ORAL ARGUMENT NOT YET SCHEDULED

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

No. 12-1100 (and consolidated cases)

WHITE STALLION ENERGY CENTER, L.L.C., *et al.*, Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*.

Respondents.

Petition for Review of Final Administrative Action of the United States Environmental Protection Agency

REPLY BRIEF OF ENVIRONMENTAL PETITIONERS

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ACRONYM	ENGLISH
EGU	Electric Generating Unit
EPA	Environmental Protection Agency
Floor Memo	Memorandum from Jeffrey Cole to Bill Maxwell regarding National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) Floor Analysis for Coal- and Oil-Fired Electric Utility Steam Generating Units for Final Rule (Dec. 16, 2011)
MACT	Maximum Achievable Control Technology
PM	Filterable Particulate Matter
Rule	National Emission Standards For Hazardous Air Pollutants From Coal And Oil-Fired Electric Utility Steam Generating Units And Standards Of Performance For Fossil-Fuel- Fired Electric Utility, Industrial-Commercial- Institutional, And Small Industrial- Commercial-Institutional Steam Generating Units, 77 Fed.Reg. 9,304 (Feb. 16, 2012)
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SUMMARY

EPA accepts that the Averaging Alternative extends the averaging period of the standards, but asserts that it does not reduce their stringency because it does not result in more "total emissions." Brief for Respondent (Resp.) 105-107. The Rule's standards regulate emissions rates – not quantity. And the Averaging Alternative allows higher rates than those EPA specified as its floor. For that reason, and as EPA has always acknowledged (even within this Rule), the Averaging Alternative's extension in the standards' averaging period reduces their stringency below the statutory minimum, 42 U.S.C. §7412(d). *See* 77 Fed.Reg. 9,304, 9,385 (Feb. 16, 2012).

The Agency acknowledges that its Parametric Monitoring Alternative permits units to exceed the standards, but claims that such exceedances are "unlikely." Resp. 114. The Agency points to no data showing they are unlikely, nor provides any authority permitting it to authorize unlikely exceedances. EPA also fails to explain how its monitoring conforms with the methods used to create and measure compliance with the standards. And the Rule's reduced monitoring for low-emitting units conflicts with a record emphasizing emissions variability.

ARGUMENT

I. The Averaging Alternative Violates the Statute.

A. The Averaging Alternative Impermissibly Decreases the Standards' Stringency.

The Agency set the Rule's standards at the "floor," the minimum stringency permitted by the Act. 77 Fed.Reg. 9,304, 9,307 (Feb. 16, 2012), JA___. EPA does not dispute this point. These standards contained a specific averaging period (30 boiler-operating-days) at which the Agency deemed the specified numerical emissions rates to be the floor. RTC Vol. 1 at 497 & Vol. 2 at 31, JA__, __. This, too, EPA does not dispute.

The Averaging Alternative extends the averaging period of the Rule's standards from 30 boiler-operating-days to 60, 90 or more. 77 Fed.Reg. at 9,385, JA____. EPA – again – does not claim otherwise. And EPA accepts, as it must, that if this extension in averaging period reduces the stringency of the Rule's standards, the Averaging Alternative violates the Act. Resp. 106. *See also* Opening Brief of Environmental Petitioners ("Env.") 15-22 (describing violation of minimum-stringency

and maximum-control requirements). This petition turns, therefore, on a single question: does an extension in averaging period reduce the stringency of the standards?

The Agency claims that the standards' stringency is unaffected by the Averaging Alternative's enlarged averaging period – because "total emissions from the affected source [will] be no greater as a result of the averaging alternative than if each [affected] unit[] were required to demonstrate compliance separately," Resp. 105-107. But "the stringency of a standard is a function of both the numerical value of the standard *and the averaging period.*" 64 Fed.Reg. 52,828, 52,930-31 (Sept. 30, 1999) (emphasis added)).

