BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the matter of:	)	
	)	
DEQ Title V Air Operating Permit No. PRO50232	)	
	)	Permit No. PRO50232
For AdvanSix Resins and Chemicals LLC	)	
	)	
Issued by the Virginia Department of Environmental Quality	)	
	)	

PETITION TO OBJECT TO THE TITLE V OPERATING PERMIT FOR ADVANSIX RESINS AND CHEMICALS LLC CHEMICAL MANUFACTURING 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), Chesapeake Bay Foundation; Mothers Out Front; Sierra Club, Falls of the James Group; and Virginia Interfaith Power & Light (collectively, "Petitioners") hereby petition the U.S. Environmental Protection Agency ("EPA") to object to the above referenced Title V permit issued by the Virginia Department of Environmental Quality ("DEQ") for AdvanSix Resins and Chemicals LLC ("AdvanSix" or the "facility"). AdvanSix, formerly owned by Honeywell International, is a massive chemical manufacturing complex located in Hopewell, Virginia, a city of 23,000 people that is home to six major-source industrial emitters. AdvanSix is one of the world's largest producers of caprolactam, a feedstock for nylon polymer used in carpet fibers, plastics, and films. It is also one of the world's largest producers of ammonium sulfate fertilizer.

The community located near AdvanSix, which is majority people of color, unquestionably suffers from environmental injustice. Compared to communities nationally, the three census tracts with residents closest to AdvanSix rank in at least the 98th percentile for their

proximity to facilities that use or manufacture certain toxic or flammable substances,[1] and rank in at least the 99th percentile for cancer risk due to air toxics.[2] AdvanSix bears a large degree of responsibility for Hopewell's disproportionate air pollution burden: it is Virginia's fourth largest emitter of nitrogen oxides ("NOx"), sixth largest emitter of fine particulate matter ("$PM_{2.5}$"), eleventh largest emitter of sulfur dioxide ("SO_2"), and largest emitter of ammonia.[3] Not only does AdvanSix release huge amounts of dangerous air pollutants into the community each year, but AdvanSix is also a notorious environmental violator.[4] More than 900 homes are located within one mile of AdvanSix,[5] with some a mere 400 to 500 feet from the facility's operations and even closer to the AdvanSix fenceline.[6]

Due to the heavy environmental burden that AdvanSix places on Hopewell residents, Petitioners have sought to take advantage of Title V's opportunity for the public to ensure that AdvanSix is required to perform monitoring, recordkeeping, reporting, and compliance certifications sufficient to assure its ongoing compliance with all applicable Clean Air Act requirements.[7] As EPA acknowledges, "Title V can help promote environmental justice through

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[1] EPA, *EJScreen Community Report: Hopewell, VA, Tract 51670820100*, at 3 (retrieved Feb. 7, 2024) (Attachment A); EPA, *EJScreen Community Report: Hopewell, VA, Tract 51670820300*, at 3 (retrieved Feb. 7, 2024) (Attachment B); EPA, *EJScreen Community Report: Hopewell, VA, Tract 51670820700*, at 3 (retrieved Feb. 7, 2024) (Attachment C).

[2] ATSDR, *Env't Justice Explorer: Census Tract 8201, Hopewell city, Virginia*, at 1 (retrieved Jan. 30, 2023) (Attachment D); ATSDR, *Env't Justice Explorer: Census Tract 8203, Hopewell city, Virginia*, at 1 (retrieved Jan. 30, 2023) (Attachment E); ATSDR, *Env't Justice Explorer: Census Tract 8207, Hopewell city, Virginia*, at 1 (retrieved Jan. 30, 2023) (Attachment F). "Air toxics cancer risk" is a measure of the cancer risk associated with inhaling 140 different hazardous air pollutants. ATSDR, Environmental Justice Index Indicators, https://perma.cc/WC2K-7YQK (last updated May 31, 2023).

[3] *See* DEQ, *2022 Annual Point Source Criteria Pollutant Emissions*, https://www.deq.virginia.gov/home/showpublisheddocument/21230/638343465513470000.

[4] *See* notes 84 & 86, *infra*.

[5] EPA, *EJScreen Community Report: Hopewell, VA, 1 mile Ring Centered at 37.300033,-77.272511* (retrieved Jan. 30, 2024) (Attachment G).

[6] *See, e.g.*, homes on Ramsey Avenue. Measured with Google Earth's Distance Measuring Tool.

[7] *See, e.g.*, Clarifying the Scope of "Applicable Requirements" Under State Operating Permit Programs and the Federal Operating Permit Program, 89 Fed. Reg. 1150, 1153/3 (Jan. 9, 2024) ("CAA section 504 provides the EPA with the authority to use title V permits to establish additional requirements necessary to assure compliance with existing applicable requirements. For example, it is well established that title V permits may be used to create or

its underlying public participation requirements and through the requirements for monitoring, compliance certifications, reporting and other measures designed to assure compliance with applicable requirements."[8] In fact, this public participation opportunity was five years overdue—a renewal permitting process should have occurred in 2019 when AdvanSix's previously issued Title V permit expired. Thus, this permit renewal proceeding was the first opportunity in a decade for the Hopewell community and the general public to broadly raise concerns about permit inadequacies.

Unfortunately, DEQ thwarted Petitioners' public participation efforts by refusing to provide the public with the information and analysis needed to evaluate the adequacy of the draft permit's monitoring requirements. Further, despite well-documented public interest in AdvanSix's air pollution and requests filed by five Hopewell- or Virginia-based organizations and four area residents, DEQ refused to hold a public hearing on the draft permit.

To ensure that Hopewell residents receive the public participation opportunities and air quality protections offered by Title V, Petitioners request that EPA object to the AdvanSix permit on the following grounds:

1. DEQ and AdvanSix **failed to provide the public with requisite emissions information** needed to identify applicable requirements and assess the adequacy of the draft permit's monitoring requirements.

2. The permit **fails to assure compliance with applicable requirements** because it lacks adequate periodic monitoring and testing requirements.

3. DEQ **failed to provide its rationale for why the permit's monitoring is sufficient** to assure the facility's compliance with applicable requirements, further impairing the public's ability to evaluate the adequacy of the draft permit's monitoring requirements.

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supplement monitoring requirements when necessary in order to assure compliance with underlying applicable requirements that do not themselves contain sufficient monitoring provisions.").

[8] *In the Matter of United States Steel Corp.–Granite City Works*, Order on Petition No. V-2011-2 at 5 (Dec. 3, 2012) ("U.S. Steel Order").

4. DEQ unreasonably and arbitrarily **refused to hold a public hearing** on the AdvanSix Title V permitting action, ignoring significant public interest.

As set forth below, each of the above deficiencies meets the statutory and regulatory criteria for an EPA objection. ***Petitioners ask EPA to object to the AdvanSix permit, instruct DEQ to make the required information available to the public, and require DEQ to offer a new public comment and hearing opportunity on the draft permit.***

I. Background: Hopewell, Virginia

As the United States Court of Appeals for the Fourth Circuit observed in *Friends of Buckingham v. State Air Pollution Control Board*, "[t]here is evidence that a disproportionate number of environmental hazards, polluting facilities, and other unwanted land uses are located in communities of color and low-income communities."[9] Under Virginia law and EPA air permitting guidance, DEQ had an obligation to look closely at the AdvanSix permitting action and ensure that it did not perpetuate this pattern of environmental injustice.

The Virginia Environmental Justice Act made it "the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth, with a focus on environmental justice communities and fenceline communities."[10] Accordingly, it is Virginia policy to afford environmental justice communities meaningful involvement and fair treatment, and to ensure that they do not "bear[] a disproportionate share of any negative environmental consequence resulting from an industrial, governmental, or commercial operation, program, or policy."[11]

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[9] 947 F.3d 68, 87 (4th Cir. 2020) (quoting Nicky Sheats, Achieving Emissions Reductions for Environmental Justice Communities Through Climate Change Mitigation Policy, 41 Wm. & Mary Env't L. & Pol'y Rev. 377, 382 (2017)).
[10] Va. Code § 2.2-235.
[11] *Id.* § 2.2-234. Separate legislation enacted in 2020 made it an express DEQ policy "to further environmental justice." *Id.* § 10.1-1183; *see also id.* § 10.1-1182 (defining "environmental justice").

