

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

IN THE MATTER OF:)
) PETITION FOR OBJECTION
Clean Air Act Title V Operating Permit)
No. TV-0420-0015 v1.1)
)
Issued to Century Aluminum) Permit Number TV-0420-0015 v1.1
of South Carolina, Inc.)
)
Issued by the South Carolina Department of)
Health and Environmental Control)
)
_____)

**PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT
TO THE MINOR PERMIT MODIFICATION TO TITLE V PERMIT NO.
TV-0420-0015 v1.1 FOR THE CENTURY ALUMINUM OF SOUTH
CAROLINA, INC. PRIMARY ALUMINUM REDUCTION FACILITY**

Pursuant to section 505(b)(2) of the Clean Air Act, 42 U.S.C. § 7661d(b)(2), and 40 C.F.R. § 70.8(d), Sierra Club and the Environmental Integrity Project (collectively, “Petitioners”) respectfully petition the Administrator of the U.S. Environmental Protection Agency (“Administrator” or “EPA”) to object to the minor permit modification and the administrative amendment to Title V Operating Permit No. TV-0420-0015 v1.1¹ for the Century Aluminum of South Carolina, Inc. (“Century Aluminum”) primary aluminum reduction facility known as the “Mt. Holly” plant, located in Goose Creek, Berkeley County, South Carolina.

On or about February 24, 2023, the South Carolina Department of Health and Environmental Control (“DHEC”) submitted the minor permit modification and the administrative permit amendment with a revised Title V Operating Permit incorporating both changes for EPA’s 45-day review.² On April 13, 2023, DHEC issued to Century Aluminum a final Title V permit incorporating both changes.³

As discussed further below, EPA must object to both revisions to Permit No. TV-0420-0015 v1.1 because (1) the minor modification does not meet the criteria for processing minor modifications under 40 C.F.R. § 70.7(e)(2); and (2) the public notice for the preconstruction permit

¹ A copy of this Permit No. TV-0420-0015 v1.1 is attached hereto as Exhibit 1.

² According to EPA, its 45-day review of the proposed Title V permit ended on April 10, 2023. See May 12, 2023 email from Art Hofmeister, Air Permits Section, U.S. EPA Region IV, to Vicki Stamper (Exhibit 2). Thus, DHEC must have submitted the proposed permit for EPA’s review on or about February 24, 2023.

³ The minor permit modification and administrative amendment are individually identified as permit nos. TV-0420-0015-MM and TV-0420-0015-AA, respectively.

that DHEC incorporated into the Title V permit via administrative amendment did not comply with applicable prevention of significant deterioration (PSD) notice requirements under South Carolina regulations or with public notice procedures substantially equivalent to 40 C.F.R. § 70.7(h)(2).

According to EPA Region IV's "South Carolina Proposed Title V Permit" website⁴ and communications with Region IV staff, the 60-day public petition period on the Title V permit began on April 10, 2023, and ends on June 9, 2023.⁵ Therefore, this petition is timely. As required, Petitioners are filing this Petition with the Administrator via the Central Data Exchange and providing copies via certified U.S. mail to DHEC and Century Aluminum.

I. BACKGROUND

The Century Aluminum Mt. Holly plant is a primary aluminum production facility located in Goose Creek, Berkeley County, South Carolina. DHEC describes the plant as fabricating aluminum from raw aluminum oxide (alumina) using the Hall-Heroult electrolytic process and explains the process as consisting of "three basic steps: (1) the manufacture of carbon anodes from coke and pitch, (2) the reduction of alumina to produce molten aluminum, and (3) the processing of molten aluminum for end users."⁶

The Mt. Holly plant is a major source of sulfur dioxide (SO₂) emissions. Based on DHEC's Statement of Basis for the 2021 Title V renewal permit for the Mt. Holly plant, the facility had a potential to emit of SO₂ of 4,016 tons per year. The sulfur content of the petroleum coke, as well as the pitch and the fluid coke, used at the Mt. Holly plant is the main source of SO₂ emissions from the facility.⁷

The Mt. Holly Plant is also a major source of particulate matter (PM), PM₁₀, and PM_{2.5}. Based on DHEC's Statement of Basis for the 2021 Title V renewal permit for the Mt. Holly plant, the facility had a potential to emit of 485 tons per year of particulate matter and 334 tons per year of PM₁₀/PM_{2.5}. The 2021 Statement of Basis also states Mt. Holly facility is a major source based on potential to emit NO_x (268 tons per year), hazardous air pollutants (HAP) (975 tons per year total HAP), and greenhouse gas emissions (415,324 million tons per year of carbon dioxide equivalent), among other pollutants.

According to EPA data, about 33,400 residents live within three miles of Century Mt. Holly. Of these residents, roughly a third (31%) are low-income, and more than a third (37%) are people of color.⁸ Data from EPA's Environmental Justice Screen Report indicates that these communities face a high level of risk of both respiratory problems and cancer caused by toxic air pollution, ranking in

⁴ <https://www.epa.gov/caa-permitting/south-carolina-proposed-title-v-permits>.

⁵ As stated in Exhibit 2.

⁶ DHEC, Draft Statement of Basis, Century Aluminum of South Carolina, Inc., Permit No. TV-0420-0015-AA, MM, at 1, attached hereto as Exhibit 3.

⁷ Cf. Alcoa-Mt Holly, NSR Assessment & PSD Permit Needs for Next Production Increase, Prepared by Cheryl Kirkland, Alcoa Mt Holly Senior Environmental Specialist, at PDF pp. 2, 15, August 2001, attached hereto as Exhibit 4.

⁸ EPA, Environmental Justice Screen report, <https://ejscreen.epa.gov/mapper>.

the 85th percentile statewide and 80-90th percentile nationwide for EPA's Air Toxics Cancer Risk scale, as well as in the 84th percentile statewide and 80-90th percentile nationwide for Air Toxics Respiratory Risk.⁹

The Mt. Holly facility is located about 40 kilometers from the Cape Romain wilderness area in South Carolina, which is a Class I area under the Clean Air Act that is afforded additional protections for prevention of significant deterioration (PSD) increments and for air quality related values including visibility. The National Parks Conservation Association has identified several other Class I areas for which the Mt. Holly plant potentially contributes to regional haze, including but not limited to the Wolf Island and Okefenokee wilderness areas in Georgia, the Linville Gorge, Shining Rock, and Swanquarter wilderness areas in North Carolina; the Joyce-Kilmer-Slickrock Wilderness in North Carolina and Tennessee; and Great Smoky Mountains National Park in North Carolina and Tennessee.¹⁰

II. RELEVANT PERMITTING HISTORY

A. 2002 Construction Permit No. 0420-0015-CR

On November 18, 2002, DHEC issued Century Mt. Holly (operating at the time as Alumax of South Carolina) PSD Construction Permit No. 0420-0015-CR. *See* Exhibit 5 (2002 Construction Permit). In relevant part, Condition II.D.9 of the 2002 Construction Permit explicitly contained requirements that the sulfur content of the pitch used in forming the anodes at the facility's two Potlines "shall not exceed 0.85% by weight based upon a monthly average," and the sulfur content of the coke used in forming the anodes "shall not exceed 2.22% by weight based upon a monthly average." *See id.* at 6. Condition II.D.9 also required Century Mt. Holly to record and maintain records of the monthly pitch and coke average sulfur contents, and to report these monthly averages to DHEC on a quarterly basis. *Id.* The sulfur content limits in Condition II.D.9 were expressly imposed to ensure that net SO₂ emissions associated with the 2002 project remained below the PSD significance threshold of 40 tons per year for SO₂.¹¹

The pitch and coke sulfur content limits were incorporated as Condition C.15 in the Title V renewal permit No. TV-0420-0015 for Mt. Holly issued in 2021. *See* Exhibit 6 at 23 (2021 Title V permit).

In addition to sulfur content limits, the 2002 Construction Permit established PM and PM₁₀ limits based on best available control technology (BACT) for those and other pollutants. *See* Exhibit 5, 2002 Construction Permit, Section II.A.

⁹ *Id.*

¹⁰ *See* National Parks Conservation Association, Sources of Visibility Impairing Pollution for Century Aluminum of South Carolina, Inc., Interactive Map. Available at <https://npca.maps.arcgis.com/apps/MapSeries/index.html?appid=73a82ae150df4d5a8160a2275591e45d>.

¹¹ *See* DHEC, Statement of Basis, Construction Permit 0420-0015-CW, December 9, 2016, at 6, attached hereto as Exhibit 8 ("The 2002 production increase project avoided PSD for SO₂").

B. 2016 Synthetic Minor Construction Permit No. 0429-0015-CW

On September 26, 2016, Century Aluminum Mt. Holly applied for a synthetic minor air construction permit seeking to modify the existing pitch and coke sulfur content limits originally established in Condition II.D.9 of the 2002 Construction Permit. DHEC issued this permit on December 9, 2016. *See* Exhibit 7 (2016 Construction Permit). Specifically, Century Aluminum’s application indicated that due to prevailing business conditions, one of the facility’s two potlines—Potline #2—had been curtailed indefinitely, and thus the facility sought a modification to the 2002 Construction Permit’s limits to allow Mt. Holly to increase the maximum sulfur content in coke limit from 2.22% to 3% by weight on a monthly average basis as long as the facility was operating under a “one potline” scenario.

Both the 2016 Construction Permit and accompanying permit record made clear that this increased 3.0% sulfur content limit **only** applied during a “one potline” operating scenario. *See* Exhibit 7, 2016 Construction Permit, Condition A: Project Description (stating “Permission is hereby granted to modify the previously established SO₂ emission limitations and to make the following modifications, while the facility is operating in the one Potline, 3% sulfur coke scenario”). Both Century Aluminum’s application for the 2016 Construction Permit, as well as DHEC’s Statement of Basis accompanying the permit, expressly noted Century was requesting a synthetic minor permit for a “one potline” scenario because applying the 3.0% limit to both potlines would result in SO₂ PTE emissions far in excess of the facility’s PSD avoidance limit for SO₂.¹²

To reflect the fact that only one potline would be operating under this allowance, the 2016 Construction Permit also decreased Mt. Holly’s maximum permitted aluminum production capacity from 256,150 tons per year (when operating two potlines) to 128,075 tons per year (one potline). The 2016 Construction Permit also decreased Century Mt. Holly’s annual allowable facility-wide SO₂ emissions from 4,015.6 tpy to 2,648.7 tpy when operating in a one potline scenario. The Statement of Basis noted that in the event that Mt. Holly resumed operation of Potline #2, the original limits established in the 2002 Construction Permit would come back into effect.¹³

C. The 2023 Minor Title V Permit Modification, TV-0420-0015-MM

In its 2023 minor permit modification to the Mt. Holly plant’s Title V permit, DHEC revised Condition C.15 of Title V Permit No. TV-0420-0015 to increase the allowable sulfur content of coke used at the Mt. Holly Plant from 2.22% to 3.0%. Other changes made to Condition C.15 included adding language that the sulfur and pitch content limits “shall be used to calculate SO₂ emissions” and adding test method options and a formula for determining blended coke sulfur content.¹⁴

¹² *See* Exhibit 8 (DHEC, Statement of Basis, Construction Permit 0420-0015-CW, December 9, 2016), at 1, 4-5.

