

**ORAL ARGUMENT NOT SCHEDULED**  
**No. 15-1056**

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**IN THE UNITED STATES COURT OF APPEALS  
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

HEARTH, PATIO & BARBECUE ASSOCIATION,  
*Petitioner,*

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,  
*Respondent.*

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PETITION FOR REVIEW OF FINAL AGENCY ACTION  
OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY

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**INITIAL REPLY BRIEF OF PETITIONER  
HEARTH, PATIO & BARBECUE ASSOCIATION**

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## INTRODUCTION

The U.S. Environmental Protection Agency’s (“EPA”) brief is an exercise in *post hoc* rationalization. The Agency failed to provide a reasoned basis for its audit testing requirements in the 2015 Rule,<sup>1</sup> which barely mentions—much less adequately explains—major changes in those requirements from the 1988 Rule.<sup>2</sup> Nor did EPA analyze the key issue of interlaboratory variability,<sup>3</sup> *e.g.*, by making findings on the magnitude of such variability, in promulgating the 2015 Rule.

EPA nonetheless asks this Court to uphold its decision to allow wood-fired heaters to be audit tested at any federal or private laboratory of EPA’s choosing—without making any allowance for interlaboratory variability—based on a combination of conclusory statements and its belated assessment of record data. These are not acceptable bases to uphold agency action. But even if this Court entertained EPA’s *post hoc* justifications, the information EPA now highlights does not support its decision, and this Court therefore should vacate the challenged audit testing provisions.

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<sup>1</sup> Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces, 80 Fed. Reg. 13,672 (Mar. 16, 2015).

<sup>2</sup> 53 Fed. Reg. 5,860 (Feb. 26, 1988) (codified at 40 C.F.R. pt. 60, subpt. AAA).

<sup>3</sup> As explained in Hearth, Patio & Barbecue Association’s (“HPBA”) opening brief (at 8, 9-10), interlaboratory variability refers to variability among the results of emission testing of the same appliance at different laboratories.

Having failed to support the 2015 Rule’s audit requirements on the merits, EPA attempts to avoid review on ripeness grounds. EPA argues that it intends to audit manufacturers rarely, so judicial review should await some future enforcement action. But the Clean Air Act (“CAA”) commands that pre-enforcement, facial challenges to EPA rules be brought within sixty (60) days of promulgation. 42 U.S.C. § 7607(b). And this Court has repeatedly held that legal issues such as whether the 2015 Rule’s audit provisions are reasonable and supported; whether EPA responded to comments; and whether EPA explained why it abandoned the 1988 Rule’s approach to auditing should—and indeed must—be adjudicated now.

## ARGUMENT

### I. Petitioner’s Challenge Is Ripe.

EPA argues (at 36-40) that HPBA’s challenge to the 2015 Rule’s audit requirements is unripe. That EPA buries this threshold justiciability argument at the end of its brief speaks volumes about its merit. Applying the *Abbott Laboratories v. Gardner* framework (as EPA suggests), HPBA’s challenge is ripe for review. *See* 387 U.S. 136 (1967).

First, this case presents purely legal issues that must be decided based on the administrative record: whether the 2015 Rule’s audit requirements are rational in light of the Agency’s failure to account for interlaboratory variability; whether

EPA acknowledged and explained the major changes between the 1988 and 2015 audit provisions; and whether EPA arbitrarily failed to address HPBA's comments. This Court has repeatedly found such issues fit for review. *See Nat'l Ass'n of Home Builders v. Army Corps of Engineers*, 417 F.3d 1272, 1281-82 (D.C. Cir. 2005) ("We have repeatedly held that claims that an agency's action is arbitrary and capricious or contrary to law present purely legal issues.").

Further factual development would not aid the Court's review of the legal issues HPBA raises. This case turns entirely on whether EPA explained and supported the auditing provisions in the 2015 Rule. Future audits are not needed to answer that question. *See Appalachian Power Co. v. EPA*, 208 F.3d 1015, 1023 & n.18 (D.C. Cir. 2000) (concluding "there is nothing to" EPA's claim that a guidance document on emissions monitoring "would be more focused in the context of a challenge to a particular permit"). EPA's authority to require audits to be performed at a laboratory of EPA's choosing, without accounting for interlaboratory variability, is at issue here, *not* whether any individual manufacturer might somehow avoid revocation despite failing an audit test. *Cf. NE Hub Partners, L.P. v. CNG Transmission Corp.*, 239 F.3d 333, 344 (3d Cir. 2001) (holding that the plaintiff need not await the outcome of the state regulatory process that it argued was unlawful to challenge it).



The second prong of the *Abbott Laboratories* analysis, the hardship to the parties from withholding review, does not apply here. “[B]ecause Congress has emphatically declared a preference for immediate review with respect to [CAA] rulemaking,” the Court has “no need to consider . . . the hardship to the parties of withhold review.” *Natural Res. Def. Council v. EPA*, 643 F.3d 311, 320 (D.C. Cir. 2011); accord *Natural Res. Def. Council v. EPA*, 22 F.3d 1125, 1133 (D.C. Cir. 1994) (hardship need not be assessed when determining whether a challenge to CAA rulemaking is ripe).