Likewise, at the federal level, Executive Order 12898 directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."[12] The Executive Order further instructs federal agencies to provide minority and low-income communities access to public information on, and an opportunity to participate in, matters relating to human health and the environment. Specifically in the context of Title V permitting, EPA has stated that under circumstances such as here, where "the immediate area around the [] facility is home to a high density of low-income and minority populations and a concentration of industrial activity," "[f]ocused attention to the adequacy of monitoring and other compliance assurance provisions is warranted."[13]

By many standards, the City of Hopewell—including the area of Hopewell where the AdvanSix facility is located—constitutes an environmental justice community. Nearly 56% of the residents of Hopewell are people of color,[14] as compared to 40% for Virginia as a whole.[15] Hopewell has a poverty rate of 21.3%[16] and is in the 86th percentile among Virginia localities for the percentage of its population classified as low-income (48%).[17]

The residents of Hopewell also face more health challenges than Virginians as a whole. The average life expectancy in Hopewell is 69 years, more than eight years shorter than the

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[12] Exec. Order No. 12,898, § 1-101, 59 Fed. Reg. 7629 (Feb. 11, 1994).
[13] U.S. Steel Order at 4–6 (citing in part to Executive Order 12898).
[14] EPA, *EJScreen Community Report: Hopewell, VA*, at 1 (retrieved Feb. 7, 2024) ("Hopewell EJScreen") (Attachment H).
[15] U.S. Census Bureau, Virginia, tbl. P1 (last visited Feb. 23, 2024), https://perma.cc/EZ56-N2Q8 ("Virginia 2020 Census Data").
[16] U.S. Census Bureau, *QuickFacts: Hopewell city, Virginia*, https://perma.cc/NTP9-WG29 (last visited Feb. 23, 2024).
[17] Hopewell EJScreen at 3.

statewide average (77.6 years).[18] Hopewell residents have the sixth-highest cancer mortality rate in the state,[19] and higher than average rates of cancer, heart disease, and asthma.[20] Exposure to air pollution increases the risk of all three diseases.[21]

Further, Hopewell represents one of Virginia's most environmentally burdened communities. Combined, Hopewell's industrial sources of air pollution (including the AdvanSix plant) account for 6.5% of Virginia's emissions of criteria pollutants and 8% of Virginia's emissions of air toxics—all in a city that has only 0.2% of Virginia's population.[22] The three census tracts with residents closest to the AdvanSix facility all rank in the 98th or 99th percentile nationwide for their proximity to Risk Management Plan facilities (facilities that use or manufacture certain toxic or flammable substances)[23] and in the 99th or 100th percentile nationwide for their air toxics cancer risk, as measured by the Centers for Disease Control and Prevention.[24]

In light of these environmental justice concerns, it is critical that EPA ensure that the conditions in the AdvanSix permit are sufficient to prevent the facility's emissions from imposing a disproportionate burden on the health and well-being of the Hopewell community.

II. Petitioners

Chesapeake Bay Foundation ("CBF") is a non-profit organization founded in 1967 and devoted to the restoration and protection of the Chesapeake Bay. CBF is the largest independent

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[18] Centers for Disease Control and Prevention, Nat'l Ctr. for Health Statistics, *Virginia*, https://perma.cc/2XN7-EDLM (last updated May 28, 2024); Hopewell EJScreen at 1.
[19] Nat'l Cancer Inst., *NCI Cancer Atlas Table View: Mortality, Virginia Counties, All Races, All Malignant Cancers (Both Sexes), 2016–2020*, https://perma.cc/2EJ3-MKRD (last updated June 14, 2023).
[20] Hopewell EJScreen at 4.
[21] World Health Org., *Ambient (outdoor) air pollution* (Dec. 19, 2022), https://perma.cc/BE8A-FBJT.
[22] EPA, Nat'l Emissions Inventory, 2020 Facility Data accessed through 2020 NEI Data Retrieval Tool at https://awsedap.epa.gov/public/single/?appid=20230c40-026d-494e-903f-3f112761a208&sheet=5d3fdda7-14bc-4284-a9bb-cfd856b9348d&opt=ctxmenu,currsel (retrieved Feb. 22, 2024).
[23] *See supra* note 1.
[24] *See* supra note 2.

conservation organization dedicated solely to the fight for effective, science-based solutions to the pollution degrading the Bay and its rivers and streams within its 64,000-square-mile watershed. CBF has more than 91,000 members in Virginia, many of whom recreate in and use the James River watershed. The proposed AdvanSix Title V permit reissuance would authorize significant air emissions from one of Virginia's largest stationary sources of air pollution, including NOx and ammonia, which will reach the James River through deposition of nitrogen to land and water.

Mothers Out Front is a member-led climate justice organization of mothers, sisters, aunts, grandmothers, and caregivers coming together to make climate justice a priority issue that our decision-makers can no longer ignore. Mothers Out Front is building a powerful grassroots movement to ensure a swift, complete, and just transition away from fossil fuels toward a renewable energy future—a future where children and families breathe clean air and have the resources to thrive, not just survive.

The **Sierra Club, Falls of the James Group**, part of the Sierra Club's Virginia Chapter, is the local Sierra Club group serving the City of Hopewell and surrounding communities. The Sierra Club is the largest and most influential grassroots environmental organization in the United States, working to protect wildlife and wild places, ensure clean air and water for all, and fight the devastating effects of climate change. The Falls of the James Group works to preserve and restore our environment through education, conservation, and advocacy, and its goals include promoting racial and environmental justice.

Virginia Interfaith Power & Light is a not-for-profit corporation comprised of congregations and persons involved in faith communities across Virginia. As the state affiliate of Interfaith Power & Light, Virginia Interfaith Power & Light's mission is to advocate for

solutions to climate change with a key focus on environmental and social justice—ensuring a healthy and stable climate for everyone, including racial minorities and other vulnerable populations that have often been disproportionately impacted by environmental harms. Virginia Interfaith Power & Light advances its missions by advocating for more effective laws and regulations, engaging and educating the public and faith communities, and directly participating in regulatory proceedings and governmental decision-making processes.

III. Procedural Background

This Petition addresses DEQ's renewal of Title V permit No. PRO50232 for AdvanSix's chemical manufacturing plant in Hopewell, Virginia. The prior Title V permit was issued on October 1, 2014, and expired on October 1, 2019. AdvanSix submitted a timely Title V renewal application on February 1, 2019, and AdvanSix has therefore operated under the so-called "application shield" since expiration of its Title V permit in 2019. The facility also operates pursuant to several minor New Source Review permits issued or modified over the last several years.[25]

DEQ released a draft Title V permit for notice and comment on January 12, 2024, with a public comment deadline of February 12, 2024. In anticipation of the draft permit, counsel for Petitioners, Southern Environmental Law Center ("SELC"), made public records requests to DEQ in October and November 2023, seeking, among other records, emissions data that was absent from AdvanSix's renewal application. Although DEQ never did produce this emissions data (likely because AdvanSix never submitted this information to the agency), DEQ did release other relevant records only on January 26, 2024—well after the start of the public comment

[25] The facility is "currently permitted under minor NSR Permits dated April 24, 2020 (boilers), April 23, 2021 (Oximes Plant) and September 8, 2022 (Caprolactam Production)." DEQ, Draft Statement of Legal and Factual Basis: AdvanSix Resins and Chemicals LLC (2024) at 2 ("Draft Statement of Basis").

period. SELC therefore requested, at minimum, an extension to the public comment period because these records had not been publicly available at the start of the comment period. On February 9, 2024, DEQ agreed to extend the deadline by 14 days to February 26, 2024.

Petitioners submitted their comments ("SELC Comments") on February 26, 2024, raising the issues that form the basis of this Petition.[26] DEQ issued its Response to Comments a month later, on April 4, 2024.[27] EPA's 45-day review period commenced that same day, ending on May 20, 2024. EPA did not object during this review period, and the public's petition deadline is therefore July 19, 2024. Accordingly, this Petition is timely.

Notably, on June 11, 2024—in the midst of the public petition period and after the close of EPA's review period—DEQ issued a revised Response to Comments ("Revised RTC").[28] It appears that DEQ primarily revised its response to further address Petitioners' comments that form the basis of this Petition. Although we believe this revised Response to Comments does not meet Title V requirements because it was prepared after EPA's review period and in the middle of the public's petition period,[29] Petitioners address DEQ's revised Response to Comments below.

IV. Legal Requirements

Federal operating permits are the primary method for enforcing and assuring compliance with the Clean Air Act's pollution control requirements for major sources of air pollution.[30] Prior

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[26] Letter from Patrick J. Anderson et al., SELC, to Cheryl Mayo, DEQ (Feb. 26, 2024) ("SELC Comments"). Three of the four Petitioners signed the February 26, 2024, comments to DEQ: CBF; Sierra Club, Falls of the James Group; and Virginia Interfaith Power & Light. Those four organizations are joined by Mothers Out Front as parties to this Petition.
[27] DEQ, AdvanSix Resins and Chemicals LLC: Summary of and Response to Public/EPA Comments (Apr. 4, 2024) ("RTC").
[28] DEQ, AdvanSix Resins and Chemicals LLC: Summary of and Response to Public/EPA Comments (Revised) (June 11, 2024) ("Revised RTC").
[29] *See* 40 C.F.R. § 70.8(a)(1).
[30] Operating Permit Program, 57 Fed. Reg. 32,250, 32,258 (July 21, 1992).

to enactment of the federal operating permit program, regulators, operators, and members of the public had difficulty determining which requirements applied to each major source and whether sources were complying with applicable requirements. This was a problem because applicable requirements for each major source were spread across many different rules and orders, some of which did not make it clear how general requirements applied to specific sources.