¹³ *See id.* at 6 (“If and when Potline #2 restarts, the facility will work with the BAQ on a transition back to the current permit conditions and limits.”). Note that the requirements in the 2016 Construction Permit were not carried over into the 2021 Title V renewal permit.

¹⁴ Exhibit 1, Title V Permit No. TV-0420-0015 v1.1 at 23, Condition C.15.

In its Statement of Basis explaining the minor permit modification, DHEC stated:

The facility is also requesting Minor Modification to Clarify Condition C.15 of the Title V permit regarding % by weight sulfur content of blended coke and pitch used to form anodes. The facility is requesting to add mass balance algorithms for % weight sulfur content to calculate monthly average SO₂ emissions to meet facility-wide 4,015.6 [tons per year (tpy)].¹⁵

DHEC attempted to justify processing the increase in coke sulfur content as a minor permit modification by reference to the underlying 2002 Construction Permit that established the sulfur content limits for petroleum coke and pitch, arguing that it allowed this flexibility:

The PSD construction permit CR (issued November 19, 2002) granted flexibility of using different % sulfur content in Coke, depending on varied production levels, to comply with applicable emissions limits, which remain unchanged.

The average sulfur content of pitch and coke is part of the methodology for demonstrating compliance with the 4,015.6 tpy SO₂ emission limit (PSD construction permit CR). The 2002 construction permit sought an increase in the [aluminum (Al)] production limit from 234,274 tpy to the full production capacity of 256,150 tpy, *or greater as long as emissions limits and conditions are not exceeded*. The 2002 project was subjected to PSD review for NO_x, CO, TSP, PM₁₀, and fluorides, but elected to limit the future potential SO₂ emissions increase below 40 tpy. To show compliance with the SO₂ limits established in the 2002 permit, an average coke sulfur content of 2.22% was used in the calculations described above.

The current minor modification request is to clarify that just as the permit allows Al production to exceed 256,150 tpy if average coke sulfur content is lower than 2.22%, conversely, if the average sulfur content is greater than 2.22%, Al production would necessarily be lower than 256,150 tpy to maintain compliance with the 4,015.6 tpy SO₂ emission limit.¹⁶

However, the 2002 Construction Permit did not allow for a “flexible” sulfur content limit, as clearly shown by the plain text of Condition II.D.9 of the 2002 permit itself and DHEC’s own enforcement of it. Rather, DHEC’s Statement of Basis misrepresents the purpose and basis for the pre-existing permit condition limiting the sulfur content of coke. As will be discussed in detail below, the state was not merely seeking to “Clarify Condition C.15” but to modify the pre-existing *limit* in Condition C.15 on the sulfur content of raw materials at the Mt. Holly plant. Moreover, nowhere does the Statement of Basis disclose that the proposed minor modification in fact increased by 35% the allowable sulfur content of coke used at the Mt. Holly plant, from 2.22% to 3.0%.

¹⁵ See Exhibit 3 at 1. Note that this Statement of Basis was posted in the files for the Title V Permit No. TV-0420-0015-v1.1 available on the EPA Region IV “South Carolina Proposed Title V Permits” website at <https://www.epa.gov/caa-permitting/south-carolina-proposed-title-v-permits>. Petitioners do not have a final version of the DHEC Statement of Basis.

¹⁶ *Id.*

D. 2023 PSD Construction Permit No. 0420-0015-CY

On December 7, 2022, DHEC posted a public notice for PSD Construction Permit No. 0420-0015-CY (PSD Construction Permit CY) and solicited comments through January 5, 2023. The public notice said only the following about the proposed PSD Construction Permit CY:

The [Mt. Holly] facility has submitted a permit application to revise the existing filterable particulate matter (PM) BACT emission limits for the Unit ID 04 Potline potroom groups to a new, single emission limit. Emissions generated by this facility as a result of the proposed project will include:

- Particulate Matter (PM);
- Particulate Matter less than 10 micrometers in diameter (PM10);
- Particulate Matter less than 2.5 micrometers in diameter (PM2.5);

Air dispersion modeling has indicated that the release of emissions from this facility will not cause or contribute to an exceedance of the National Ambient Air Quality Standards (NAAQS). *No degree of increment consumption is expected.*

There will be *no Class I Areas impacted and no degree of increment consumption resulting* from this proposed project.¹⁷

Based on the statement that “no degree of increment consumption” would result and the fact that the notice did not state that emission limits were increasing, a member of the public could only conclude that the permit would cause no increase in emissions and, naturally, consume no increment. But, as detailed below, the PSD Construction Permit did allow for PM, PM10, and PM2.5 emissions increases and increment consumption, and the extent of these increases is not readily ascertainable in the permit record associated with the draft permit.

The public notice also stated that the “construction permit will be incorporated into the existing Title V permit with no additional public comment period, provided all public participation requirements and EPA requirements were fulfilled with notice of the construction permit action.”¹⁸

Just one week after the close of comment, on January 12, 2023, DHEC issued PSD Construction Permit CY to Century Aluminum for its Mt. Holly Plant.¹⁹ The final determination notes that no comments were received from EPA, federal land managers, or the public.²⁰

¹⁷ DHEC, Bureau of Air Quality, Notice of a Draft Air Prevention of Significant Deterioration (PSD) Construction Permit, Public Notice #22-091, at 1, attached hereto as Exhibit 9 (emphasis added).

¹⁸ *Id.*

¹⁹ DHEC, Prevention of Significant Deterioration Final Determination, Century Aluminum of South Carolina, Inc. – Mt. Holly Plant, Permit No. 0420-0015-CY, January 12, 2023, attached hereto as Exhibit 10.

²⁰ *Id.* at PDF p. 12.

E. The 2023 Administrative Permit Amendment, TV-0420-0015-AA

On January 19, 2023, Century Aluminum submitted a request to DHEC to incorporate the revised potroom PM emission rates of PSD Construction Permit CY into its Title V operating permit as an administrative permit amendment, indicating on an Administrative Permit Amendment form that this change was for “Incorporation of preconstruction review permit requirements in accordance with S.C. Regulation 61-62.70, Title V Operating Permit Program, Section 70.7(d)(1)(v).”²¹

On or about February 25, 2023, DHEC submitted to EPA a proposed Title V permit incorporating PSD Construction Permit CY as an administrative amendment, along with the previously discussed minor permit modification to the Title V Operating Permit No. TV-0420-0015 v1.1 for EPA’s 45-day review.²²

III. PETITIONERS

Sierra Club is a nonprofit corporation incorporated in California, with more than 780,000 members and supporters nationwide, including approximately 6,350 members who reside in South Carolina. Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of Earth; to practicing and promoting responsible use of the Earth’s resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. Sierra Club’s concerns encompass the exploration, enjoyment, and protection of surface waters in South Carolina. Sierra Club’s South Carolina Chapter has members that live, work and recreate near the facility.

Environmental Integrity Project (“EIP”) is a non-profit, non-partisan watchdog organization that advocates for effective enforcement of environmental laws. EIP has three goals: (1) to illustrate through objective facts and figures how the failure to enforce and implement environmental laws increases pollution and harms public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help communities obtain protections guaranteed by environmental laws.

IV. STANDARD OF REVIEW

EPA must object to any Title V permit that fails to include or assure compliance with all applicable requirements of the Clean Air Act. 40 C.F.R. § 70.8(c). “Applicable requirements” include any requirements of a federally enforceable State Implementation Plan, any Part 70 requirements, and any preconstruction requirements that are incorporated into the Title V permit.

²¹ Scott E. Courtney, P.E., Environmental Manager, Century Aluminum, submittal to DHEC re: Notification of Construction, Startup and Operating Permit Request, Potroom Group PM emission rate, Century Aluminum of South Carolina, Inc., Construction Permit 0420-0015-CY, attached as Exhibit 11.

²² See Exhibit 2.

In the Matter of Pac. Coast Bldg. Prods., Inc., Permit No. A00011, Clark County, NC (Dec. 10, 1999) at 7 (holding “applicable requirements include the requirement to obtain preconstruction permits that comply with preconstruction review requirements under the Act, EPA regulations, and State Implementation Plans.”).

If EPA does not object to a Title V permit, “any person” may petition EPA to object to a permit “within 60 days after the expiration of [EPA’s] 45-day review period” on the proposed permit. 42 U.S.C. § 7661d(b)(2); *see also* 40 C.F.R. § 70.8(d). Any objection included in the petition “must be based on a claim that the permit, permit record, or permit process is not in compliance with applicable requirements or requirements [of 40 C.F.R. Part 70].” 40 C.F.R. § 70.12(a)(2). Each objection must have been “raised with reasonable specificity during the public comment period provided for in § 70.7(h) of this part, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.” 40 C.F.R. § 70.8(d).

Upon receipt of a petition, EPA “shall issue an objection within [60 days] if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of this chapter.” 42 U.S.C. § 7661d(b)(2) (emphasis added); *see also* 40 C.F.R. § 70.8(c) (“The Administrator will object to the issuance of any proposed permit determined by the Administrator not to be in compliance with applicable requirements or requirements under this part.”). As noted above, applicable requirements include applicable requirements of a State Implementation Plan. *See* 40 C.F.R. § 70.2 (definition of applicable requirement). EPA must also object to permits for which the state permitting authority failed to “[p]rocess the permit under procedures approved to meet [40 C.F.R.] § 70.7(h).” 40 C.F.R. § 70.8(c)(3)(iii).

V. GROUNDS FOR PETITION

As set forth below, EPA must object to Mt. Holly’s Title V Permit No. TV-0420-0015-v1.1 because neither the minor permit modification nor the administrative permit amendment to the permit were issued in compliance with the requirements of 40 C.F.R. Part 70 or South Carolina’s implementing regulations at S.C. Regulation 61-62.70 (Title V Operating Permits) and 61-62.5, Standard No. 7 (PSD Permits). Specifically:

- A. DHEC did not meet the minor permit modification criteria in processing the changes to Condition C.15 of Permit No. TV-0420-0015, which are limited to changes that, among other things, 1) do not seek to establish or change a permit condition that the source has assumed to avoid an otherwise applicable requirement and 2) do not violate any applicable requirement; and
- B. DHEC cannot incorporate the PSD Construction Permit 0420-0015-CY into Mt. Holly’s Title V Permit via an administrative amendment because its public notice of the PSD Permit failed describe the degree of increment consumption, as required by S.C. Regulation 61-62.5, Standard No. 7(Q)(2)(c), and failed to describe the emissions change or the activity involved, as required by 40 C.F.R. § 70.7(d)(1) and the corresponding S.C. Regulation 61-62.70.7(d)(1) (requirements for administrative amendments).