This is so because, first, the stringency of the Rule's standards is not defined by "total emissions." The standards regulate the *rate* of emissions (pounds of pollutant *per unit of energy used*). 76 Fed.Reg. 24,976, 25,037 (May 3, 2011) (standards are "rate limitations" defined "as a mass of pollutant emitted per heat energy input"). A speed limit (miles *per hour*, a rate) is less stringent if it allows cars to go faster, regardless of the 'total quantity' of miles travelled. Likewise, an emissions standard is less stringent if it allows higher pollution rates, regardless of the "total quantity" of emissions, 77 Fed.Reg. at 9,385.

And the Averaging Alternative permits higher pollution rates. The best-performing units' normal, average emissions rates are well below the numerical rates EPA included in its standards. See Floor Memo at B-2-B-7, JA_-__ (comparing mean emissions rates with rates in standards). But as EPA emphasized, generating units' emissions rates are highly variable; their worst-case emissions rates significantly exceed their normal operating rates. 76 Fed.Reg. at 25,041. RTC Vol. 1 at 460, JA__. To accommodate that variability, the Agency set standards (numerical emissions rates and an averaging period) that allow units to exceed the prescribed emissions rate at times, while otherwise maintaining emissions at a normal operating level below that rate. 76 Fed.Reg. at 25,044-45 (EPA set rates expecting "that ... units that perform better than the floor on average could potentially exceed [those] levels a part of the time").

The averaging period determines the standards' stringency because it sets the boundary on the size and length of those exceedances (spikes), by defining how many hours of normal, lower-pollution

operations they will be averaged against. *See* Env. 3-5. As EPA puts it: a longer averaging period allows "high" measurements to "be averaged with many more measurements closer to the mean" over that longer period. 77 Fed.Reg. at 9,385, JA_.

Here, EPA determined that its floor-level numerical emissions rates reflected the effects of "regular process and fuel variability" (including the frequency, length, and severity of emissions spikes) over an averaging period of 30 boiler-operating-days. RTC Vol. 1 at 564, JA_. *See* RTC Vol. 2 at 31, 36, JA__, __ (rejecting longer averaging periods as inconsistent with statutory stringency requirements). The Averaging Alternative allows longer and larger spikes than that floor, by providing plant-owners an additional 30, 60 or more boiler-operating-days with which to dampen such spikes' effects on the calculated numerical emissions rate (that is, for rates to regress to the mean). 77 Fed.Reg. at 9,385.

While the potential for spikes may be "inherent in all rate-based standards," Resp. 106, a standard permitting longer and larger pollution spikes is nevertheless less stringent than a standard permitting only shorter, smaller spikes: the former allows pollution

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rates that the latter would prohibit. That decrease in stringency causes real harm. Addendum to Env. (Sahu Decl. ¶¶ 18-21, describing harm to petitioners' members from longer averaging periods). As a practical matter, too, it results in more pollution; high-polluting units adjacent to newer, cleaner units will be able to forego controls that would otherwise be required. *See* Env. 10-11.

EPA has, for these reasons, always acknowledged that increased averaging results in a less stringent standard:

Fundamental to any emissions control parameter is the way averaging affects an emissions standard or limit. At a fixed numerical value, *a standard or limit is more stringent as the averaging period decreases and less stringent as the averaging period increases*

62 Fed.Reg. 67,788, 67,797 (Dec. 30, 1997) JA_ (emphasis added). See, e.g., 77 Fed.Reg. 72,512, 72,545 (Dec. 5, 2012), JA_ (longer averaging period allows "short-term spikes [to] be 'smoothed out," reducing stringency); 77 Fed.Reg. 39,943, 39, 946 (July 6, 2012) ("[A] limit expressed as an annual average is inherently less stringent than the same limit expressed as a 30-day average."); 75 Fed.Reg. 54,970, 54,988 (Sept. 9, 2010), JA_ ("increasing the averaging period ... normally makes a standard more lenient because there is more opportunity to average out individual results."). 73 Fed.Reg. 64,068, 64,090 (Oct. 28, 2008), JA___ ("[S]horter averaging periods result in more stringent control of the parameter."); 69 Fed.Reg. 21,198, 21,229 (Apr. 20, 2004), JA__ ("[T]he averaging period associated with the numerical emissions limitation affects the stringency of the standard."); 64 Fed.Reg. at 52,930-31, JA__ ("[T]he longer the averaging period the less stringent the standard").