Regardless, EPA is wrong to suggest that HPBA’s members would suffer no hardship from delaying review until EPA audits a heater. HPBA’s members must act now to ensure that their products will not only obtain certification, but remain certified if audited. That is no small task given the stringency of the 2020 standards. If they fail an audit, even by the slightest margin, EPA “will notify the manufacturer that certification is revoked for that model line,” 40 C.F.R. § 60.533(n)(3)(ii), resulting in immediate business harms. Thus, even if the Court considers the hardship prong, HPBA’s challenge is ripe.

EPA’s ripeness argument boils down to the fact that it has not yet ordered an audit under the 2015 Rule. But under that theory, most challenges to CAA rules would be unripe—an outcome that cannot be reconciled with Congress’s mandate that facial challenges be brought within 60 days of promulgation. 42 U.S.C.

§ 7607(b)(1).<sup>4</sup> EPA's argument also conflicts with 42 U.S.C. § 7607(b)(2), which bars an entity subject to an enforcement action from raising arguments "with respect to which review could have been obtained under" subsection (b)(1). Petitioner's members thus cannot wait until they are subject to an enforcement action to challenge the facial lawfulness of the 2015 Rule's audit provisions, as they would likely then be barred from doing so. The CAA's jurisdictional provision thus makes it clear that Petitioner's challenges to that Rule *must* be brought and adjudicated now.

EPA's self-serving claims (at 37-38) that it intends to audit appliances "rarely" and that it is "possible" it might not ultimately revoke a certification do not render this petition unripe. The uncertainty of whether and how a rule might be enforced against a particular entity is not a ticket to evade review of whether EPA adequately supported its rule at the time of promulgation. *See, e.g., Gen. Elec. Co. v. EPA*, 290 F.3d 377, 381 (D.C. Cir. 2002) (rejecting "EPA's assertion that it will apply the Guidance Document flexibly" as grounds for deferring review of APA challenge); *Nat'l Ass'n of Home Builders*, 417 F.3d at 1282 (rejecting argument

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<sup>4</sup> EPA has recognized as much in other cases. For example, in a brief recently filed in a case arising under the National Environmental Policy Act, EPA cited the CAA's jurisdictional provision as illustrative of "[w]hen Congress expressly authorizes judicial review of agency regulations *apart from any concrete application thereof*." Defs.' Br. in Supp. of Mot. to Dismiss, *Wild Virginia v. Council on Env'tl. Quality*, No. 20-cv-45, ECF No. 53, at 17 n.6 (W.D. Va. filed Aug. 25, 2020).

that challenged permits “are not fit for review because their applicability to a given activity remains within the Corps’ discretion”). In another variant of the same flawed argument, EPA suggests there are too many “unknowns” and “imponderables” about how the Rule’s audit provisions will be applied. EPA Br. 36-37. But it is always “unknown” if, when, or how a rule that has just been promulgated will be implemented generally, or in particular cases. That does not make a facial challenge to the rationality of the 2015 Rule unripe.<sup>5</sup> See 42 U.S.C. § 7607(d)(9).

In sum, EPA’s ripeness argument fails, and the Court should address the merits of HPBA’s challenge.

## **II. The 2015 Rule’s Audit Requirements Are Arbitrary and Capricious.**

### **A. EPA’s Defense Improperly Rests on *Post Hoc* Rationalizations.**

EPA must fulfill the obligations of reasoned decision-making *when promulgating* a rule, not after the fact. *Dep’t of Homeland Sec. v. Regents of the Univ. of Calif.*, 140 S. Ct. 1891, 1907-09 (2020) (“*Regents*”) (it is a “foundational

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<sup>5</sup> *Media Access Project v. FCC*, 883 F.2d 1063, 1070 (D.C. Cir. 1989), does not hold otherwise. There, the Court found a challenge unripe due to “uncertainties in the actual meaning of the regulations at issue.” There is no such uncertainty in the meaning of the 2015 Rule; no one disputes that it allows EPA to audit any certified heater at a laboratory of its choosing without any adjustment for variability. Moreover, in *Media Access*, this Court found a reasonable likelihood that “the agency could grant the requested relief and thereby obviate the need for judicial review.” *Id.* That is not true here. While EPA says it intends to audit heaters “rarely,” it has notably not disclaimed the power to do so.

principle of administrative law” that “[a]n agency must defend its actions based on the reasons it gave when it acted,” not “belated justifications” or “impermissible *post hoc* rationalization”). Another “simple but fundamental rule of administrative law” is that “a reviewing court, in dealing with a determination or judgment which an administrative agency alone is authorized to make, must judge the propriety of such action solely by the grounds invoked by the agency.” *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947).