A. PETITION CLAIM ONE: The changes to the coke sulfur content permit conditions cannot be processed as a minor permit modification

The permit change to increase the coke sulfur content at Mt. Holly runs afoul of several federal and state limitations on the use of minor permit modification procedures, and DHEC's justifications for using minor modification procedures do not pass muster.

Because DHEC processed this change to the sulfur content of the coke in Mt. Holly's Title V permit as a minor permit modification, DHEC did not provide an opportunity for the public to comment on these revisions. Thus, it was impracticable for Petitioners to submit comments on this permit modification. *Cf.* 40 C.F.R. §§ 70.8(d), 70.12(a)(2)(v) (requiring petitioners to demonstrate an issue raised in a petition was raised during public comment, or that it was impracticable to do so). Nonetheless, this change cannot properly be processed as a minor permit modification for two reasons.

First, the increase to the allowable petroleum coke sulfur content at the Mt. Holly plant changes a permit condition for which there is no corresponding underlying requirement and which the Mt. Holly plant assumed in the 2002 Construction Permit, No. 0420-0015-CR (Exhibit 5), to avoid an applicable requirement to which the aluminum plant would otherwise be subject, i.e., PSD requirements. *See* 40 C.F.R. § 70.7(e)(2)(i)(A)(4); S.C. Regulation 61-62.70.7(e)(2)(i)(A)(4).

Second, the minor modification would violate an applicable requirement of the Construction Permits issued for the Mt. Holly Aluminum Plant in 2002 and 2016. *See* 40 C.F.R. § 70.7(e)(2)(i)(A)(1); S.C. Regulation 61-62.70.7(e)(2)(i)(A)(1). The minor modification would also violate an applicable requirement of the South Carolina State Implementation Plan (SIP). The 2.22% coke sulfur content limit was a limit taken to restrict the net emissions increase of SO₂ below PSD major modification significance levels due to the increase in aluminum production capacity that was permitted in the plant's 2002 Construction Permit. Thus, the relaxed coke sulfur content limits violate applicable PSD permitting requirements of the South Carolina SIP because they would allow the previously permitted minor modification of SO₂, as permitted in the 2002 Construction Permit, to become a major modification of SO₂. *See* S.C. Regulation 61-62.5, Standard No. 7 (PSD), Section (R)(4); *see also* 40 C.F.R. § 52.21(r)(4).

Thus, Petitioners request that EPA object to the changes to Condition C.15 of Mt. Holly Title V Permit No. TV-0420-0015 v1.1 because the changes cannot be processed as a minor modification. EPA should require DHEC to follow applicable PSD and construction permitting requirements of the South Carolina SIP to revise the coke sulfur content limit, including providing public notice and the opportunity for public comment.

1. ***Argument 1: The minor permit modification changes a permit term or condition for which there is no corresponding underlying applicable requirement and that Mt. Holly assumed to avoid applicable PSD requirements***

a. Applicable Requirements

40 C.F.R. § 70.7I(2)(i)(A)(4) and corresponding S.C. Regulation 61-62.70.7I(2)(i)(A)(4) provide that a minor permit modification cannot be used for permit revisions that “change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.”

b. Specific Grounds for Objection

The existing 2.22% sulfur content limit on coke and the 0.85% sulfur content limit on pitch used at the Mt. Holly plant were permit terms or conditions for which there was no underlying regulatory requirement that the Mt. Holly facility assumed to avoid applicable PSD requirements to which the facility would otherwise be subject.

The 2002 Construction Permit allowed an increase in aluminum production at the Mt. Holly plant from 234,274 tons per year to a production capacity of 256,150 tons per year, which triggered PSD permitting requirements for all pollutants. But the owner/operator of the Mt. Holly aluminum plant (which, at that time, was Alcoa operating as Alumax of South Carolina) requested limits on sulfur content of raw materials to avoid PSD requirements for SO₂ for this capacity increase. Specifically, DHEC’s Statement of Basis for the 2002 Construction Permit states that the plant was “requesting to reduce the limit of their coke and pitch sulfur content from 2.95% and 1.2% to 2.22% and 0.85%, respectively, *as a means to net out of PSD requirements for SO₂*.”²³ This makes clear that DHEC imposed the sulfur content limits on coke and pitch as a limit to avoid the otherwise applicable requirement for the aluminum production capacity increase permitted in the 2002 Construction Permit.

Further, there was no corresponding underlying applicable regulatory requirement limiting the sulfur content of petroleum coke and pitch to the 2.22% and 0.85% limits that the Mt. Holly plant assumed to avoid the otherwise applicable PSD permitting rules that would have applied to the 2002 modification. Neither the currently approved South Carolina SIP nor the federal regulations had imposed an underlying limit on sulfur content of the coke used at the Mt. Holly Plant. Moreover, considering the new Condition C.15 in Mt. Holly’s Title V permit on its own terms, it becomes clear that no applicable regulatory requirement underlies revised Condition C.15. Rather, DHEC used Title V minor permit procedures to rewrite enforceable limits established in the 2002 Construction Permit.

²³ As stated in a January 27, 2023, email from Robert K. Mahoney, P.E., Manager, Metals and Chemicals Permit Section, Bureau of Air Quality – Air Permitting Division, DHEC, to Scott Courtney, Century Aluminum, at 2, attached as Exhibit 12 (emphasis added).

DHEC argues in its Statement of Basis that the sulfur content limits were not limits at all, but merely part of the “methodology” for demonstrating compliance with a mass-based facility-wide SO₂ limit. However, that argument is contradicted by the language and context of the 2002 Construction Permit term regarding coke sulfur content, the DHEC’s enforcement of that permit term in 2004, and how DHEC viewed that permit term in a 2016 synthetic minor permitting action. Petitioners discuss these issues in detail in Section 4, *infra* page 15, below.

Because the minor permit modification changes a permit term for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement, the DHEC should not have revised the limit through a minor permit modification pursuant to 40 C.F.R. § 70.7(e)(2)(i)(A)(4) and the corresponding S.C. Regulation.

2. ***Argument 2: The minor permit modification violates applicable requirements of Mt. Holly’s 2002 Construction Permit & 2016 Construction Permit***

a. Applicable Requirements

40 C.F.R. § 70.7(e)(2)(i)(A)(1) and corresponding S.C. Regulation 61-62.70.7(e)(2)(i)(A)(1) limit minor permit modifications to changes that “[d]o not violate any applicable requirement.” An “applicable requirement” is “any term or condition of any preconstruction permit issued pursuant to regulations approved or promulgated through rulemaking under title I, including parts C or D, of the [Clean Air] Act.” *See* 40 C.F.R. § 70.2 (definition of applicable requirement, at (2)); S.C. Regulation 61-62.70.2(f)(2).

b. Specific Grounds for Objection

The new 3.0% coke sulfur limit violates Condition II.D.9 of the 2002 Construction Permit, which states that the “sulfur content of the coke used in forming the anodes shall not exceed 2.22% by weight based upon a monthly average.”²⁴ The 2002 Construction Permit is an “applicable requirement” as defined in federal and implementing state regulations because it was issued pursuant to regulations approved or promulgated through rulemaking under Title I, Part C (PSD) of the Clean Air Act. *See* 40 C.F.R. § 70.2 (definition of “applicable requirement”). DHEC cannot attempt to revise this PSD Construction Permit through the Title V permitting process; rather, DHEC must revise the 2002 Construction Permit itself. *Cf. In the Matter of Big River Steel, LLC, Osceola, Arkansas*, Order on Petition Nos. VI-2013-10 at 8-20 (Oct. 31, 2017).

Because the minor modification violates the 2002 Construction Permit, the change to increase the sulfur content of coke at Mt. Holly cannot be processed as a minor permit modification pursuant to 40 C.F.R. § 70.7(e)(2)(i)(A)(1) and the corresponding S.C. Regulations; instead, DHEC must follow significant modification procedures and must also revise the 2002 Construction Permit.

²⁴ Exhibit 5 at 6.

Not only does the minor permit modification violate the terms of the 2002 Construction Permit, the modification also violates the terms of Mt. Holly's 2016 Synthetic Minor Construction Permit. *See* Exhibit 7 (2016 Construction Permit). The 2016 Construction Permit allowed Mt. Holly's maximum sulfur content in coke to be increased from 2.22% to 3.0% by weight (on a monthly average basis) **only** when the facility is operating in a one potline scenario. *Id.* at 2. With this increased sulfur content/one potline scenario, the 2016 Construction Permit imposed a lower potline aluminum production capacity of 128,075 tons per year, a lower facility-wide SO₂ emission limit of 2,648.7 tons per year, and lower SO₂ limits for the Anode Scrubber (Source 85) and Bake Oven Scrubber (Source 01); it also decreased allowable hourly SO₂ emissions limits for Potline #2 from 212.24 lb/hr to zero. *Id.* at 2, 4 (Conditions C.5, C.6, C.7., C.8, C.9, and C.10).

The minor permit modification to Title V Permit No. TV-0420-0015 v1.1 includes none of these additional limits on aluminum production capacity or the lowered SO₂ emissions from the facility, anode scrubber, and bake oven scrubber, or for the potlines. Because this permit change violates the 2016 Construction Permit, the increase to the sulfur content of coke at Mt. Holly cannot be processed as a minor permit modification pursuant to 40 C.F.R. § 70.7(e)(2)(i)(A)(1) and the corresponding S.C. Regulations. Accordingly, Petitioners request that EPA object to this minor permit modification to the Mt. Holly Title V permit.

3. *Argument 3: The minor permit modification violates applicable PSD permitting requirements in the South Carolina SIP*

a. Applicable Requirements

As stated above, 40 C.F.R. § 70.7(e)(2)(i)(A)(1) limits minor permit modifications to changes that do not violate any applicable requirement. An "applicable requirement" includes "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." *See* 40 C.F.R. § 70.2 (definition of applicable requirement, at (1)); S.C. Regulation 61-62.70.2(f)(1).

In relevant part, the PSD permitting regulations of the South Carolina SIP state:

At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements or paragraphs (J) through (R) shall apply to the source or modification as though construction had not yet commenced on the source or modification.

S.C. Reg. No. 62.5, Standard No. 7 (PSD), Section (R)(4); 40 C.F.R. Part 52, Subpart PP, § 52.2120(c). *See also* 40 C.F.R. § 52.21(r)(4).

b. Specific Grounds for Objection

The 2.22% limit on coke sulfur content is an enforceable limitation which was established after August 7, 1980, and which limits the capacity of the Mt. Holly Plant to emit SO₂. As stated by DHEC,²⁵ the pre-existing 2.22% sulfur in coke limit originated in the 2002 Construction Permit (Exhibit 5). DHEC issued the 2002 Construction Permit to allow for an increase in aluminum production.²⁶ The 2002 Permit is labeled as a “PSD, NSPS (40CFR60) and NESHAP (40CFR63) Construction Permit.”²⁷

A review of the emission calculations conducted for the Mt. Holly plant’s increase in aluminum production capacity that was permitted in the 2002 Construction Permit shows that if the 2.22% assumed coke sulfur content limit was increased to 3.0% sulfur content, the 2002 Construction Permit would have qualified as a major modification.