The Agency has provided no reason why that relationship between averaging period and stringency does not exist for these standards. Rather, it confirmed *in this Rule* that adding boiler-operating-days to the standards' averaging period would decrease their stringency. 77 Fed.Reg. at 9,385, JA___ (statutory floor demands lower numerical rate with longer averaging period). Indeed, when EPA assessed the numerical emissions rates of the best-performing units over longer averaging periods, the Agency concluded that it had to set lower numerical emissions rates to meet the statutory "floor." *See* Memorandum from Stephen Boone to Bill Maxwell dated December 9, 2011 at 2-3, Docket ID No. EPA-HQ-OAR-2009-0234-20134, JA__-

____(analyzing MACT floor "if EPA decides to promulgate a compliance

period longer than 30 days," and finding lower numerical emissions rate over longer averaging periods).

Intervenors would justify the Averaging Alternative on grounds that EPA has not invoked, and which this Court should not credit. *See New Jersey v. EPA*, 517 F.3d 574, 581 n.3 (D.C. Cir. 2008) (refusing to consider rationale EPA did not offer on the record). Intervenors claim that the formula by which multi-unit averages are calculated leaves the "standards' operating period" unaffected, because that formula requires multiple units to "sum, over [a] 30-*group* boiler operating day compliance period, the hourly mass emissions of the [units] in the averaging *group*," and then to divide the result "by total [group] heat input or electrical output." Joint Brief of Industry Intervenors in Response to Environmental Petitioners ("Joint Br.") 4 (emphasis added).

But a "group" operating-day is crucially different from a boileroperating-day: it incorporates one operating-day for *each* unit in the "group." The Averaging Alternative's formula sums, for example, emissions from three separate units over 30 days at each unit, and divides the resulting emissions by the units' total heat input during

those 30 operating-days apiece – as one could sum the emissions of a single unit over three 30-day periods, and divide the resulting emissions by the heat input of that single unit over those three 30-day periods.¹ 77 Fed.Reg. at 9,473-4, JA___; 40 C.F.R. § 63.1009(b)(1)). In both cases, the averaging period increases to 90 boiler-operating-days, and the standard's stringency decreases. That decrease is not permitted where, as here, EPA has set its standards at the statutory floor. 42 U.S.C. §7412(d)(3).

Finally, petitioners do not "quarrel with the Rule's definition of an existing affected source." Resp. 104. They challenge EPA's decision to *set* its emissions standards at the maximum, variable numerical rates of the best performing plants over an averaging period of 30 boiler-operating-days; then to permit *compliance* with the same numerical

¹ Intervenors note that some of the units from which EPA calculated its floors shared a single smokestack. Joint Br. 3. EPA assumed that such units were responsible for equal portions of the total emissions through the shared stack. RTC Vol. 2 at 394-96, JA__. This very different "averaging" is irrelevant. Petitioners object to EPA's decision to increase the averaging period of standards which it found to be the "floor" only over a period of 30 days – not "averaging" per se. That objection remains, regardless of how EPA calculated emissions rates during its floor analysis.

rates over a longer, less stringent averaging period. Once EPA has set floor-level standards premised upon one averaging period, it cannot dilute their stringency by adding operating-days to that period – whether those days come from within the same "source," or not. 42 U.S.C. §7412(d). *See* 77 Fed.Reg. at 9,385 (adding days from the same source to averaging period reduces standards' stringency). *See Nat'l Lime Ass'n v. EPA*, 233 F.3d 625, 629 (D.C. Cir. 2000).