Contrary to these basic principles, EPA’s brief is littered with *post hoc* rationalizations. Not once did the 2015 Rule mention interlaboratory variability or interlaboratory precision. Instead, EPA silently removed text from the 1988 Rule that accounted for interlaboratory variability during audit testing. *See* 40 C.F.R. § 60.533(p)(4)(ii) (2014). EPA’s failure to analyze interlaboratory variability in the 2015 Rule is perhaps unsurprising given that it never fulfilled its prior commitment to analyze the issue “in a statistically sound manner” and publish its findings before auditing on an interlaboratory basis. *See* 53 Fed. Reg. at 5,871 & 5,878 (codified at 40 C.F.R. § 60.533(p)(4)(ii)(B)).

EPA also failed to address whether the audit testing requirements must account for interlaboratory variability when responding to comments. EPA referenced interlaboratory variability a few times when *summarizing* comments, but it never substantively responded. EPA easily could have acknowledged and

attempted to explain its decision to delete regulatory text that accounted for interlaboratory variability during audit testing—*e.g.*, by asserting, as EPA does now, that it incorporated “margins of variability” into the standards themselves or that it had “good reasons” for changing course. But EPA never did so, and none of the record pages cited in its brief reflect that EPA made such determinations in 2015.

Similarly, when addressing criticisms that the audit testing program was unnecessarily burdensome given the “inherent variability” of wood burning and “significant test method imprecision,” EPA blandly assured commenters that “compliance audit tests . . . would be conducted under rare circumstances on a case-by-case basis.” JA\_\_ (RTC 219-20). This is nonresponsive. EPA also said that it “plan[ned] to re-assess our approval role as well as the need for EPA-directed audit testing provisions in the next NSPS review.” JA\_\_ (RTC 220). Again, this is no comfort to manufacturers facing the prospect of audit testing at an unknown laboratory (and a potential loss of certification as a result) and only highlights the lack of substantive support for the changed audit testing requirements in the 2015 Rule.

Given EPA’s failure to explain the revised audit testing requirements in the 2015 Rule or respond to comments that those requirements do not account for interlaboratory variability, this Court should not now entertain EPA’s belated

justifications that interlaboratory variability is minimal and already incorporated into the 2020 emission standards.<sup>6</sup> *See Regents*, 140 S. Ct. at 1907-09.

**B. EPA Failed to Acknowledge That the 2015 Rule’s Audit Requirements Are a Major Change, Much Less Explain That Change.**

Because EPA never explained why it changed course from its 1988 approach to auditing and interlaboratory variability (*supra* II.A), the audit requirements are arbitrary and capricious. *See FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009) (agency must “display awareness that it is changing position” and “show that there are good reasons for the new policy”).

The shift in approach from the 1988 Rule is no “slight” deviation, as EPA suggests (at 19), but a major—and unexplained—reversal of its prior approach to auditing and interlaboratory variability. EPA claims the “sole difference” between the 1988 and 2015 Rules is that “while the 1988 Rule initially required the certifying laboratory to conduct the compliance audit test, the 2015 Rule permits

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<sup>6</sup> Nor should the Court consider extra-record evidence or arguments presented only by *amici*. The challenged audit testing provisions stand or fall based on EPA’s rationale and supporting record in 2015, not new information generated in 2020. Likewise, *amici*’s claim (at 11) that audit testing is necessary to correct errors in the certification process “[b]ecause manufacturers certify their compliance with emissions standards without regulatory oversight” is not a justification that EPA invoked and thus, is not a basis to affirm EPA’s action. *See Chenery*, 332 U.S. at 196. Besides, that justification rests on the false premise that manufacturers self-certify compliance without EPA oversight. EPA issues *all* certificates of compliance after reviewing the relevant information. *See* 40 C.F.R. §§ 60.533, 60.5475.

any qualified laboratory to conduct the compliance audit test.” EPA Br. 34. That is not true. As discussed in HPBA’s opening brief (at 24-26), several core elements of EPA’s approach to audit testing and variability differ markedly:

1988 Rule	2015 Rule
<p>EPA set standards that incorporated a specific margin of intralaboratory variability (within 1.0 g/h) for wood stoves.</p> <p>53 Fed. Reg. at 5870-71.</p>	<p>EPA did not say it was incorporating specific margins of intralaboratory or interlaboratory variability into either the 2015 or 2020 standards.</p>
<p>EPA cautioned manufacturers to “provide a sufficient margin in their designs to account for intralab precision” and warned that audit tests conducted at the “same laboratory” that did the certification test would be “compared directly, without any adjustment for precision.”</p> <p>52 Fed. Reg. at 5010.</p>	<p>EPA did not caution manufacturers to provide sufficient margins in their designs to account for either intralaboratory or interlaboratory variability during audit testing.</p>
<p>EPA <i>prohibited</i> audit testing at any laboratory other than that which certified the model line, at least until it collected additional data on interlaboratory variability (which it never did).</p> <p>53 Fed. Reg. at 5011, 5871.</p>	<p>EPA can require audit testing at <i>any</i> federal laboratory or accredited private laboratory.</p> <p>80 Fed. Reg. at 13,708.</p>
<p>EPA committed to analyzing and publishing findings on interlaboratory variability and then “amend” the emission limit to account for imprecision greater than 1 g/hr. Additionally, the interlaboratory component of the precision “shall be added to the applicable emission standard” for audit testing purposes.</p>	<p>EPA made no quantitative findings on interlaboratory or intralaboratory variability. The rule no longer provides for adjustments for interlaboratory variability during audits.</p> <p>40 CFR § 60.533(n)(3)(ii).</p>

