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# United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

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Argued November 13, 2003      Decided February 24, 2004

No. 01-1053

NORTHEAST MARYLAND WASTE DISPOSAL AUTHORITY,  
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,  
RESPONDENT

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Consolidated with  
01-1054, 01-1055, 02-1280, 02-1299, 03-1093

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On Petitions for Review of an Order of the  
Environmental Protection Agency

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*Timothy R. Henderson* argued the cause for petitioners Northeast Maryland Waste Disposal Authority, *et al.* With him on the briefs was *Warren K. Rich*.

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Bills of costs must be filed within 14 days after entry of judgment. The court looks with disfavor upon motions to file bills of costs out of time.

*James S. Pew* argued the cause and filed the briefs for petitioners Sierra Club and New York Public Interest Research Group.

*H. Michael Semler* and *Stephen E. Crowley*, Attorneys, U.S. Department of Justice, argued the cause and filed the brief for respondents.

Before: SENTELLE, HENDERSON and GARLAND, *Circuit Judges*.

Opinion for the court *Per Curiam*.

*Per Curiam*: This action challenges the Emission Guidelines for Existing Small Municipal Waste Combustion Units, 65 Fed. Reg. 76,378 (Dec. 6, 2000), and the New Source Performance Standards for New Small Municipal Waste Combustion Units, 65 Fed. Reg. 76,350 (Dec. 6, 2000), promulgated by the United States Environmental Protection Agency (EPA, Agency) pursuant to § 129 of the Clean Air Act (CAA), 42 U.S.C. § 7429.<sup>1</sup> The petitioners include three members of the municipal waste combustor industry (Industry Petitioners): Northeast Maryland Waste Disposal Authority (Northeast Maryland), which operates four municipal waste combustor (MWC) units in Harford County, Maryland;<sup>2</sup> Dutchess County Resource Recovery Agency, which operates

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<sup>1</sup> Under the regulatory scheme, for existing units EPA promulgates “emission guidelines” which “do not directly regulate any MWC units, but . . . require States to develop plans to limit air emissions from existing small MWC units.” 65 Fed. Reg. at 76,379. For new units, by contrast, EPA promulgates “new source performance standards” with which MWC operators must directly comply. *See id.* Both the new source performance standards and the emission guidelines for existing sources are commonly referred to as “standards.”

<sup>2</sup> Waste Energy Partners (WEP), a one-time owner of the Harford County, Maryland facility, originally filed this action. On July 1, 2002, however, Northeast Maryland acquired WEP’s ownership interest in the Harford facility. Accordingly, on August 14, 2002, we added Northeast Maryland as a party to WEP’s petition in No. 01–1053, and on November 4, 2003, we granted WEP’s motion to withdraw from these proceedings.

two MWC units at a facility in Poughkeepsie, New York and Islip Resource Recovery Agency, which operates two MWC units at a facility in Islip, New York. The petitioners also include two environmental organizations: the New York Public Interest Research Group (NYPIRG) and the Sierra Club (collectively identified as Sierra Club). For the reasons set out below, we grant the petitions in part and deny the petitions in part.

### I.

The challenged rulemaking is now in its third decade. In 1987 EPA issued an advance notice of a rulemaking to regulate pollutants produced by MWC emissions pursuant to § 111 of the CAA, 42 U.S.C. § 7411, which requires EPA to develop emission standards generally for each category of pollutant EPA determines “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare,” 42 U.S.C. § 7411(b)(1)(A). *See* Assessment of Municipal Waste Combustor Emissions Under the Clean Air Act, 52 Fed. Reg. 25,399, 25,399 (July 7, 1987). In 1989 EPA issued proposed emission regulations imposing limits on the MWC emission levels for specific pollutants, based on the level of emissions achievable with the best pollution control technology, but did not prescribe specific control technologies to be used to achieve the limits. *See* Standards of Performance for New Stationary Sources; Municipal Waste Combustors, 54 Fed. Reg. 52,251 (Dec. 20, 1989).