The federal operating permit program was created to improve compliance with and to facilitate enforcement of Clean Air Act requirements by requiring each major source to obtain an operating permit that (1) lists all applicable federally-enforceable requirements, (2) contains emissions calculations and other information sufficient for readers to determine how applicable requirements apply to units at the permitted source, and (3) establishes monitoring requirements that assure compliance with all applicable requirements.[31]

The Title V operating permit program provides a process for stakeholders to resolve disputes about which requirements should apply to each major source of air pollution outside of the enforcement context.[32] Because courts, agencies, the public, and regulated entities rely on Title V operating permits to determine which requirements may be enforced and which requirements may not be enforced against each major source, state permitting agencies and EPA must exercise care to ensure that each federal operating permit includes a clear, complete, and accurate account of the requirements that apply to the permitted source.

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[31] 42 U.S.C. § 7661c(a), (c); 40 C.F.R. § 70.6(a), (c); *Virginia v. Browner*, 80 F.3d 869, 873 (4th Cir. 1996) ("The permit is crucial to implementation of the Act: it contains, in a single, comprehensive set of documents, all CAA requirements relevant to the particular source."); *Sierra Club v. EPA*, 536 F.3d 673, 674–75 (D.C. Cir. 2008) ("But Title V did more than require the compilation in a single document of existing applicable emission limits . . . . It also mandated that each permit . . . shall set forth monitoring requirements to assure compliance with the permit terms and conditions").

[32] 57 Fed. Reg. at 32,266 ("Under the [Title V] permit system, these disputes will no longer arise because any differences among the State, EPA, the permittee, and interested members of the public as to which of the Act's requirements apply to the particular source will be resolved during the permit issuance and subsequent review process.").

The Act also requires the Administrator to object to a state-issued federal operating permit if they determine that it fails to include and assure compliance with all applicable requirements.[33] If the Administrator does not object to a federal operating permit, "any person may petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection."[34] The Administrator "shall issue an objection . . . if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the . . . [Clean Air Act]."[35] The Administrator must grant or deny a petition to object within 60 days of its filing.[36]

V. Grounds for Objection

For the reasons set forth below, EPA must object to the Title V permit for AdvanSix.

A. DEQ and AdvanSix failed to provide the public with requisite emissions information needed to identify applicable requirements and assess the adequacy of the draft permit's monitoring requirements.

1. Specific Grounds for Objection

Title V permit applications must include unit-specific emissions rates and the underlying emissions calculations. This information is vital to the Part 70 public participation requirements because emissions rates and emissions estimates determine which applicable requirements apply to individual units or the facility, and this data informs the adequacy of the permit's monitoring, recordkeeping, and reporting requirements. AdvanSix's Title V permit application was almost wholly devoid of this requisite and essential unit-specific emissions information.

Specifically, the federal Title V regulations at 40 C.F.R. § 70.5(c) state that a Title V permit application "may not omit information needed to determine the applicability of, or to

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[33] 42 U.S.C. § 7661d(b)(1); 40 C.F.R. § 70.8(c).
[34] 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d).
[35] 42 U.S.C. § 7661d(b)(2); *see also* 40 C.F.R. § 70.8(c)(1).
[36] 42 U.S.C. § 7661d(b)(2).

impose, any applicable requirement." Further, 40 C.F.R. § 70.5(c)(3)(i) requires the disclosure of "[a]ll emissions of pollutants for which the source is major, and all emissions of regulated air pollutants." Moreover, this calculation of emissions must be made on a unit-by-unit basis: "[a] permit application shall describe all emissions of regulated air pollutants emitted from any emissions unit."[37] The Title V rules at 40 C.F.R. § 70.5(c)(3)(iii) further require submission of "[e]missions rate in tpy [tons per year] and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method." Finally, 40 C.F.R. § 70.5(c)(3)(viii) requires an application to include the "[c]alculations on which the [foregoing emissions information] is based."

To comply with these informational requirements, applicants typically include an appendix in their application setting out the emissions rates, emissions calculations, and emission factors for each pollutant emitted by each emission source or unit at a facility. For instance, when Honeywell—the former owner of the AdvanSix facility—recently applied to renew its Title V permit for its Geismar, Louisiana, chemical complex, it included a detailed, unit-by-unit, pollutant-by-pollutant accounting of the facility's emissions.[38] Yet it appears that DEQ improperly makes submittal of this requisite emissions information optional. For instance, DEQ's "Contents Checklist for Title V Air Operating Permit Application" form lists "potential to emit worksheet" as an optional attachment.[39] This is contrary to the plain Part 70 requirements listed above.

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[37] 40 C.F.R. § 70.5(c)(3)(i).
[38] Honeywell International Inc., Application for Renewal and Revision to Part 70 Permit No. 0180-00003-V11 Fluorocarbon Pants, Appendix 3 (Jan. 7, 2021), https://edms.deq.louisiana.gov/app/doc/view?doc=12517228.
[39] AdvanSix, Federal Operating Permit Renewal Application, Appendix B, Form 805, Contents Checklist for Title V Air Operating Permit Application (Jan. 2019, revised May 2023) ("AdvanSix Renewal Application").

And while DEQ's Statement of Basis for the AdvanSix Title V permit lists 2022 *facility-wide* actual emissions for some pollutants,[40] facility-wide emissions do not allow the public to assess applicable requirements and monitoring conditions that apply to *specific* emission units. We also note that, in addition to not including all regulated pollutants, this table of *actual* facility-wide emissions is also distinct from *potential* emissions for purposes of assessing applicable regulatory requirements.

Moreover, EPA has previously objected to Title V permits when emissions calculations did not appear in Title V applications or in the permit record available to the public during the comment period. For example, in *In the Matter of Cash Creek Generation, LLC* ("Cash Creek Order"), EPA objected to the facility's proposed Title V permit because the applicant failed to include emissions estimates for fugitive emissions in its permit application.[41] Although the applicant provided this information after the close of the comment period, EPA still objected on the grounds that the original omission of this information rendered public participation impossible.[42] EPA based this objection in part on the fact that "Petitioners raise[d] numerous concerns regarding the fugitive emissions calculation" after the emissions calculations were eventually made public.[43] EPA further explained "[d]ue to the unavailability of Cash Creek's fugitive emissions calculation during the public comment period, Petitioners were unable to raise these concerns with [the permitting authority], and [the permitting authority], in turn, did not have an opportunity to respond to these concerns."[44]

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[40] *See* Draft Statement of Basis at 5.
[41] *In the Matter of Cash Creek Generation, LLC,* Order on Petition No. IV-2020-4 (EPA June 22, 2012), https://perma.cc/L48Y-5X5C.
[42] *Id.* at 10–11.
[43] *Id.* at 10.
[44] *Id.* at 10–11.

Unlike the application described in the Cash Creek Order, here AdvanSix's Title V renewal application and the record more broadly omit *all* unit-specific emissions calculations, not just fugitive emissions estimates. Nor did AdvanSix or DEQ supplement the permit record to include this information in response to comments. Thus Petitioners and the public in this instance are at an even greater disadvantage than the Cash Creek petitioners, who at least were able to review emissions calculations in time to raise permit deficiencies in their Title V petition.

In sum, the Part 70 rules require a unit-by-unit, pollutant-by-pollutant accounting of emissions along with supporting emissions calculations in Title V applications. This is critical to allow the public to verify applicable requirements and the adequacy of Title V monitoring provisions, as discussed below. This kind of emissions information has also allowed the public in many instances to identify Part 70 permitting deficiencies that would otherwise have been missed by permitting authorities.[45] The vast majority of industrial sources readily comply with this requirement by providing detailed emissions calculations for every emitting unit and pollutant emitted, but it appears that DEQ allows at least some sources, including AdvanSix, to bypass this requirement. Because AdvanSix's application omitted this requisite emissions information, and because the omission materially impacted the public's ability to review the adequacy of the draft permit, EPA must object.

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[45] As just one example, one of the undersigned authors identified a wood pelletizing unit at a facility in Louisiana that had underestimated that unit's volatile organic compound ("VOC") emissions. The facility, LaSalle BioEnergy, was permitted as a major source subject to best available control technology ("BACT") limits. When the facility's Title V permit renewal came to public notice, the renewal application contained detailed emissions calculations, which enabled the author to identify a significant flaw in how the company had estimated VOC emissions from units known as pellet coolers. The draft Title V permit, however, did not include any testing provisions for this unit. Commenters argued that the Title V permit was deficient because it did not include monitoring sufficient to assure compliance with the BACT limit for the pellet coolers. In response to these comments, the company voluntarily conducted its own testing, which demonstrated that VOC emissions were "significantly over the permitted VOC limit." *See* Drax Biomass, LaSalle BioEnergy Compliance Plan, at 1 (Aug. 23, 2019) (Attachment I). The company ultimately agreed to install a new regenerative catalytic oxidizer control device in order to reduce emissions and comply with the BACT limit. *Id.*

2. Applicable Requirement or Part 70 Requirement Not Met

A Title V permit "may be issued only if . . . the permitting authority has received a complete application for a permit."[46] To be deemed complete, "an application must provide all information required pursuant to paragraph (c) of [40 C.F.R. § 70.5]."[47] Paragraph (c) in turn requires that applications "may not omit information needed to determine the applicability of, or to impose, any applicable requirement."[48] Paragraph (c) further requires the following:

- "All emissions of pollutants for which the source is major, and all emissions of regulated air pollutants";[49]
- "A permit application shall describe all emissions of regulated air pollutants emitted from any emissions unit";[50]
- "Emissions rate in tpy [tons per year] and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method";[51] and
- "Calculations on which the [foregoing] is based."[52]

The Part 70 rules also require that the complete Title V permit application be available to the public during the public notice and comment period.[53]

As discussed herein, AdvanSix did not submit a complete Title V permit application as required by the foregoing Part 70 requirements, and the public was consequently prevented from providing informed public comment. Therefore, DEQ's issuance of the Title V permit was unlawful.