1988 Rule	2015 Rule
53 Fed. Reg. at 5871, 5878; <i>see also</i> 40 C.F.R. § 60.533(p)(4)(ii)(B).	

Collectively, the provisions in the 1988 Rule regarding intralaboratory and interlaboratory variability assured manufacturers that, having invested in the development and certification of heaters, those certifications would not be revoked due to expected variability in test results. In the 2015 Rule, EPA removed *all* of those assurances without explanation or offering any alternatives.

EPA still refuses to acknowledge that it significantly changed its audit testing requirements. EPA tries to paper over these changes in its brief by highlighting aspects of the audit regulations that have remained largely unchanged since 1988 and by claiming, for the first time, that it had good reasons for eliminating the limitations on auditing on an interlaboratory basis. These arguments are meritless.

1. EPA's Reliance on Provisions That Did Not Meaningfully Change Between the 1988 and 2015 Rules Is Misplaced.

Although EPA touts manufacturers' ability to present "relevant evidence" at a hearing before permanently losing certification, *see* EPA Br. 18-19, 32-33 & 34, that is no substitute for the audit testing limitations that EPA removed from the 1988 Rule. Nothing in the regulations requires EPA to actually *consider* evidence presented by the manufacturer to be "relevant"—let alone persuasive in rebutting



audit test results. Moreover, manufacturers have no way to obtain data about variability at the laboratory chosen by EPA to conduct the test(s) upon which EPA ultimately proposes to decertify a heater. Finally, EPA continues to dismiss as unconvincing data that manufacturers believe shows there is substantial interlaboratory variability, such as the Curkeet-Ferguson study (“Curkeet”). The ability to present “relevant evidence” at a hearing before losing certification is thus cold comfort to manufacturers.

EPA’s reliance on the 50% suspension provision similarly fails. The suspension provisions in the 1988 and 2015 Rules are almost identical. *Compare* 40 C.F.R. § 60.533(n)(3)(i) *with* 53 Fed. Reg. at 5,878 (codified at 40 C.F.R. § 60.533(p)(5)(i)). EPA fails to explain why retaining this provision in 2015 justifies deleting other provisions from the 1988 Rule that addressed variability, such as requiring that an interlaboratory variability component be added to the emission limits for purposes of audit testing *before* the Agency could require interlaboratory testing. *See* 53 Fed. Reg. at 5,878. Moreover, as previously explained (HPBA Opening Br. 18-19 & 29 n.11), the sole purpose of the suspension provision is to differentiate *temporarily* between egregious audit test fails (suspension of certification within 72 hours) and less serious fails (no immediate suspension while the manufacturer conducts additional audit tests). At the end of the day, EPA “will” revoke certifications if emissions “exceed the applicable limit” *regardless of*

*whether the exceedance is by 10% or 1000%. See 40 CFR §§ 60.533(n)(3)(ii), 60.5475(n)(3)(ii); see also HPBA Opening Br. 19.* Simply put, the suspension provision alone is no substitute for the limitations on auditing in the 1988 Rule, which served a distinct purpose.

2. EPA's Belated Justifications for Changing the Audit Testing Provisions Lack Record Support.

EPA now claims it has “good reasons” for stripping away the protections in the 1988 Rule’s audit testing provision. *See EPA Br. 34-35.* As detailed below, the conclusory assertions in EPA’s brief still fall short. While the arbitrary and capricious standard is not onerous, EPA cannot satisfy that standard because it has not “adequately explain[ed] its result” and merely relies on “conclusory statements.” *Dickson v. Sec’y of Def.*, 68 F.3d 1396, 1407 (D.C. Cir. 1995); *see also Nat’l Shooting Sports Found., Inc. v. Jones*, 716 F.3d 200, 214 (D.C. Cir. 2013) (no deference “to an agency’s conclusory or unsupported suppositions”).

EPA refers to “new data” and “analyses of data from old heaters” to support its decision to allow audit testing at any lab of its choosing, but EPA fails to explain what any of this data shows about the magnitude of interlaboratory variability. *See EPA Br. 34-35.* This Court cannot uphold EPA’s decision to change the audit testing rules without more explanation about what facts EPA found and how those facts rationally connect to the choices EPA made. *See Dickson*, 68 F.3d at 1404-05; *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto.*

*Ins. Co.*, 463 U.S. 29, 43 (1983) (court cannot “make up for such deficiencies” by “supply[ing] a reasoned basis for the agency’s action that the agency itself has not given”).

