UNITED STATES ENVIRONMENTAL PROTECTION AGENCY BEFORE THE ADMINISTRATOR

IN THE MATTER OF)	PETITION FOR OBJECTION
)	
Clean Air Act Title V Permit For)	
)	
ALABAMA POWER COMPANY)	Permit No. 503-1001
BARRY GENERATING PLANT)	
)	
)	
Final Title V/State Operating Permit)	
In Mobile County, AL)	
)	
Issued by the Alabama Department)	
of Environmental Management)	

PETITION TO OBJECT TO THE TITLE V OPERATING PERMIT FOR ALABAMA POWER COMPANY'S BARRY STEAM ELECTRIC GENERATING PLANT

Pursuant to section 505(b)(2) of the Clean Air Act (CAA), 42 U.S.C. § 7661d(b)(2), and 40 C.F.R. § 70.8(d), Sierra Club and Greater-Birmingham Alliance to Stop Pollution ("GASP, Inc.") ("Petitioners")¹ petition the Administrator of the U.S. Environmental Protection Agency ("EPA") to object to the above-referenced Title V permit (No. 503-1001) ("the Permit") issued by the Alabama Department of Environmental Management ("ADEM") for Alabama Power Company's ("APC") Barry Steam Electric Generating Plant ("Barry," "the Barry Plant," or "the Plant") in Bucks, Alabama.

INTRODUCTION

EPA should object to ADEM's renewal of the Title V permit for the Barry plant on several grounds. Focusing first on the permit's limits for SO₂, the permit was issued in contravention of the applicable requirement in the Alabama State Implementation Plan (SIP) that required Alabama Power to "[d]emonstrate, to the satisfaction of the Director, that the sulfur oxides emitted, either alone or in contribution to other sources, will not interfere with . . . maintenance of any primary . . . ambient air quality standard prescribed at Rule 335-3-1-.03." Ala. Admin. Code r. 335.3.5.01(2)(a). Second, the Permit's SO₂ limits contravene the SIP's applicable

¹ The undersigned attorneys submit this Petition on behalf of the Petitioners.

requirement that "the administration of the [Air] Division by the Director shall provide for the attainment of the [National Ambient Air Quality Standards [NAAQS]] throughout the State as expeditiously as practicable." Ala. Admin. Code r. 335-3-1-.03(3). Indeed, the *only* evidence in the record--there is no contradictory evidence before ADEM or EPA--demonstrates that the SO₂ limits in the permit will lead to massive exceedances of the 2010 SO₂ NAAQS in the communities in the vicinity of the Barry Plant. In fact, air dispersion modeling submitted with GASP, Inc. and Sierra Club's comments demonstrates that the permitted limits can lead to SO₂ levels as high as 681 ug/m3 or 430 ug/m3 (depending on what limit one of the coal units complies with), versus the NAAQS limit of 196.2 μ g/m3 -- exceedances over two or three times the allowable health-based limit.²

These exceedances will have tremendous impacts on the environmental justice ("EJ") communities living in the vicinity of the plant³--communities that the Biden Administration and Administrator Regan have identified as key priorities for EPA. Indeed, the modeling submitted by Sierra Club demonstrates the plume of unsafe SO₂ levels will blanket the environmental justice communities living near the plant, as reflected in the figures below taken from the expert modelling report Petitioners included with their comments.⁴

² See Stephen Klafka, Barry Steam Electric Generating Plant, Bucks, Alabama, Evaluation of Compliance of the June [30], 2020 Draft Operating Permit with the 1-hour NAAQS for SO₂ (Aug. 31, 2020) (hereafter "Klafka Report") at 3-5 (Exhibit 1 to Sierra Club and GASP, Inc.'s October 22 Comments on Draft Permit No. 503-1001) (hereafter "Petitioners' Comments," attached hereto as Attachment 1).

³ See Printout of EPA EJSCREEN Map, *Cancer Risk, Bucks, Alabama* (Feb. 24, 2021) (hereafter "Cancer Risk Map") (attached hereto as Attachment 2) and Sub-Attachments 1-3 to Letter from Sierra Club and GASP, Inc. to EPA, Review of ADEM's Operating Permit for Plant Barry No. 503-1001 (Jan. 21, 2021) (hereafter "Letter to EPA," attached hereto as Attachment 4).

⁴ See Klafka Report at 10-11 (PDF 13-14), (Ex. 1 to Attach. 1 hereto).



Figure 1 – Regional View of Predicted Exceedances Due to All Sources & Unit 5 at 1.8 lbs/mmbtu



Figure 2 - Regional View of Predicted Exceedances Due to All Sources & Unit 5 at 0.2 lbs/mmbtu

Numerous people--including dozens of Sierra Club members--specifically raised the environmental justice implications with ADEM when submitting comments on the proposed permit, and Petitioners also raised them more recently with EPA Region 4. One representative comment expressed alarm that the SO₂ limits are "an environmental justice issue [whose] threats fall disproportionately on low-income rural communities and communities of color. It is both immoral and unethical to allow these neighboring communities to bear the brunt of loose standards that are hazardous to their health."⁵ Dozens of others make similar comments emphasizing such concerns.⁶

⁵ See Barbara Caddell et al., Public Comments Compilation to ADEM (Oct. 22, 2020) at PDF 98 (hereafter "Public Comments," attached hereto as Attachment 3). This same document is a compilation of approximately 70 comments in the record.

⁶ Id.

It is imperative that EPA act to protect the environmental justice communities living around the Barry Plant and object to the Barry Permit. EPA is required to direct ADEM to comply with its State Implementation Plan's governing regulations, and ADEM is required to comply with the the applicable requirements contained therein, including the requirement that ADEM administer its program to require attainment with the NAAQS within a set timeframe that has now passed. In addition, ADEM must require APC to demonstrate that the permit limits contained in the proposed permit are sufficiently stringent to be protective of the NAAQS, particularly when new SO₂ NAAQS are in full force and effect, and there is clear evidence in the record that the proposed limits are insufficiently stringent to ensure compliance with the NAAQS.

EPA must also object because nearby EJ communities will be unable to monitor Plant Barry's compliance with the SIP requirement that restricts visible coal dust emissions beyond the lot line via the Title V permit. ADEM ignored Sierra Club and GASP, Inc. comments and included neither the SIP requirements in the permit nor permit terms for monitoring, recordkeeping and reporting of these emissions to provide the community with a way to track and ensure the Barry Plant meets the restrictions.

EPA must also require that ADEM obtain a complete and accurate compliance certification from APC. Without a legal compliance certification, the impacted minority populations have no assurance that the Barry Plant is operating in compliance with applicable requirements. Moreover, because ADEM failed to justify granting a permit shield for the entire facility, EPA is required to ensure ADEM either justifies the shield, or removes it from the permit. Without EPA's action, APC will be shielded from enforcement actions.

BACKGROUND

I. THE PROPOSED PERMIT AND THE BARRY PLANT

This petition asks EPA to object to the renewed Title V permit for the Barry Plant in Bucks, Alabama, No. 503-1001, about 25 miles north of Mobile. ADEM released the draft permit for public comment on June 30, 2020, and set a comment deadline of October 22, 2020. Petitioners timely submitted comments on October 22, raising objections discussed below.

Alabama Power Company has operated the Barry Steam Plant in Bucks, Alabama, since the early 1950s.⁷ While for decades it operated with 5 coal units, presently, it has 2 aging coal units,

⁷ Expert Report by William L. Hall at Section 3.2, *Labauve v. Olin Corp. Arch Chems.*, 231 F.R.D. 632 (S.D. Ala. Dec. 8, 2004) (No. 1:03-cv-00567), 2004 WL 3607471.

Units 4 and 5, which have been in operation for more than 50 years.⁸ Unit 4 has no controls for its emissions of SO₂.⁹

II. PETITIONERS

Sierra Club is one of the oldest and largest national nonprofit environmental organizations in the country, with over 3.5 million members and supporters dedicated to exploring, enjoying, and protecting the wild places and resources of the earth; practicing and promoting the responsible use of the earth's ecosystems and resources; educating and enlisting humanity to protect and restore the quality of the natural and human environment; and using all lawful means to carry out these objectives. One of Sierra Club's priority national goals is promoting and improving air quality. Another is endeavoring to secure environmental justice for those disproportionately impacted by pollution.

GASP, Inc. is actively involved in addressing community concerns involving air quality and environmental justice throughout Alabama. One way in which GASP, Inc. seeks to improve air quality and address historic and ongoing environmental justice issues in these communities is through advocating for stronger Title V permits.

III. LEGAL STANDARDS FOR OBJECTIONS

The Clean Air Act provides that EPA "shall issue an objection ... if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the" Act. 42 U.S.C. § 7661d(b)(2). Likewise, EPA's implementing regulations provide that EPA will object to the Permit if it is not "in compliance with applicable requirements or requirements under this [40 C.F.R. Part 70]." 40 C.F.R. § 70.8(c). *See also N.Y. Pub. Interest Research Group v. Whitman*, 321 F.3d 316, 333 n.12 (2d Cir. 2003) (explaining that under Title V, "EPA's duty to object to non-compliant permits is nondiscretionary"). In Section 70.2, EPA defines "applicable requirements" as "(1) Any standard *or other requirement provided for in the applicable implementation plan* approved or promulgated by EPA through rulemaking under title I of the Act that implements the relevant requirements of the Act, including any revisions to that plan promulgated in part 52 of this chapter." 40 C.F.R.§ 70.2(1) (emphasis added). An additional ground for EPA to object arises when the permitting agency -- here ADEM -- fails to "[s]ubmit any information necessary to review adequately the proposed permit." 40 CFR § 70.8(c)(3)(ii).

⁸ Test. of Larry W. Loos at A-17, *In the Matter of AmerenUE*, No. ER-2010-0036, (Mo. Pub. Serv. Comm'n July 24, 2009), available at

https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935482519

⁹ Alabama Power Company, Statement of Basis, Barry Steam Electric Generating Plant, MSOP No. 503-1001 at 2-3 (hereafter "SOB").

IV. TIMELINESS

ADEM submitted the draft permit materials for Plant Barry to EPA on December 18, 2020,¹⁰ and EPA's 45-day period to review expired on February 1, 2021.¹¹ This Petition is being filed on or before April 5, 2021, which is within 60 days following the end of EPA's 45-day review period, as required by CAA § 505(b)(2). The Administrator must grant or deny this petition within 60 days after it is filed.¹²

V. SUMMARY OF OBJECTIONS

Serious environmental justice concerns in the communities surrounding the Barry Plant amplify the importance of EPA closely reviewing the objections below and ensuring that the permit's terms and the permitting process comply with legal requirements meant to protect all members of the public.

ADEM's Failure to Require APC to Demonstrate Permit Limits Will Not Interfere With Maintenance of SO₂ NAAQS. EPA should object because ADEM failed to require Alabama Power to "[d]emonstrate . . . that the sulfur oxides emitted [by Plant Barry], either alone or in contribution to other sources, will not interfere with . . . maintenance of' the SO₂ NAAQS. Ala. Admin. Code r. 335-3-5-.01(2)(a). This is especially critical because ADEM had before it

¹⁰ Departing from its historical practice of transmitting one or two permits at the same time, ADEM transmitted a total of three APC Title V permits, along with a fourth Title V permit, to EPA, all of which have significant public interest. While Petitioners recognize ADEM was under a State court deadline to issue the Plant Barry permit, ADEM generally staggered the public notice and comment schedule for Plant Barry (state public comment period ended October 22, 2020) with the two other APC Title V permits (i.e., APC Gaston Steam Electric Generating Plant (Permit No. 411-0005, state public comment period ended July 29, 2020), and APC Greene County Steam Electric Generating Plant (Permit No. 405-0001, state public comment period ended July 29, 2020)). ADEM's staggered schedule allowed the staff person assigned the APC permits and management to process the APC's permits sequentially. Rather than continue the sequential processing, ADEM elected to transmit the three APC Title V permits along with the fourth (i.e., UOP, LLC Plant in Mobile, Alabama (Permit No. 503-8010, state public comment period ended October 26, 2020)), to EPA Region 4 all on the same day - December 18, 2020. ADEM's simultaneous submittals of the draft Title V permits for the three APC sources along with the UOP Plant meant that EPA's 45-day clock ran for all four permits at the same time. On the day after EPA's deadline to object, ADEM's Director issued all four permits. The result of ADEM's departure from its historical practice set a single deadline - April 5, 2021 - for the public to file petitions on any of the four permits. See, Screenshots of ADEM Title V draft permits submitted to EPA, U.S. E.P.A., Alabama Proposed Title V Permits, https://www.epa.gov/caa-permitting/alabama-proposed-title-v-permits (which shows for the 94 permits in EPA's database ADEM rarely submits more than one or two permits to EPA on the same day; when ADEM has simultaneously submitted permits on the same day, none of ADEM's other simultaneous submittal and issuance dates are for permits with the level of public interest for the four permits it issued on February 2, 2021) (Attach. 5 hereto).