In 1990 the Congress enacted CAA § 129, 42 U.S.C. § 7429, which expressly requires EPA to establish specific standards for each “solid waste incineration unit.”<sup>3</sup> The standards must “reflect the maximum degree of reduction in emissions of air pollutants listed under section (a)(4) that [EPA], taking into consideration the cost of achieving such

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<sup>3</sup> The statute defines a “solid waste incineration unit” as “a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public.” 42 U.S.C. § 7429(g)(1).

emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category.” *Id.* § 7429(a)(2).<sup>4</sup> These standards are known as “maximum achievable control technology” or “MACT” standards. The statute limits EPA’s discretion to determine the stringency of MACT standards. MACT standards must be at least as stringent as the MACT floor set for each pollutant. The MACT floor for new units is defined as “the emissions control . . . achieved in practice by the best controlled similar unit.” *Id.* The MACT floor for existing units is defined as “the average emissions limitation achieved by the best performing 12 percent of units in the category.” *Id.* The statute mandates two “categories” within both existing and new units (defined in terms of combustion capacity), with different deadlines for promulgating standards, *id.* § 7429(a)(1)(B)-(C), and further provides that EPA “may distinguish among classes, types, . . . and sizes of units within a category in establishing [MACT] standards,” *id.* § 7429(a)(2).

In 1994 EPA proposed new standards governing MWC units pursuant to § 129. *See* Standards of Performance for New Stationary Sources: Municipal Waste Combustors, 59 Fed. Reg. 48,198 (Sept. 20, 1994). The Agency proposed distinct sets of standards for new and for existing sources, as the statute contemplates, and broke down both source types

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<sup>4</sup> Subsection (a)(4) of § 129 provides:

The performance standards promulgated under . . . this section and applicable to solid waste incineration units shall specify numerical emission limitations for the following substances or mixtures: particulate matter (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, and dioxins and dibenzofurans. The Administrator may promulgate numerical emissions limitations or provide for the monitoring of postcombustion concentrations of surrogate substances, parameters or periods of residence time in excess of stated temperatures with respect to pollutants other than those listed in this paragraph.

42 U.S.C. § 7429(a)(4).

into two categories based on the aggregate plant capacity for municipal solid waste (MSW), that is, based on the sum of the maximum amount of waste each MWC unit located at a particular site is designed to combust daily. Thus, within both existing and new source types, EPA created a large unit category — consisting of units located at plants with an aggregate MSW capacity greater than 250 tons per day (tpd) — and a small unit category — consisting of units located at plants with an aggregate MSW capacity of 250 tpd or less (but greater than 35 tpd).

In 1995 EPA issued its final standards, which generally tracked the proposed ones. *See* Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Municipal Waste Combustors, 60 Fed. Reg. 65,387 (Dec. 19, 1995) (1995 Rule). Two MWC facility operators petitioned this court to review the 1995 Rule, asserting that EPA violated § 129’s unambiguous language when it defined large and small units based on the aggregate MSW combustion capacity of the plant at which a MWC unit is located rather than on the combustion capacity of the individual MWC unit itself. We agreed with the petitioners and vacated the standards, holding that “the EPA’s use of aggregate plant MSW capacity rather than unit MSW capacity in the 1995 standards to create categories of MWC units for MACT purposes violates the plain meaning of section 129 and exceeds the EPA’s statutory authority.” *Davis County Solid Waste Mgmt. v. EPA*, 101 F.3d 1395, 1411 (D.C. Cir. 1996). Subsequently, on EPA’s motion for rehearing, the court modified the remedy to vacate only the small unit standards because it concluded “the *Davis* opinion will not meaningfully alter the [new source performance standards] or the emission guidelines applicable to [existing] large units and that vacating the large unit standards will have a significant deleterious effect.” *Davis County Solid Waste Mgmt. v. EPA*, 108 F.3d 1454, 1460 (D.C. Cir. 1997) (rehearing).