In terms of “new data,” EPA claims that a study by the Brookhaven National Laboratory shows the “repeatability of results from hydronic heater tests” to be between 3% and 15%, which Brookhaven and EPA characterize as “very good.”<sup>7</sup> EPA Br. 34-35, 13, 27 (quoting 79 Fed. Reg. 37,259, 37,261 (July 1, 2014)). To clarify, that study involved a *wood stove*, not a hydronic heater, as its title and the *Federal Register* notice cited in EPA’s brief make clear. JA\_\_ ; 79 Fed. Reg. at 37,261. EPA’s mischaracterizations of the study on which it so heavily relies seriously undermines its defense. More importantly, as EPA even acknowledges, all of the Brookhaven tests took place *at one laboratory*, which explains why EPA can only recite select findings on “repeatability” (intralaboratory variability), but nothing on reproducibility (interlaboratory variability). *Compare* EPA Br. 27 *with id.* 34-35; *see also* JA\_\_ (Brookhaven at 2-4). Because this study proves nothing about interlaboratory variability—either for wood stoves or hydronic heaters—it

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<sup>7</sup> In fact, that study concluded repeatability was “very good” at only *two* of the three burn rates tested. *See* JA\_\_ (Brookhaven at 7, 17). Results from testing at the third burn rate were far more variable (6.46 to 17.4 g/hr); consequently, Brookhaven concluded repeatability “is not as clear” without expressing variability as a percentage. *See id.* at 12.

does not support EPA's decision to remove the 1988 Rule provisions on interlaboratory variability.

EPA also references data submitted by a stove manufacturer, Woodstock Soapstone (the "Morrisey" data). EPA Br. 34-35, 11. If anything, this data confirms that interlaboratory variability remains a valid concern, especially now that the applicable emission limit for wood stoves is 2.0 g/h.<sup>8</sup> *See id*; EPA Br. 28; & JA\_\_ (EPA-HQ-OAR-2009-0734-1511) (1.9 g/hr in one laboratory versus 1.29 g/hr in another, which equates to variability that is roughly 30% of the 2020 standard). This suggests that a stove certified at between 1.4 and 2.0 g/hr is at considerable risk of failing an audit. It does not support EPA's decision to ignore interlaboratory variability during audit testing.

Apart from the aforementioned data, EPA points to the Puget Sound Clean Air Agency's ("PSCAA's") critique of the Curkeet study. EPA Br. 12. But that critique only re-assessed data from Curkeet; it did not supply additional data on which EPA could have relied to conclude that interlaboratory variability is so minimal that no accommodation need be made for it during audit testing.

Additionally, as EPA confirmed (at 13), while arguing that there is less interlaboratory variability than Curkeet found, PSCAA still concluded that such

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<sup>8</sup> As the wood stove standard tightened from 4.5 g/hr (2015) to 2.0 g/hr (2020), *any* amount of variability, whether 0.6 g/hr or 1.5 g/hr, became significantly more likely to cause manufacturers to fail an audit.

variability is  $\pm 1.5$  to 2 g/hr. JA\_\_ (EPA-HQ-OAR-2009-0734-0060 at 10). That is hardly insubstantial; even a heater certified based on compliance test results of *under* 1 g/hr may well repeatedly fail to meet a 2.0 g/hr standard if subjected to audit testing.

Critically, EPA did not adopt specific findings about the expected range of variability from *any* of these studies when promulgating the 2015 Rule.<sup>9</sup> This is evident from statements in EPA's brief suggesting wide potential ranges of variability. *E.g.*, EPA Br. 17 (arguing that the hydronic heater limits account for variability "even if there were to be method uncertainty on the order of approximately four times the expected precision of 35 percent"). Again, the core problem with EPA's treatment of interlaboratory variability in promulgating the 2015 Rule is that EPA *made no findings* that could support a decision to make no allowance for interlaboratory variability during audit testing.

EPA's final "good reason" for reversing course on audit testing requirements between the 1988 and 2015 Rules is that it "improved test methods" to "further reduce variability." EPA Br. 35; *see also id.* at 30 (asserting that "most" test results

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<sup>9</sup> As explained more fully below, EPA does not point to *any data* on variability in forced-air furnace or hydronic heater testing. Indeed, EPA had no information on central heater variability in 2015; thus, it could not—and still cannot—explain why it is nevertheless appropriate to require audit testing without any consideration of variability under 40 C.F.R. § 60.5475(n)(3).

in HPBA's dataset were the result of "less precise" test methods).<sup>10</sup> But EPA fails to explain why certain changes (*e.g.*, requiring the use of Method 5G-3, as opposed to other methods permitted under the 1988 Rule) would reduce variability so much as to render the multiple layers of protection afforded by the 1988 Rule's audit testing provisions unnecessary. "It is up to EPA . . . to support its methodology as reliable, and this requires more than reliance on the unknown" or "speculation." *Int'l Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 645 (D.C. Cir. 1973).