¹¹ See 42 U.S.C § 7661d(b)(1); see U.S. E.P.A., Alabama Proposed Title V Permits, <u>https://www.epa.gov/caa-permitting/alabama-proposed-title-v-permits</u>. ¹² 42 U.S.C. § 7661d(b)(2).

evidence that plainly showed the limits could cause violations of the 2010 SO₂ NAAQS.¹³ Given the modeling in the record that Sierra Club and GASP, Inc. submitted, ADEM was required to refuse to issue the permit until Alabama Power demonstrated that the limits it proposed in its permit application, and that ADEM included in the draft Plant Barry Permit, would be sufficient to ensure compliance with the 2010 SO₂ NAAQS.

ADEM's Failure to Administer Air Division to Attain NAAQS. EPA should object because ADEM has failed to comply with Ala. Admin. Code r. 335-3-1-.03(3), "Attainment of Primary Standard," which requires that "the administration of the [Air] Division by the Director shall provide for the attainment of the [NAAQS] throughout the State as expeditiously as practicable, but in no case later than three years after the date of initial adoption of these rules and regulations or within the time limits specified by Section 110(a) of the Clean Air Act, as amended (91 Stat. 685), whichever is later." Both of these time periods have passed for the 2010 SO₂ NAAQS for attainment areas in Alabama.¹⁴ EPA should object because ADEM issued the Permit with a NAAQS limit that could lead to violations of the NAAQS, as demonstrated by evidence Sierra Club and GASP, Inc. submitted with their comments. Thus, the Division Director's issuance of the Final Permit transgresses this requirement. ADEM's failure to require APC to demonstrate the permit limits would ensure compliance with the SO₂ NAAQS, as mandated by Ala. Admin. Code r. 335-3-5-.01(2)(a) is further evidence of ADEM not administering the Air Division to "provide for the attainment of the [NAAQS]." Ala. Admin. Code r. 335-3-1-.03(3).

ADEM's Failure to Submit Information Necessary for EPA to Review the Permit. EPA should object because ADEM has not submitted documentation to EPA to support that the limits are sufficient to ensure compliance with the NAAQS, contrary to the requirement that ADEM "[s]ubmit [to EPA] any information necessary to review adequately the proposed permit," which constitutes grounds for objection. 40 C.F.R. § 70.8(c)(3). Notably, Sierra Club and GASP, Inc. included modeling in their comments which demonstrates that the permit limits are not sufficient to ensure compliance with the NAAQS. There is no contrary evidence, and without such information, EPA lacks the information needed to find that ADEM is administering the Air Division to "provide for the attainment of the [NAAQS]," as required by Ala. Admin. Code r. 335-3-1-.03(3). Moreover, EPA would have additional pertinent information to review the proposed permit, regarding compliance with the NAAQS, had ADEM ensured that APC conduct the compliance demonstration required under Ala. Admin. Code r. 335-3-5-.01(2)(a).

The Permit's Inappropriate Averaging Periods for SO₂ Limits. The Permit also fails to set an appropriate averaging period for determining compliance with the SO₂ NAAQS emission limits. Despite the fact that EPA has determined a one-hour air quality standard is necessary to protect public health from the dangers associated with exposure to SO₂, the Permit measures compliance

¹³ See Klafka Report (Ex. 1 to Attach. 1 hereto).

¹⁴ See infra note 68

with the SO₂ emission limitation of 1.8 lb/MMBtu for both Units 4 and 5 according to a rolling 24-hour averaging time period.¹⁵ Likewise, for Unit 5, and its stated plan to comply with the lower SO₂ limit available as an option for compliance with the Mercury and Air Toxics Standards (hereinafter "MATS" or "MATS rule"),¹⁶ compliance is impermissibly measured over an even longer period — based upon "a [30]-boiler operating day (BOD) SO₂ rolling average (lb/MMBtu)."¹⁷

The Permit Fails to Include SIP Requirements and Monitoring, Recordkeeping and Reporting to Control Offsite Coal Dust Emissions. EPA should object because the Permit fails to include the SIP work practice requirements to control fugitive coal dust from the coal handling systems. Systems that convey coal delivered by coal barges, convey and store coal in piles, convey delivered and stored coal to pulverize into powder-like material, and then use fans to blow the powder-like material into the units to fire the boilers. ADEM also failed to include monitoring, recordkeeping and reporting for the SIP work practice requirements and the 20 percent opacity limitation.

ADEM's Failure to Require APC Submit a Complete and Accurate Compliance

Certification. EPA should object to the permit because contrary to the Part 70 requirements, the permit applicant failed to submit a complete and accurate compliance certification. Despite comments from Sierra Club and GASP, Inc. that pointed out the missing and inaccurate information, ADEM's final permit record neither responds to these comments nor addresses them. EPA must object to the Permit because without a legal compliance certification, the minority populations have no assurance that the Barry Plant is operating in compliance with applicable requirements.

ADEM's Failure to Justify a Facility-Wide Permit Shield. EPA must also object because ADEM provided no basis for granting the permit shield for the entire facility.

¹⁵ Alabama Department of Environmental Management, Major Source Operating Permit: Alabama Power Company - Barry Steam Electric Generating Plant, Facility No. 503-1001 (Feb. 2, 2021) [hereafter "Final Permit"] at 32, 38; SOB at 6, 8, 13.

¹⁶ SOB at 11 (Pursuant to 40 C.F.R. § 63.9991(c), APC can only choose this option if it satisfies specified regulatory criteria, which include, <u>inter alia</u>, that Barry "[a]t all times . . . operate the wet or dry flue gas desulfurization technology installed on the unit consistent with § 63.10000(b)").

¹⁷ SOB at 13.

VI. BACKGROUND RELATED TO SO₂ NAAQS OBLIGATIONS

A. EPA Promulgated Updated SO₂ NAAQS in 2010 to Protect and Enhance Public Health and Welfare

EPA is required to promulgate primary NAAQS for six "criteria" pollutants— including sulfur dioxides.¹⁸ Establishing such NAAQS is one means to meet the CAA's intent to protect and enhance the nation's public health and welfare. Primary NAAQS are health-based standards and must be set at a level adequate to protect the public from the harmful effects of exposure to the criteria pollutants -- here SO₂ -- with an adequate margin of safety.¹⁹

For sulfur dioxide, EPA adopted a one-hour standard of 75 parts per billion (ppb) (equivalent to 196.2 micrograms per cubic meter $(\mu g/m^3)$),²⁰ in recognition of the fact that the prior twenty-four hour and annual standards did not adequately protect the public against adverse respiratory effects associated with short term (five-minute to twenty-four hour) exposure.²¹ When setting the one-hour SO₂ NAAQS, EPA determined exposure to SO₂ in even very short time periods, such as five minutes, causes decrements in lung function; aggravation of asthma; and respiratory and cardiovascular morbidity.²²

Short-term exposure to SO₂, ranging from five minutes to twenty-four hours, causes an array of health problems, including premature death; worsening of respiratory diseases such as emphysema and bronchitis; aggravation of asthma; exacerbation of heart disease; chest tightness; and decrements in lung function.²³ These adverse health effects are more pronounced

https://nepis.epa.gov/Exe/ZyPDF.cgi/P1008KCP.PDF?Dockey=P1008KCP.PDF.

¹⁸ 42 U.S.C. § 7409.

¹⁹ *Id.* at § 7409(b)(1).

²⁰ Compliance with the 75 ppb standard is determined by the ninety-ninth percentile of the annual distribution of daily maximum one-hour concentrations —which is the same as the fourth-highest value at each modeling receptor for a given year—averaged over three years. The one-hour SO₂ NAAQS of 75 ppb equals 196.2 µg/m³. U.S. EPA, *Applicability of Appendix W Modeling Guidance for the 1-hour SO₂ National Ambient Air Quality Standard*, at 1 (Aug. 23, 2010).

²¹ U.S. EPA, *Final Rule, Primary National Ambient Air Quality Standard for Sulfur Dioxide*, 75 Fed. Reg. 35,520 (June 22, 2010) (codified at 40 C.F.R. § 50.17(a)) ("The level of the national primary 1-hour annual ambient air quality standard for oxides of sulfur is 75 parts per billion (ppb, which is 1 part in 1,000,000,000), measured in the ambient air as sulfur dioxide (SO₂)").

²² See Env't. Prot. Agency, EPA/600/R-08/047FA, Integrated Science Assessment for Sulfur Oxides -Health Criteria, Ch. 5 tbls.1, 5-2 (2008) (hereafter "EPA Integrated Science Assessment for SO₂"), available for download at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=198843; Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. at 35,525; see also Env't. Prot. Agency, Our Nation's Air: Status and Trends Through 2008 (2010) (noting that the health effects of sulfur dioxide exposure include aggravation of asthma and chest tightness) http://www.epa.gov/airtrends/2010/report/airpollution.pdf.

²³ See EPA Integrated Science Assessment for SO₂, Ch. 5 tbls. 5-1, 5-2; *Primary National Ambient Air Quality Standard for Sulfur Dioxide*, 75 Fed. Reg. at 35,525; EPA, *Our Nation's Air: Status and Trends Through 2008*, at 4 (2010), available at:

in people who exercise and play outdoors, especially those with asthma. Studies also show a connection between short-term SO₂ exposure and increased hospitalizations, particularly in atrisk populations such as children, the elderly, and asthmatics.³⁸

Due to both the shorter averaging time and the lower concentration value, the one-hour seventyfive ppb standard for SO₂ is far more protective than prior standards, with enormous public health benefits—EPA estimated that compliance with the standard would prevent 2,300 to 5,900 premature deaths and 54,000 asthma attacks a year.²⁴

B. Alabama Regulations Implementing SO₂ NAAQS Limits

The Alabama SIP incorporates the NAAQS as set forth in 40 C.F.R. § 50. Ala. Admin. Code r. 335-3-1-.03. Alabama regulations dating back to 1996, prior to the 2010 SO₂ NAAQS, set an SO₂ emission limit of 1.8 lbs/mmbtu as applied to fuel combustion as relevant here. Ala. Admin. Code r. 335-3-5-.01(1)(a).²⁵ However, beyond that, the regulations impose other requirements clearly designed to ensure that SO₂ emissions actually achieve compliance with the SO₂ NAAQS. First, the same rule that imposes the 1.8 lbs/mmbtu limit--Ala. Admin. Code r.335-3-5-.01--also requires the "owner or operator of a fuel burning installation having a total rated capacity greater 1500 million BTU per hour," to demonstrate "that the sulfur oxides emitted, either alone or in contribution to other sources, will not interfere with attainment and maintenance of any primary . . . ambient air quality standard prescribed at Rule 335-3-1-0.3" [the Rule that incorporates the NAAQS, as set forth in 40 CFR 50]. Ala. Admin. Code r. 335-3-5-.01(2)(a). Second, Ala. Admin. Code r. 335-3-1-.03(3), titled "Attainment of Primary Standard," requires that "the administration of the [Air] Division by the Director shall provide for the attainment of the [NAAQS] throughout the State as expeditiously as practicable, but in no case later than three years after the date of initial adoption of these rules and regulations or within the time limits specified by Section 110(a) of the Clean Air Act, as amended (91 Stat. 685), whichever is later." Thus, ADEM is not authorized to simply include in a rote fashion the 1.8 lbs/mmbtu limit in a permit. The importance of these additional requirements is further evident from the fact that ADEM established the 1.8 lbs/mmbtu standard fourteen years prior to the 2010 SO₂ NAAQS, effective October 15, 1996.²⁶

²⁴ U.S. EPA, *Final Regulatory Impact Analysis (RIA) for the SO*₂ *National Ambient Air Quality Standards (NAAQS)*, tbl. 5.14 (2010), available at:

https://www3.epa.gov/ttnecas1/regdata/RIAs/fso2ria100602full.pdf.