Specifically, an August 2001 Alcoa – Mt Holly document entitled “NSR Assessment & PSD Permit Needs for Next Production Increase,” appears to have the pre-project and post-project net emissions emission calculations for the aluminum production increase project that was permitted in the 2002 Construction Permit.²⁸ Based on the data for tons per year of coke processed, pitch processed, and fluid coke consumed and the given average percent sulfur in coke, pitch, and fluid coke for both “Current Operation” and “Proposed Operation,” Petitioners were able to recalculate the pre-project “Current Operation” emissions and revised “Proposed Operation” emissions.

Petitioners’ analysis shows that the relaxation of the 2.22% coke sulfur content limit, originally taken to avoid PSD permitting requirements, to a 3.0% coke sulfur content limit should be projected to result in a significant net emissions increase of SO₂, and thus a major modification for SO₂ at the Mt. Holly plant. These calculations are summarized in Table 1 below and the calculations are included in Exhibit 13 to this petition.

²⁵ Exhibit 3 at 1 (DHEC, Draft Statement of Basis, Century Aluminum of South Carolina, Inc., Permit No. TV-0420-0015-AA, MM).

²⁶ Exhibit 5 at 1.

²⁷ *Id.*

²⁸ *See* Exhibit 4. This file was attached to a January 31, 2023 email from Scott Courtney, P.E., Environmental Manager, Mt. Holly Plant, Century Aluminum, to DHEC. *See* Exhibit 12, which includes the January 31, 2023 email. According to the January 31, 2023 email, this document is a “PDF Compilation of the 2002 PSD Permit Current Actual Emission Calcs, Future Potential Emission Calcs and the Table 1 Netting Analysis.”

Table 1. Evaluation of Whether the Relaxation of the Coke Sulfur Content Limit from 2.22% to 3.0% Should Be Considered to Be a Major Modification of SO₂, Due to Relaxation of the Sulfur Limit Taken in 2002 to Avoid PSD Review²⁹

	Coke Processed, tons/year	% Sulfur in Coke	Pitch Processed, tons/year	% Sulfur in Pitch	Fluid Coke Processed, tons/year	% Sulfur in Fluid Coke	Calculated SO₂ Emissions, tons per year³⁰
Current (Pre-Project) Operation	92,100	2.40%	21,232	0.70%	599	4.24%	3,990 tpy
Revised Post-Project Operation Based on Increased Sulfur in Coke Limit	98,086	3.0%	22,612	0.85%	599	5%	5,296 tpy
Emission Increase with Increased Sulfur in Coke Limit							1,309 tpy

Because the relaxed coke sulfur content limit likely violates applicable PSD permitting requirements of the South Carolina SIP by relaxing an enforceable limitation on the capacity of the Mt. Holly aluminum plant to emit SO₂ such that the 2002 modification would become a major modification for SO₂, DHEC was not authorized to process the increased sulfur content through minor permit modification procedures pursuant to the limitations of 40 C.F.R. § 70.7(e)(2)(i)(A)(1). Accordingly, Petitioners request that EPA object to this minor permit modification to the Mt. Holly Title V permit.

²⁹ See Exhibit 13, spreadsheet created by Petitioners with SO₂ calculations based on process data from Alcoa-Mt Holly, NSR Assessment & PSD Permit Needs for Next Production Increase, Prepared by Cheryl Kirkland, Alcoa Mt Holly Senior Environmental Specialist, August 2001, at 2 (Table 1) (Exhibit 4).

³⁰ Formula for SO₂ emissions is from Alcoa-Mt Holly, NSR Assessment & PSD Permit Needs for Next Production Increase, prepared by Cheryl Kirkland, Alcoa Mt Holly Senior Environmental Specialist, August 2001, at 6 (attached as Exhibit 4).

4. *Analysis of DHEC's justifications for the minor permit modification*

- a. DHEC's attempt to justify the permit change as one of "methodology" is flawed because the sulfur content restriction is an independently enforceable limit

DHEC's justification for processing the revision to Condition C.15 as a minor permit modification rests on its assertion that the Condition was "part of the methodology for demonstrating compliance with the 4,015.6 tpy SO₂ emission limit (PSD construction permit CR)." ³¹ To bolster that claim, DHEC stated that the 2002 Construction Permit "granted flexibility of using different % sulfur content in Coke, depending on varied production levels, to comply with applicable emissions limits" and that the 2002 Permit "sought an increase in the Al production limit from 234,274 tpy to the full production capacity of 256,150 tpy, *or greater as long as emissions limits and conditions are not exceeded.*" ³² But DHEC's justifications are not consistent with the terms of the 2002 Construction Permit, the 2016 Construction Permit, or DHEC's treatment and enforcement of the sulfur content in coke limit as an independently enforceable limit from 2002 to present.

First, the 2002 Construction Permit clearly imposed the 2.22% sulfur content in coke and the 0.85% sulfur content in pitch requirements as independently enforceable limitations. The 2002 Permit states, in relevant part:

The sulfur content of the pitch used in forming the anodes shall not exceed 0.85% by weight based upon a monthly average. The sulfur content of the coke used in forming the anodes shall not exceed 2.22% by weight based upon a monthly average. Records of the monthly average sulfur contents of pitch and coke shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.

QUARTERLY reports, including all recorded parameters and calculated values, shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 days after the end of the reporting period. (Source ID01) ³³

The 2002 Construction Permit also included the following permit condition pertaining to SO₂ emissions from the potline groups:

As established by PSD limits, combined sulfur dioxide emissions from all Potline Roof Monitors and Potline Scrubbers shall not exceed 848.96 pounds per hour and 3,718.44 tons per year. Combined carbon monoxide emissions from all Potline

³¹ Exhibit 3 at 1.

³² *Id.* (emphasis in original).

³³ Exhibit 5 at 6. Source "ID01" is listed in the Construction Permit as "Green Carbon Plant." Thus, these limits on sulfur content of coke and pitch applied to the Green Carbon Plant emission unit, as that is where the coke and pitch are received and processed into anodes.

Scrubbers shall not exceed 12,713.2 pounds per hour and 55,684 tons per year.
(Source ID04)³⁴

Nothing in the 2002 Construction Permit indicates that these limitations on sulfur in coke and pitch were solely part of the “methodology” for determining compliance with a 4,015.6 tons per year limit, as claimed by DHEC. In fact, the 2002 Construction Permit *does not have* a specific permit condition limiting facility-wide SO₂ emissions to 4,015.6 tons per year—that limit was first included as a condition in the facility’s Title V permit many years later.³⁵ Instead, the 2002 Construction Permit has an SO₂ limit for the Potlines (Emission Unit ID 04) of 3,718.44 tons per year total. Further, the unit ID listed for the sulfur content limits for coke and pitch in the 2002 Construction Permit is Source ID 01, which is the green carbon plant where the coke and pitch are received and formed into anodes.³⁶ Importantly, SO₂ is emitted from the anode baking process as well as from the potlines at a primary aluminum production plant, and thus the sulfur content limits on the coke and pitch used at the Mt. Holly plant impact SO₂ emissions from both the potlines and the anode bake furnaces.³⁷

Second, in 2004, DHEC and Alcoa Mt. Holly, operating as Alumax of South Carolina, Inc., entered into a Consent Order to address violations of the sulfur in coke limits of the 2002 Construction Permit.³⁸ The Consent Order demonstrates that DHEC considered the sulfur content limits as independently enforceable limitations.

Specifically, the Consent Order states the following pertinent Findings of Fact:

3. The Department issued Construction Permit 0420-0015-CR to Alumax on November 19, 2002, to increase aluminum potline production from a limit of 234,274 tons per year (“TPY”) to 256,150 TPY. The permit allows additional production as long as emission limits and conditions are met, and no physical changes or changes in the method of operation that result in a significant net emissions increase of a regulated pollutant are involved, or there are no other modifications that would require further permitting. Alumax’s increased aluminum production was a major modification pursuant to PSD regulations because several pollutants, including sulfur dioxide (“SO₂”), exceeded significant increase levels (40 TPY in the case of SO₂).

³⁴ Exhibit 5 at 9. Source “ID04” is listed in the Construction Permit as “Potlines.” Thus, this mass-based SO₂ emissions limit applied to the potlines at Mt. Holly.

³⁵ To the best of Petitioners’ knowledge, DHEC imposed a 4,015.6 ton per year facility-wide SO₂ limit for the first time in its 2021 Title V Renewal Permit for the Mt Holly Plant, issued June 23, 2021, at 32-33 (Condition C.38) (Exhibit 6).

³⁶ Exhibit 5 at 2, 6.

³⁷ These limits on sulfur in coke and pitch and the SO₂ limits were incorporated into the Title V permit for the Mt. Holly plant in 2004 and again in 2021, when the Title V permit was last renewed, for both emissions units.

³⁸ The State of South Carolina, Before the Department of Health and Environmental Control, In RE: Alcoa Mt. Holly (Operating as Alumax of South Carolina, Inc.), Berkeley County, Consent Order 04-009-A, executed March 10, 2004, attached hereto as Exhibit 14.

4. Construction Permit 0420-0015-CR requires Alumax to limit the sulfur content of coke used in forming anodes in the Green Carbon Plant to 2.22% by weight based upon a monthly average. Alumax accepted this Federally enforceable limit to avoid PSD permitting and emission control requirements for SO₂. The permit requires Alumax to submit quarterly reports of all recorded parameters and calculated values regarding the coke sulfur content to the Department.
5. On June 20, 2003, Alumax informed the Department by phone that the average sulfur content of coke shipments unloaded at the facility in January 2003 was 2.31%. . . .
6. On July 28, 2003, Alumax submitted to the Department a semi-annual excess emissions report as required by the Title V Permit. The report also included that the average sulfur content of coke shipments unloaded at the facility in January 2003 was 2.31%.
7. On November 26, 2003, the Department issued Alumax a Notice of Violation and a Notice of Enforcement Conference for the cited violation.
8. On December 15, 2003, representatives of Alumax met with the Department to discuss the Notice of Violation. During the enforcement conference, representatives of Alumax presented data demonstrating that the January 2003 exceedance of the sulfur content limit was the only excursion during 2003, and that TPY emissions of SO₂ did not exceed the 40 TPY trigger level for PSD. . . .³⁹

The Consent Order stated as a Conclusion of Law that “the Department concludes that Alumax has violated . . . S.C. Code Ann. §48-1-110(d), in that it failed to limit the sulfur content of coke used in forming anodes in the Green Carbon Plant to 2.22% by weight based upon a monthly average, as required by its permit.”⁴⁰ The Consent Order directed that Alumax shall “limit the sulfur content of coke used in forming anodes in the Green Carbon Plant to 2.22% by weight based upon a monthly average” and required payment of a civil penalty.⁴¹

This Consent Order makes clear that DHEC considered the coke sulfur content limit to be an emission standard imposed to allow the Mt. Holly Plant to avoid PSD permitting requirements for SO₂. The Order also shows that DHEC considered the coke sulfur content limit to be an actionable limit regardless of whether the actual sulfur content resulted in a significant (greater than or equal to 40 tons per year) emission increase of SO₂ at the Mt. Holly plant.⁴²

³⁹ Exhibit 14 at 2-3.