Even if EPA's assertion that the use of Method 5G (for measuring particulate matter emissions) will reduce variability is true, that is but one piece of the puzzle. EPA glosses over variability concerning the numerous test methods that cover the fueling and operating protocol (Method 28R or an EPA-approved cordwood method for wood stoves; ASTM E2779-10 for pellet stoves; Methods 28WHH, 28WHH PTS, or ASTM E2618-13 for hydronic heaters; and CSA Method B415.1-10 for furnaces). *See* 40 C.F.R. §§ 60.534(a), 60.5476(c)-(e). And there is variability from the inherently random nature of burning wood, for which Method 5G does not control. Addressing one source of variability does not mean that variability—and particularly interlaboratory variability—has been reduced to

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<sup>10</sup> EPA's Response to Comments similarly states, without specificity or support, that EPA "expect[s]" that "improvements to the test methods [ ] in this final rule . . . will also improve the reliability and precision (repeatability, reproducibility)." JA\_\_ (RTC 91).

the point where it is no longer necessary to account for it. Regardless, EPA never so asserted in the 2015 Rule.

For these reasons, EPA's belated assessment of the record data on variability does not support its decision to allow audit testing at different laboratories without accounting for interlaboratory variability. The 2015 Rule's audit testing provisions are therefore arbitrary and capricious.

### **III. The 2020 Emissions Standards Do Not Incorporate Margins of Variability.**

EPA goes to great lengths to overcome its obvious failure to explain why it was reasonable to remove prior limitations on audit testing on an interlaboratory basis by arguing that it incorporated "margins of variability" into the 2020 standards. *See* EPA Br. 22, 24-32. The record belies EPA's assertions.

To begin, EPA conflates two distinct questions: (1) whether lower emissions standards can be measured accurately once; and (2) whether the new interlaboratory audit testing requirements are sound. HPBA's petition raises the latter issue, not the former.<sup>11</sup> Even if manufacturers can achieve the 2020 emission

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<sup>11</sup> EPA wrongly suggests that HPBA changed its position to focus on audit testing "instead" of arguing whether the standards are unachievable. EPA Br. 24. That is not the case. In its comments, HPBA clearly addressed *both*. JA \_\_\_. That HPBA also raised concerns about the achievability of the 2020 standards in its comments does not undercut its challenge to the audit testing requirements.

limits by passing an initial certification test, the 2015 Rule does not cure—or even address—the problems with EPA’s audit testing requirements.

Despite its contrary claims, EPA never quantified the magnitude of variability when it promulgated the 2015 Rule, nor did it assert that the 2020 standards for any of the three appliance categories incorporated a particular margin of variability:

*First*, forced-air furnaces provide the clearest example: not a single record citation in EPA’s brief reflects that EPA analyzed variability for furnaces. EPA candidly admits that it had no data showing the 2020 limit for furnaces is achievable (much less the 140% margin of variability it now claims to have built in); nevertheless, it set standards based on manufacturers’ optimistic projections that they were designing products that could eventually meet the standard. EPA Br. 17. The fact is, EPA “entirely failed” to consider variability both in setting the 2020 standard for furnaces and in imposing audit testing requirements. *State Farm*, 463 U.S. at 43.

*Second*, EPA’s claim (at 26) that it “accommodated ‘method uncertainty’” for hydronic heaters by incorporating a 140% margin of variability is equally unpersuasive. That figure appears to be the difference between the hydronic heater cord wood alternative standard and “the lowest demonstrated emissions results” for hydronic heater emissions, *id.*, not an allowance calculated to accommodate a



particular amount of interlaboratory (or intralaboratory) variability. To be sure, the preamble to the 2015 Rule vaguely mentions the “expected precision of 35 percent” when discussing the 2020 hydronic heater cord wood alternative limit. *See* 80 Fed. Reg. at 13,687. But there is no data supporting that expectation anywhere in the record.<sup>12</sup> That unsupported and conclusory statement is not evidence of reasoned decision-making. *See Nat’l Shooting Sports*, 716 F.3d at 214; *see also Mo. Pub. Serv. Comm’n v. FERC*, 234 F.3d 36, 41 (D.C. Cir. 2000) (“A passing reference . . . is not sufficient to satisfy the Commission’s obligation to carry out reasoned and principled decisionmaking.”) (internal quotation marks omitted). And as explained above (at 14-15), EPA’s reliance on the Brookhaven study, which addresses *wood stoves*, to try to show that it reasonably incorporated a large margin of variability into the *hydronic heater* standards is meritless.

*Third*, regarding wood stoves, EPA now claims that it “included a margin of 1 g/hour to reflect imprecision in testing” in “both the 2020 crib wood and cord wood limits for room heaters.” EPA Br. 25.<sup>13</sup> Notably, there is no citation for this

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<sup>12</sup> HPBA’s comments noted that the limited data on variability in hydronic heater testing suggests that intralaboratory variability was 0.50 lb/mmBtu. JA\_\_ (HPBA Comments at 112; citing JA\_\_ (Intertek Testing Services Comment on Variability, at 7-8 (Apr. 30, 2014))). EPA did not address that comment.