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[46] 40 C.F.R. § 70.7(a)(1)(i).
[47] *Id.* § 70.5(a)(2).
[48] *Id.* § 70.5(c).
[49] *Id.* § 70.5(c)(3)(i).
[50] *Id.*
[51] *Id.* § 70.5(c)(3)(iii).
[52] *Id.* § 70.5(c)(3)(viii).
[53] 40 C.F.R. § 70.7(h)(2). An exception is made for confidential information, but, critically, emissions data cannot be considered confidential.

3. Inadequacy of Permit Terms

The lack of unit-specific emissions estimates, emission factors, and emissions calculations in AdvanSix's Title V permit renewal application materially impacted the public's ability to identify potential deficiencies in the draft Title V permit during the public comment period. Given the very nature of this application deficiency, however, petitioners are not able to identify specific permit terms that might be inadequate. Instead, it is exactly this inability to identify potentially inadequate permit terms—given the lack of emissions information—that renders the public participation process, and, in turn, the resulting Title V permit, deficient.

In particular, the public could not adequately verify the following Title V and Part 70 requirements as they might apply to AdvanSix:

a. Compliance Assurance Monitoring applicability

Compliance Assurance Monitoring ("CAM") is a Part 70 requirement that applies to units with pre-controlled potential emissions of criteria pollutants greater than 100 tons per year ("tpy") and that also use a control device to meet an emission limit. The emissions information required by the Part 70 rules—but omitted by AdvanSix—would enable the public to verify which units should be subject to CAM.

Although AdvanSix's application included tables that assess CAM applicability,[54] these tables do not satisfy 40 C.F.R. § 70.5(c)'s requirement that applications include emissions rates and the underlying emissions calculations. In particular, while AdvanSix's tables list pre-control emissions rates for various units, the application did not include any information on how these emissions estimates were made. For instance, for the facility's five Hydroxylamine Diammonium Sulfonate ("HDS") trains, AdvanSix summarily states that each train has the

[54] AdvanSix Renewal Application § 14.

potential to emit between 88 and 94 tons of SO_2, just shy of the 100 tpy CAM threshold (meaning that, according to the company, these units are not subject to CAM).[55] But, critically, because the application does not include the requisite emissions calculations explaining how AdvanSix calculated these emissions rates, the public must take this company's word for its determination that CAM does not apply to these and dozens of other units. This renders public participation with respect to the applicability of CAM requirements impossible. Appendix A to this Petition lists all units for which CAM applicability could not be determined due to the lack of emissions information.

b. Adequacy of periodic monitoring, recordkeeping, and reporting

Emissions calculations are also necessary to assess whether the Title V permit contains adequate monitoring, recordkeeping, and reporting requirements to assure compliance with applicable requirements, which is a fundamental Title V requirement.[56] For example, most units at AdvanSix—many of which are decades old—are subject to federal emission limits under New Source Performance Standards ("NSPS") and/or National Emission Standards for Hazardous Air Pollutants ("NESHAP") standards. Many units are also subject to source-specific emission limits such as best available control technology ("BACT") limits. Title V permits must implement periodic monitoring, recordkeeping, and reporting to assure compliance with these applicable requirements. A vital part of Title V is allowing the public to assess whether the draft permit in fact assures compliance with these applicable requirements through monitoring, recordkeeping, and reporting conditions.

Emissions calculations play a critical role in this requisite public oversight. For instance, the public has in many instances identified miscalculations that lead to underestimated emissions

[55] *Id.* tbl. 14-3 (PDF page 240).
[56] *See, e.g.*, 40 C.F.R. § 70.6(3)(i)(B).

and potential non-compliance with federal or source-specific emission limits. The public has then been able to argue for additional emissions monitoring requirements, such as stack tests, to verify the source's emissions calculations and ultimately its compliance with the relevant emissions limit.

In this instance, though, the public has been hamstrung by the lack of emissions calculations. For most of the hundreds of emissions limits that apply to individual units at AdvanSix, the public has no way to verify whether emissions are well below the limit, very close to the limit, or even exceeding the limit if the unit is operated at full capacity. As a result, the public cannot provide informed comments on the adequacy of the draft permit's periodic monitoring, recordkeeping, and reporting requirements.

4. Issues Raised in Public Comments

Petitioners expressly raised the foregoing issues in the SELC Comments on pages 4–7.

5. Analysis of DEQ's Response

DEQ's response to Petitioners' comments on this issue does not explain, resolve, or rectify the failure of AdvanSix to submit (and DEQ to require) a complete Title V permit application that includes unit- and pollutant-specific emissions calculations. Rather than merely requiring AdvanSix to submit this set of emissions calculations (as almost all similar sources provide), DEQ cites to EPA's 1996 "White Paper Number 2" for the claim that major sources need not submit emissions calculation because, according to that guidance:

> [A] source familiar to the permitting authority may simply stipulate in its application that it is major or that Federal requirements apply as specified in the application. The paper clarifies that there is no need to prepare and submit extensive information about the source that "proves" it is subject to any requirements that it stipulates are applicable.[57]

[57] Revised RTC at 8.

In other words, White Paper No. 2 says that where a source concedes that a particular requirement applies to it, it need not provide extensive emissions information to prove that point. Petitioners do not disagree with this premise, but it is off point. Petitioners are not concerned about applicable requirements that AdvanSix concedes apply to it, but rather the requirements or monitoring that potentially apply but that cannot be ascertained due to the absence of emissions calculations. Simply put, the core logic of White Paper No. 2 is not applicable here.

Moreover, DEQ does not address the sentence in White Paper No. 2 that immediately follows the excerpt DEQ cited (quoted above), which states that "*this guidance does not affect the requirement to provide information that is otherwise required by part 70.*"[58] As discussed above, AdvanSix did not provide the information required by the Part 70 rules, and the omission of this information materially impacted the public's ability to review and comment on the draft Title V permit.

Relatedly, DEQ expends significant language explaining that because the facility is a major source, it need not submit detailed emissions calculations under Part 70 requirement for the submittal of "[a]ll emissions of pollutants for which the source is major and all emissions of regulated air pollutants,"[59] apparently citing to 40 C.F.R. § 70.5(c)(3)(i). DEQ seems to focus only on the first part of this requirement related to major sources and ignores the provision concerning "all emissions of regulated air pollutants." DEQ also does not address the sentence that immediately follows their cited language from Part 70, which states that "[a] permit application shall describe all emissions of regulated air pollutants emitted from any emissions unit."[60] Nor does DEQ's response address 40 C.F.R. § 70.5(c)(3)(viii), requiring submittal of the

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[58] EPA, White Paper Number 2 for Improved Implementation of The Part 70 Operating Permits Program, at 4 (Mar. 5, 1996).
[59] Revised RTC at 8.
[60] 40 C.F.R. § 70.5(c)(3)(i).

"[c]alculations on which the [foregoing] is based." DEQ also does not address 40 C.F.R. § 70.5(c)(3)(iii), requiring "Emissions rate in tpy [tons per year] and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method."

Again, Petitioners' comments did not argue that the facility needs to submit emissions calculations to prove that this major source is indeed a major source. Rather, the SELC Comments and this Petition focus on the other requirements and monitoring that potentially apply to the facility after a review of its unit-by-unit emissions calculations.

Finally, DEQ argues that emissions calculations are not needed because, by definition, each unit's potential emissions are defined by the emission limits in the Title V permit.[61] This is a basic misunderstanding of Petitioners' arguments and Clean Air Act requirements. Potential emissions calculations are based on a unit's physical and operational parameters and the effectiveness of pollution control technology, which in sum determine potential and, along with operating rates, actual emissions. An emission limit, on the other hand, is a legal requirement founded on either federal standards (e.g., NSPS or NESHAP) or source-specific determinations like BACT. Especially given that the AdvanSix facility is decades old, there is no guarantee that individual units will meet federal standards issued on a nationwide basis. As to source-specific limits like BACT, there is again no guarantee that AdvanSix has correctly estimated emissions for units subject to BACT or other source-specific limits, and therefore that those units will comply with the relevant limits. In both instances, emissions calculations would enable the public to verify that the permit contains sufficient monitoring to assure compliance with emission limits.