⁴⁰ *Id.* at 3.

⁴¹ *Id.*

⁴² Petitioners also note that the 2.22% sulfur content limit plainly meets the definition of a federally enforceable “emission standard or limitation” under the Clean Air Act’s citizen suit provision, and thus if DHEC itself had not enforced against these violations, citizens would have been authorized to do so. *See* 42 U.S.C. § 7604(f)(3) (defining “emission standard or limitation”

Third, DHEC considered the limits on the sulfur content of raw materials, along with the allowed aluminum production level, as the limits on potential to emit SO₂ in the 2016 Construction Permit (Exhibit 7). In the Statement of Basis for this construction permit, DHEC states in pertinent part:

The facility is submitting this Construction Permit application to modify the following non-combustion sulfur compound-related permit limits (existing) while the facility is operating in the proposed one Potline scenario:

- (1) Increase the maximum sulfur content in coke from 2.22 percent (%) to 3% by weight (on a monthly average basis);
- (2) Decrease the facility's maximum permitted Potline aluminum production capacity from 256,150 tons per year (TPY) to 128,075 TPY....
- (3) Decrease the annual allowable facility-wide sulfur dioxide (SO₂) emissions from 4,015.6 TPY to 2,648 TPY. . . .⁴³

The 2016 Permit Statement of Basis further explains that the 2.22% sulfur content limit in coke and the sulfur content limit in pitch were "PSD avoidance limits":

The facility last underwent a PSD construction permitting review in 2002. The project increased permitted aluminum production from 234,274 TPY to 256,150 TPY. The 2002 production increase project avoided PSD for SO₂. This was accomplished by lowering the average maximum sulfur content of the coke and pitch used to form anodes. The PSD avoidance limits established for the 2002 project are coke sulfur content maximum of 2.22% (based on a monthly average) and pitch sulfur content maximum of 0.85% by weight (based on a monthly average).⁴⁴

Finally, the Statement of Basis states that "[a]t full production (both Potlines operating) using 3% sulfur coke, this project would have the [potential to emit (PTE)] greater than the significant net increase threshold for SO₂. Synthetic minor emission limitations are being established for SO₂ for PSD avoidance."⁴⁵

DHEC's "netting analysis" for the 2016 Construction Permit examined whether the aluminum production increase project permitted in 2002 would be considered a major modification for SO₂ with the increased sulfur content of coke allowed by the 2016 permit. Specifically, DHEC compared the "Facility-Wide PTE for One Potline, 3% Sulfur Coke Scenario" of 2,648.66 tons per year (which was a new facility-wide SO₂ limit established in the

to include, in relevant part, "any condition or requirement of a permit under part C of subchapter I (relating to significant deterioration of air quality)").

⁴³ Exhibit 8 at 1 (DHEC, Statement of Basis, Century Aluminum of South Carolina, Inc., Permit Number 0420-0015-CW, December 9, 2016).

⁴⁴ *Id.* at 6.

⁴⁵ *Id.*

2016 construction permit) to the “1999/2000 Facility-Wide Baseline Actual Emissions for the 2002 PSD Project” of 3,990.38 tons per year.⁴⁶

These statements from the 2016 Construction Permit also show the sulfur content limits on coke and pitch from the 2002 permits were not simply “part of the methodology” for compliance with the ton per year SO₂ limits. Instead, the sulfur content limits on coke and pitch were the synthetic minor limits on SO₂ from the Mt. Holly plant. DHEC cannot now rewrite the basis for those synthetic minor limits—at least not without modifying the 2002 Construction Permit.

For all of these reasons, DHEC’s claim that the limit on sulfur content in coke and pitch was “part of the methodology for demonstrating compliance with the 4,015.6 tpy SO₂ emission limit”—a limit which first appeared in Condition C.38 of Mt. Holly’s 2021 Title V permit and which was *not* part of the 2002 Construction Permit in which the 2.22% sulfur in coke limit was established—is inconsistent with the terms and conditions of the 2002 Construction Permit, DHEC’s Statement of Basis for the 2002 Construction Permit, DHEC’s subsequent actions to enforce the sulfur content in coke limit, and DHEC’s 2016 Construction Permit. Rather, the sulfur in coke limit is an independently enforceable limit that was taken to avoid PSD review for SO₂.⁴⁷

b. The 2002 Construction Permit does not grant the “flexibility” DHEC claims

As part of its justification for relaxing the coke sulfur content limit, DHEC also claimed that the 2002 Construction Permit “granted flexibility” in using a different percent sulfur “depending on varied production levels, to comply with applicable emissions limits,” and that the 2002 Construction Permit “sought an increase in the Al production limit from 234,274 tpy to

⁴⁶ *Id.* at 5. *See also* 2016 Construction Permit 0420-0015-CW, at 4 (Condition C.10) (Exhibit 7).

⁴⁷ Even if EPA were to accept DHEC’s justification that the sulfur content limit was “part of the methodology” for determining compliance with the plant-wide SO₂ limit—which it should not—DHEC’s permit change would then have violated the prohibition against using minor permit processes where a modification involves significant changes to existing monitoring requirements. *See* 40 C.F.R. § 70.7(e)(2)(i)(A)(2); S.C. Regulation 61-62.70.7(e)(2)(i)(A)(2). In the permit modification, DHEC revised Condition C.15 to specifically state, for the first time, that the monthly average sulfur contents of coke and pitch be used “to calculate applicable SO₂ emissions.” Thus, DHEC added a new monitoring requirement that was not previously specified in the Title V permit. *Compare* Operating Permit No. TV-0420-0015 v1.1, at 23, Condition C.15 (Exhibit 1) *with* Operating Permit No. TV-0420-0015, at 23, Revised Condition C.15 (Exhibit 6). Further, DHEC’s changes to Condition C.15 added test methods, including the ability for the Department to approve alternatives to testing, and an algorithm for calculating the monthly sulfur content of blended coke. These would all constitute significant changes to existing monitoring requirements for SO₂. As such, they should not have been processed as minor permit modifications under 40 C.F.R. § 70.7(e)(2)(i)(A)(2) and the corresponding S.C. Regulation.

the full production capacity of 256,150 tpy, *or greater as long as emissions limits and conditions are not exceeded.*”⁴⁸

To be clear, the 2002 Construction Permit states that “*additional production is allowed as long as emission limits and conditions are met* and no physical changes or changes in the method of operation that result in a significant net emissions increase of a regulated pollutant are invoiced, or other modification that would require further permitting.”⁴⁹ This statement explicitly allows for an increase in aluminum production capacity—it does **not** allow for an increase in coke sulfur content. Further, the fact that this statement requires both emissions limits and “conditions” to not be exceeded indicates that this statement was not intended to allow an increase in sulfur content of coke. Nothing in the 2002 Construction Permit or accompanying permit record suggests that the sulfur content limit is “flexible.”

Moreover, an increase in coke sulfur content would be considered a “physical change or change in the method of operation” at the Mt. Holly plant under the PSD permitting regulations. The definition of “major modification” in federal and South Carolina PSD regulations states that a physical change or change in the method of operation shall not include:

(e) Use of an alternative fuel or raw material by a stationary source which:

(1) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I; or

(2) The source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166.

S.C. Regulation 61-62.5, Standard No. 7, Section (b)(30)(iii)(e). *See also* 40 C.F.R. § 52.21(b)(2)(iii)(e).

The Mt. Holly plant was not approved to use coke with a sulfur content higher than 2.22% under the terms of the federally enforceable 2002 Construction Permit, which was issued under PSD construction permitting rules. Not only did the 2002 Construction Permit not allow an increase in coke sulfur content if it would not increase emissions (as erroneously claimed by DHEC) because the 2002 Construction Permit only allowed for an increase in aluminum production “as long as emissions limits and conditions are met,”⁵⁰ but also an increase in sulfur content of coke would require an analysis of whether this physical or operational change would result in a significant net emissions increase in SO₂ before such a change could be made. DHEC

⁴⁸ Exhibit 3 at 1 (DHEC, Draft Statement of Basis, Century Aluminum of South Carolina, Inc., Permit No. TV-0420-0015-AA, MM) (emphasis in original).

⁴⁹ Exhibit 5 at 1 (emphasis added).

⁵⁰ Exhibit 5 at 1.

has not done any such net emission increase analysis for the increase in petroleum coke sulfur content.

Moreover, because the limit on sulfur content of coke was imposed to restrict future emissions after the production increase project permitted in the 2002 Construction Permit, DHEC would also be required to determine whether the relaxation of the coke sulfur content limit would have resulted in the 2002 project being considered a major modification for SO₂ and, if so, the increase in coke sulfur content would be required to obtain a PSD permit as though construction had not yet commenced on the 2002 production increase project pursuant to S.C. Regulation 61-62.5, Standard No. 7, Section (r)(4). *See also* 40 C.F.R. § 52.21(r)(4).

Finally, the 2016 Construction Permit action also directly contradicts DHEC's claim that the 2002 Construction Permit "granted flexibility of using different % sulfur content in Coke, depending on varied production levels, to comply with applicable emissions limits."⁵¹ If DHEC considered the SO₂ limit mass-based ton per year limit as the defining limit on the Mt. Holly plant's potential to emit SO₂, then DHEC would not have had to impose a lower annual SO₂ limit and a lower aluminum production limit with the 2016 increase in the sulfur content of coke used at Mt. Holly for the one potline scenario.

5. ***Claim One Summary: EPA should object to the increase in allowable coke sulfur content at the Mt. Holly plant as such a change cannot be processed through a minor permit modification***

In sum, the permit change to the coke sulfur content at Mt. Holly did not meet the criteria for minor permit modification procedures because it violated applicable requirements, and it changed a permit condition for which there is no corresponding underlying requirement and which the Mt. Holly plant assumed to avoid applicable PSD requirements. *See* 40 C.F.R. § 70.7(e)(2)(i) & (4); *accord* S.C. Regulation 61-62.70.7(e)(2)(i) & (4). DHEC's claim that the coke sulfur content of the 2002 Construction Permit was only intended as a methodology of assessing compliance with mass-based limits is not supported by the plain language of the 2002 and 2016 Construction Permits or by its own past enforcement of the limit on sulfur in coke used at the Mt. Holly plant. Further, DHEC's claim that the 2002 Construction Permit allows for flexibility in using different percentages of coke sulfur content as long as emission limits are met is not supported by the plain language of the 2002 and 2016 Construction Permits or with South Carolina and federal PSD permitting regulations.