In August 1999 EPA proposed new standards for the category of small MWC units, which it defined as units “with a combustion design capacity of 35 to 250 tons per day.”

Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units, 64 Fed. Reg. 47,234, 47,236 (Aug. 30, 1999).<sup>5</sup> *Existing* small units were further divided into three subcategories according to type and aggregate plant capacity: Class A, consisting of “nonrefractory-type small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW”; Class B, consisting of “refractory-type small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW”;<sup>6</sup> and Class C, consisting of all “small MWC units located at plants with an aggregate plant capacity less than or equal to 250 tons per day of MSW.” *Id.* *New* small units were divided into only two subcategories, strictly by aggregate plant capacity: Class I, consisting of small units located at plants with aggregate plant capacities greater than 250 tons of MSW per day, and Class II, consisting of small units located at plants with aggregate plant capacities less than or equal to 250 tons of MSW per day. New Source Performance Standards for New Small Municipal Waste Combustion Units, 64 Fed. Reg. 47,276, 47,279 (Aug. 30, 1999).

Following comment and hearing, in December 2000 EPA issued its final standards, which established subcategories by aggregate plant capacity alone both for existing units, 65 Fed. Reg. 76,378, and for new units, 65 Fed. Reg. 76,350, (collectively, the 2000 Rule). For both existing and new units, Class I consists of small MWC units located at plants with aggregate plant capacities greater than 250 tons of MSW per day,

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<sup>5</sup> EPA has not yet promulgated standards to regulate units with a design capacity of 35 tpd or less, although a consent decree entered in *Sierra Club v. Whitman*, No. 01-1537 (D.D.C. filed July 16, 2001), requires it to do so by November 30, 2005. Because such units are not regulated, hereinafter our references (regarding both the proposed and the final rule) to units with a combustion capacity of equal to or less than 250 tpd refer to MWC units with MSW capacity between 35 tpd and 250 tpd.

<sup>6</sup> A “refractory type” MWC unit is one “that has no energy recovery (such as through a waterwall) in the furnace of the municipal waste combustion unit.” 64 Fed. Reg. at 47,262.

while Class II comprises small MWC units located at plants with aggregate plant capacities equal to or less than 250 tons of MSW per day. 65 Fed. Reg. at 76,379 (existing small units); 65 Fed. Reg. at 76,351 (new small units). Within each subcategory EPA calculated a MACT floor for each pollutant and set a standard at or beyond the floor.

On February 2, 2001 Waste Energy Partners, together with other parties to the administrative proceeding, petitioned EPA for reconsideration, and all Industry Petitioners filed petitions for review of the final standards with the court. On February 5, 2001 NYPIRG filed a petition for administrative reconsideration, and on February 6, 2001 Sierra Club filed a petition for judicial review of the standards. EPA denied WEP's petition for reconsideration on August 7, 2002, J.A. 2317, and denied NYPIRG's petition on August 14, 2002, J.A. 2319.

## II.

Under § 307(d)(9) of the CAA, the court reviews EPA action as follows:

In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be —

- (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
- (B) contrary to constitutional right, power, privilege, or immunity;
- (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or
- (D) without observance of procedure required by law, if (i) such failure to observe such procedure is arbitrary or capricious, (ii) the requirement of paragraph (7)(B) has been met, and (iii) the condition of the last sentence of paragraph (8) is met.<sup>7</sup>

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<sup>7</sup> Paragraph 7(B) provides: “Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be

42 U.S.C. § 7607(d)(9). We apply this standard of review *seriatim* to each of the petitioners' challenges to EPA's standards.