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[61] *Id.*

Under DEQ's circular reasoning, a unit's potential or actual emissions could never exceed these emission limits. But even in instances where the permit limit is set at exactly the unit's potential to emit, this does not mean that the unit could never exceed this limit; in fact, in such instances, exceedances are particularly likely given that any underestimation in the potential emissions calculations, however small, would guarantee exceedances of the emission limit when the unit operates at full capacity.

In other words, DEQ assumes that every unit at every source will comply with every emission limit because emission limits are the same as potential emissions. This is absurd, especially given that AdvanSix has a track record of failing compliance tests. Moreover, the public has often identified instances where a source has underestimated emissions by analyzing its emissions calculations—not available here—to identify real-world emissions violations or applicable requirements and monitoring that should apply.

To summarize, it is indisputable that AdvanSix has not complied with the Part 70 requirements to submit emissions calculations. DEQ's response to comments does not remedy this deficiency, relying on inapplicable arguments around the fact that the facility is a major source or the unrealistic proposition that the facility's potential and actual emissions are defined solely by permit limits that could never be violated. These responses do not resolve the underlying Part 70 deficiencies set forth above.

Finally, we address a separate but related response from DEQ, which is the premise that federal emissions standards, like NSPS and NESHAP, that were promulgated after 1990 are presumed to contain adequate monitoring requirements for Title V purposes. We note that

DEQ's legal support for this claim is flawed.[62] However, to the extent this presumption *might* be valid for the pollutant-specific limits established under those federal standards, many emission limits in the AdvanSix permit derive not from federal standards but from source-specific New Source Review permits. Moreover, like any presumption, DEQ's presumption is rebuttable; for instance, if AdvanSix's emissions calculations showed that units at its plant were unique (which is plausible given the age and niche processes at the plant) and might operate or emit at different rates than most units regulated by the federal standard, the monitoring required by the federal standard might not be adequate for Title V purposes to assure compliance.

B. The renewal permit fails to assure compliance with applicable requirements because it lacks adequate periodic monitoring and testing requirements.

1. Specific Grounds for Objection

Title V permits must include "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit."[63] Moreover, as EPA is aware, the AdvanSix facility has a remarkably checkered compliance history, including several outstanding violations at the time of permit issuance. In fact, although our records may be incomplete, since 2010 the facility has been issued at least 17 Notices of Violation and half a dozen consent decrees. Notably, several of the violations that were the subject of these enforcement actions were failed initial compliance stack tests.

Moreover, AdvanSix has more than 220 emission points, yet the renewal permit requires Continuous Emission Monitoring Systems ("CEMS") for only nine stacks. The only other direct

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[62] For support for this claim, DEQ cites to 40 C.F.R. § 64.2(b)(1)(i), which is the CAM provision exempting units subject to NSPS or NESHAP standards from CAM requirements. DEQ, however, conflates CAM applicability under Part 64 with Part 70's mandate that Title V permits contain adequate periodic monitoring to assure compliance. Title V permits must assure compliance with all applicable requirements; being exempt from CAM does not change this.

[63] 40 C.F.R. § 70.6(3)(i)(B).

emissions monitoring that the permit requires for any of the other 211-plus emission points is initial—but not repeated nor periodic—stack testing, and only for about a dozen additional units.

In other words, despite the history of violations, including stack test failures during initial compliance tests, the permit relies solely on opacity and parametric monitoring (at most) for 211-plus emission points. Given the lack of emissions data discussed above, the public is not able to adequately review the periodic monitoring and lack of testing provisions in the renewal permit to identify all specific deficiencies. Petitioners' comments, however, pointed out that units with potential or actual emissions that are substantial enough to potentially exceed emission limits should be subject to more than just parametric monitoring, i.e. periodic stack tests or CEMS.[64]

For example, the Kellogg Ammonia Plant Combustion System (KAPCS-1) unit is subject to the following emission limits (excerpted from the renewal permit, Permit Condition 405):

Pollutant	Lb/hr	Tons/year
PM (filterable only)	1.78	6.95
PM_{10}	7.14	27.82
$PM_{2.5}$	7.14	27.82
Sulfur Dioxide	2.82	10.98
Nitrogen Oxides (as NO_2)	517.0	552.6
Carbon Monoxide	37.56	146.4
Volatile Organic Compounds	1.3	5.2

Neither AdvanSix's application nor DEQ's Statement of Basis explain whether this unit's potential emissions estimates are far below these limits, exactly at these limits, or even in excess of these limits. The only monitoring associated with these limits, meanwhile, appears in Conditions 411 (opacity monitoring) and 412 (pressure monitoring on the Kellogg purge gas

[64] EPA has often objected to Title V permits that lack sufficient stack testing requirements to assure compliance. For instance, EPA has objected to Title V permit conditions on the basis that once-per-permit-term testing requirements do not constitute periodic monitoring sufficient to comply with 40 C.F.R. § 70.6(a)(3)(B). *See In re Consolidated Edison Co. of NY, Inc, Ravenswood Steam Plant*, Order on Petition No. II-2001-08, at 21 (Sep. 30, 2003), https://perma.cc/NU8G-TDZY. Here, of course, the permit lacks *any* periodic stack test requirements, let alone once-per-permit-term testing conditions.

compressor). And while the permit also implements applicable requirements under 40 C.F.R. Part 63 Subpart DDDDD (Boiler MACT), the Boiler MACT, which is primarily concerned with hazardous air pollutants, does not require periodic monitoring to assure compliance with these criteria pollutant emission limits.

Under the terms of the permit, then, the KAPCS-1 unit and more than 200 other emission points at AdvanSix will never be subject to periodic compliance testing to assure compliance with their emission limits. If emissions for these units are well below the limits, parametric monitoring alone may be acceptable to assure the units will not exceed their emission limits; on the other hand, if emissions estimates show that emissions are high enough to potentially exceed the emission limits, parametric monitoring alone is likely insufficient to assure compliance in the long term and must be paired with periodic compliance tests.

Although Petitioners ask EPA to object on the grounds that the permit fails to assure compliance with emission limits such as those identified above for the KAPCS-1 unit, EPA should also direct DEQ to require a complete application with requisite emissions calculations and to hold another comment period such that the public—and EPA—can review the adequacy of the draft permit's periodic monitoring and identify any instances where that monitoring is deficient.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements.[65] Further, any "monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a [Title V] permit unless and until it is supplemented by more rigorous standards" sufficient to assure compliance.[66]

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[65] 42 U.S.C. § 7661c(a), (c); 40 C.F.R. § 70.6(a)(3), (c)(1).
[66] *See Sierra Club*, 536 F.3d at 677.

Moreover, conditions in NSR permits incorporated by reference into the proposed permit are applicable requirements.[67]

3. Inadequacy of the Permit and Permit Terms

As demonstrated above in Part V(B)(1) of this Petition, the permit fails to assure compliance with numerous emission limits because it lacks adequate periodic monitoring and is therefore deficient in each instance. Once again, Petitioners cannot identify every potential deficiency given the incomplete application lacking emissions information.

4. Issues Raised in Public Comments

Petitioners expressly raised the foregoing issues in the SELC Comments at 9–11.

5. Analysis of DEQ's Response

DEQ's response does not resolve the foregoing permit deficiencies. In particular, DEQ has not provided justification for refusing to implement any periodic stack testing requirements or how the existing parametric monitoring is sufficient to assure compliance. DEQ responded to this issue in two places (Responses 12 and 14), and we address each response below:

DEQ's Revised RTC, Response 12

As stated in the SLFB, the draft permit contains sufficient monitoring, recordkeeping, and reporting provisions to provide a reasonable assurance of compliance with each applicable requirement/permit limitation.

Petitioners' Response: This is a conclusory statement that does not address the details of the SELC Comments.

This comment does not specifically identify any permit limitation with allegedly deficient periodic monitoring. The comment also does not address the periodic monitoring included in the Title V permit for these unidentified permit limitations or demonstrate why the existing monitoring requirements (including any periodic monitoring) for such limitations are specifically deficient. Instead, the comment asserts in a blanket fashion that adequate periodic monitoring for any

[67] 40 C.F.R. § 70.2.

"unit" where a stack test was included as part of an initial compliance demonstration can only be achieved by continuous emissions monitoring or by periodic stack testing. As noted, the Title V regulations require the inclusion of sufficient monitoring to demonstrate compliance with each applicable requirement, not for "units". As such, and given the comment's failure to identify specific applicable requirements or to challenge any of the existing monitoring requirements, this comment is not reasonably specific such that DEQ can effectively further respond.

Petitioners' Response: As noted in the SELC Comments (and reiterated in this Petition), commenters could not pinpoint specific emission limits or permit conditions that must be supplemented with periodic stack testing or continuous emissions monitoring. Without unit- and pollutant-specific emissions data, the public could not identify whether noncompliance with any particular emission limit is sufficiently likely that additional periodic monitoring via stack tests or CEMS is required. For instance, in the example of the KAPCS-1 unit discussed above, potential emissions may be so far below the limits that no additional periodic monitoring is required, or they might be so high as to warrant stack-testing requirements. This is true for not just this unit, but each of the 200-plus other sources and even more numerous emission limits in the permit.