<sup>13</sup> Ironically, EPA elsewhere (at 31) criticizes HPBA for expressing variability in grams/hr, rather than “as a percentage,” and asserts that, when expressed as a percentage, “HPBA calculated variability . . . to be  $\pm 112\%$ .” But the Curkeet study did not do that. Rather, that study used “coefficient of variability” (“CV”)

statement. Further on, EPA quotes from the 2015 Rule preamble—that “precision is no better than 1.0 g/hr” and “1.0 g/hr plus 1.0 g/hr equals 2.0 g/hour”—as demonstrating that it incorporated that specific margin of variability when setting the crib wood limits. *Id.* (citing 80 Fed. Reg. at 13,686). First, EPA’s citation is wrong; those two phrases appear together in a discussion of the 2020 standards’ stringency at 80 Fed. Reg. at 13,687.<sup>14</sup> And EPA omits critical context:

*Several stoves have been EPA-certified at 1.0 g/hr, which is well under the final Step 2 emission limit of 2.0 g/hr. Even if the commenters’ claims were correct that the precision is no better than 1.0 g/hr, the final emission limit of 2.0 g/hr would still cover these stoves, i.e., 1.0 g/hr plus 1.0 g/hr equals 2.0 g/hr.*

*Id.* (emphasis added). Thus, EPA never found that precision was at, or even “no better than 1.0 g/hr”; rather, it attributed, without analyzing, that number to unidentified “commenters’ claims.” *Id.* at 13,686. At any rate, none of this supports

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calculations to confirm that “variability is high,” and offered the following illustration: “For example, a CV of 40% implies that the results of any one test could vary by +/-112% from a population mean with a probability of 5% or less of being farther away.” JA\_\_ (EPA-HQ-OAR-2009-0734-0222 at 8). That is not the same as calculating that variability is 112%. Rather, the study found that “[f]or any emissions rate measured using the EPA test methods, the result could be 4.9 to 9.8 grams per hour higher or lower if the appliance were tested again at a different laboratory.” *Id.* Regardless, whether expressed as a percentage or in grams/hr, none of the record evidence suggests interlaboratory variability is zero, which is essentially what the 2015 Rule’s auditing requirements assume.

<sup>14</sup> The prior page also contains the “precision is no better” language, but in a different (and irrelevant) context: a discussion of the alternative cord wood limit. *See* 80 Fed. Reg. at 13,687.

the assertion in EPA's brief that the 2.0 g/hr standard incorporates a sufficient margin of variability. The "commenters' claim" is, after all, that testing imprecision is "no better than" 1.0 g/hr; *i.e.*, it is *at least* that amount. Given that EPA admits that only "several" best performers in the wood stove category have been certified at 1.0 g/hr, a standard of 2.0 g/hr does not provide a sufficient margin for imprecision of *at least* 1.0 g/hr.

Perhaps most importantly, the quoted passage above is not an analysis of variability. EPA bypassed a meaningful analysis of variability, opting instead to state that an assumed variability of 1.0 g/hr would not be a problem for the cleanest stoves. Nothing in the above-quoted passage, or elsewhere in the Rule, suggests that EPA calculated and incorporated a specific margin of variability in the 2020 standards—much less that it analyzed *interlaboratory* variability in particular—before reversing its longstanding restriction on audit testing on an interlaboratory basis in promulgating the 2015 Rule.<sup>15</sup> Furthermore, what does EPA's assurance that the cleanest certified wood stoves should meet the 2020 standards with some room to spare mean for other stoves? By EPA's logic, a stove certified at 1.6 g/hr may not be compliant because it could yield audit test results of 2.6 g/hr *or higher*.

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<sup>15</sup> Nor did EPA suggest, in any of the RTC passages addressing HPBA's concerns about variability during audit testing, that either the 2015 or 2020 standards already incorporated a margin of variability. *See* JA\_\_ (RTC at 148-50, 175-76, 220-21, 236 & 364-65).

If true, this is information that EPA plainly needed to provide to manufacturers in the 2015 Rule, so that they could try to incorporate a 1.0 g/hr margin into their designs—or challenge the 2020 standards as overly stringent on that basis.

All of this sharply contrasts with the 1988 Rule. There, EPA made specific findings regarding the magnitude of intralaboratory variability and explicitly incorporated those findings into the standards. 53 Fed. Reg. at 5,870-71 (“data available . . . about intralaboratory precision . . . indicated that this precision was within 1 g/hr for a four test run average.”); 52 Fed. Reg. 4,994, 5,010 (Feb. 18, 1987) (“[T]he intralab precision of the test method and procedure was taken into account in the establishment of the standards”). Because EPA recognized that it lacked data on *interlaboratory* variability, it prohibited audit testing on an interlaboratory basis until it studied that issue and made the necessary adjustments. *See* 53 Fed. Reg. at 5,871 & 5,878. Taking a belt-and-suspenders approach, EPA clearly warned manufacturers in the 1988 Rule to “provide a sufficient margin in their designs to account for intralab precision.” 52 Fed. Reg. at 5,010. No such warning was provided in 2015—let alone any articulation of how much of the standard was intended to accommodate variability, as EPA now argues was the case. The contrast between EPA’s careful consideration of and accommodation for both intralaboratory and interlaboratory variability in the 1988 Rule, and EPA’s failure to assess or accommodate variability in the 2015 Rule, could not be clearer.