B. The Averaging Alternative Lacks a Rational Basis.

Where EPA has previously permitted source-wide averaging, it has – because such averaging otherwise decreases stringency – compensated with a "discount factor" reducing the applicable numerical emissions rate. *See* Env. 9-10. The Agency did not provide a similar discount for the Averaging Alternative, claiming "homogeneity of fuels within the rule['s] subcategories" made it "unwarranted."² 77 Fed.Reg. at 9,386, JA_. The Agency merely reiterates that rationale, without explaining it, or providing any record support for it. Resp. 109-110. EPA has acknowledged that emissions within its subcategories are highly

² A discount factor only provides a means by which EPA could have (and previously has) allowed increased averaging without weakening the Rule's standards. *Cf.* Resp. 109 (characterizing absence of discount as "main complaint").

variable, and the Rule's subcategories encompass decidedly nonhomogenous fuels. The Agency's stated rationale consequently conflicts with the record. *See* Env. 17-22. *See Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983).

II. The Monitoring Alternatives Are Unlawful.

A. The Parametric Monitoring Alternative Violates the Act.

EPA concedes that the Parametric Alternative permits units to exceed the standards, as it must. The Alternative undisputedly allows sources to calibrate their operating parameter to the *highest* single hour of a nine-hour test, as long as the *average* concentration of the test is below the limit. Env. 12. Because the highest hourly concentration within nine hours of stack testing may greatly exceed the standard, even while average test emissions do not, Env. 23-24, the Parametric Alternative allows sources to certify compliance even when their emissions violate the standard.

EPA claims only that such exceedances are "unlikely." Resp. 114. The agency cites no legal authority by which it could authorize "unlikely" exceedances. As this Court has held, the Clean Air Act unambiguously requires continuous compliance with section 112

standards. *Sierra Club v. EPA*, 551 F.3d 1019, 1028 (D.C. Cir. 2008). Nor does EPA cite any data to support its assertion that exceedances are "unlikely."

The Parametric Alternative also *conflicts* with the method used to develop the standard and determine compliance – stack test averages.³ EPA gives no rational explanation for allowing sources to base their parametric monitoring upon the highest single hour of stack test emissions, a parameter completely unrelated to the test averages. In Portland Cement Association v. Ruckelshaus, 486 F.2d 375, 396-97 (D.C. Cir. 1973), this Court found that EPA failed to explain a discrepancy between the short-term test data used to establish a limit and the longer-term averaging period used to measure compliance. The Court subsequently confirmed that EPA must explain how its parameters correspond to the underlying standard, upholding EPA's monitoring approach in *NRDC v. EPA* only after the Agency assured the Court that operators would establish "correlation between the control parameters

³ Under EPA's approach, stack test averages determine compliance, while the Parametric Alternative "ensures" compliance. RTC Vol. 2 at 78, JA_; *see also* 77 Fed.Reg. at 9,472, JA_; 40 C.F.R. § 63.10007(a), (d).

and emission limits." 194 F.3d 130, 136 (D.C. Cir. 1999). EPA provides no such explanation or assurance regarding the Parametric Alternative.

EPA characterizes its monitoring regime as "technical," and therefore within its discretion. Resp. 113. That discretion is, however, bounded. EPA must require monitoring sufficient to assure compliance with Section 112 limits, which must be met on a continuous basis. Env. 11. The Parametric Alternative fails to meet this standard.⁴

B. Petitioners May Challenge the Monitoring Provisions.

EPA argues that petitioners failed to raise their monitoring claims during the comment period, but EPA previously acknowledged that the proposed rule did not include the Parametric Alternative. RTC Vol. 2 at 452, JA____. The proposal included parametric monitoring only to supplement (not replace) a requirement to continuously monitor actual emissions, and the proposed parameters corresponded to stack-test averages, not peak hourly emissions. 76 Fed.Reg. at 25,052. The final Rule eliminated the requirement to continuously monitor emissions, and substituted a parameter based on maximum hourly emissions,

⁴ Sierra Club v. EPA, 353 F.3d 976, 991-92 (D.C. Cir. 2004), held only that EPA could authorize parametric monitoring where it rationally determined that the method assured compliance and was consistent with the required compliance test. *Cf.* Resp. 117.

without explanation or warning. Env. 12. Petitioners therefore could not comment on the Parametric Alternative. Petitioners have filed a reconsideration petition raising their claims. Petition for
Reconsideration, Docket ID No. EPA-HQ-OAR-2009-0234-20187, JA__.
EPA is reconsidering the same Parametric Alternative for new sources, but has not initiated reconsideration proceedings for existing ones. 77
Fed.Reg. 71,323, 71,329 (Nov. 30, 2012), JA___.

