Here, in order to determine whether the plant is in fact complying with the applicable standards, the Proposed Permit’s monitoring requirements for SO₂ should have provided that SO₂ emissions be monitored and measured on an hourly basis through the use of a Continuous Emissions Monitoring System (“CEMS”) at all times that the units are operating. Because it fails to do so, EPA should object to the Proposed Permit.

As written, the Proposed Permit does require the installation, operation, and maintenance of a CEMS for SO₂ in compliance with Chapter 139 Subchapter C (relating to requirements of continuous in-stack monitoring for stationary sources). However, the Proposed Permit goes on to provide for the allowance of an alternative method for monitoring SO₂ emissions—a sulfur-in-fuel sampling program. *See* Proposed Permit at 45. The Proposed Permit also allows PaDEP to employ a “to-be-determined” alternative for SO₂ monitoring if the department determines that a continuous emission monitoring system would be inaccurate or cannot be achieved. *See id.* The final permit cannot allow for these inadequate and unknown alternative monitoring methods. Instead, SO₂ CEMS must be required for monitoring SO₂ emissions from the Plant’s large coal-fired boiler in order to assure compliance with all applicable SO₂-related requirements. EPA should accordingly object to these failures in the Proposed Permit.

II. The Proposed Permit Fails to Require Adequate Monitoring to Assure Compliance with Particulate Matter Emission Limits

Bruce Mansfield’s Proposed Permit fails to require monitoring of particulate matter emissions adequate to assure compliance with applicable limits. As drafted, the Proposed Permit requires that particulate matter emissions from the Plant’s coal-fired boilers be tested

only once every two years.²⁰ This method of monitoring is wholly inappropriate, especially since the Plant is already equipped with Continuous Particulate Monitoring Systems (“PM CEMS”), as required by a 2008 Consent Order between PaDEP and the Plant, as well as a Partial Consent Decree between Citizens for Pennsylvania’s Future and the Plant. Attached as Exhibits 9 and 10, respectfully. Accordingly, EPA should object and require the incorporation of more stringent monitoring requirements. Here, that would be an explicit requirement to operate the Plant’s PM CEMS.

The CAA requires that permits “shall set forth . . . monitoring . . . requirements sufficient to assure compliance” with emissions limits in a Title V permit, 42 U.S.C. § 7661c(c).

Particularly, the frequency of emissions monitoring must reflect the averaging time used to determine compliance. *Sierra Club*, 536 F.3d at 765 (a yearly monitoring requirement would not likely adequately address a daily maximum emission limit); *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 monitoring requirements” under the CAA for PM), attached hereto as Exhibit 11. Again, EPA has promulgated regulations in Part 70 that describe the three steps permitting authorities must take to fulfill the monitoring requirement from 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 Sierra Club v. EPA*, 536 F.3d at 675, 678 (D.C. Cir. 2008) (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 monitoring requirements.”); *see also In re United States Steel Corporation – Granite City Works*, Petition No. V-2009-03, Order Responding to Petitioner’s Request that the Administrator Object to Issuance of State Operating Permit, at 6-7 (hereinafter “*U.S. Steel*”), attached hereto as Exhibit 12. In addition to setting forth adequate monitoring requirements for emission limits, the permitting authority is required to set forth its rationale in a statement of basis describing why the chosen monitoring regime is adequate to assure compliance with the emissions limit. 40 C.F.R § 70.7(a)(5); *U.S. Steel* at 7.

The determination of what monitoring is adequate is a context-specific exercise. *U.S. Steel* at 7. EPA has described the permit writer’s monitoring analysis as *beginning* by “assessing whether the monitoring required in the applicable requirement is sufficient to assure compliance with the permit terms and conditions.” *Id.* Appropriate factors for the permit writer to consider include: (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.* Applying these factors, EPA has found that stack testing for particulate matter emissions once every five years was insufficient to assure compliance. *Id.* at 31.

Here, the PM emission standards for Bruce Mansfield’s coal-fired boilers are derived from 25 Pa. Code § 123.11(a)(3), and prohibit the emission of particulate matter from the combustion unit in excess of 0.1 pounds per million Btu of heat input when the heat input to

²⁰ This issue was raised on Page 19 of the comments submitted by Sierra Club on July 20, 2012.

the combustion unit in millions of Btus per hour is equal to or greater than 600. Proposed Permit at 39. The Pennsylvania SIP does not contain provisions requiring specific types of PM monitoring; accordingly, the second scenario described in *Sierra Club* applies: PaDEP is required to include in Title V permits “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” *Sierra Club*, 536 F.3d at 675.