²⁵ See U.S EPA, *EPA Approved Statutes and Regulations in the Alabama SIP: Chapter No. 335-3-5, Control of Sulfur Compound Emissions*, <u>https://www.epa.gov/sips-al/epa-approved-statutes-and-regulations-alabama-sip</u>.

²⁶ See U.S. EPA, EPA Approved Statutes and Regulations in the Alabama SIP: Chapter No. 335-3-5, Control of Sulfur Compound Emissions, <u>https://www.epa.gov/sips-al/epa-approved-statutes-and-regulations-alabama-sip</u>.

C. Modeling Results Demonstrate the Permit Limits Allow Barry's Emissions to Exceed the SO₂ NAAQS

In support of its permit comments, GASP, Inc. and Sierra Club submitted an air modeling study conducted by expert Steve Klafka of Wingra Engineering. The study employed EPA's AERMOD, AERMET, and AERMINUTE programs to measure the Plant's allowable (based on permitted heat inputs and sulfur dioxide emission factor in pounds per million Btu) emissions to determine the Plant's potential impact on the 1-hour SO₂ NAAQS. The modelling predicted that the proposed emission limits in the draft Permit would unlawfully allow emissions at a level that would cause a violation of the SO₂ NAAQS -- leading to SO₂ levels as high as 681 ug/m3 or 430 ug/m3, (depending on what limit one of the coal units complies with) versus the NAAQS limit of 196.2 μ g/m3 -- exceedances over two or three times the allowable health based limit.²⁷

The figures above, set forth on pages 3-4 are results from the expert modeling report, and depict the regional view of predicted exceedances when both Units 4 and 5 comply with the 1.8 lb/mmbtu limit, and when Unit 5 complies with the stricter 0.2 lb/mmbtu limit. The modelling report further identified the limit that is needed to prevent this. It determined that .46 lb/mmbtu is the limit needed to achieve the SO₂ NAAQS, when Unit 5 is not complying with the stricter 0.2 lb/mmbtu (as a surrogate for MATS compliance).²⁸ The model determined that .94 lb/mmbtu was the limit needed for Unit 4 emissions to meet the NAAQS assuming Unit 5 was adhering to that stricter 0.2 lbs/mmbtu limit.²⁹ Furthermore, using the Plant's 2018 emissions, Wingra Engineering modeled compliance with the .46 and .94 lb/mmbtu limits, and found that Barry Unit 4 exceeded the 0.46 lb/mmbtu limit needed to meet the NAAQS when Unit 5 is not adhering to the stricter 0.2 lb/mmbtu limit that Unit 4 exceeded the 0.94 lb/mmbtu limit 43.4% of the year.³¹

VII. EPA Must Consider Critical Environmental Justice Implications Relating to Petitioners' Objection to this Permit

A. EPA Is Charged With "Delivering" and "Securing" Environmental Justice

The objections raised in this Petition -- ranging from burdening the surrounding community with emissions exceedances with health-based SO₂ standards, to the unlawful compliance certification -- raise serious environmental justice concerns. Meaningful consideration of those concerns is long overdue. Existing Executive Orders require federal executive agencies such as EPA to

²⁷ Klafka Report at 3-5, (Ex. 1 to Attach. 1 hereto).

²⁸ *Id.* at 7.

²⁹ *Id*. at 8.

³⁰ Klafka Report at 7, (Ex. 1 to Attach. 1 hereto).

³¹ *Id*. at 8.

"make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."³²

Recent Executive Orders affirm the urgency of addressing such impacts now. EPA, in reviewing the objections set forth below, "must hold polluters accountable for their actions [and] must deliver environmental justice in [the] communities [surrounding the Barry Plant]."³³ The current Biden Administration's "policy ... is to secure environmental justice."³⁴ EPA, to "deliver" and "secure" environmental justice, must, when it reviews the objections in this Petition, confront the pervasive environmental justice concerns. This includes how, as explained below, allowing the Barry Plant to continue to emit SO₂ at levels that could exceed the NAAQS will have "disproportionately high and adverse human health impacts" on the surrounding minority populations and low-income populations. Additionally, as reflected in the map generated using EPA's EJSCREEN mapping tool copied below, EPA must recognize that such populations also suffer from the highest levels of cancer risk.

³³ "Executive Order on Tackling the Climate Crisis at Home and Abroad," § 201 (Jan. 27, 2021), available at <u>https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-orderon-tackling-the-climate-crisis-at-home-and-abroad/; *see also*, White House Fact Sheet, "President Biden Takes Executive Actions to Tackle the Climate Crisis at Home and Abroad, Create Jobs, and Restore Scientific Integrity Across Federal Government," (Jan. 27, 2021), available at <u>https://www.whitehouse.gov/briefing-room/statementsreleases/2021/01/27/fact-sheet-president-bidentakes-executive-actions-to-tackle-the-climate-crisis-at-home-and-abroad-create-jobs-and-restorescientific-integrity-across-federal-government/.</u></u>

³² Exec. Order No. 12898, § 1-101, 59 Fed. Reg. 7629 (Feb. 16, 1994), as amended by Exec. Order No. 12948, 60 Fed. Reg. 6381 (Feb. 1, 1995).

³⁴ "Executive Order on Tackling the Climate Crisis at Home and Abroad," § 219 (Jan. 27, 2021).

Bucks AL Cancer Risk



Figure 3 - National Percentiles of Cancer Risk Surrounding Plant Barry in Bucks, Alabama from Inhalation of Air Toxics³⁵ -- Darkest Red Correlates with 95 to 100 percentile.

The same is true for particulate matter emissions from the coal handling systems. ADEM's permit fails to include permit terms that control emissions from these systems. As explained in section II, ADEM's permit allows APC to emit unrestricted fugitive coal emissions that will have "disproportionately high and adverse human health impacts" on the surrounding minority populations and low-income populations. Finally, EPA must secure environmental justice for the surrounding populations and ensure that ADEM implements all the Part 70 requirements, removing hurdles to enforcement.

B. As They Have for Decades, Environmental Justice Communities Surrounding Barry Will Bear the Brunt of Adverse Health Impacts from Emissions Exceeding SO₂ NAAQS

The brunt of the impact from Plant Barry's sulfur dioxide emissions will be felt first and foremost by the environmental justice communities living in the vicinity of the plant and its

³⁵ See EPA's Environmental Justice Screening and Mapping Tool (Version 2020).

emissions.³⁶ They have borne the impacts of Plant Barry's pollution for far too long.³⁷ Continuing to permit emissions of SO₂ that fail to ensure that such long burdened communities benefit from the more health protective standard of the 2010 SO₂ NAAQS, eleven years after they were first promulgated, would defy the dictates of the recent Executive Order that EPA is to "deliver" and "secure" environmental justice.

Not surprisingly, environmental justice concerns were at the forefront of many public comments. Over 70 people, including dozens of Sierra Club members, submitted comments to ADEM, identifying the environmental justice implications of the permit.³⁸ As one such comment states, the SO₂ pollution would "disproportionately impact [...] low-income folks, rural communities, and people of color."³⁹ Another comment from a Sierra Club member similarly stated that the SO₂ limits are

[A]n environmental justice issue [whose] threats fall disproportionately on low-income rural communities and communities of color. It is both immoral and unethical to allow these neighboring communities to bear the brunt of loose standards that are hazardous to their health.⁴⁰

Likewise, Sierra Club retained Wingra Engineering which did air dispersion modeling and generated plume maps of the unlawfully high SO₂ levels that would result from the SO₂ limits in the proposed permit--plumes which extend miles from the plant. These maps clearly show violations of the SO₂ NAAQS in the vicinity of the plant in areas where well-known EJ communities live. Copies of these plume maps are set forth in the Introduction section above.⁴¹

Sierra Club and GASP, Inc. submitted these plume maps to ADEM,⁴² but ADEM failed to act on the information and tighten the SO₂ limits in the final permit. There can be no factual dispute that these are EJ communities.⁴³ Wingra also generated maps that overlaid the results generated from EPA's own EJSCREEN over the plume maps,⁴⁴ and EPA's EJSCREEN tool confirms the prevalence of minority communities and low-income communities in the area surrounding the Barry Plant.

³⁶ See Klafka Report, Figures at 11-12 (Ex. 1 to Attach. 1 hereto) and EJ and Modeling Figures, (Sub-Attach. 1 to Attach 4. hereto).

³⁷ Id.

³⁸ See Public Comments (Attach 3. hereto).

³⁹ See Public Comments at 1 (Attach 3. hereto).

⁴⁰ See Public Comments (Attach. 3 hereto).

⁴¹ See supra at 3-4.

⁴² See Klafka Report (Ex. 1 to Attach. 1 hereto). The plume maps along with the entire report were submitted to ADEM.

⁴³ See Cancer Risk Map (Attach. 2 hereto).

⁴⁴ See Modeling Figures 1-3 (Sub-Attach. 1 to Letter to EPA (Attach. 4 hereto)).

Additionally, EPA's EJSCREEN also shows that communities in areas surrounding Barry rank in the highest percentile ranges for "NATA cancer risk" (measuring cancer risk from inhalation of air toxics). The screening ranks these communities surrounding Barry west of the Mobile River in the 95 to 100 percent range, while those in the remaining area east of Barry are only slightly less burdened -- ranking in the 90 to 95 percentile range.⁴⁵ This data amplifies how the communities surrounding Barry have been suffering from exposure to environmental pollutants and hazards for far too long.

As explained above, the results of Wingra Engineering's AERMOD modeling demonstrated that the Plant Barry SO₂ limits could result in violations of the 2010 SO₂ NAAQS at levels as high as 681 ug/m3 or 430 ug/m3, (depending on what limit Unit 5 complies with) versus the NAAQS limit of 196.2 µg/m3 -- exceedances greater than two or three times the allowable health based limit.⁴⁶ Moreover, modeling identified the limits needed to prevent such exceedances, and determined that, using the Plant's historic emissions from 2018, Barry Unit 4 exceeded the 0.46 lb/mmbtu limit needed to meet the NAAQS when Unit 5 is not adhering to the stricter 0.2 lb/mmbtu 73% of the year.⁴⁷ The modeling further determined, assuming Unit 5 was adhering to that stricter 0.2 lbs/mmbtu limit, that Unit 4 exceeded the 0.94 lb/mmbtu limit 43.4% of the year.⁴⁸

Moreover, likewise of concern is the Permit's use of a 24-hour rolling average for the 1.8 lb/mmbtu limit, and a 30-day rolling average for the 0.2 lb/mmbtu, whereas the NAAQS SO₂ limit is based on a one-hour averaging time. The 24-hour and 30-day limits will expose people downwind of the plant to emissions during a 24-hour period that are even higher than the permit limit of 1.8 lb/mmbtu, which itself is already too high to ensure compliance with the NAAQS.⁴⁹

A comparison between the even greater amount of Barry SO₂ emissions from prior years, to recent years, further shows the historic burdens the minority communities and low-income communities surrounding Barry have shouldered due to exposure to high levels of SO₂ emissions. Publicly available emissions data show that Barry Units 4 and 5 emitted approximately 3,500 tons of SO₂ in 2019, 5,200 tons in 2018, and 4,200 tons in 2017.⁵⁰ Yet, emissions in prior years imposed an even greater emission burden -- from the late 1990s to 2007, the annual emissions ranged from almost 47,500 tons to close to 75,000 tons, with an annual average for the years 1997 to 2007 of almost 60,000 tons.⁵¹ As modeling of the 2018 emissions demonstrated exceedances of the NAAQS, these far higher amounts from earlier years --

⁴⁵ See Cancer Risk Map (Attach. 2 hereto).