Although the SELC Comments could not pinpoint precise deficiencies throughout the permit, the comments did set out instances where periodic stack testing should be required. These included both instances where a unit has previously failed a compliance test and instances where emissions are close enough to the relevant emission limit that parametric monitoring alone cannot assure compliance. Again, though, without the underlying emissions calculations, the public could not identify such instances.

Even if the comment's assertion was somehow intended to apply on an (specific) applicable requirement basis, there is no support for such a position in the Clean Air Act or the Title V permit regulations

It is unclear what "position" DEQ refers to in this portion of the response. The SELC Comments argued that the draft permit needed additional periodic monitoring in the form of

periodic stack tests, and the Clean Air Act and the Title V permit regulations in particular are clear that Title V permits must contain adequate periodic monitoring to assure compliance.

> *[T]here is significant contradictory support. For example, according to 40 CFR 64.2(b)(1)(i), NSPS and MACT standards promulgated after November 15, 1990, by default can be considered to include monitoring, recordkeeping, and reporting provisions sufficient to qualify as periodic monitoring without additional requirements. Many of these federal rules require an initial compliance demonstration that includes a stack test followed by continuing compliance requirements that include parametric monitoring, reporting, etc., but not additional stack tests. The draft permit includes a variety of compliance (monitoring) requirements of the same design. Accordingly, DEQ is not proposing any revisions to the draft permit in response to this comment.*

DEQ does not provide a citation for the claim that national standards promulgated after 1990 can "by default be considered" to include adequate periodic monitoring for Title V purposes. EPA has suggested somewhat similar language in guidance, stating that "all new standards proposed under the authority of section 111 NSPS and section 112 NESHAP after November 15, 1990, are presumed to have adequate monitoring to meet the periodic monitoring requirement for those standards,"[68] but we cannot find any support for a "default" assumption as claimed by DEQ. As discussed above in the response to DEQ's Revised RTC in Section V.A.5 of this Petition, the presumption that EPA's guidance alludes to is certainly rebuttable, and the public may have been able to do so here if equipped with a complete Title V permit application that included emissions calculations.

More to the point, however, to the extent this argument from DEQ is even valid, the argument would apply only to emission limits promulgated under the NSPS and NESHAP standards enacted after 1990. The AdvanSix permit has numerous emission limits that originate

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[68] EPA, Periodic Monitoring Guidance for Title V Operating Permits Programs, at 5 (Sept. 15, 1995), https://perma.cc/ZK3A-QHB9. As noted by the disclaimer on this document, this guidance was set aside by a 2000 D.C. Circuit decision. While EPA may have reiterated this premise elsewhere, we have not located any such similar statement.

elsewhere. For example, the hourly and annual emission limits for the KAPCS-1 unit (Condition 405) originate not from a national emissions standard but from the "9/8/22 NSR Permit," and even though the unit is subject to the Boiler MACT standards, the Boiler MACT does not require periodic monitoring for most or all of the criteria pollutant emission limits in Condition 405. In fact, we have identified more than 85 limits in the Title V permit that ultimately arise from Virginia's State Implementation Plan standards rather than NSPS or NESHAP standards.[69] A list of these limits is included in Appendix B.

DEQ's Revised RTC, Response 14

Please refer to DEQ Response #3 for discussion of why potential emissions estimates were not required in the Title V renewal application. The Guidance on Limiting Potential to Emit (Hunt & Seitz, 1989), refers to the definitions of "potential to emit" in 40 CFR 52.21(b)(4), 40 CFR 51.165(a)(1)(iii) and 40 CFR 51.166(b)(4), which state that potential to emit is "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of fuel combusted, stored, or processed, shall be treated as part of its design if the limitation or effect it would have on emissions is federally enforceable." Further, the guidance says that "[p]ermit limitations are very significant in determining whether a source is subject to major new source review. This is because they are the easiest and most common way for a source to obtain restrictions on its potential to emit." An emission unit's Potential to Emit is equal to the emission limit included in the draft permit. Therefore, a comparison of an emission unit's potential to emit to its emission limit would not be meaningful.

Here, again, DEQ fundamentally misunderstands the SELC Comments regarding potential emissions. While "Potential to Emit" is defined in part by emission limits when assessing major source applicability (i.e., synthetic minor limits), that is not what SELC meant

[69] These limits are listed in the Title V permit as originating under the "9/8/2022 NSR Permit." Petitioners then examined that NSR permit and found that 86 limits in that permit, which are then incorporated into the Title V permit, originate from 9VAC5-50-260, "Standards for Stationary Sources." This rule sets out best available control technology requirements for new and existing standards and is distinct from NSPS standards located in a different part of Virginia's State Implementation Plan. Appendix B lists the permit conditions in both the NSR permit and the draft Title V permit.

when it discussed potential emissions. Rather, the clear meaning of the SELC Comments deals with potential emissions calculations in the context of whether a given unit could be expected to comply with an emission limit without additional periodic monitoring.

By way of example, a typical boiler with a heat input rating of 100 MMBtu/hr burning natural gas will emit NOx at a rate of 0.275 lb/MMbtu according to EPA's AP-42 emission factors. At full capacity, this works out to 27.5 lb/hr. If the boiler is then limited to 27.5 lb/hr (or even some lower rate) by a blanket permit limit, under DEQ's reasoning, this defines the boiler's "Capital P" Potential to Emit (i.e., from a purely legal definition of Potential to Emit) and the boiler need not ever conduct periodic stack tests to confirm compliance with the 27.5 lb/hr limit. Yet because AP-42 emission factors are based on averages of numerous stack tests, boilers subject to this limit will fail about 50% of all compliance tests, meaning the lack of periodic stack testing fails to assure compliance with the emission limit. DEQ then uses its faulty logic to claim that no periodic testing is required for units at AdvanSix. Yet this is inadequate justification for failing to require periodic stack testing for units where compliance with emission units might be in doubt due to the closeness between emissions calculations and emissions limits.

Finally, DEQ once again focuses on the question of major-source applicability, arguing that because Potential to Emit is legally bound to the emission limit, the sources in question could not be major sources. This again misses the point; the SELC Comments arguing for periodic stack testing were premised squarely on the adequacy of Title V periodic monitoring, not the applicability of major-source thresholds.

Summary of DEQ's Responses

In sum, none of the foregoing responses, taken individually or as a whole, explain why more than 200 units at AdvanSix, including substantial emitters like the Kellogg Ammonia Plant

Combustion System (permitted to emit more than 500 tons of NOx per year), are not subject to any periodic, real-world emissions monitoring like stack tests or CEMS.

C. DEQ failed to provide a rationale for why the permit's monitoring is sufficient to assure the facility's compliance with applicable requirements, impairing the public's ability to evaluate the draft permit's adequacy.

1. Specific Grounds for Objection

In addition to requiring adequate monitoring in Title V permits, Title V rules also require that the "rationale for the monitoring requirements selected by a permitting authority must be clear and documented in the permit record (e.g., in the Statement of Basis)."[70]

The Statement of Basis here is devoid of such rationale for why parametric and opacity monitoring alone are sufficient monitoring for the vast majority of AdvanSix's 200-plus emission points. Instead, the Statement of Basis includes numerous and identical recitations of the following statement:[71]

> 9/8/2022 NSR permit
> The monitoring, testing, notification, and recordkeeping requirements in Conditions 365, 378, and 379 of the 9/8/2022 NSR permit **(Title V Conditions 412-414)** have been examined and determined to meet Part 70 requirements as is.

This conclusory statement does not provide *any* rationale for why the selected monitoring provisions are sufficient to assure compliance, other than the mere fact that DEQ has examined the monitoring provisions. In short, the public has no way of ascertaining *why* DEQ determined the monitoring provisions were adequate—*i.e.*, how the parameters to be monitored equate with assuring that emissions do not exceed relevant emission limits.

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[70] 40 C.F.R. § 70.5(a)(5); *In the Matter of United States Steel, Granite City Works*, Order on Petition No. V-2009-03 at 7–8 (January 31, 2011) ("Granite City I Order").

[71] Draft Statement of Basis at 26. Similar statements explaining merely that DEQ has "examined" and "determined" that underlying monitoring requirements are sufficient without further explanation are found on pages 9, 10, 13, 16, 19, 22, 24, 26, 28, 29, 34, and 38 of the draft Statement of Basis.

This particular excerpt relates to the monitoring provisions for the KAPCS-1 unit discussed above, which is subject to both hourly and annual emission limits for particulate matter ("PM"), NOx, carbon monoxide ("CO"), SO_2, and volatile organic compounds ("VOCs"). The only monitoring related to these emission limits in the permit is found in Conditions 411 (opacity monitoring) and 412 (pressure monitoring on the Kellogg purge gas compressor). The Statement of Basis does not explain how these monitoring provisions will assure compliance with the PM, CO, SO_2, and VOC emission limits. (DEQ does explain how the purge gas compressor monitoring relates to NOx emissions under CAM.)[72] The foregoing scenario, with little variation, is repeated throughout the Statement of Basis, meaning the public had no insight into how parametric monitoring assures compliance with the majority of emission limits in the permit.