C. EPA's Reduced Monitoring for Low Emitting Units Conflicts With the Record.

EPA incorrectly states that units qualify as "low emitting" only after twelve consecutive quarterly stack tests measure particulate or nonmercury metal concentrations below 50% of the limit. Resp. 119 & n.59. In fact, the Rule requires stack tests on only an annual basis for units employing the Parametric Alternative, which EPA identifies as the most likely option for most units. 77 Fed.Reg. at 9,466, JA___; 40 C.F.R. § 63.10000(c)(iv)(A). EPA thus allows these units to forego testing for three years based on only three stack tests. Env. 12.

This approach assures compliance only if EPA can show that particulate emissions over three years will not exceed twice the amounts measured through stack testing. EPA has not made that showing; the Agency found that stack test results among even the best performers will vary by more than a factor of ten. Floor Memo at B-2, JA___.

To identify the floor, EPA evaluated multiple stack tests from 130 best-performing sources. Those sources' mean emission rate was 0.00216 lb/MMbtu. Floor Memo at B-2, JA___. EPA asserted, however, that emissions from its best performers varied enough to inflate its "floor" to 0.030 lb/MMbtu, over 30 boiler-operating-days. *Id.*; *see also* RTC Vol. 1 at 435, JA___. In other words, EPA concluded that even emissions from the cleanest sources would vary by as much as 14 times the average emission rate measured during multiple stack tests.

EPA's own data indicate that emissions from the same unit can vary by more than a factor of two. Floor Memo, Att. a4 (worksheet titled "fPM_avg_MMBtu"), JA____. For example, 72 of EPA's best performers reported results from at least four stack tests. In 23 cases, the highest emission rate exceeded twice the average emission rate from all other tests at the same unit. *Id.* PM emissions from one test at Salem Harbor were more than ten times higher than results from three other stack tests at the same unit. *Id.* In short, the record provides no support for –

in fact, contradicts – EPA's belief that three annual stack tests below 50% of the limit demonstrate that a unit's PM emissions will remain below the limit for three years. Resp. 119.

EPA has suggested that parametric monitoring will assure compliance between triennial stack tests for low emitting facilities. Resp. 119. As explained above, the parameters selected by EPA do not assure compliance. Reducing stack test frequency could also reduce the accuracy of parametric monitoring, since operating conditions change and the tests are used to reestablish the relationship between parameters and emission rates.

Finally, EPA's response suggests that the Rule's monitoring plans and calibration techniques, meant only to assure that testing and parametric monitors operate as intended, will address petitioners' concerns. But petitioners' concern is that the parameters selected will not assure compliance – not that the parameters will be measured inaccurately.

Dated: March 25, 2013

Respectfully submitted,

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CERTIFICATE REGARDING WORD LIMITATION

Counsel hereby certifies, in accordance with this Court's Order filed August 24, 2012 (Doc No. 1391295) and Federal Rule of Appellate Procedure 32(a)(7)(C), that the foregoing Reply Brief of Environmental Petitioners contains 2,988 words, as counted by counsel's word processing system. DATED: March 25, 2013

<u>/s/James S. Pew</u> James S. Pew

CERTIFICATE OF SERVICE

I hereby certify that on this 25th day of March, 2013 I have served the foregoing Reply Brief of Environmental Petitioners on all registered counsel through the Court's electronic filing system (ECF).

<u>/s/James S. Pew</u> James S. Pew