At bottom, EPA never disputes there is variability in wood heater emissions testing; it only argues about the *magnitude* of variability to try to show that it is less than its purported 1.0 g/hr “margin of variability.” But if this Court agrees that EPA did not actually incorporate margins of variability into the 2020 emission standards, the audit testing provisions necessarily fail, because they effectively codify an assumption that variability is negligible or non-existent, which has no basis in the record.

#### **IV. Vacatur Is the Appropriate Remedy.**

Intervenors’ assertion (at 3-6) that remand without vacatur is the appropriate remedy is unconvincing. “The ordinary practice is to vacate unlawful agency action.” *United Steel v. Mine Safety & Health Admin.*, 925 F.3d 1279, 1287 (D.C. Cir. 2019). And for good reason: remand without vacatur risks “invit[ing] agency indifference.” *In re Core Commc’ns, Inc.*, 531 F.3d 849, 862 (D.C. Cir. 2008) (Griffith, J., concurring); *see also Natural Res. Def. Council v. EPA*, 489 F.3d 1250, 1262-64 (D.C. Cir. 2007) (Randolph, J., concurring) (“A remand-only disposition is, in effect, an indefinite stay of the effectiveness of the court’s decision and agencies naturally treat it as such.”).

Under the familiar *Allied-Signal* test, this Court should vacate the audit testing provisions in the 2015 Rule. *See Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm’n*, 988 F.2d 146, 150-51 (D.C. Cir. 1993) (“The decision

whether to vacate depends on the seriousness of the order's deficiencies . . . and the disruptive consequences of an interim change that may itself be changed.”). EPA's failure to explain and support its decision goes to the heart of the challenged auditing provisions, and vacatur would have no disruptive results here.

*First*, EPA's “fail[ure] to offer a reasoned explanation” for the audit testing requirement renders those provisions “*ultra vires* and unenforceable.” *United Steel*, 925 F.3d at 1287; *see also Petroleum Commc'ns, Inc. v. FCC*, 22 F.3d 1164, 1173 (D.C. Cir. 1994) (vacating rule even though the Court “d[id] not foreclose the possibility that the [agency] may develop a convincing rationale” on remand). Contrary to Intervenors' claim, EPA cannot reach the same result on remand. As explained above, there is no information in the record on variability in forced-air furnace testing, and EPA's unsupported supposition in the 2015 Rule preamble about the “expected precision” of hydronic heater testing is not a sufficient basis to retain the audit testing provision for central heaters (40 C.F.R. § 60.5475(n)). Without supporting data, there is nothing that EPA can point to on remand to justify its decision to impose audit testing without any adjustments for variability. EPA's lack of a reasoned explanation for the wood stove audit testing provision (40 C.F.R. § 60.533(n)) is also incurable. Simply put, EPA ignored interlaboratory variability, and even the data EPA now references to try to show otherwise proves that there is too much interlaboratory variability to reverse course from the 1988

Rule by requiring audit testing without *any* adjustment for such variability. *See supra* at 13-16.

*Second*, vacatur would not have disruptive consequences in this case. EPA itself asserts (at 37-38) that it “rarely” intends to require audit testing. Thus, Intervenor’s claim that vacatur of the 2015 Rule’s audit testing requirements would harm the environment rings hollow. Furthermore, vacatur of the 2015 audit testing rule results in reinstatement of the 1988 audit testing rule, which appropriately and meaningfully accounts for variability. *See United Steel*, 925 F.3d at 1287 (“The 2018 Amendment modifies the terms of the 2017 Standard and so vacatur of the 2018 Amendment simply undoes those modifications.”); *accord Georgetown Univ. Hosp. v. Bowen*, 821 F.2d 750, 757 (D.C. Cir. 1987) (“This circuit has previously held that the effect of invalidating an agency rule is to reinstate the rules previously in force.”). EPA would remain free to conduct audits under the terms of the 1988 Rule while it decides how to address a court-ordered vacatur.

## CONCLUSION

The Court should grant HPBA’s petition and vacate the 2015 Rule’s audit testing provisions (40 C.F.R. §§ 60.533(n) & 60.5475(n)).

Dated: October 9, 2020

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## CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitations of Federal Rule of Appellate Procedure 32(a)(7)(B) because it contains 6,403 words, excluding the parts of the brief exempted by Rule 32(a)(7)(B)(iii). This brief complies with the typeface requirements of Rule 32(a)(5) and the type style requirements of Rule 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word 2010 in Times New Roman and 14-point font.

/s/ David Y. Chung

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**CERTIFICATE OF SERVICE**

I hereby certify that on October 9, 2020, I caused copies of the foregoing Initial Reply Brief to be served by the Court's CM/ECF system, which will send a notice of the filing to all registered CM/ECF users.

/s/ David Y. Chung

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