⁴⁶ Klafka Report at 3-5 (Ex. 1 to Attach. 1 hereto).

⁴⁷ *Id*. at 7.

⁴⁸ *Id*. at 8.

⁴⁹ Id.

⁵⁰ U.S. EPA, Air Markets Program Data (last visited March 31, 2021) <u>https://ampd.epa.gov/ampd/.</u>

⁵¹ Id.

averaging approximately 11 times the 2018 total, reflect the staggering burden imposed on the surrounding communities, and the injustice of permitting emissions that would continue to allow for the communities to be exposed to exceedances of SO₂ limits meant to protect public health.

Finally, earlier modeling also performed by Steve Klafka of Wingra Engineering in 2012 documented the vast areas impacted by exceedances of the SO₂ NAAQS limit in the communities surrounding the Barry plant in prior years. Sierra Club submitted AERMOD modeling of the 1.8 lb/mmbtu limit to ADEM during ADEM's promulgation of its Section 112(a) Infrastructure State Implementation Plan for the 2010 SO₂ NAAQS. This modeling demonstrated that emissions allowed under that same permit limit of 1.8 lb/mmbtu could cause significant exceedances of the 2010 SO₂ NAAQS of up to 886 μ g/m3 as compared to the NAAQS limit of 196 μ g/m3) when combined with background and other sources, over a broad swath of area surrounding the Barry Plant.⁵²

Accordingly, the current and historic environmental justice burdens on the communities surrounding the Barry Plant merit EPA's vigilant review of the Barry permit and the objections the Petitioners set forth below. To "deliver" and "secure" the long overdue environmental justice to them, EPA, based upon the clear evidence in the record that the SO₂ permit limits are not stringent enough to ensure compliance with the NAAQS, must object to the permit for the reasons set forth further below.

GROUNDS FOR OBJECTION

I. Objections Arising from Permit Limits with Potential to Exceed SO₂ NAAQS

Petitioners' comments identified multiple bases for objecting to the draft Permit's SO₂ limits.⁵³ ADEM's response did not dispute the insufficiency of the limits to ensure attainment of the NAAQS, but rather focused on the sufficiency of its authority to solve the problem.⁵⁴ As shown below, EPA should object because ADEM does have legal authority to solve the problem, yet failed to exercise that authority. It failed to require APC to demonstrate that the SO₂ permit

⁵² See Letter from Sierra Club to Ron Gore, Chief of Air Division, ADEM at 3, 10 (Dec. 20, 2013) (Sub-Attach. 2 to Letter to EPA (Attach. 4 hereto)).

⁵³ See Petitioner's Comments at 5-11 (Attach. 1 hereto).

⁵⁴ ADEM's sole response to these comments was to state that "The Title V Operating Permit is not the appropriate forum for addressing an area's compliance with the NAAQS. These determinations are made through the SIP program established by the Clean Air Act," and that ADEM purportedly has "no authority to make emission limits more stringent through a permit action. The Title V Operating Permit is not the appropriate forum for addressing an area's compliance with the NAAQS. These determinations are made through the SIP program established by the Clean Air Act." *See,* Alabama Department of Environmental Management, *Response to Comments Re: Alabama Power Company--Barry Steam Electric Engineering Plant Title V Renewal, at 1-2* (Feb. 2, 2021),

https://mosaiceps.epa.gov/sites/default/files/FRU/APC%20Plant%20Barry%20Final%20Response%20to %20T5%20Comments.pdf. (hereafter "Response to Comments").

limits will not interfere with maintenance of the SO₂ NAAQS, and as such, failed to administer ADEM's Air Division so as to ensure attainment of the NAAQS. Moreover, ADEM issued the Permit with a NAAQS limit that evidence Sierra Club and GASP, Inc. submitted with their comments demonstrated could lead to violations of the NAAQS, which further transgresses the SIP requirement to administer the Air Division to "provide for the attainment of the [NAAQS] throughout the State." Furthermore, ADEM has not submitted documentation to EPA to show that the limits are sufficient to ensure compliance with the NAAQS, contrary to the requirement that ADEM "[s]ubmit [to EPA] any information necessary to review adequately the proposed permit," which constitutes grounds for objection. 40 CFR § 70.8(c)(3). This deficiency is reinforced by the modeling evidence that Sierra Club and GASP, Inc. included in their comments, which demonstrates that the permit limits are not sufficient to ensure compliance with the NAAQS. Furthermore, EPA should object because the permit sets long-term emission limits that are inadequate to protect the short term, one-hour air quality standard EPA set for the SO₂ NAAQS.

A. EPA Should Object Because ADEM Failed to Require APC to Demonstrate that Barry's Emissions Will Not Interfere with Maintenance of SO₂ NAAQS.

ADEM issued the Barry Permit without complying with the requirement provided in Alabama's SIP under Rule Ala. Admin. Code r. 335.3.5.01(2)(a)), that Alabama Power, as the "owner or operator of a fuel burning installation having a total rated capacity greater than 1500 million BTU per hour," must demonstrate "that the sulfur oxides emitted, either alone or in contribution to other sources, will not interfere with attainment and maintenance of any primary . . . ambient air quality standard prescribed at Rule 335-3-1-0.3."⁵⁵ To the contrary, when ADEM issued the proposed and final permits, it had in its possession evidence demonstrating that the permit's SO₂ limits were not stringent enough to ensure they would not interfere with maintenance of the SO₂ NAAQS.

As noted above, Sierra Club and GASP, Inc., in their comments, submitted modeling performed by Wingra Engineering that demonstrated that the old 1.8 lbs/mmbtu limit would allow Barry to cause exceedances of the NAAQS in the areas surrounding the Plant. This modeling plainly demonstrated that ADEM's proposal to leave in place and unchanged the pre-existing SO₂ limits that predated the 2010 SO₂ NAAQS was insufficient to ensure compliance with the 2010 SO₂ NAAQS.⁵⁶ There is no other modeling in the record that contradicts the results of Wingra Engineering's AERMOD modeling showing the Plant Barry SO₂ limits would result in violations of the 2010 SO₂ NAAQS. Such violations could be at levels as high as 681 ug/m3 or 430 ug/m3 (depending on what limit Unit 5 complies with) versus the NAAQS limit of 196.2 µg/m3.⁵⁷ Yet,

⁵⁵ Ala. Admin. Code r. 335-3-1-.03 incorporates the NAAQS, as set forth in 40 C.F.R. § 50.

⁵⁶ See Klafka Report at 3-11 (Ex. 1 to Attach. 1 hereto).

⁵⁷ See Klafka Report at 6, 7 (Ex. 1 to Attach. 1 hereto).

ADEM turned a blind eye to this evidence, and never required Alabama Power to demonstrate that the Plant Barry Permit's SO₂ limits would not interfere with maintenance of the SO₂ NAAQS.

Compliance with the Alabama SIP demonstration provision was all the more essential because the Barry Title V permit was the first permit ADEM considered for Barry subsequent to the promulgation of the 2010 SO₂ NAAQS and it is well known that fossil-fuel-burning power generation units like those at Barry are the predominant source of SO₂ emissions in this country.⁵⁸ Yet, APC sought in its permit application the same permit limit set in the earlier Barry Title V permit -- 1.8 lbs/mmbtu⁵⁹ (except for the lower limit available for Unit 5 if it sought to comply with that as a surrogate for MATs compliance). APC submitted no modeling with its application to show that this limit would achieve compliance with the SO₂ NAAQS. Despite that, and the modeling evidence that the proposed permit limit was *not strict enough* to preclude "interference with . . . maintenance of" the SO₂ NAAQS, ADEM wrongly issued the Plant Barry Permit with the SO₂ limits that Alabama Power proposed in its application and that predated the 2010 SO₂ NAAQS, citing as authority Ala. Admin. Code r. 335-3-5-.01(1)(a).⁶⁰

ADEM's Response to Comments does not address its failure to require APC to make this demonstration. Rather, ADEM claimed that "the Title V Operating Permit is not the appropriate forum for addressing an area's compliance with the NAAQS" and suggested that such limits should be "made through the SIP program established by the Clean Air Act."⁶¹ But the EPA has already rejected this argument. In *In the Matter of Duke Energy, LLC Asheville Steam Electric Plant Arden*, North Carolina's response to comments made similar claims about the NAAQS not themselves being applicable requirements, but EPA rejected that reasoning because Petitioners' objections were, like here, rooted in separate and distinct state regulatory provisions.⁶²

⁵⁸ According to the EPA, "fossil fuel combustion at electric utilities" comprised 66 percent of anthropogenic SO₂ emissions. *Primary National Ambient Air Quality Standard for Sulfur Dioxide*, 75 Fed. Reg. at 35524.

⁵⁹ Alabama Power Company, Barry Steam Electric Generating Plant, Facility No. 503-1001 Permit Application at 5.

⁶⁰ Final Permit at 29, 38. This standard's inclusion in Alabama regulations dates back to 1996. See U.S. EPA, EPA Approved Statutes and Regulations in the Alabama SIP: Chapter No. 335-3-5, Control of Sulfur Compound Emissions, at <u>https://www.epa.gov/sips-al/epa-approved-statutes-and-regulations-alabama-sip</u>.

⁶¹ See Response to Comments at 1. While not immediately relevant to EPA's objection to ADEM's Barry permit at issue here, Sierra Club notes that Sierra Club engaged in ADEM SIP process implementing the 2010 SO₂ NAAQS, both before ADEM and EPA, including submitting earlier Wingra Engineering AERMOD modeling of Plant Barry demonstrating that ADEM had to tighten the plant's SO₂ emissions limits if it was to ensure compliance with the SO₂ NAAQS, but ADEM did not do so. See Sub-Attachments 2 and 3 to Letter to EPA (Attach. 4 hereto).

⁶² In the Matter of Duke Energy, LLC Asheville Steam Electric Plant Arden, North Carolina Petition No. IV-2016-06, at *14 ("The Petitioner does not claim that the promulgation of the 2010 1-hour SO₂ NAAQS itself requires additional emission limits; rather, the Petitioner relies on NC 0401 and NC 0501

Importantly, as detailed above, EPA's environmental justice screening tool demonstrates that the environmental justice communities in the vicinity of Plant Barry are the communities that have been and will be most, and disproportionately, impacted by Plant Barry's violations of the SO₂ NAAQS.⁶³ This is on top of even higher levels of historic emissions, that, as discussed above, modelling demonstrated also disproportionately burdened those same communities with exceedances of SO₂ NAAQS limits, with those closest to the Plant suffering the highest impacts.⁶⁴ EPA is now tasked with "deliver[ing]" and "secur[ing]" environmental justice to the communities surrounding the Barry Plant.⁶⁵ To do so, it must, when reviewing these objections, consider and address the disproportionate and cumulative impacts, long arising from Barry's SO₂ emissions.⁶⁶

In short, EPA should object to the Permit and mandate that ADEM not issue the permit until Alabama Power demonstrates that Plant Barry Permit's SO₂ limits would not allow for violations of the SO₂ NAAQS as required by Ala. Admin. Code r. 335-3-5-.01(2)(a).⁶⁷

B. EPA Should Object Because ADEM Failed to Administer the Air Division to Provide for the Attainment of the NAAQS.

EPA should also object because ADEM issued the Barry Permit without complying with another Alabama SIP provision, that is, under Ala. Admin. Code r. 335-3-1-.03(3), "the administration of the Division by the [Air] Director shall provide for the attainment of the [NAAQS] throughout the State as expeditiously as practicable but in no case later than three years after the date of initial adoption of these rules and regulations or within the time limits specified by Section 110(a) of the Clean Air Act, as amended (91 Stat. 685), whichever is later." Both of these time

to support its claim that the 2016 Asheville title V permit must contain emission limits to ensure the 2010 1-hour SO₂ NAAQS is not violated"). Relatedly, *In the Matter of Mill Creek Generating Station*, Petition No. IV-2017-10 (Oct. 3, 2019), is not controlling because it addressed whether or not a limit set in the "NAAQS . . . in and of itself result[s] in an applicable requirement that must be reflected in a source's emission limit in its title V permit." *Mill Creek* at 8. Sierra Club and GASP, Inc.'s objections do not argue that the SO₂ NAAQS limit in and of itself be included in the Barry Title V permit, but instead rely on other distinct ADEM regulations related to compliance with the NAAQS.