Accordingly, Petitioners request that EPA object to this minor permit modification to the Mt. Holly Title V permit and either terminate the minor permit modification or reopen the Title V permit for cause to require DHEC to properly permit the increase in coke sulfur content in accordance with all applicable requirements, including the PSD requirements of the South Carolina SIP, and in accordance with federal operating permit revision requirements.

⁵¹ *See* Exhibit 3 at 1.

B. PETITION CLAIM TWO: PSD Construction Permit No. 0420-0015-CY cannot be incorporated into Mt. Holly’s Title V Permit via an administrative permit amendment because DHEC failed to meet applicable public notice requirements

On or about February 24, 2023, DHEC also submitted an administrative permit amendment along with the minor permit modification previously discussed. The administrative permit amendment sought to incorporate into Mt. Holly’s Title V permit the terms and conditions of PSD Construction Permit No. 0420-0015-CY, which DHEC issued on January 12, 2023.⁵² But the administrative permit amendment failed to meet (1) the permit process requirements of the South Carolina SIP, which is an “applicable requirement” under 40 C.F.R. §§ 70.2 & 70.12(a)(2), and (2) the permit process requirements of 40 C.F.R. § 70.7(h)(2) (Part 70 public notice requirements).

In the public notice for PSD Construction Permit 0420-0015-CY (“PSD Construction Permit CY”), DHEC stated that the “construction permit will be incorporated into the existing Title V permit with no additional public comment period, provided all public participation requirements and EPA requirements were fulfilled with notice of the construction permit action.”⁵³ But “all public participation requirements and EPA requirements” were *not* met with the notice of PSD Construction Permit CY. Specifically, DHEC incorrectly stated in the notice that *no degree* of increment consumption is expected from the construction permit, which directly contradicts Century Aluminum’s permit application for the construction permit showing a significant degree of PM10 increment would be consumed by the facility as a result of this modification. Thus, DHEC’s notice failed to meet the requirements of the South Carolina SIP PSD regulations at S.C. Regulation 61-62.5, Standard No. 7, Section (Q)(2)(c), which is an “applicable requirement” under 40 C.F.R. Part 70.

Additionally, this public notice also failed to meet applicable Part 70 permit processing requirements. DHEC can only administratively incorporate preconstruction review permits into a Title V permit if the PSD permit was issued following procedures that were “substantially equivalent” to the procedural requirements in 40 C.F.R. § 70.7. *See* 40 C.F.R. § 70.7(d)(1)(v); S.C. Regulation 61-62.70.7(d)(1)(v). The public notice for the construction permit here failed to describe the “emissions change” or “the activity or activities” involved in the permit action, as required by the notice procedures in 40 C.F.R. § 70.7(h)(2) and S.C. Regulation 61-62.70.7(h)(2). Specifically, the notice did not provide any indication of the significant allowable emissions increases associated with this permit revision—and was in fact worded in a manner that suggested there were **not** any emissions increases associated with this permit, especially given its incorrect statement that there was no degree of increment consumption expected.

Accordingly, EPA must object to the incorporation of PSD Construction Permit CY via an administrative amendment because the permit process in issuing the underlying construction

⁵² *See* Exhibit 10 at PDF p. 14 (Construction Permit 0420-0015-CY, Appendix A, issued January 12, 2023).

⁵³ *See* Exhibit 9 (Public Notice #22-091) at 1.

permit failed to meet permit process requirements of the South Carolina SIP and of the EPA operating permit program requirements in 40 C.F.R. Part 70.⁵⁴

1. *Argument 1: DHEC's notice of Construction Permit CY failed to meet applicable notice requirements in the state SIP PSD regulations*

a. Applicable requirement

EPA must object where a petitioner demonstrates that a permit process is not in compliance with applicable requirements. 40 C.F.R. § 70.8(c)(1); *see also id.* § 70.12(a)(2). EPA's operating permit regulations define an "applicable requirement" to include "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 [40 C.F.R. Part 52]." 40 C.F.R. § 70.2 (definition of "applicable requirement," paragraph (1)) (emphasis added).

South Carolina's EPA-approved SIP regulations require that the public notice for a PSD permit include "the degree of increment consumption that is expected from the source or modification." S.C. Regulation 61-62.5, Standard No. 7, § (Q)(2)(c); 40 C.F.R. § 52.2120(c). This PSD regulation implements EPA public notice requirements for PSD plans found in 40 C.F.R. § 51.166(q)(2)(iii), which specifically requires the public notice to include the "degree of increment consumption that is expected from the source or modification" and which was implemented to meet requirements of Clean Air Act § 165, 42 U.S.C. § 7475. EPA's Environmental Appeals Board (EAB) has found a PSD permit to be deficient for failing to provide a complete description of proposed increment consumption in the public notice for a draft PSD permit. *See In the Matter of Hadson Power 14-Buena Vista*, Remand Order on PSD Appeal Nos. 92-3, 92-4, 92-5, at 271-72 (Oct. 5, 1992).

b. Specific grounds for objection

DHEC's public notice for PSD Construction Permit CY failed to meet the applicable PSD notice requirements of the South Carolina SIP because it failed to identify the degree of increment consumed from the source or modification.

DHEC's December 2022 public notice stated that there would be **no** degree of increment consumed.⁵⁵ This was incorrect. Indeed, Century Aluminum's application for this PSD permit, which is in Appendix B of DHEC's Preliminary Determination for PSD Construction Permit CY,

⁵⁴ Petitioners note that EPA has authority to object to Mt. Holly's revised Title V Permit, even though DHEC seeks to incorporate PSD permit terms via an administrative amendment, because DHEC packaged this permit change concurrently with the minor permit modification and sent the entire revised Title V permit to EPA for a 45-day review. The Clean Air Act allows EPA to object to "any permit" provided for its review, and for citizens to petition EPA to object if EPA does not object during the 45-day review period. *See* 42 U.S.C. § 7661d(b)(1) & (2).

⁵⁵ Exhibit 9 (Public Notice #22-091) at 1.

identified that 75.5% of the 24-hour PM10 increment would be consumed and that 24.6% of the annual PM10 increment would be consumed by the Mt. Holly facility.⁵⁶

The South Carolina SIP requires that the public notice identify the degree of increment consumption expected from the source or modification. S.C. Regulation 61-62.5, Standard No. 7, § (Q)(2)(c); 40 C.F.R. §52.2120(c). The federal PSD rules for state PSD SIPs also specifically require that the degree of increment consumption expected must be stated in the public notice. *See* 40 C.F.R. §51.166(q)(2)(iii). The EAB has identified this public notice requirement as important “[t]o allow for meaningful comment” and that, without such data on the degree of increment consumption in the public notice, the public’s “ability to comment on the air quality impact and proposed alternatives would be severely limited.” *Hadson Power* at 272.

In *Hadson Power*, the state of Virginia had identified the degree of increment consumption in *one* geographic location (the James River Face Wilderness) where the state claimed the worst-case increment consumption occurred, but the state failed to identify the degree of increment consumption at Shenandoah National Park. The state argued that the data on the degree of increment consumption at other locations like Shenandoah National Park were available at their air quality control office and local public libraries for public review, but the EAB was not persuaded by this argument. The EAB stated that the “Clean Air Act requires meaningful public participation in the PSD permitting process” and that it was not sufficient to state that the data was available at designed locations within the vicinity of the facility—“the regulation specifically requires these data to be in the public notice.” *Hadson Power* at 272.

Here, the public notice for PSD Construction Permit CY did not identify degree of increment consumption with the revised PM BACT limits; instead, the notice said **no** increment would be consumed, a statement that is, at best, inaccurate about the degree of increment consumption expected from the source and entirely inconsistent with the underlying permit record. This was an egregious error in the notice for the PSD permit and, considering no comments were submitted during the comment period, one that almost certainly misled the public regarding the significance of this proposed modification. Why would members of the public turn to the permit record when the notice pointed in the opposite direction and explicitly stated that no degree of increment would be consumed?

Thus, Petitioners request that EPA object to the incorporation of PSD Construction Permit CY into Mt. Holly’s Title V Permit (*see* Exhibit 1) via an administrative permit amendment because the PSD permit process failed to comply with the applicable requirements of the South Carolina SIP at S.C. Regulation 61-62.5, Standard No. 7, § (Q)(2)(c); 40 C.F.R. § 52.2120(c).

⁵⁶ DHEC, Preliminary Determination, Appendix B, Century Aluminum PSD Permit Application, Revised April 2022, at 7-10 (Table 7-6) (PDF page 60), attached hereto as Exhibit 15.

2. *Argument 2: DHEC's notice of Construction Permit CY failed to meet federal and state Part 70 program notice requirements*

a. Applicable requirement

In addition, where a state seeks to use an administrative amendment process to incorporate requirements from preconstruction permits, federal Title V operating permit rules require that “such a program meets procedural requirements substantially equivalent to the requirements of [40 C.F.R.] §§ 70.7 and 70.8 that would be applicable to the change if it were subject to review as a permit modification” 40 C.F.R. § 70.7(d)(1)(v). South Carolina’s administrative amendment rule mirrors the federal rule. *See* S.C. Regulation 61-62.70.7(d)(1)(v).

Part 70 public participation requirements for permit processes specify that a public “notice shall identify . . . the activity or activities involved in the permit action; [and] the emissions change involved in any permit modification,” among other requirements. *See* 40 C.F.R. § 70.7(h)(2); S.C. Regulation 61-62.70.7(h)(2).

b. Specific grounds for objection

DHEC’s public notice for PSD Construction Permit 0420-0015-CY failed to meet “substantially equivalent” procedural requirements of 40 C.F.R. Part 70 pertaining to public notice, namely, 40 C.F.R. § 70.7(h)(2).

First, DHEC’s public notice of PSD Construction Permit CY did not properly identify the “emissions change involved” in the permit action because it did not identify the magnitude of the emissions changes being allowed. *See* 40 C.F.R. § 70.7(h)(2). In full relevant part, the public notice for PSD Construction Permit CY states:

The facility has submitted a permit application to revise the existing filterable particulate matter (PM) BACT emission limits for the Unit ID 04 Potline potroom groups to a new, single emission limit. Emissions generated by this facility as a result of the proposed project will include:

- Particulate Matter (PM);
- Particulate Matter less than 10 micrometers in diameter (PM10);
- Particulate Matter less than 2.5 micrometers in diameter (PM2.5);

Air dispersion modeling has indicated that the release of emissions from this facility will not cause or contribute to an exceedance of the National Ambient Air Quality Standards (NAAQS). No degree of increment consumption is expected.

There will be no Class I Areas impacted and no degree of increment consumption resulting from this proposed project.⁵⁷

⁵⁷ Exhibit 9 at 1.