2. Applicable Requirement or Part 70 Requirement Not Met

40 C.F.R. § 70.5(a)(5) requires that permitting authorities shall provide "a statement that sets forth the legal and factual basis for the draft permit conditions." EPA has routinely explained that this factual basis, often called a Statement of Basis, must include the "rationale for the monitoring requirements selected by a permitting authority" and that this rationale "must be clear and documented in the permit record (e.g., in the Statement of Basis)."[73] As discussed above, by providing only conclusory statements that DEQ determined that underlying monitoring provisions, such as those in NSR permits, were adequate without further explanation, DEQ has not provided the rationale for how the selected monitoring requirements assure compliance.

[72] Draft Statement of Basis at 27.
[73] 40 C.F.R. § 70.5(a)(5); Granite City I Order at 7–8.

3. Inadequacy of the Permit Process and Required Public Participation Procedure Not Provided

Section V.C.1 of this Petition, above, discusses how the permit lacks adequate periodic monitoring, but the deficient Statement of Basis also rendered the permit process and required public participation procedure ineffective. By failing to explain how the selected periodic monitoring purportedly assures compliance with each of the multitude of emission limits in the AdvanSix permit (and instead by providing only brief, conclusory statements), DEQ prevented the public from understanding whether and how the various parametric monitoring provisions in the permit assure compliance in the absence of periodic stack testing requirements.

4. Issue Raised in Public Comments

Petitioners expressly raised the foregoing issue in the SELC Comments at 10–11.

5. Analysis of DEQ's Response

Neither DEQ's initial nor revised response to comments addressed this issue. This failure to respond to significant public comment is itself a deficiency.[74]

D. DEQ unreasonably refused to hold a public hearing on the AdvanSix Title V permitting action, ignoring significant public interest.

1. Specific Grounds for Objection

Pursuant to the federal Title V regulations at 40 C.F.R. § 70.7(h), DEQ must "offer[] an opportunity for public comment and a hearing on the draft permit."[75] To implement that requirement, Virginia's Title V regulations at 9 Va. Admin. Code § 5-80-35(E) provide DEQ with discretion to hold a public hearing on a draft Title V permit. In addition, Virginia's

[74] *See* 40 C.F.R. § 70.7(h)(6) ("The permitting authority must respond in writing to all significant comments raised during the public participation process, including any such written comments submitted during the public comment period.").

[75] *See also* 42 U.S.C. § 7661a(b)(6) (requiring state permitting programs to include "procedures . . . for public notice, including offering an opportunity for public comment and a hearing").

regulations at 9 Va. Admin. Code § 5-80-35(C)(1) go beyond the federal Title V regulations and specify circumstances under which the Director *must* grant a hearing; notably, the regulations provide that the Director is required to hold a hearing if, among other things, DEQ receives "a minimum of 25 individual requests." Regardless of whether requesters achieve the 25-individual-request threshold for triggering a mandatory public hearing, 9 Va. Admin. Code § 5-80-35(E) is clear that the Director retains authority to grant a hearing request. Petitioners seek EPA's objection to the proposed AdvanSix permit on the basis that DEQ abused its discretion in denying numerous requests for a public hearing based solely on a finding that it had not received 25 individual hearing requests, and without regard to demonstrated, widespread public interest in the permit proceeding and in AdvanSix's compliance (and lack thereof) with air pollution control requirements.

During the public comment period on the AdvanSix draft Title V permit, DEQ received hearing requests from five Hopewell-based or Virginia-based organizations and four Hopewell-area residents.[76] As grounds for seeking a hearing, requesters cited the facility's substantial emissions and their potential health effects, the disproportionate burden that Hopewell residents face from air pollution and other environmental hazards, AdvanSix's history of environmental violations and safety failures, and the need to allow the views of affected community members to influence DEQ's permitting decision.[77]

Notwithstanding this broad support for a public hearing, DEQ rejected the multiple requests it received. DEQ's initial Response to Comments provided only two sentences to

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[76] SELC Comments at 15–16; Email from Katherine Podlewski to Cheryl Mayo, DEQ (Feb. 5, 2024) ("Podlewski Comments"); Email from Eliza Lamb to Cheryl Mayo, DEQ (Feb. 8, 2024) ("Lamb Comments"); Email from Amanda Vtipilson to Cheryl Mayo, DEQ (Feb. 9, 2024) ("Amanda Vtipilson Comments"); Email from CeJae Vtipilson to Cheryl Mayo, DEQ (Feb. 9. 2024) ("CeJae Vtipilson Comments").
[77] *See* Lamb Comments; CeJae Vtipilson Comments; SELC Comments at 15–16.

explain the agency's rejection of those requests: "[T]he criteria in 9VAC5-80-35 for granting a public hearing were not met. A public hearing was not granted in this case."[78]

In DEQ's revised Response to Comments, issued after the close of EPA's 45-day review period, DEQ further noted that under Virginia's Title V regulations, DEQ "shall" grant a hearing if it finds, among other things, "[t]hat there is significant public interest in the issuance [or] denial . . . of the permit in question as evidenced by receipt of a minimum of 25 individual requests for a public hearing."[79] According to DEQ, this criterion was "not met, as fewer than 25 individual requests for a public hearing were received. Accordingly, a public hearing is not required."[80] DEQ did not contend that any other criteria in 9 Va. Admin. Code § 5-80-35 were not met; accordingly, the sole basis asserted by DEQ for its denial of multiple individual requests for a public hearing was that it was not *required* by Virginia law to hold one, because the number of requests was 9 and not 25.

While 9 Va. Admin. Code § 5-80-35(E) provides DEQ with discretion to decide whether to hold a hearing under circumstances where requesters do not meet the 25-individual-request threshold, DEQ must exercise that discretion in a non-arbitrary manner. DEQ's apparent conclusion that there must be 25 individual hearing requests to demonstrate "significant public interest" in the permit proceeding sufficient to warrant a hearing is unreasonable and arbitrary and does not give effect to Title V's requirement that the public be given an opportunity for a hearing.

In sharp contrast to DEQ's determination here, EPA's Environmental Appeals Board ("EAB") concluded in *In re Sierra Pacific Industries* that in the context of a Clean Air Act

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[78] RTC at 20.
[79] Revised RTC at 5–6 (quoting 9 Va. Admin. Code § 5-80-35(C)(1)).
[80] Revised RTC at 6.

construction permit issued under federal regulations, only three individual hearing requests, combined with consideration of other factors, was sufficient to demonstrate significant public interest sufficient to warrant holding a public hearing.[81] Declaring that "gauging the degree of public interest is not simply a numbers game," the EAB held that the permitting authority must consider an array of factors other than the number of requests in determining whether there is a significant degree of public interest in a permit proceeding, including the materiality of issues raised by requesters, the degree of public interest in related State or local proceedings, the amount of media coverage, the significance of the permit action, whether any substitute process was provided, and demographic information.[82] Notably, the EAB agreed "that permitting authorities should consider environmental justice when deciding whether to hold a public hearing," and that "environmental justice considerations . . . are plainly relevant to a permit issuer's decision as to whether to exercise its discretion to hold a public hearing under [federal regulations]."[83]

Just as the EAB found that a permitting authority's refusal to hold a public hearing on a draft Clean Air Act construction permit based solely on the number of requests submitted was unlawful, DEQ's refusal to hold a hearing on the AdvanSix Title V permit based solely on its receipt of 9 hearing requests instead of 25 is likewise unlawful. Consideration of the factors that the EAB identified in *Sierra Pacific* as relevant to a public interest assessment plainly supports a finding that public interest in the AdvanSix Title V permit proceeding is sufficient to hold a public hearing. Specifically:

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[81] *In re Sierra Pacific Industries*, 16 E.A.D. 1 (EAB 2013).
[82] *Id.* at 23–24.
[83] *Id.* at 24.

Materiality of Issues Raised: The hearing requesters raised detailed concerns regarding the substance of the draft permit and the inadequacy of the supporting information provided by DEQ and AdvanSix. DEQ has not disputed that requesters submitted material comments.

Media Coverage: In the year preceding DEQ's denial of the hearing requests, AdvanSix's environmental violations received considerable media attention[84] and even inquiries from federal and state legislators.[85] Examples of AdvanSix media coverage are compiled in Appendix C to this Petition.