⁶³ See Figures 1-3 (Sub-Attach. 1 to Letter to EPA (Attach. 4 hereto)).

⁶⁴ See Klafka Report at 7 (Ex. 1 to Attach. 1 hereto); Steven Klafka, Barry Steam Electric Generating Plant, Bucks, Alabama, Sierra Club Evaluation of Compliance with 1-hour SO₂ NAAQS, June 22, 2012, at 3, 10, 11-12 (hereafter "Klafka 2012," Sub-Attach. 3 to Letter to EPA (Attach. 4 hereto)).

⁶⁵ "Executive Order on Tackling the Climate Crisis at Home and Abroad," at §§ 201, 219.

⁶⁶ See generally, Charles Lee, *Confronting Disproportionate Impacts and Systemic Racism in Environmental Policy*, 51 Envtl. L. Rep. 10207, 10216 (2021) ("[T]he development of tools and methodologies that map the disproportionate distribution of cumulative impacts cannot be an end in and of itself. It is paramount that we act on this information to make a difference in these communities. This involves prioritizing attention and resources to the most overburdened communities as well as identifying and redressing the policy decisions that led to such inequities").

⁶⁷ Based upon petitioner's modeling, which demonstrates the current limits are not adequately strict, this would also require modeling of more stringent NAAQS SO₂ limits.

limits have now passed.⁶⁸ Accordingly, this rule imposes on ADEM's Air Division Director the obligation to administer that division to attain the NAAQS. Acting to set limits on SO₂ emissions in a Title V Operating Permit is part of administering the Air Division, and as such, something that must be done to "provide for the attainment of the [NAAQS]." Ala. Admin. Code r. 335-3-1-.03(3). By issuing the permit in the face of modelling evidence establishing that the SO₂ limit will interfere with the NAAQS, and failing to require APC to demonstrate that the proposed limit would provide for attainment of the SO₂ NAAQS, ADEM's Air Division Director has violated Ala. Admin. Code r. 335-3-1-.03(3).

Accordingly, EPA should object because the Division Director's issuance of the Final Permit⁶⁹ transgresses this requirement because modelling shows the Permit's limits can lead to exceedances of the NAAQS, and because ADEM has failed to require APC to demonstrate the permit limits would ensure compliance with the SO₂ NAAQS, as mandated by Ala. Admin. Code r. 335.3.5.01(2)(a).

C. EPA Should Object Because ADEM Failed to Submit Information Necessary to Adequately Review the Proposed Permit.

Moreover, EPA should object because ADEM failed to "[s]ubmit [to EPA] [] information necessary to review adequately the proposed permit." 40 C.F.R. § 70.8(c)(3). To enable EPA to adequately review the proposed permit, ADEM needed to convey a record that supported its decision to retain the pre-existing 1.8 lb/mmbtu permit, showing that such a limit will achieve compliance with the NAAQS. Such information is essential to enable EPA to determine that the Air Division Director is providing for the attainment of the NAAQS in his administration of the Barry permit, as required by Ala. Admin. Code r. 335-3-1-.03(3).

Yet, the record includes no such information; rather, the record shows that the Permit's 1.8 lb/mmbtu emission limit fails to protect the NAAQS. As described above, Petitioners submitted modeling evidence demonstrating that the Permit's SO₂ limit *is not adequate* to ensure compliance with the NAAQS. The information ADEM provided in the permit record includes no evidence to the contrary, and specifically does not include the required demonstration by APC that the limits would not interfere with maintenance of the NAAQS as required by Ala. Admin. Code r. 335.3.5.01(2)(a).

⁶⁸ Three years have passed since the initial adoption of this rule, as its effective date was October 13, 1998, according to EPA's Alabama SIP website. *See* U.S. EPA, *EPA Approved Statutes and Regulations in the Alabama SIP: Chapter No. 335-3-1, General Provision*, <u>https://www.epa.gov/sips-al/epa-approved-statutes-and-regulations-alabama-sip</u>. Likewise, the time limit prescribed in CAA Section 110(a) has passed. 42 U.S.C. § 7410(a).

⁶⁹ Ronald Gore, Chief, Air Division, signed the permit for ADEM. See Final Permit at 1.

Accordingly, EPA, like in other EPA precedent, should object to the proposed permit because the record is not sufficient to conclude that the permit "limit[s are] adequate to satisfy the requirements of [a state regulation] in regards to the 2010 1-hour SO₂ NAAQS, or, alternatively, why [that state regulation] does not require a more stringent SO₂ emissions limit to protect the 2010 1-hour SO₂ NAAQS at this time."⁷⁰

In short, the present record provided to EPA includes no evidence to support that the permit limits are stringent enough to meet the NAAQS, and only evidence to the contrary. Accordingly, EPA should object because the information in the record is not sufficient to enable EPA to find that ADEM is administering the Air Division to "provide for the attainment of the [NAAQS]." as required by Ala. Admin. Code r. 335-3-1-.03(3). Moreover, EPA should object because ADEM failed to submit (and failed to require performance of) the compliance demonstration required under Ala. Admin. Code r. 335-3-5-01(2)(a), which would have provided additional information bearing on the proposed permit's compliance with the SO₂ NAAQS.

D. EPA Should Object Because ADEM Sets Long-Term Emission Limits Inadequate to Protect the Short-Term NAAQS.

EPA must also object to the Permit on the independent grounds that it improperly relies on 24hour and 30-day limits to ostensibly protect the 1-hour NAAQS. As discussed above, the 2010 75 ppb air quality standard is based on a one-hour averaging time,⁷¹ reflecting its design to prevent harm to human health—harm which can be caused by as little as five minutes of exposure. Yet, contrary to that, the Permit computes compliance with the Permit's SO₂ emission limitation of 1.8 lb/MMBtu for both Units 4 and 5 based on twenty-four hour rolling averaging.⁷² Likewise, for Unit 5, and its stated plan to comply with the MATS Rule by monitoring as a surrogate compliance with a rate of 0.20 lb/MMBtu, compliance is proposed to be computed over an even longer period — based upon "a 30-boiler operating day rolling average."⁷³

Continued reliance on the 24-hour averaging time for the SO₂ emission limitation of 1.8 lb/MMBtu, or a 30-day rolling average for the 0.2 lbs/mmbtu limit, to determine compliance with permit limits could result in the release of emissions that exceed the permit limitations during multiple hours of the day.⁷⁴ The fact that the 24-hour average of SO₂ emissions falls below a certain level (putting aside the issues regarding the propriety of that level addressed above) provides no comfort to the environmental justice communities downwind of the Plant who will breathe heavily polluted air at a particular point during the day. Indeed, this aspect of the Permit

⁷⁰ In the Matter of Duke Energy, LLC Asheville Steam Electric Plant Arden, North Carolina Petition No. IV-2016-06, at *16.

⁷¹ See 40 C.F.R. § 50.17(a).

⁷² Final Permit at 34, 42; SOB at 6, 8, 13.

⁷³ Final Permit at 42; SOB at 13.

⁷⁴ See Klafka Report at 3, 9 (Ex. 1 to Attach. 1 hereto).

flies in the face of EPA's rationale for tightening the SO_2 air quality standard—namely, the scientific evidence that short-term exposure to SO_2 for time periods as low as five minutes can cause serious health problems.⁷⁵

EPA guidance has recommended that averaging times for emissions limits "should not exceed the averaging time of the applicable NAAQS that the limit is intended to help attain."⁷⁶ Thus, "emission limits for attaining the 1-hour SO₂ standard should limit emissions for each hour, without any provision for limiting emissions as averaged across multiple hours."⁷⁷ Moreover, EPA has advised that "any emissions limits based on averaging periods longer than one-hour should be designed to have comparable stringency to a 1-hour average limit at the critical emission value."⁷⁸ If a permit employs an averaging period longer than one hour, the numerical limit for the SO₂ emissions must be ratcheted down further to provide adequate assurance that those emissions will not cause or contribute to the exceedance of the one-hour, 75 ppb air quality standard.⁷⁹

Sierra Club and GASP, Inc. raised the averaging issue in their comments,⁸⁰ yet ADEM failed to respond to it in its Response to Comments. Accordingly, EPA should object to the permit because it fails to establish an hourly averaging limit for permit compliance that is necessary to ensure that appropriately stringent SO₂ emission limits apply at all times of the day. Alternatively, if the 24-hour averaging period is retained, the permit should adopt even more stringent numerical emission limits. Given the continuous emission monitoring system in place at the Plant and required by the Permit,⁸¹ APC should have no trouble measuring compliance with emission limits every hour.

Likewise, EPA should also object to the Permit's calculation as a thirty-day rolling average for compliance with Unit 5's alternate limit of 0.2 lbs/mmbtu. Although this limit is stricter, since the permit measures compliance over an even longer period — a 30-day rolling average — it too

⁷⁵ See Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. at 35,529-30. See also EPA Integrated Science Assessment for SO₂, Ch. 5 tbls 1, 5-2. See also Our Nation's Air at 4. ⁷⁶ U.S. EPA, Guidance for One-Hour SO₂ NAAOS Nonattainment Area SIP Submissions, at 22 (Apr. 23,

^{2014),} https://www.epa.gov/sites/production/files/2016-

^{06/}documents/20140423guidance nonattainment sip.pdf.

⁷⁷ Id.

⁷⁸ Id.

⁷⁹ See id. app. B (detailing EPA's guidance for setting longer term average emission limits). Moreover, as described above, Klafka's modeling, based upon hour by hour 2018 emissions, demonstrated frequent exceedances of the limits his modeling identified as necessary to ensure compliance with the NAAQS. Klafka Report at 3 (Ex. 1 to Attach. 1 hereto) (modelling analysis applies permit limits "on an hour-by-hour basis (as if they were 1-hour averages)"). While the modeling establishes such exceedances, in 2018, Unit 4's emissions were measured to comply with the 24-hour averaging for the 1.8 lbs/mmbtu limit, again reflecting the need to measure compliance on an hourly basis.

⁸⁰ See Petitioner's Comments 10-11 (Attach. 1 hereto).

⁸¹ SOB at 13.

impermissibly creates the risk of violation of the one-hour average NAAQS limit of the one-hour, 75 ppb air quality standard.⁸²

II. ADEM's Permit Does Not Comply with the Clean Air Act's Substantive Requirements.

Under CAA § 504(a), "[e]ach permit issued under [Title V] shall include enforceable emission limitations and standards...and such other conditions as are necessary to assure compliance with the applicable requirements of this chapter, including the requirements of the applicable implementation plan." 42 U.S.C. § 7611c. Likewise, the EPA's part 70 regulations specify that each Title V permit must include "[e]missions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance."⁸³

A. EPA Should Object Because the Permit Does Not Include Applicable SIP Requirements for Control of Fugitive Emissions from the Coal Handling System and Associated Monitoring, Recordkeeping, and Reporting.

Petitioners' comments explained that the Barry Permit does not include or meet best management practices necessary to eliminate or minimize fugitive dust from the materials handling system.⁸⁴ ADEM's response incorrectly interpreted and failed to apply its SIP regulation, Fugitive Dust and Fugitive Emissions, Ala. Admin. Code r. 335-3-4-.02, and did not address Petitioners' concern that the Barry Permit only requires the plant to take "reasonable precautions," which is so vague as to be unenforceable.⁸⁵ Furthermore, Petitioners pointed out that the permit "must be revised to include more details, specific and enforceable measures, including recordkeeping and reporting requirements that assure compliance with Alabama's SIP and ensure federal enforceability of the permit."⁸⁶

B. EPA Should Object Because ADEM Fails to Include Emission Controls and Work Practice Standards for Plant Barry's Coal Handling Operations.