However, the monitoring frequency required by Bruce Mansfield’s Proposed Permit is inadequate to assure compliance with the hourly limits. Proposed Permit Section E, Source Group 1, Condition #011 states that, “[t]he permittee shall conduct a source test within one (1) year of the issuance of this Operating Permit and at least every two (2) years thereafter to demonstrate compliance with the particulate emission rate identified under the requirements of 25 PA Code 123.11 (0.1 lb/MMBtu for Units #1 and #2) or 40 CFR 60.42 (0.10 lb/MMBtu for Unit 3).” Such infrequent monitoring of PM emissions is inadequate to assure compliance with a continuous standard, especially when PM CEMS are already installed at the Plant. What is more, such infrequent monitoring is unlawful. See *U.S. Steel* at 7. As an application of the five *U.S. Steel* factors makes clear, continuous operation of the Plant’s PM CEMS must be required instead. This is most significantly true under *U.S. Steel* factor four—the type of monitoring, process, maintenance, or control equipment data already available for the Plant’s emission units, and the type—as well as factor five—frequency of the monitoring requirements for similar emission units at other facilities. The fact that the Plant has already installed PM CEMS on Units 1, 2, and 3 clearly dictates that continuous monitoring by the PM CEMS must be required. In addition, considering factors one—variability of emissions from the unit in question—and three—whether add-on controls are being used for the unit to meet the emission limit—together, the variability of emissions, especially as they relate to the add-on controls used by the plant in this case, strongly support continuous operation of the Plant’s PM CEMS. Bruce Mansfield employs scrubbers and ESPs as the means of controlling particulate matter emissions from its coal-fired boilers. Proposed Permit at 4 – 5. These control method, combined with the inherent variability of PM emissions from coal fired boilers, creates a very high degree of variability in PM emissions.²¹ As a result, it is highly unlikely that an occasional measurement (such as a stack test) will accurately capture such variability. Therefore, continuous operation of the Plant’s PM CEMS must be required in the final permit.

In addition, and as EPA is well aware, stack tests are scheduled well ahead of time. Sources equipped with scrubbers and ESPs, like Bruce Mansfield, have the opportunity to take advantage of that advance notice and perform work on their controls prior to testing in order to ensure favorable stack test results.²² In addition, during stack tests, the Plant will almost always run their pollution control technology at full capacity to ensure the greatest emissions reductions from its emission sources, whereas normal operations may involve running those

²¹ For instance, various properties of coal and flyash particles affect ESP performance and ultimately the amount and variability of particulate matter emissions from the boilers.

²² Some sources even have stack testing companies perform “diagnostic tests” before the “official stack test.” If the results of the diagnostic test show violations, then the source can simply perform work on the ESP to ensure that it “passes” the official stack test.

controls at reduced capacity. Thus, stack tests may not tell the public or regulatory agencies whether the source will be in compliance during the following multi-year period when the controls may once again be operating at a substandard level. Thus, to assure compliance where the emissions are so variable, continuous direct monitoring by the already-installed PM CEMS is the only adequate monitoring option.²³

Requiring operation of the Plant's PM CEMS is especially important since Units 1, 2, and 3 are subject to the federal Compliance Assurance Monitoring Rule ("CAM Rule") found in 40 C.F.R. Part 64 for particulate matter, and PaDEP has determined that the PM CEMS constitute CAM for these units. See PaDEP Review of Operating Permit Renewal Application Memo, From Barbara Hatch, To Air Quality Permit File TVOP-04-00235, May 24, 2012, page 7. Thus, operation of the Plant's PM CEMSs must be required at all times to provide the monitoring necessary to determine whether the Plant's particulate control devices are being properly operated and maintained and, as a result, provide the requisite reasonable assurance of compliance with applicable requirements under the CAA and CAM Rule.

Only by continuously monitoring PM emissions from Bruce Mansfield will PaDEP be able to assure that the Plant is in compliance with applicable particulate limits. See 25 Pa. Code §§ 127.512(h), 121.1 ("applicable requirements") (ii). Because the Proposed Permit fails to mandate continuous operation and use of the Plant's PM CEMS indicated by PaDEP as already installed on Units 1, 2, and 3, EPA should object.

III. The Proposed Permit Fails to Require Adequate Monitoring to Assure Compliance with Opacity Limits

Opacity at Bruce Mansfield is limited in its Proposed Title V Permit to "[e]qual to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour" and "[e]qual to or greater than 60% at any time." See Proposed Permit at 17. As previously discussed, the monitoring requirements in the Plant's Title V Permit 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); see also 25 Pa. Code § 127.511(a)(2). Yet, the opacity monitoring requirements set forth in the Proposed Permit are too infrequent to ensure that potential exceedances or violations of the opacity limitations are detected, recorded, and reported as required.²⁴ See

²³ Under the Proposed Permit, the Plant could very easily violate its particulate standard every hour on every day except for the handful of days on which the plant conducts its bi-annual stack tests. Essentially, without a requirement in the Title V Permit to operate the Plant's PM CEMS, the Plant could realistically violate its particulate limits 17,448 times over a two year period and still be deemed "in compliance" with its permit (assuming that the plant conducts stack test three days every two years and does not conduct stack test on the remaining 727 days over those two years). Allowing for such a possibility would be entirely absurd and contrary to the CAA. This absurdity is especially true given that the Plant already has the capability to continuously monitor its particulate emissions.