### **A. Industry Challenges**

We begin with the challenges raised by Industry Petitioners. Each of these petitioners owns and operates small MWC units — i.e., units with capacities equal to or less than 250 tpd. Because each of these small MWC units is located at a plant with multiple units, the aggregate capacity of which exceeds 250 tpd, each is classified as a Class I facility under the 2000 Rule. Industry Petitioners challenge the emission limits set by the 2000 Rule for existing units on both substantive and procedural grounds. We consider those challenges below.

#### **1. Substantive Challenges**

Industry Petitioners raise two substantive challenges to the 2000 Rule. First, they contend that § 129(a)(2) of the Clean Air Act requires EPA to establish one MACT floor for all existing units within the small unit category, and that the Agency therefore exceeded its statutory authority by establishing different MACT floors for subcategories of units (i.e., Class I and Class II units). Second, Industry Petitioners argue that, even if EPA may subcategorize when setting MACT floors, the Act does not permit it to do so on the basis of aggregate plant capacity. The consequence of this unlawful subcategorization, they protest, is that their Class I units are subjected to more stringent standards than they would be

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raised during judicial review.” 42 U.S.C. § 7607(d)(7)(B). The final sentence of paragraph 8 provides: “In reviewing alleged procedural errors, the court may invalidate the rule only if the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.” *Id.* § 7607(d)(8).

if MACT floors were instead calculated on a category-wide basis.<sup>8</sup>

#### a. Subcategorization

Both Industry Petitioners and EPA contend that our opinion in *Davis County Solid Waste Management v. EPA*, 101 F.3d 1395 (D.C. Cir. 1996), governs the question of subcategorization authority — although each side draws a different lesson from that case. Accordingly, we begin with a brief recap of *Davis*.

As noted above, EPA promulgated an earlier round of standards to regulate municipal waste combustion in 1995. *See* 60 Fed. Reg. 65,387. Unlike the 2000 Rule, which applies only to the category of small (250 tpd or less) MWC units and which *subcategorizes* that category based on aggregate plant capacity, the 1995 Rule *categorized* units based on aggregate plant capacity. As a consequence, the 1995 Rule grouped a number of small MWC units with individual capacities of less than 250 tpd into the same category as large units with individual capacities greater than 250 tpd, because those small units were located at facilities with aggregate capacities greater than 250 tpd. *Id.* In *Davis*, we found the 1995 Rule unlawful, concluding that the Clean Air Act created two

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<sup>8</sup>This is so, Industry Petitioners contend, because Class I units have more efficient pollution control systems than the smaller Class II units. By creating a subcategory of better-performing units, and calculating the MACT floor on that basis, the resulting standard is more stringent than it would be if EPA grouped all MWCs in the small MWC unit category together and calculated one MACT floor for all of them. This is especially true, petitioners continue, because if EPA were to establish one MACT floor for *all* small MWC units, the Agency would have to include in its calculation “very small” units — those with capacities of less than 35 tpd — a group that is currently unregulated. *See supra* note 5. On the other hand, were EPA to adopt Industry Petitioners’ view, Class II units as well as below-35 tpd units would be subject to more stringent controls than they are under the 2000 Rule. Respondent’s Br. at 25–26. Indeed, according to EPA, a MACT floor applicable to all small MWCs would be stricter than most Class II units and below-35 tpd units could feasibly achieve. *Id.* at 26 & n.29.

separate “categories of MWC units based on unit capacity, units with unit MSW capacities above 250 tons/day and units with unit MSW capacities of 250 tons/day or less.” 101 F.3d at 1410. In support, we relied on the fact that § 129(a)(1) imposed “different dates by which the standards for large and small MWC units must be promulgated,” and that it therefore “separately define[d] these two types of MWC units.” *Id.* at 1403.<sup>9</sup>