ADEM characterizes the emissions from the coal handling systems as "fugitive emissions."⁸⁷ ADEM's Statement of Basis (SOB) claims that "[t]here are no emissions standards associated with these systems" and asserts that since there are no emission standards no periodic monitoring

⁸² Ala. Admin. Code r. 335-3-16-.05(c)(1)(ii).

⁸³ 40 C.F.R. § 70.6(a)(1). See also 40 C.F.R. § 70.6(c)(1).

⁸⁴ Petitioners' Comments at 22-24, 17-18 (ADEM never planned an inspection to observe unloading of coal from the barges).

⁸⁵ Response to Comments at 4-6; Permit proviso 18.

⁸⁶ Petitioners' Comments at 24.

⁸⁷ SOB at 18.

or CAM is required.⁸⁸ Thus, ADEM's final Permit for Plant Barry fails to require control of emissions at any point in the coal handling operations.

The coal handling operations entail numerous processes that release particulate matter (PM₁₀ and PM_{2.5}) emissions. Coal arrives at the plant via coal river barges and initially is either conveyed to the plant for burning or to the coal pile for storage.⁸⁹ Coal is unloaded from the barges at two different locations using different method, which include: a continuous bucket unloader onto a 2000 ton per hour conveyor;⁹⁰ and (2) a clamshell E-Crane to unload coal onto a 1200 ton per hour conveyor.⁹¹ Coal is conveyed to the plant for firing the steam boilers or to the coal pile for storage.⁹² The average size of the coal pile is 668,745 tons and the particle size of the coal varies from micron size to a few inches in diameter.⁹³ Coal is reclaimed from the coal pile by the use of front end loaders that push the coal into grated reclaim bins at the coal pile and conveyed to coal bunkers on the conveyor belts.⁹⁴ From the bins, coal is conveyed to the bunkers.⁹⁵ Coal from the bunkers is conveyed to coal scale/feeders and into pulverizers, which results in powder-sized material.⁹⁶ This fine material is then forced to the coal-fired units by fans for firing the boilers.⁹⁷ The coal handling system processes coal at the maximum rate of 2,400,000 lb/hr, with a total quantity of 3,842,830 tons per year.⁹⁸ APC's permit application includes the diagram seen below in Figure 3, which displays the coal handling and processing operations.

⁹⁵ Id.

⁸⁸ SOB at 18-19.

⁸⁹ SOB at 18.

⁹⁰ Alabama Power, Title V Operating Permit Application, Barry Steam Electric Generating Plant, at pdf 233 (Feb. 5, 2016, date on the cover page, however, the February 16, 2016, cover letter from APC to ADEM indicates the 2016 application was amended and enclosed) ADEM file name: 547 503-1001 097 04-27-2020 T5APP MOG RENEWAL APPLICATION WITH UPDATES. (Form dated June 25, 2015). (hereafter "Application") (Attach. 6 hereto).

⁹¹ Id.

⁹² Id.

⁹³ Application at PDF 237.

⁹⁴ *Id.* at PDF 233

⁹⁶ SOB at 18.

⁹⁷ SOB at 18.

⁹⁸ Application at PDF 234.



Figure 3. Plant Barry Coal Fuel Handling System.⁹⁹

C. EPA Should Object Because ADEM Failed to Require that APC Disclose All Fugitive Emissions from the Coal Handling System.

ADEM's SOB uses APC's fugitive emission estimate, explaining that based on the calculations in the application, PM emissions are expected to be approximately 45.9 tpy.¹⁰⁰ APC explains the emission factor was developed using unspecified AP-42 emission factors and a "study of the coal pile at TVA's Plant Colbert."¹⁰¹ APC fails to include with its application the coal pile study or provide a reference for the public to find the study. Moreover, APC failed to explain how a study of another company's coal pile located in Northwest Alabama, which no longer operates, is representative of fugitive emissions from Plant Barry's coal pile.

Additionally, while ADEM's SOB suggests the 45.9 tpy estimate is for all coal handling operations, the estimate only include emissions from the surface area of the "Columbian coal pile"¹⁰² and fails to estimate fugitive emissions from the rest of the operations, for example, missing from the estimate are emissions created by:

• Unloading the micron and slightly larger sized coal from the barges;

⁹⁹ Application at PDF 238.

¹⁰⁰ SOB at 18.

¹⁰¹ Application at PDF 456-7.

¹⁰² Application at PDF 238 and 457.

- Conveying coal from the barges to the coal pile, which has a surface area of 34.86 acres;
- Conveying coal from the barges to the units for burning;
- Using loaders to push the coal into grated reclaim bins at the coal pile;
- The rest of the operations that make up the coal fuel handling, processing and pulverizing system.

D. EPA Should Object Because ADEM Fails to Include the SIP Requirements to Control Fugitive Coal Emissions and Permit Provisos for Monitoring, Recordkeeping and Reporting.

There are two SIP regulations with emission standards that apply to the coal handling systems: (1) the 20 percent opacity limit;¹⁰³ and (2) limitations and work practice standards that apply to fugitive emissions.^{104, 105} Although ADEM's SOB does not recognize either of these are

¹⁰³ Ala. Admin. Code r. 335-3-4-.01(1). The SIP-approved version of this regulation is attached to this petition and is available at https://www.epa.gov/sites/production/files/2017-12/documents/335-3-

^{4 2017.}pdf. (Attach. 7 hereto). The regulation was first approved into the SIP on May 31, 1972 (37 Fed. Reg. 10842) and last revised October 15, 2008 (73 Fed. Reg. 60957). Under the Part 70 program, applicable requirements that *must* be included in a permit include provisions that are in the SIP. 40 C.F.R. § 70.2 ("*Applicable requirement* means all of the following as they apply to emissions units in a part 70 source (including requirements that have been promulgated or approved by EPA through rulemaking at the time of issuance but have future-effective compliance dates): (1) Any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the Act that implements the relevant requirements of the Act, including any revisions to that plan promulgated in part 52 of this chapter...").

¹⁰⁴ Ala. Admin. Code r. 335-3-4-.02. The SIP-approved version of this regulation is attached to this petition and is available at <u>https://www.epa.gov/sites/production/files/2017-12/documents/335-3-4_2017.pdf</u>. The regulation was first approved into the SIP on May 31, 1972 (37 Fed. Reg. 10842) and last revised June 6, 1997 (62 Fed. Reg. 30991).

¹⁰⁵ ADEM's Response to Comments did not dispute Petitioner's comments, which included the following discussion regarding the fact Ala. Admin. Code r. 335-3-4-.02 is in the EPA-approved Alabama SIP. Although Ala. Admin. Code r. 335-3-4-.02(2) was invalidated by the Alabama Supreme Court on State constitutional grounds, Ross Neely Express, Inc. v. Ala. Dep't of Envtl. Mgmt., 437 So. 2d 82 (Ala. 1983), it remains part of the Alabama SIP approved by the EPA. The decision by the Alabama Supreme Court does not revise the Alabama SIP without approval of the revision by the EPA. See 40 C.F.R. § 51.105 ("Revisions of a plan, or any portion thereof, will not be considered part of an applicable plan until such revisions have been approved by the Administrator in accordance with this part."); 42 U.S.C. § 7416 ("if an emission standard or limitation is in effect under an applicable implementation plan or under section 7411 or section 7412 of this title, such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section"); Sierra Club v. TVA, 430 F.3d 1337, 1346 (11th Cir. 2005) (ADEM interpretation of rule and adoption of rule revision does not revise SIP without EPA approval); United States v. Ford Motor Co., 814 F.2d 1099, 1103 (6th Cir. 1987) (stating that "State courts thus lack the authority to invalidate EPAapproved SIPs on infeasibility grounds" and holding that "invalidation of a SIP on technical grounds by a state court . . . cannot be given effect, because . . . revisions and variances of properly promulgated SIPs require EPA approval"); League to Save Lake Tahoe, Inc. v. Trounday, 598 F.2d 1164, 1166 n.2 (9th Cir. 1979) (State law changes do not revise SIP without EPA approval); Safe Air for Everyone v. United States EPA, 488 F.3d 1088, 1097 (9th Cir. 2007) ("the SIP became federal law, not state law, once EPA

applicable requirements that apply to the coal handling systems, ADEM's Barry Permit includes an opacity limit of 20 percent in the "Provisos for Solid Fuel Handling Systems"¹⁰⁶ But, the "Provisos for Solid Fuel Handling Systems" lack associated requirements for

- Compliance and Performance Test Methods and Procedures,
- Emission Monitoring, and
- Recordkeeping and Reporting.¹⁰⁷

ADEM's response to comment asserts "[t]here are no requirements other than those listed [in] the General Provisos that are applicable to barge coal unloading."¹⁰⁸ Notably, this statement is inconsistent with the SOB that describes the "Solid Fuel Handling Systems" – which are covered by the "Permit Provisos for Solid Fuel Handling Systems" – as including delivery of coal by barges and unloading coal from barges.¹⁰⁹

ADEM's Final Permit does not assure compliance with the permit proviso that contains the 20 percent opacity SIP requirement for the coal handling systems because the permit lacks requirements for monitoring, recordkeeping and reporting conditions for opacity. Therefore, the Final Permit does not satisfy the requirement for all title V permits to "contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements."¹¹⁰

The fugitive dust regulation includes four distinct requirements:

• Persons must take reasonable precautions to prevent particulate matter from becoming airborne, including a non-exhaustive list of specific control devices and practices;¹¹¹

approved it, and could not be changed unless and until EPA approved any change"); *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 92 (1975) ("[A] polluter is subject to existing requirements until such time as he obtains a variance, and variances are not available under the revision authority until they have been approved by both the State and the Agency"); *Gen. Motors Corp. v. United States*, 496 U.S. 530, 540 (1990) ("There can be little or no doubt that the existing SIP remains the 'applicable implementation plan' even after the State has submitted a proposed revision".)

¹⁰⁶ Permit Provisos for Solid Fuel Handling Systems, Emission Standards, Proviso 1, at 55.

¹⁰⁷ Permit Provisos for Solid Fuel Handling Systems at 55.

¹⁰⁸ Response to Comments at 4.

¹⁰⁹ SOB at 18.

¹¹⁰ 42 U.S.C. § 7661c(a), (c); 40 C.F.R. § 70.6(a)(3), (c)(1).

¹¹¹ "No person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following: (a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land; (b) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stock piles, and other surfaces which create airborne dust problems; (c) Installation and use of hoods, fans, and fabric filters (or other suitable control devices) to enclose and vent

- A restriction on visible emissions beyond the lot line;¹¹²
- Authority for the Director to order treatment or destruction of fugitives that escape from a building or equipment that cause a nuisance or violate a regulation;¹¹³ and
- The owner or operator of any source or combination of sources on contiguous property which has the potential to emit 100 T/yr of particulates and which is located in the nonattainment areas of Etowah, Jefferson or Mobile must submit a plan for control of fugitive dust and fugitive emissions to the Director for approval.^{114, 115}

Petitioners pointed out that General Proviso 18 "fails to sufficiently comply with the relevant requirements ... and is vague and unenforceable."¹¹⁶ This proviso merely states that "[r]easonable precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc."¹¹⁷ Therefore, while General Proviso 18 includes the "reasonable precaution" provisions found in SIP regulation, Fugitive Dust and Fugitive Emissions, Ala. Admin Code r. 335-3-4-.02(1), it does not include the requirement in an enforceable way. The Final Permit also lacks the required monitoring, recordkeeping and reporting provisions¹¹⁸ and thus fails to assure compliance with Ala. Admin Code r. 335-3-4-.02.

Petitioner's comments further explained the Administrator's 2014 Order granted requests to object to vague terms regarding fugitive dust requirements in Title V permits where the Georgia Environmental Protection Division's permits contained similar "reasonable precautions" provisions, stating:

the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations." Ala. Admin. Code r. 335-3-4-.02(1).