Significance of the Permit Action: This renewal Title V permit proceeding is the first time in a decade that the public has had an opportunity to comprehensively weigh in on whether the permit requirements are sufficient to assure AdvanSix's compliance with federal air pollution control requirements. This permit proceeding is especially significant because AdvanSix's Hopewell plant has been cited repeatedly over the past decade by EPA and DEQ for violations of air pollution requirements.[86] In enacting Title V, Congress ensured the opportunity for public

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[84] *See, e.g.*, Luca Powell, *New Leak Reported at Hopewell Plastics Plant That Has Been Subject of Scrutiny*, Richmond Times-Dispatch, Sept. 16, 2023, https://perma.cc/56E7-HKSF; Kassidy Hammond, *Chemical Leaks Continue at Hopewell AdvanSix Industrial Plant*, WRIC, Sept. 16, 2023, https://www.wric.com/news/local-news/the-tri-cities/chemical-leaks-continue-at-hopewell-advansix-industrial-plant/; Sierra Krug, *Toxic Gas Leak in Hopewell Forces Industrial Plant Lockdown, Nearby Residents Concerned*, WRIC, June 29, 2023, https://www.wric.com/news/local-news/the-tri-cities/toxic-gas-leak-in-hopewell-forces-industrial-plant-lockdown-nearby-residents-concerned/; Luca Powell, *Documents: Hopewell Plant AdvanSix Flagged by Feds for Repeated Chemical Releases*, Richmond Times-Dispatch, Apr. 7, 2023, https://perma.cc/9RG3-XK54.

[85] *See* Luca Powell, *McClellan Fires Off Letter to Executives at AdvanSix Chemical Plant*, Richmond Times-Dispatch, Apr. 17, 2023, https://perma.cc/N2R4-AJZP; Luca Powell, *State Senator "Dismayed" by Reports of Chemical Releases at Hopewell Plant*, Richmond Times-Dispatch, Apr. 28, 2023, https://perma.cc/25T9-XY6G.

[86] *See, e.g.*, Consent Decree, *United States v. Honeywell Resins & Chems. LLC*, No. 3:13-cv-193 (E.D. Va. lodged Mar. 28, 2023), https://perma.cc/W5XN-5E4F; DEQ, Notice of Violation Nos. 12-04-PRO-08322 (Apr. 17, 2012), 12-05-PRO-401 (May 22, 2012), 12-11-PRO-8551 (Nov. 19, 2012), APRO000305-001 (Nov. 30, 2015), APRO-000324 (Jan. 21, 2016), APRO000757-001 (Dec. 7, 2017), APRO000888-001 (Apr. 26, 2018), APRO001039-001 (Feb. 4, 2019), APRO001232-001 (July 15, 2019), APRO001824-001 (May 28, 2021), APRO001965-001 (Oct. 1, 2021), APRO001965-003 (May 3, 2022), APRO001965-004 (Jan. 27, 2023), APRO001965-005 (July 6, 2023).

involvement in every aspect of the permitting process and expressly required permitting authorities to provide the public with an opportunity for a public hearing and a draft permit.[87]

Whether Substitute Process Was Provided: There was no other opportunity for the public to present oral comments on AdvanSix's draft Title V permit.

Demographic Information: As discussed above, the potential health impacts of emissions from the AdvanSix plant and the five other major sources of air pollution in Hopewell—all concentrated in a community that is predominantly composed of people of color and that has a substantial low-income population—raise serious environmental justice concerns.

In light of these factors, DEQ's determination that the AdvanSix Title V permitting action is *not* a matter of significant public interest that warrants a public hearing—solely because DEQ received 9, and not 25, individual hearing requests—was unreasonable and arbitrary. DEQ's mechanical application of the 25-request threshold denied Hopewell residents and other interested Virginians with the meaningful involvement in agency decision-making that EPA's Title V regulations are designed to promote.

The arbitrary denial of multiple hearing requests was also contrary to the policy embodied in EPA air permitting guidance and in the Virginia Environmental Justice Act. EPA's December 2022 guidance "EJ in Air Permitting: Principles for Addressing Environmental Justice Concerns in Air Permitting" encourages permitting authorities to identify those permitting actions that may have a disproportionately high and adverse effect on communities with environmental justice concerns and to take steps to provide residents of those communities with

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[87] 42 U.S.C. § 7661a(b)(6) (requirement for an opportunity for a public hearing); *see also* § 7661c(e) (requiring permit applications, compliance plans, monitoring reports, certifications, and permits to be publicly available), § 7604(a)(1), (f)(4) (authorizing any person to bring a citizen suit against a source for violating its permit), § 7661d(b)(2) (authorizing any person to petition EPA to object to a Title V permit and to obtain review of any petition denial in the relevant U.S. Court of Appeals).

meaningful opportunities to provide input into the decision that will affect their lives.[88] The guidance specifically lists "holding formal public hearings and informal public meetings in or near the community" as an example of what those meaningful opportunities can be.[89]

These principles are enshrined in Virginia law as well. The Virginia Environmental Justice Act, passed in 2020, makes it "the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth."[90] In promoting the meaningful involvement of affected community members in agency decision-making, state decision-makers must "seek out and consider" their participation, "allowing the views and perspectives of community residents to shape and influence the decision."[91]

A hearing would have enabled community residents who are less comfortable putting their comments in writing to share their concerns with DEQ, thereby increasing the number of affected individuals participating in the AdvanSix permit proceeding. A hearing would also have provided members of the public with an opportunity to meet with DEQ representatives directly and ask questions. Instead, members of the public received no such opportunity; they were forced to digest a highly technical draft permit and statement of basis; to confront a permitting record that, as set forth in Section V.A, above, was missing critical information; and to provide their comments to DEQ only in writing. DEQ's determination that the AdvanSix permit was not a matter of significant public interest and its resulting decision not to hold a hearing under the specific circumstances of this permitting action were unreasonable and arbitrary.

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[88] EJ in Air Permitting at 2.
[89] *Id.* at 3.
[90] Va. Code § 2.2-235.
[91] *Id.* § 2.2-234; *see also id.* § 2.2-235.

2. Regulatory Requirement Not Met

DEQ's arbitrary refusal to exercise its discretionary authority under 9 Va. Admin. Code § 5-80-35(E) to grant the nine requests for a public hearing on AdvanSix's draft Title V permit contravenes the requirement under 40 C.F.R. § 70.7(h) that a Title V permitting authority "offer[] an opportunity for public comment and a hearing on the draft permit."[92] The federal Title V regulations at 40 C.F.R. § 70.8(c)(3)(iii) state that a permitting authority's failure to "[p]rocess the permit under the procedures approved to meet § 70.7(h) of this part" constitutes grounds for an EPA objection.[93]

3. Inadequacy of the Permit Process and Required Public Participation Procedure Not Provided

As set forth in Section V.C.1, above, DEQ denied the written requests by four individuals and five organizations to hold a public hearing and ignored the other indicators of significant public interest in the AdvanSix permit. By mechanically applying an arbitrary indicator of the level of public interest in a permitting action, DEQ did not offer a meaningful opportunity for a public hearing as required by 40 C.F.R. § 70.7(h) and did not reasonably exercise its discretion to grant or deny requests for hearings.

4. Issue Raised in Public Comments

Five organizations (Hopewell-Colonial Heights NAACP (Unit #7078); Sierra Club, Falls of the James Group; Virginia Interfaith Power & Light; and Chesapeake Bay Foundation; along with SELC) requested a public hearing on the proposed permitting action, and provided the grounds for that request, in the written comments they submitted to DEQ during the comment

[92] 40 C.F.R. § 70.7(h); *see also* 42 U.S.C. § 7661a(b)(6).
[93] 40 C.F.R. § 70.8(c)(3)(iii).

period.[94] Four individual commenters similarly requested a public hearing on the draft permit in their own written comments.[95]

5. Analysis of DEQ's Response to Public Comments

DEQ's decision to deny the multiple requests for a public hearing was first announced in its initial Response to Comments and was reaffirmed in its revised Response to Comments.[96] As set forth in Section V.D.1, above, DEQ's explanation of its decision not to hold a hearing reveals that the agency did not offer a meaningful opportunity for a public hearing and did not reasonably exercise its discretion to grant or deny hearing requests.

VI. Conclusion

For the foregoing reasons, the proposed AdvanSix Title V permit is deficient. Accordingly, the Clean Air Act requires the Administrator to object to the proposed permit.

Respectfully submitted,

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[94] *See* SELC Comments at 15–16.
[95] *See* Lamb Comments; Amanda Vtipilson Comments; CeJae Vtipilson Comments; Podlewski Comments (It appears that Ms. Podlewski mistakenly referred to the "water permit" rather than the "Title V" or "air" permit in requesting a public hearing. Her mistake is understandable; DEQ also solicited public comment on a draft water permit for the AdvanSix facility from October 31, 2023, to November 30, 2023, and again from April 19, 2024, to June 5, 2024. *See* DEQ, Public Notice – Environmental Permit (Apr. 19, 2024) (Attachment J). Considering that Ms. Podlewski submitted her comments to the DEQ air permit writer responsible for the AdvanSix Title V permit (not the water permit writer) and did so during the public comment period on the Title V permit (not the water permit), it is reasonable to conclude that Ms. Podlewski's request for a public hearing was directed at the draft Title V permit.)
[96] *See* RTC at 20; Revised RTC at 5–6, 21.

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