Although the only question in *Davis* was the lawfulness of including both large and small units within the same category, the opinion contains dicta upon which each side has seized regarding the question of subcategorization. EPA focuses on the *Davis* court’s suggestion — repeated four times in the opinion — that the Agency may “exercise[ ] its discretion to distinguish among units within a category and create[ ] subcategories of small units, for which it can then calculate MACT floors and standards separately.” *Id.* at 1408; *see also id.* at 1404–05, 1405 n.11, 1409 n.12, 1411. EPA reads this statement as advising that, while the Agency is obligated to *categorize* MWCs based on unit capacity, it remains free to *subcategorize* the small unit category based on other factors. *See* Respondent’s Br. at 27; *see also* 64 Fed. Reg. at 47,237 (quoting passage from *Davis* and concluding that the court’s decision allows EPA to exercise its discretion to set MACT floors based on subcategories of small units). In opposition, Industry Petitioners maintain — “[w]ith all due respect” to the *Davis* court — that the above-quoted material “is directly at odds with” other sentences in the same opinion. Reply Br. at 5. In particular, petitioners rely on *Davis*’ statement that, “in order to promulgate emissions standards, the EPA must first calculate the MACT floors, and the EPA cannot calculate the MACT floors until it has studied the emissions levels of all units in the relevant category,” as barring EPA from

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<sup>9</sup> Under 42 U.S.C. § 7429(a)(1), EPA was to promulgate standards for MWC units with capacities of more than 250 tpd by November 15, 1991, but did not have to promulgate standards for MWC units with capacities of 250 tpd or less until November 15, 1992.

calculating MACT floors based on anything other than a category-wide basis. *Davis*, 101 F.3d at 1404.

Given that *Davis* — which did not involve subcategorization within a category at all, but rather an attempt by the Agency to collapse two statutory categories into one — contains no holding on the subcategorization question at issue here, we see little to be gained by striving to reconcile its dicta. Instead, we look directly to the relevant statutory language in order to determine whether EPA’s action was authorized. That language is contained in § 129(a)(2) of the Clean Air Act, which, with sentence numbers inserted for ease of subsequent discussion, states as follows:

**Emissions standard**

[1] Standards applicable to solid waste incineration units promulgated under . . . this section shall reflect the maximum degree of reduction in emissions of [listed air pollutants] that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category. [2] The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards. [3] The degree of reduction in emissions that is deemed achievable for new units in a category shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator. [4] Emissions standards for existing units in a category may be less stringent than standards for new units in the same category but shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category . . . .

42 U.S.C. § 7429(a)(2). In brief summary: § 129(a)(2)’s first sentence directs EPA to set overall emission standards that (inter alia) reflect the maximum degree of achievable emissions reduction (“beyond-the-floor” MACT levels); the second

sentence grants EPA discretion to distinguish among units within a category in establishing emission standards; the third sentence instructs EPA that emission standards for new units must “not be less stringent than” a specified level (the new-unit MACT “floor”); and the fourth sentence instructs the Agency that emission standards for existing units must “not be less stringent than” a (different) specified level (the existing-unit MACT “floor”).

*Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984), governs our review of Industry Petitioners’ claim that the 2000 Rule conflicts with § 129(a)(2). As the Supreme Court has recently explained, under *Chevron* “we must decide (1) whether the statute unambiguously forbids the Agency’s interpretation, and, if not, (2) whether the interpretation, for other reasons, exceeds the bounds of the permissible.” *Barnhart v. Walton*, 535 U.S. 212, 218 (2002). Industry Petitioners contend that the 2000 Rule cannot survive the first step of the *Chevron* inquiry. We disagree, concluding that the Rule survives both steps of *Chevron* because the statutory language is ambiguous, and the Agency’s interpretation is reasonable. See *Barnhart v. Thomas*, 124 S. Ct. 376, 380 (2003).

In support of its *Chevron* argument, Industry Petitioners focus on § 129(a)(2)’s fourth sentence. That sentence states that emissions limitations for existing units “shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the *category*.” 42 U.S.C. § 7429(a)(2) (emphasis added). By its plain terms, petitioners insist, this provision requires EPA to calculate one MACT floor for all existing units in the small MWC category.