¹¹² "No person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate." Ala. Admin Code r. 335-3-4-.02(2).

¹¹³ Ala. Admin. Code r. 335-3-4-.02(3).

¹¹⁴ "The owner or operator of any source or combination of sources on contiguous property which has the potential to emit 100 T/yr of particulates and which is located in the nonattainment areas of Etowah, Jefferson or Mobile must submit a plan for control of fugitive dust and fugitive emissions to the Director for approval." Ala. Admin. Code r. 335-3-4-.02(4). Actual emissions from Plant Barry exceed the regulation's threshold.

¹¹⁵ This SIP regulation contains additional details on these requirements. Ala. Admin. Code r. 335-3-4-.02(4)(a)-(d). This regulation was adopted April 3, 1979 and subsequently revised on September 18, 1985, however, EPA had not acted on the September 18, 1985, revision. Thus the 1979 regulation included here is in the EPA-approved SIP and an applicable requirement for purposes of Title V. ¹¹⁶ Petitioners' Comments at 22-23.

¹¹⁷ General Proviso 18(a), at 11. General Proviso 18(b) does include fugitive dust mitigation measures for haul roads, but those are not relevant to the control of fugitive dust from the coal handling systems. ¹¹⁸ *Id.*

While the SIP regulation identifies various fugitive dust control methods that may constitute 'reasonable precautions' *it does not mandate the use of any of those methods*. For a Title V permit to assure a particular source's compliance with this requirement, consistent with 40 C.F.R. § 70.6(a)(1) [...] the permit terms must specify the emissions limitations and standards, including those operational requirements and limitations that assure compliance with the applicable requirement in Georgia['s] SIP.¹¹⁹

The situation is worse here. General Proviso 18(a) requires use of "reasonable precautions," but does not even include the potential fugitive dust control methods that are provided in the SIP regulation.¹²⁰

Although ADEM's SOB explains that this facility's operations result in fugitive particulate matter and dust emissions from its coal handling systems and the permit includes provisos for the systems, ADEM's Response to Comments did not adequately respond to Petitioners' comments and address the applicable SIP requirements. ADEM does not recognize there are four separate and distinct requirements in Ala. Admin. Code r. 335-3-4-.02. First, as discussed above, the Final Permit fails to include the "reasonable precautions" requirement in an enforceable way. Second, ADEM ignores the restriction on visible emissions beyond the lot line and neither its Response to Comments nor the permit acknowledge and include the requirement in Ala. Admin. Code r. 335-3-4-.02(2). Third, ADEM fails to consider the applicability of the provision that gives the Director the authority to order treatment or destruction of fugitives that escape from a building or equipment that cause a nuisance or violate a regulation.

Without quoting or citing language or a regulation number, ADEM erroneously interpreted its "fugitive dust regulations to require development and implementation of fugitive dust control plans *only* for those facilities for which ADEM determines that there is a *need* for fugitive dust mitigation."¹²¹ Although unclear which of the three provisions in its fugitive dust rule ADEM

¹¹⁹ In 2012, GreenLaw on behalf of Sierra Club and other environmental organizations raised issues in five related petitions. The petitions sought the EPA's objection to operating permits issued by Georgia Environmental Protection Division (Georgia EPF) to Georgia Power/Southern Company for five existing coal-fired power plants. Specifically, EPA granted the Petitioners' request for an objection to the permits based on deficiencies in the permit conditions implementing the fugitive dust control requirements of Georgia SIP Rule 391-3-1-.02(2)(n). Order Granting in Part and Denying in Part Five Petitions for Objections to Permits, Petitions Nos. IV-2012-1-IV-2012-2, IV-2012-3, IV-2012-4 and IV-2012-5 (April 14, 2014).

¹²⁰ "Such reasonable precautions shall include, but not be limited to, the following: (a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land; (b) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stock piles, and other surfaces which create airborne dust problems; (c) Installation and use of hoods, fans, and fabric filters (or other suitable control devices) to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations." Ala. Admin. Code r. 335-3-4-.02(1).

¹²¹ Response to Comments at 4, 5. (emphasis added).

interpreted, it appears to invalidly suggest that only one applies: Ala. Admin. Code r. 335-3-4-.02(3). And because ADEM has "no findings of fugitive dust issues at Plant Barry…there is no need to include fugitive dust provisos in the Permit at this time."¹²² The plain language of 335-3-40.02(1), (2), and (4) give ADEM no authority to waive the requirements for reasonable precautions, no visible emissions beyond the lot line, and specific requirements that apply to sources in Mobile county.

Thus, ADEM's interpretation in its Response to Comments is plainly inconsistent with the SIP regulation. Furthermore, ADEM's response which indicated that it "has clear authority to require the facility to develop and implement a fugitive dust control plan at any time necessary in the future"¹²³ does not recognize the other requirements for reasonable precautions, restrictions beyond the property line, and the Mobile County specific provisions that are applicable requirements now. Furthermore, future assurances provide no protection in the next five years for the nearby EJ community exposed to potential fugitive dust emissions from the plant.

The Final Permit is incomplete and fails to include all the applicable requirements. The Final Permit includes the general "reasonable precautions" language from the SIP regulation, but does not include specific, enforceable best management practices necessary as reasonable precautions. The SIP regulation, Ala. Admin. Code r. 335-3-4-.02(1), includes a non-exhaustive list of specific control devices and practices that should be adapted and applied to this facility and detailed in its Title V permit as enforceable conditions of its operation. These include the application of water or other dust suppressants on surfaces or operations that can give rise to airborne dust, and "[i]nstallation and use of hoods, fans, and fabric filters (or other suitable control devices) to enclose and vent the handling of dusty materials."¹²⁴ The Final Permit does not include any of the listed best management practices.¹²⁵ Rather, the permittee is only required to take "reasonable precautions."¹²⁶ This requirement is vague and unenforceable. The Final Permit also lacks the restriction for fugitive emissions beyond the lot line and the Mobile County specific requirements.

The Final Permit for Plant Barry subjects the coal handling system to an opacity limit of 20 percent as required by Ala. Admin. Code r. 335-3-4-.01(1), but does not include any associated monitoring, recordkeeping and reporting that are necessary to make the opacity limit enforceable. The Final Permit also fails to include any requirements for monitoring, recordkeeping and reporting fugitive emissions to assure compliance with the fugitive dust regulations.

¹²² Id.

¹²³ *Id*.

¹²⁴ Ala. Admin. Code r. 335-3-4-.02(1).

¹²⁵ General Permit Proviso 18, at 11.

¹²⁶ *Id*.

Moreover, ADEM has erroneously interpreted and ignored the language of the SIP by failing to incorporate specific control devices and practices and the lot line restriction for fugitive emissions. EPA should object and require work practices and devices to be described in more detail in the Permit, and require monitoring and reporting of these devices as well as to demonstrate compliance with the 20 percent opacity limit, so that the public can evaluate their efficacy and, when necessary, seek enforcement of any violations. The required frequency, quantity and duration of dust suppression techniques should also be included in the Barry Permit.

E. EPA Should Object Because APC Failed to Demonstrate Compliance.

1. EPA Should Object Because ADEM Failed to Determine Compliance.

As Petitioners' comments explained, the Act and the Part 70 regulations require that the permit contain requirements for the permittee to at least annually submit the compliance certification.^{127, 128} The major source's annual compliance certification must include the status of compliance for the facility's emission limitations, standards and work practices for each term or condition of the permit that is the basis of the certification (i.e., on a unit-by-unit basis) *and* whether the facility is in compliance (i.e., for the facility as whole).¹²⁹ Additionally, the permitting authority may require other facts to determine the compliance status of the source.¹³⁰ The Act's section "114(a)(3) clearly states that a major source's 'compliance certification shall include ... whether compliance is continuous or intermittent..."¹³¹ and that "Congress expressly and unambiguously required that the certification include 'whether compliance is continuous or intermittent..."¹³²

¹²⁷ Comment Letter at 37-40. Petitioners raised compliance status issues throughout their comments, including: 16-20 (explaining the source is not entitled to a permit shield); 19 (SOB should include discussion of permit shield and compliance history, among other topics); 40 (urging ADEM to "[o]mit the permit shield" because the applicant and permitting authority failure to meet the requirements to include a permit shield in the final Title V permit.).

¹²⁸ 40 C.F.R. § 70.6(c)(5)(iii)(A)-(C).

¹²⁹ 40 C.F.R. § § 70.6(c)(1), 70.6(c)(5), 70.6(c)(5)(ii), 70.6(c)(5)(iii)(A)-(D). 40 C.F.R. § 70.6(c)(5)(iii)(D) clearly requires that in addition to determining compliance at the emission unit level, ADEM must "determine the compliance status of the source." Moreover, 40 C.F.R. § 70.6(c)(5)(iv) requires that all compliance certifications are submitted to ADEM and EPA's Administrator, so EPA in its oversight role receives this information as well.

¹³⁰ 42 U.S.C. § 7414(a)(3)(B); 40 C.F.R. §§ 70.6(c)(1), 70.6(c)(5)(iii)(A)-(D). In processing the application for public notice and comment and responding to comments, ADEM failed to request supplemental information from APC to determine whether the facility as a whole, and individual emission units, are in compliance. Thus, the impacted EJ community does not know if Plant Barry is in compliance.

¹³¹ Natural Res. Defense Council, Inc. v. E.P.A, 194 F.3d 130, 138 (D.C. Cir. 1999). ¹³² Id.

Petitioner's comments to ADEM explained that contrary to the regulatory requirements, ADEM had not determined the compliance status either on a unit-by-unit basis or overall facility compliance.¹³³ EPA must object and direct that ADEM make these determinations.

2. EPA Must Direct ADEM to Obtain Accurate and Complete Compliance Certifications from the Applicant.

Petitioner's review of the 2019 Compliance Certification - the most recent available at the time the draft permit was out for public comment - found that APC did not certify continuous compliance with all permit conditions, nor did it certify facility-wide compliance.¹³⁴ APC's annual compliance certification failed to contain the information necessary to certify compliance.¹³⁵ The lack of an adequate compliance certification means that neither the public nor government entities can truly determine from the application whether the facility is currently in compliance with all the applicable requirements. Moreover, the public and government entities will face difficulty in bringing an enforcement action against the permit applicant because it omitted application information about ongoing pollution violations. Furthermore, without the required certification information, effective participation during public comment periods preceding issuance of a Title V permit is impossible. Petitioners expressed to ADEM that it had the authority and the duty to request the information missing from the 2019 Compliance Certification. Information necessary for ADEM to determine the compliance status of the source prior to issuing the permit.¹³⁶ Indeed, a permitting agency cannot issue a final permit alleging the source is in compliance if it lacks a reasoned basis for doing so. Here, ADEM not only lacked a basis, but information provided by Petitioners clearly shows the permit applicant failed to completely and accurately demonstrate compliance at multiple units.

¹³³ Petitioners' Comments at 39. Petitioners reviewed the permit application and information in Alabama's eFile system for this facility. But that cannot substitute for the owner's certification and legal responsibility to comply with these requirements. Because ADEM's draft permit action did not include an analysis of the source's compliance as required by 40 C.F.R. § 70.6(c)(5)(iii)(D), ADEM failed to meet the Part 70 requirements, which improperly shifted the burden to Petitioners to determine compliance status.

¹³⁴ Petitioner's Comments at 39.

¹³⁵ 40 C.F.R. §§ 70.6(c)(5), 70.6(c)(5)(iii)(B); Petitioners' Comments at 37-40.

¹³⁶ 40 C.F.R. § 70.7(a)(I) (a permit may be issued only if, among other things, the permitting authority "has received a complete application."); 40 C.F.R. § 70.5(2) (stipulates what constitutes a complete application and also allows for ADEM to deem the application complete within 60 days of receipt of the application. Ala. Admin. Code. R. 335-3-16-.04(5)); Ala. Admin. Code r. 335-3-16-.04(7) ("A source must submit additional information to the Department to supplement or correct an application promptly after becoming aware of the need for additional or corrected information. Also, a source must supply to the Department additional information concerning any new requirements which have become applicable after a complete application has been filed but before a draft permit is released").