Taken as a whole, and in the absence of information on the magnitude of emissions changes that were being allowed, the public notice gave the impression that *no* PM emission increase would occur, particularly because it twice states that there will be “no degree of increment consumption.”⁵⁸ Based on the language of this notice, members of the public would reasonably assume that the sole purpose of this proposed modification was to adopt a new single BACT limit that reflected the sum total of the existing PM BACT limits for the potline potroom groups, in place of the existing individual limits. Such a change (if that were truly what was being permitted) would be considered a change in BACT limits, and thus subject to a PSD permit action, but would not allow for an increase in total hourly or annual PM emissions from the potline groups. This interpretation is reinforced by DHEC’s statement that “no degree of increment consumption is expected.” But Construction Permit No. CY *does* allow for significant increases in particulate matter, PM10, and PM2.5 emissions at the Mt. Holly plant, as discussed further below.

EPA has previously objected to Title V Permits where the relevant public notice did not specifically describe the magnitude of the emissions change in the notice itself. *See, e.g., In the Matter of Bio Energy, LLC*, Order on Petition No. I-2003-01, at 9-10 (Oct. 27, 2006) (holding that the public notice “did not specifically describe the change in emissions associated” with the permit modification and that even though modeling showed that “the potential emissions increases associated with the authorized fuel change were nonmajor, NH DES was required to provide this information about potential emissions changes in its public notice” (emphasis added)).

In addition, DHEC’s public notice did not properly describe “the activity or activities involved in the permit action.” *See* 40 C.F.R. § 70.7(h)(2). Again, the only relevant activity described by the notice was the revision of the four potline groups’ emission limits into a single limit. This description is highly misleading: Construction Permit 0420-0015-CY actually *revises* the roof vent limits and scrubber/baghouse limits by combining the roof vent and scrubber/baghouse limits of each potline group into a single limit for each potline group—not a single limit from all four potline groups. Further, DHEC’s revision to the Mt. Holly filterable PM BACT limits was much more than a consolidation of permit limits into a single emission limit for each of the potline groups: the combined roof vent and scrubber/baghouse emissions limit from each potline group was increased from a total of 19.65 lb/hr (based on the pre-existing 1.5 lb/hr PM limit for the scrubbers/baghouses plus the pre-existing 18.15 lb/hr PM limit for the roof vents) to 28.73 lb/hr for each scrubber/baghouse plus the roof vent combined. DHEC’s public notice for the construction permit failed to describe those activities.

⁵⁸ *Id.* In contrast, the Draft Statement of Basis for the administrative permit amendment that DHEC sent to EPA in April 2023 shows that DHEC could have been much clearer about the emissions change. *See* Exhibit 3 at 1 (stating that “[t]he newly combined PM BACT limit will *increase* from 18.15 lb/hr (each ridge vent or roof monitor) and 1.5 lb/hr (each scrubber/dust collector) to a single emission limit of 28.73 lb/hr for each Potline group scrubber/dust collector and ridge vent set” (emphasis added)). This clear, numerical explanation was absent from DHEC’s December 2022 public notice for the PSD Construction Permit CY.

Petitioners note that while some of the information missing from the notice can be found in the DHEC's Draft Statement of Basis and Preliminary Determination and/or Century Aluminum's permit application, the emissions change and activities are not readily ascertainable even from a review of those documents due to a number of conflicting and confusing statements between these documents on the magnitude of emissions changes allowed by the PSD permit. This is discussed further below.

However, regardless of whether the information on the degree of increment consumption or the magnitude of emissions changes or the activities involved in the permit action can be gleaned based on a review of the underlying permit record, Petitioners request that EPA object to the administrative permit amendment to Mt. Holly's Title V permit because under federal and state notice regulations, this information must be in the public notice itself, and the omissions and incorrect statements in the public notice failed to provide for meaningful public participation in the permit process.

It is important to note that DHEC has, in the past, provided much clearer public notices for construction permits that it intended to incorporate administratively into Title V permits, such as the public notice for the 2016 Synthetic Minor Construction Permit, which clearly identified activities involved in the permit (i.e., an increase in allowable coke sulfur content with a decrease in allowable aluminum production) and the emissions changes involved in the permit (a decrease in allowable facility-wide SO₂ emissions from 4,015.6 tons per year to 2,648 tons per year).⁵⁹ It is difficult to understand why DHEC did not correctly identify the degree of increment consumption, the activities allowed in the permit, or the emissions change allowed by the permit in the notice for PSD Construction Permit CY, but the effect was clearly to minimize the possibility of public comment.

A clear notice to the public was particularly important here, because with these changes to the PM BACT limits in Construction Permit CY, DHEC has relaxed the PM emissions limits on each potline group and, in the process, excused Mt. Holly's recent repeated violations of those PM limits.⁶⁰ The PM BACT limits for the Mt. Holly potroom vents and potroom scrubber/baghouses were established twenty years ago in Construction Permit 0420-0015-CR

⁵⁹ See DHEC, Public Notice #16-048-TV-C, Air Permit #0420-0015-CW, attached hereto as Exhibit 16. Note that this was not a PSD permit, so no degree of increment consumption was required to be identified in the public notice. In addition, this public notice stated that the construction permit would be incorporated into the Title V permit with no additional public notice requirements. However, as far as Petitioners can tell, these construction permit terms have not been included in the Title V Permit for Mt. Holly.

⁶⁰ See, e.g., Exhibit 15 at PDF p. 124, DHEC, Preliminary Determination, December 7, 2022, Appendix D, Draft Statement of Basis for Construction Permit No. 0420-0015-CY, at 1, (acknowledging the latest performance testing for PM emissions from Potline #1 and Potline #2 ridge vent exhausts and dry scrubbers conducted in March 2022 and May 2022 showed Potline #1 ridge vent west (Equipment ID 40102) and Potline #2 ridge vent west (Equipment ID 40104) were both in violation for PM).

that was issued in 2002.⁶¹ Petitioners contend that the state should not be increasing and relaxing BACT limits 20+ years after the permit establishing those BACT limits was issued. Rather, revisions to BACT limits are generally made (if made at all) in the first few years after operation.

The implication of DHEC's change to the PM BACT limits appears to be related to the facility's intermittent compliance with those limits since 2017 and its failure to meet performance testing in 2022. Mt. Holly has exceeded permitted air emissions limits numerous times during routine compliance testing, primarily for particulate matter.⁶² Yet, DHEC did not address this noncompliance before authorizing PSD Construction Permit CY, which eliminated the facility's longstanding PM BACT limits. Instead, DHEC issued this permit with a much higher PM BACT limits that would almost guarantee that the Mt. Holly plant no longer violated its permit limits. The context of this permit action is the precise reason that the regulatory requirements for public notice in the South Carolina SIP and 40 C.F.R. § 70.7(h)(2) should have been complied with in processing PSD Construction Permit CY with the intention of incorporating the permit via an administrative permit amendment to the Mt. Holly Title V permit with no further comment period.

In sum, because the public notice for PSD Construction Permit CY did not identify any emissions change involved the permit modification or the activities involved in the change, the Permit did not follow procedural requirements for public notice in 40 C.F.R. § 70.7(h)(2) and S.C. Regulation 61-62.70.7(h)(2) and is not eligible for administrative incorporation into the Title V permit for the Mt. Holly plant. *See* 40 C.F.R. § 70.7(d)(1)(v); S.C. Regulation 61-62.70.7(d)(1)(v).

3. *Issues raised in public comment*

As an initial matter, Petitioners did not comment on the administrative permit amendment because DHEC gave no notice or opportunity for comment on that amendment; thus, it was impracticable for Petitioners to submit comments on the administrative amendment. *See* 40 C.F.R. §§ 70.8(d), 70.12(a)(2)(v) (requiring petitioners to demonstrate an issue raised in a petition was raised during public comment, or that it was impracticable to do so).⁶³

Petitioners also did not comment on draft Construction Permit 0420-0015-CY because the public notice (Exhibit 9) was faulty, as described in detail above. The notice did not

⁶¹ *See* Exhibit 5. Note that DHEC incorrectly indicates in its Statement of Basis for Construction Permit CY that these BACT limits were established in a 2003 PSD permit application, but the limits were cited in the 2002 Construction Permit at page 3, in the entries for ID04, 02A, 03A, 04A, and 05A and for 02, 03, 04, and 05 as Standard 7 (PSD) requirements.

⁶² *See, e.g.*, Exhibit 15 at PDF p. 124-26 (DHEC, Preliminary Determination, December 7, 2022, Appendix D, Draft Statement of Basis, at 1-3).

⁶³ Indeed, DHEC's public notice for the PSD Construction Permit CY states that it would be incorporated into Mt. Holly's Title V permit "with no additional public comment period, provided all public participation and EPA requirements were fulfilled with notice of the construction permit action." *Id.* But those requirements were not met here.

accurately state the degree of increment consumption expected nor clearly describe the emissions change or activities involved in the proposed permit. As a consequence, the public was deprived of meaningful participation opportunities.

Despite the instruction in 40 C.F.R. § 70.7(h)(2) that the public notice itself must describe the activities involved and the emissions change, *see also Bio Energy, LLC*, Order on Petition No. I-2003-01, at 9-10, EPA has previously declined to object to Title V permits with deficient public notices where the relevant information was “readily ascertainable” in the permit record associated with the draft permit. *Cf. In the Matter of Phillips 66 San Francisco Refinery*, Order on Petition No. IX-2018-4 at 7 (Aug. 8, 2018) (holding public comment is not impracticable where “relevant information is ‘readily ascertainable’ during the comment period—e.g., where information is contained in the permit record associated with a draft permit.”).

Here, there was nothing in the public notice that would have alerted the public to the need to review the record for emissions increases from the PM BACT limit changes. But even upon reviewing the record, the public would not be able to “readily ascertain” the PM, PM10, and PM2.5 emission increases associated with the PSD Construction Permit CY because of inconsistencies between record documents when viewed together.

In its public notice, DHEC states that the permit record here included a Preliminary Determination, draft construction permit, and statement of basis.⁶⁴ But the Preliminary Determination did not identify the hourly emissions changes associated with the project.⁶⁵ The Draft Statement of Basis identifies the increase in hourly PM emission rates,⁶⁶ but fails to identify any emissions increases for PM10 and PM2.5, which are subsets of PM that DHEC should have accounted for.⁶⁷ The Preliminary Determination does include a table entitled “PSD

⁶⁴ Petitioners obtained the Preliminary Determination on the Construction Permit after specific records requests to DHEC. The 157-page document includes a) DHEC’s Preliminary Determination b) Century Aluminum’s permit application and other submittals, c) the draft construction permit, d) the draft Statement of Basis, e) public notice of the draft PSD construction permit, and f) correspondence. *See Exhibit 15 at PDF p. 2* (DHEC, Prevention of Significant Deterioration Preliminary Determination, Century Aluminum of South Carolina, Inc., Permit No. 0420-0015-CY, December 7, 2022, at ii).