The problem with this argument is that it reads the fourth sentence of § 129(a)(2) in isolation, as if it were the only sentence in the section rather than the final sentence of four. As the Supreme Court has instructed, “the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.” *Davis v. Michigan Dep’t of Treasury*, 489 U.S. 803, 809 (1989); see *National R.R. Passenger Corp. v. Boston & Maine Corp.*, 503 U.S. 407, 417

(1992). And when we follow that instruction and look — as EPA does — at the second sentence of § 129(a)(2), we find express authorization for the Agency to “*distinguish* among classes, types . . . , and sizes of units *within a category* in establishing such standards.” 42 U.S.C. § 7429(a)(2) (emphasis added).

Petitioners contend that EPA cannot rely on the second sentence of § 129(a)(2) for authorization because, in their view, that sentence permits subcategorization only *after* MACT floors are calculated. That is so, they argue, because the second sentence refers to subcategorization in the setting of “such standards,” which petitioners read as pertaining only to the beyond-the-floor levels described in the bulk of the section’s first sentence. On that reading, subcategorization is permissible in setting beyond-the-floor levels, but not in setting the floors themselves.

But Industry Petitioners’ reading is not the only reasonable way to read § 129(a)(2). It is, of course, possible that the second sentence’s use of the phrase “such standards” refers to the first sentence as a whole. But another valid reading is that “such standards” refers merely to the opening phrase of the first sentence: “standards applicable to solid waste incineration promulgated under . . . this section.” And that phrase can be read as encompassing both the beyond-the-floor requirements of the balance of the first sentence and the floor requirements of the third and fourth sentences. Read in this fashion, the second sentence authorizes the Agency to distinguish among units “within a category” during all stages of the MACT standard-setting process described in the section.

The order of the sentences in § 129(a)(2) further supports EPA’s view that the second sentence does not only authorize subcategorization *after* MACT floors are established. Indeed, the second sentence, which expressly permits subcategorization, *precedes* the two sentences that mandate the establishment of MACT floors. And it is certainly reasonable to conclude that a statutory provision that authorizes an agency to take a particular action contemplates that such

action will be taken *before* — rather than *after* — another action that is not even mentioned until a subsequent provision. Thus, if one reads the sentences of § 129(a)(2) in order, the second sentence appears to contemplate that EPA may first distinguish among units in a category, and then apply the resulting subcategories when setting MACT floors. See *Holloway v. United States*, 526 U.S. 1, 6 (1999) (“In interpreting the statute at issue, [w]e consider not only the bare meaning’ of the critical word or phrase ‘but also its placement and purpose in the statutory scheme.’” (quoting *Bailey v. United States*, 516 U.S. 137, 145 (1995))).

Finally, still further support for EPA’s view is provided by close attention to § 129(a)(2)’s third sentence, which immediately follows the authorization to subcategorize and directs the Agency to establish MACT floors for new units. That sentence states that “for new units in a category,” the MACT floor “shall not be less stringent than the emissions control that is achieved in practice by the best controlled *similar* unit.” 42 U.S.C. § 7429(a)(2) (emphasis added). The word “similar” may reasonably be read as referring to a unit that is in the same subcategory. Indeed, to find otherwise would work the disfavored result of giving the word “similar” no effect. See *TRW Inc. v. Andrews*, 534 U.S. 19, 31 (2001); *Duncan v. Walker*, 533 U.S. 167, 174 (2001). And, if EPA can group “similar” units together in setting the MACT floor for new units, then Industry Petitioners’ central contention — that the (second) subcategorization sentence must be limited to beyond-the-floor calculations — cannot be sustained.