ADEM appears to misunderstand the certification requirements, which apply regardless of the compliance status of the facility, as its response missed the mark:

A compliance schedule is necessary only when a facility is not in compliance with applicable requirements at the time of issuance of the permit. Here, Alabama Power is in compliance with applicable requirements.¹³⁷ ... The above comment claims Alabama Power's application does not comply with 40 CFR 70.6(c)(5)(iii)(B). The cited rule does not apply.¹³⁸

The Part 70 regulations require that "[a]ll part 70 permits shall contain" the identified list of six "elements with respect to compliance."¹³⁹ The regulation's language is clear that several of the elements in 40 C.F.R. § 70.6(c) apply to permits *regardless* of the source's compliance status. For example, 40 C.F.R. § 70.6(c)(5)(iii) identifies what the permit must require for certifying compliance with terms and conditions contained in the permit, including emission limitations, standards, or work practices. 40 C.F.R. § 70.6(c)(5)(iii)(B) requires that the compliance certification include:

The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under paragraph (a)(3) of this section. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information.

ADEM's response references no language from the regulation to support its assertion that this regulation is limited to noncompliant sources. Indeed, there is no such language. The provisions in this regulation require that the permit contain terms requiring the source's compliance certification to identify the *methods* for each term and condition *of the permit*.

The permit applicant's 2019 Annual Compliance Certification form was incomplete and ADEM failed to hold the permit applicant accountable for these requirements. While the regulations and form require the applicant to identify the "*methods* used to determine compliance" - the applicant did not. Instead, for the methods used to determine compliance the applicant indicated "intermittent" in several sections.¹⁴⁰ "Intermittent" is not responsive because it is *not* a method. The rule provides that:

¹³⁷ Response to Comments at 5.

¹³⁸ Response to Comments at 11.

¹³⁹ 40 C.F.R. § 70.6(c).

¹⁴⁰ For example, APC's 2019 Annual Compliance Certification contains no facility wide compliance status and notes intermittent compliance in several instances: namely for all units (General Conditions 5

Such methods and other means shall include, at a minimum, the methods and means required under paragraph (a)(3) of this section. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information.¹⁴¹

Paragraph (a)(3) in turn contains permit requirements for monitoring, recordkeeping and reporting.¹⁴² These would be the "methods and means" for determining compliance.

Therefore, Alabama Power's Compliance Certification was *incomplete* because it failed to identify the methods it used to determine compliance,¹⁴³ which are required of all sources pursuant to 40 C.F.R. § 70.6(c)(5)(iii)(B). Furthermore, because Alabama Power's 2019 certification of compliance indicated "intermittent" for several of the emission units, it admits that it was not in compliance with all the permit conditions. Finally, Alabama Power neither certifies continuous compliance with all permit conditions nor can it since it indicated that compliance was "intermittent" for several emission units.

and 3; Operation and Maintenance (hereinafter "O&M") of SO2 CEMS for Units 1, 2, 3, 4 and 5 O&M for NOx CEMS for Units 1, 2, 3, 4 and 5; O&M for CO₂ CEMS for Units 1, 2, 3, 4 and 5; Compliance Assurance Monitoring for Units 4 and 5; and Precipitator Performance Monitoring O&M of COMs for Unit 5, Cover letter and compliance certification from APC to ADEM (Nov. 26, 2019), ADEM eFile name: 547 503-1001 097 11-26-2019 T5ACC MOG 2019 + ADR (Attach. 8 hereto); Email from Tyler Phillips to Mark Steele (Dec. 13, 2019.) Id., see also (examples of additional incomplete and inaccurate compliance certifications and ADEM's failure to require APC to correct its submittal) ADEM letter approving compliance certification (Nov. 28, 2011), ADEM eFile name: 547 503-1001 097 11-28-2011 T5ACC MOG JANUARY 1, 2011-SEPTEMBER 30, 2011 ADR (Attach. 9 hereto); Cover letter and compliance certification from APC to ADEM (Nov. 25, 2014), ADEM eFile name: 547 503-1001 097 11-25-2014 T5ACC MOG OCT 1 2013-SEPT 30 2014 + ADR (Attach. 10 hereto), Email from Trevor O. Baird to Mark Steele (Feb. 4, 2015), Id.; Cover letter and compliance certification from APC to ADEM (Nov. 23, 2015), ADEM eFile name: 547 503-1001 097 11-23-2015 T5ACC MOG OCT 2014-SEPT 2015 (Attach. 11 hereto); Cover letter and compliance certification from APC to ADEM (Nov. 28, 2016), ADEM eFile name: 547 503-1001 097 11-28-2016 T5ACC MOG 2016 (Attach. 12 hereto); Cover letter and compliance certification from APC to ADEM (Nov. 29, 2018), ADEM eFile name: 547 503-1001 097 11-29-2018 T5ACC MOG 2018 (Attach. 13 hereto), Email from Trevor O. Baird to Brittany R. Pitts (Dec. 7, 2018), Id.

¹⁴¹ 40 C.F.R. § 70.6(c)(5)(iii)(B).

¹⁴² 40 C.F.R. § 70.6(a)(3).

¹⁴³ "Congress clearly intended for compliance certifications to include a description of the methods used for determining compliance." *See In re Request for a Determination that New York State Department of Environmental Conservation is Inadequately Administering New York's Title V Program*, New York Public Interest Research Group Petition to Review New York Title V Program at 10-11 (April 13, 1999).

In the preamble to the final 40 CFR part 70 rulemaking, EPA emphasized the importance of the initial compliance certifications, which the Administrator has explained are *no* different from annual compliance certifications, ¹⁴⁴ stating that:

[I]n § 70.5(c)(9), every application for a permit must contain a certification of the source's compliance status with all applicable requirements, including any applicable enhanced monitoring and compliance certification requirements promulgated pursuant to section 114 and 504(b) of the Act. This certification must indicate the methods used by the source to determine compliance. This requirement is critical because the content of the compliance plan and the schedule of compliance required under § 70.5(a)(8) are dependent on the source's compliance status at the time of permit issuance.¹⁴⁵

The permit applicant's omission of required information regarding the facility's current compliance status cannot possibly assure compliance with applicable requirements as mandated by 40 C.F.R. §§ 70.1(b) and § 70.6. Additionally, "[a]s a general matter, specificity ensures that the responsible official has in fact reviewed each term and condition, as well as considered all appropriate information as part of the certification."¹⁴⁶ The statements that compliance was "intermittent" for several units indicates there should be a schedule for compliance, but the permit lacks one.

ADEM's failure to hold the permit applicant accountable improperly shifted the burden of identifying applicable requirements and compliance status to the public.¹⁴⁷ Despite public comments that pointed this out, ADEM's final action enabled the applicant to avoid revealing

 ¹⁴⁴ See In re Request for a Determination that New York State Department of Environmental Conservation is Inadequately Administering New York's Title V Program, at 10-11 (April 13, 1999),
¹⁴⁵ 57 Fed. Reg. 32250, 32274 (July 21, 1992).

¹⁴⁶ See Memorandum from Stephen D. Page on Implementation Guidance on Annual Compliance Certification Reporting and Statement of Basis Requirements for Title V Operating Permits to Regional Air Division Directors, Regions 1-10 (Apr. 30, 2014), <u>https://www.epa.gov/sites/production/files/2015-08/documents/20140430.pdf</u>.

¹⁴⁷ "As provided in 40 C.F.R. § 70.5(c)(9)(i), permit applicants are required to submit "a certification of compliance with all applicable requirements by a responsible official consistent with ... section 114(a)(3) of the Act." EPA interprets this language as requiring that sources certify their compliance status as of the time of permit application submission. Where certifications do not address compliance status as of the time of permit application, the State, EPA and the public have been deprived of meaningful information on compliance status which may have a negative effect on source compliance and could impair permit development. Compliance certifications are public documents. Thus, one purpose of the initial compliance certification is to provide an incentive for sources to come into compliance with applicable requirements before they complete their applications. Another purpose is to alert the permitting authority to compliance issues in advance so that it can work with the source on such problems and develop an appropriate schedule of compliance in the Title V permit. *See* 40 C.F.R. § 70.5(c)(8) and 70.6(c)(3) and (4)." *In The Matter Of Maimonides Medical Center*, Petition No. II-2001-04, at 4 (Dec. 16, 2002).

potential noncompliance. EPA must object and require that ADEM obtain complete and accurate information from APC upon which to make the required compliance determinations.

F. EPA Must Object Because APC Failed to Include All Applicable Requirements in the Application.

In addition to failing to accurately complete the compliance certification, the permit application lacks certain information required by 40 C.F.R. § 70.5(c)(4), a description of all applicable requirements that apply to the facility. For example, because this is a major source that has operated for many years, the major New Source Review ("NSR") requirements that apply from its pre-construction permits – and all permits - should be included as applicable requirements in the compliance certification and they are not.¹⁴⁸ Since ADEM did not require the applicant to describe each underlying requirement, it is virtually impossible for the public to identify existing requirements from NSR permits that must be incorporated into the applicant's Title V permit. ADEM's response to comments and the draft permit fail to clear up the confusion, especially since ADEM entirely omits citations to preexisting NSR permits from the applicant's Title V permit without providing an explanation.

G. EPA Must Object Because ADEM Fails to Provide Information Required to Include a Permit Shield.

A permitting authority may include a permit shield in the permit if certain conditions are met.¹⁴⁹ In order to include a permit shield, "provided that: (i) Such applicable requirements are included and are specifically identified in the permit; or (ii) The permitting authority, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof."¹⁵⁰ Neither of these conditions are met because ADEM:

- Cannot rely on the applicant's alleged compliance certification because it is incomplete and incorrectly compiled;
- Did not address the compliance certification issues; and
- Did not demonstrate that all the applicable requirements are included in the permit.

Moreover, contrary to the requirements in 40 C.F.R. § 70.6(f)(1)(ii), neither ADEM's draft nor final SOB documents discuss and provide a written basis for including the permit shield as proposed.

¹⁴⁸ Petitioners' Comments at 24.

¹⁴⁹ 40 C.F.R. § 70.6(f).

¹⁵⁰ *Id*.

EPA should require ADEM to obtain the missing compliance certification information from Alabama Power. EPA should further require that it provide a detailed rationale in the permit record explaining why it does (or does not) determine the source is in compliance on a unit-byunit basis with all applicable requirements, and based on that assessment whether the facility is in compliance and entitled to a permit shield.

CONCLUSION

For the reasons set forth above, EPA must act to protect the environmental justice communities living around the Barry Plant and object to the Barry Permit. EPA is required to object where, as shown above, ADEM has failed to comply with applicable requirements in its State Implementation Plan's governing regulations. Regarding the Plant's SO₂ emissions, EPA must object because ADEM has failed to comply with multiple requirements in Alabama's SIP, including the requirement that APC demonstrate that the permit limits contained in the proposed permit are sufficiently stringent to be protective of the NAAQS and the requirement that ADEM administer its program to require attainment with the NAAQS within a set timeframe, that has now passed. Additionally, EPA should object because ADEM sets long-term emission limits in the permit that are inadequate to protect the 1-hour SO₂ NAAQS, and because ADEM failed to submit information to allow EPA to adequately review the permit. In particular, ADEM provided no support for its decision to retain the pre-existing 1.8 lb/mmbtu SO₂ limit, and information in the record clearly establishes that that limit would allow exceedances of the NAAQS.

Moreover, EPA must object because ADEM failed to include SIP requirements for control – and the associated monitoring, recordkeeping and reporting to assure compliance - of coal dust particulate matter emissions from the material handling systems. EPA must also object because ADEM failed to require that APC correct its compliance certifications that show a pattern and practice of inaccurate and incomplete information. Finally, ADEM's Final Permit record lacks a reasoned analysis to support the facility-wide permit shield and EPA must require that ADEM provide a detailed rationale and revise its permit shield determination because the compliance certifications show the facility is not entitled to the shield.

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Respectfully submitted,

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