⁶⁵ *See Exhibit 15 at PDF pp. 1-18.* A review of the Preliminary Determination shows that it does not identify the existing 18.15 lb/hr and 1.5 lb/hr PM BACT limits for each potroom ridge vent and scrubber/dust collector, respectively, and instead it only identifies the new single emission limit of 28.73 lb/hr.

⁶⁶ *Id.* at PDF p. 124 (Appendix D, Draft Statement of Basis at 1).

⁶⁷ All three pollutants are regulated NSR pollutants under the federal and South Carolina PSD permitting program. *See* 40 C.F.R. § 52.21(b)(50); South Carolina Regulation 61-62.5, Standard No. 7, § (b)(44). However, currently, national ambient air quality standards (NAAQS) and PSD increment standards are only in effect for PM10 and PM2.5. *See* 40 C.F.R. §§ 50.6 and 50.7; S.C. Regulation 61-62.5, Standard No. 2. Thus, in identifying the emissions changes involved in the permit modification, DHEC should have identified the change in emissions of PM, PM10, and PM2.5.

Applicability Analysis,”⁶⁸ which showed Controlled Emission Increases of PM. But, notably, the table does not identify any emission increase for PM10 or PM2.5 emissions:

Table 1 – PSD Applicability Analysis			
Pollutant	Controlled Emissions Increase	PSD Significant Threshold	Significant Increase?
	TPY	TPY	
PM	159.07	25.0	Yes

Moreover, two very different annual PM increases were identified in the Preliminary Determination and the Draft Statement of Basis.⁶⁹ Specifically, the Draft Statement of Basis indicated in a table labeled “PSD Applicability Analysis”⁷⁰ that the annual increase in PM emissions would be 36.32 tons per year, much lower than the 159.07 tons per year annual PM increase identified in the Preliminary Determination. And unlike the emissions information presented in the Preliminary Determination, this table did include an entry for PM10 emission increases. However, the Draft Statement of Basis still did not quantify PM2.5 emission increases allowed by the permit revision. DHEC’s “PSD Applicability Analysis” table is reprinted below, along with DHEC’s notes for the table:

PSD Applicability Analysis			
Pollutant	Uncontrolled Emissions Increase	Significant Threshold	Significant Increase?
	TPY	TPY	
PM	36.32	25.0	Yes
PM10	92.15	15.0	(b)
PM2.5	(a)	10.0	Not Applicable

Note: (a) The US EPA had not yet required PM2.5 to be evaluated for PSD applicability analysis in 1978. PM2.5 PSD regulations were promulgated on April 25, 2007. Consequently, PM2.5 emissions during the year 1996 were not subject to a PSD applicability evaluation.

(b) There is a significant increase in PM10 emissions. The facility will comply with the revised filterable PM limit, which was originally established as a surrogate for total PM10 in the 2003 permitting action and is being revised with this permit.⁷¹

Indeed, the table only confuses matters further. Not only does the table show “Uncontrolled Emissions Increase” for PM as lower than the “Controlled Emission Increase” for PM listed in Table 1 of DHEC’s Preliminary Determination, it also shows a PM emissions increase that is much lower than the PM10 emissions increase, which is nonsensical given that PM10 is a subset of PM. On this record, it is not possible for a member of the public to parse the annual emissions changes in PM and PM10 allowed by Construction Permit CY, and thus the record does not make the emissions changes “readily discernible.”

⁶⁸ *Id.* at PDF p. 6.

⁶⁹ Appendix D to the Preliminary Determination, Exhibit 15.

⁷⁰ *Id.* at PDF p. 131 (Appendix D, Draft Statement of Basis at 8).

⁷¹ *Id.*

Stepping back from the record, Petitioners note that the purpose of public notice is two-fold: First, to provide the public meaningful opportunity to participate, and second, for the state agency to have opportunity to address substantive issues in the permit drafting stage. The decision to frame the substance of this revision as merely combining multiple emission limits into a single limit is especially concerning, given that DHEC must surely have been aware that the **nearly 50%** increase in those limits omitted from the notice would have been of much more concern to the public. This omission is startling, given the notice for Mt. Holly’s 2016 Construction Permit 0420-0015-CW (Exhibit 16) shows that the agency can properly provide the specificity needed to describe activities and emissions changes associated with construction permits, and has in fact done so in the past. Moreover, it is concerning that DHEC’s notice on the PSD Construction Permit CY did not identify *anyone* as an interested party on a permit change involving a >100 ton per year increase in allowable emissions of a criteria pollutant.

EPA should not sanction a public notice that led the public away from the reality of the changes to Mt. Holly’s longstanding BACT permit limits, both by the notice’s failure to specifically describe the emissions changes and by its misleading statements that no degree of increment consumption was expected.⁷² Even viewing the permit record, a member of the public could not “readily ascertain” the PM, PM10, and PM2.5 emission changes associated with the permit modification. While the faulty public notice alone should be sufficient justification for EPA to object to the administrative permit amendment under 40 C.F.R. § 70.7(h)(2) and the South Carolina SIP regulations, the conflicting information in the permit record failed to make apparent the significant emissions changes associated with the permit. Thus, it was impracticable for Petitioners meaningfully comment on PSD Construction Permit CY.

4. *Claim Two Summary*

Overall, DHEC’s notice to the public for Construction Permit 0420-0015-CY did not comply with permit processing public notice procedures applicable under the EPA-approved SIP PSD rules or under a process “substantially equivalent to” the public notice procedures in 40 C.F.R. § 70.7(h)(2). As such, Petitioners request that EPA object to the administrative permit amendment incorporating PSD Construction Permit CY into the Mt. Holly Title V permit and direct DHEC to re-notice PSD Construction Permit CY with a notice that meets both the PSD regulations of the South Carolina SIP, S.C. Regulation 61-62.5, Standard No. 7, § (Q)(2)(c), and the operating permit program rules at 40 C.F.R. § 70.7(h)(2).

⁷² Petitioners note that the Draft Statement of Basis said an “updated increment modeling analysis has been provided to reflect the revised PM10 emission rates.” Exhibit 15 at PDF p. 131. Yet, the Statement of Basis did not identify the degree of increment consumption expected. Century Aluminum’s PSD permit application, Appendix B of the Preliminary Determination, did identify that 75.5% of the 24-hour PM10 increment would be consumed and that 24.6% of the annual PM10 increment would be consumed by the Mt. Holly facility. *See id.* at PDF p. 60 (Table 7-6). DHEC’s omission of this information from the public notice (and the Draft Statement of Basis)—particularly when the degree of increment consumed is a required component of the public notice for a PSD permit under South Carolina’s SIP-approved PSD regulations—deprived the public of notice of critical components of the permit action.

In the alternative, if EPA contends it does not have authority to object to an administrative permit amendment that was issued under procedures not substantially equivalent to 40 C.F.R. § 70.7(h), EPA should treat this section as a petition to reopen the Title V permit for cause. *See* 42 U.S.C. § 7661d(e); 40 C.F.R. § 70.7(f)(1)(iv) (“A permit shall be reopened and revised” where the Administrator “determines that the permit must be revised or revoked to assure compliance with the applicable requirements.”).

VI. CONCLUSION

For all of the above reasons, DHEC improperly revised the Title V permit for the Century Aluminum Mt. Holly plant using minor permit modification and administrative amendment procedures. Pursuant to 40 C.F.R. § 70.8(d), Petitioners ask EPA to object to the minor modification to Title V Permit No. TV-0420-0015 v1.1 on the basis that the increase in allowable coke sulfur content did not qualify for processing as a minor permit modification. EPA should either terminate the minor permit modification, reopen the Title V permit, and require DHEC to follow the applicable PSD and construction permitting requirements of the South Carolina SIP to revise the coke sulfur content limit, including providing public notice and the opportunity for public comment.

DHEC also has improperly administratively incorporated the PSD Construction Permit 0420-0015-CY into Mt. Holly’s Title V permit because DHEC failed to comply with the PSD permit notice requirements of the South Carolina SIP and federal and state § 70.7(h)(2) public notice procedures. The public notice and record for the PSD Construction Permit were wholly deficient to inform the public of the permit’s allowance of significant PM emissions increases and changes to decades-old PM BACT limits, as well as the corresponding impacts on the PSD increments. Accordingly, Petitioners ask EPA to object to the administrative amendment for failure to comply with applicable public notice requirements for Construction Permit 0420-0015-CY and to require DHEC to re-notice the PSD permit in accordance with permit process procedures of the PSD rules in the SIP and the operating permit program rules to allow for meaningful public participation.

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*On behalf of the Sierra Club and
Environmental Integrity Project*

INDEX OF EXHIBITS TO PETITION

Exhibit Number	Title/Description
1	Title V Operating Permit No. TV-0420-0015 v1.1, revised April 13, 2023, issued to Century Aluminum of South Carolina, Inc.
2	May 2023 Emails Between V Stamper and A Hofmeister at EPA R4 re Century Aluminum Permit 0420-0015
3	DHEC, Draft Statement of Basis, Century Aluminum of South Carolina, Inc., Permit No. TV-0420-0015-AA, MM
4	Alcoa-Mt Holly, NSR Assessment & PSD Permit Needs for Next Production Increase, Prepared by Cheryl Kirkland, Alcoa Mt Holly Senior Environmental Specialist, August 2001
5	Construction Permit No. 0420-0015-CR issued to Alcoa-Mt. Holly (operating as Alumax of South Carolina), November 19, 2002
6	Title V Operating Permit No. TV-0420-0015, issued June 23, 2021 to Century Aluminum of South Carolina, Inc.
7	Synthetic Minor Construction Permit No. 0420-0015-CW, issued December 9, 2016 to Century Aluminum of South Carolina, Inc.
8	DHEC, Statement of Basis, Construction Permit 0420-0015-CW, December 9, 2016
9	DHEC, Bureau of Air Quality, Notice of a Draft Air Prevention of Significant Deterioration (PSD) Construction Permit, Public Notice #22-091
10	DHEC, Prevention of Significant Deterioration Final Determination, Century Aluminum of South Carolina, Inc. – Mt. Holly Plant, Permit No. 0420-0015-CY, January 12, 2023
11	Century Aluminum submittal to DHEC re: Notification of Construction, Startup and Operating Permit Request, Potroom Group PM emission rate, Construction Permit 0420-0015-CY, January 19, 2023
12	Emails between DHEC and Century Aluminum regarding Century Aluminum 0420-0015 Minor Permit Modification, dated between January 31, 2023 and February 21, 2023
13	Spreadsheet prepared by Petitioners with 52.21(r)(4) calculations for increased coke sulfur content
14	The State of South Carolina, Before the Department of Health and Environmental Control, In RE: Alcoa Mt. Holly (Operating as Alumax of South Carolina, Inc.), Berkeley County, Consent Order 04-009-A, executed March 10, 2004
15	DHEC, Preliminary Determination for Construction Permit 0420-0015-CY, Appendix B, Century Aluminum PSD Permit Application, Revised April 2022
16	DHEC, Public Notice #16-048-TV-C, Air Permit #0420-0015-CW