²⁴ This issue was raised on Page 24 of the comments submitted by Sierra Club on July 20, 2012.

Proposed Permit at 46 (“The Owner/Operator shall measure Visible Emissions for at least 1 hour during each calendar week . . .”).

The Proposed Permit must require continuous monitoring of opacity in order to assure that the Permit’s terms are in fact consistent with the applicable opacity standards—(1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour; and (2) Equal to or greater than 60% at any time. See Proposed Permit at 17 (emphasis added). As drafted, the Proposed Permit leaves 99.4% (or 10,020) of the 10,080 minutes in each week unmonitored for opacity. What is more, this permit condition goes on to allow the Plant to forgo even this infrequent and inadequate opacity monitoring when “atmospheric conditions make such readings impossible.”²⁵ *Id.* Because the frequency of monitoring must meaningfully relate to the opacity limits in the permit, EPA should object to the Proposed Permit as currently drafted.

Finally, the method by which opacity monitoring is to be conducted under the Proposed Permit is inadequate. The Proposed Permit states, “Visible emissions may be measured using either of the following: (1) A device approved by the Department and maintained to provide accurate opacity measurements; or (2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.”²⁶ Proposed Permit at 19. Neither of these monitoring methods is adequate. As drafted now, the monitoring requirements for opacity in the Proposed Permit are insufficient to ensure that any potential exceedances or violations are detected, recorded, and reported as required. The permit must require continuous opacity monitoring (or at the very least daily stack observations for visible emissions) to assure compliance with the permit’s opacity limits. Because it does not, EPA should object.

CONCLUSION

For the reasons cited above, the Citizen Groups respectfully request that the Administrator of the United States Environmental Protection Agency grant this Petition to Object to the Bruce Mansfield Title V Permit and order PaDEP to include in a new permit: (1) the prohibition on air pollution; (2) hourly SO₂ emission limits, averaging periods, and monitoring requirements sufficiently stringent to avoid causing harmful air pollution and violations of the applicable acid rain provision; (3) adequate monitoring provisions—namely, a requirement for continuous operation of the Plant’s PM CEMS—to assure compliance with the permit’s particulate matter emissions limits; and (4) adequate monitoring provisions to assure compliance with the permit’s opacity limitations. In addition, we request that EPA also object

²⁵ The Permit is unclear as to which party has the discretion to determine what conditions make readings “impossible.” Allowing the Plant to make such a determination for its own testing invites manipulation and is wholly improper.

²⁶ As a carry-over from its last Title V Permit, issued in 2002, the Proposed Permit specifically exempts Bruce Mansfield’s Units 1, 2, and 3 from installing, operating and maintaining a continuous opacity monitoring system. See Proposed Permit at 46. PaDEP’s continued choice to exempt these units from the requirements of 25 Pa. Code § 123.46(b) is surprising given that the Plant has a history of numerous and severe opacity issues and violations in the past. EPA should object to this exemption.

to the Proposed Permit on the basis of the various other enumerated grounds for objection raised in the Sierra Club Comments (e.g. the Proposed Permit includes language that purports to limit the type of evidence that is to be used for compliance purposes or to show that the facility is in violation of an applicable requirement; the Proposed Permit impermissibly applies a permit shield to unidentified changes at the Plant), and order PaDEP to make the necessary changes in a new permit.²⁷

Respectfully submitted,

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²⁷ These additional grounds for objection are as follows: the Proposed Permit lacks adequate requirements to ensure consistency with the averaging period and monitoring necessary under the one-hour nitrogen dioxide (“NO₂”) NAAQS; the Proposed Permit lacks certain necessary reporting requirements; the Proposed Permit fails to set separate emissions limits for PM_{2.5}; the Proposed Permit fails to consider both filterable and condensable PM when determining compliance with its particulate emissions limitations; the Proposed Permit fails to assure compliance with the applicable interstate air pollution rule; the Proposed permit fails to ensure that its Best Available Retrofit Technology (“BART”) analyses for its coal-fired boilers are appropriate; the Proposed Permit impermissibly claims to apply a permit shield to unidentified future projects; and the Proposed Permit fails to provide for consideration of all Credible Evidence when determining compliance with the permit’s terms.

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