In sum, we conclude that § 129(a)(2) is at least ambiguous on the question of whether EPA may subcategorize the small unit category when establishing MACT floors for MWCs, and that the Agency’s construction of the section as permitting such subcategorization is permissible.<sup>10</sup>

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<sup>10</sup> In a footnote, Industry Petitioners argue that an altogether different provision of the Clean Air Act shows that Congress knew how to explicitly grant EPA discretion to set MACT floors for subcategories when it wanted to do so. Petitioners’ Br. at 13 n.6.

### b. Subcategorization by Aggregate Plant Size

We now turn to Industry Petitioners' second substantive claim, that even if EPA may subcategorize when setting MACT floors, the Clean Air Act does not permit it to do so on the basis of aggregate plant capacity. This inquiry centers on § 129(a)(2)'s second sentence, which provides: "The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards." 42 U.S.C. § 7429(a)(2). According to Industry Petitioners, aggregate plant capacity is not encompassed within any of the sentence's three permissible grounds of distinction: class, type and size of unit.

Once again, Industry Petitioners insist that their position is compelled by dicta in this court's opinion in *Davis*. In support, they point to a fragment of a sentence in a footnote that states: "EPA cannot use location to override the MWC unit categories established by Congress." *Davis*, 101 F.3d at 1405 n.11. But even if the word "location" is correctly read as a reference to a unit's location at a plant of a specified aggregate capacity, the complete footnote is at least equally supportive of EPA's position: that while location may not be used to combine statutory categories, it may be used to subcategorize within each category. The footnote states:

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That provision is CAA § 112(d)(3), which governs standards for emissions from major stationary sources, and provides:

Emission standards promulgated under this subsection for existing sources . . . shall not be less stringent . . . than — (A) the average emission limitation achieved by the best performing 12 percent of the existing sources . . . in the category or subcategory . . .

42 U.S.C. § 7412(d)(3). But the fact that Congress had available a clearer way of expressing what EPA believes the legislature said in § 129(a)(2) does not compel us to reject EPA's interpretation. Although § 112(d)(3)'s single-sentence formulation is clearer, we cannot conclude that EPA was unreasonable in relying on two of § 129(a)(2)'s sentences to do the same work.

We emphasize that we do not hold that the EPA is precluded from ever taking a unit's location into account, but simply that EPA cannot use location to override the MWC unit categories established by Congress. *Section 129(a)(2) gives the EPA broad discretion to differentiate among units in a category, and there is nothing in the text of section 129(a)(2) that would prevent the EPA from subcategorizing within the two categories of MWC units . . . on the basis of the units' location, provided the EPA indicated why such a subcategorization was appropriate.*

*Id.* (emphasis added); *see also id.* at 1411.

As before, we need not spend time deconstructing *Davis'* dicta, because the words of the statute must ultimately decide the issue. *See Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 201 (1976). As we have noted, § 129(a)(2) authorizes EPA to “distinguish among classes.” “Class” is an ambiguous term. It is not defined in the Clean Air Act, and the dictionary definition — “a group, set, or kind marked by common attributes” — could hardly be more flexible. WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 416 (1976) (3rd meaning). There is certainly nothing about the term or its dictionary definition that precludes the use of aggregate plant capacity as a factor for drawing distinctions among units.

Because the term “class” is ambiguous, we would now ordinarily take *Chevron's* second step and ask whether it was reasonable for the Agency to construe that term as permitting subcategorization based on aggregate plant capacity. But because Industry Petitioners regard this case as governed by step one of *Chevron*, their briefs do not dispute that, assuming subcategorization is permitted at all, aggregate capacity is a reasonable criterion. Petitioners' Br. at 11, 16. Instead, they contend that EPA failed to provide any explanation at all for subcategorizing on that basis. Because we ultimately find that argument dispositive, we preterm our discussion of *Chevron* and proceed directly to that challenge.<sup>11</sup>

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<sup>11</sup> Industry Petitioners also contend, somewhat elliptically, that the 2000 Rule is inconsistent with the statute because the emission

## 2. Procedural Challenges

In addition to their substantive challenges, Industry Petitioners level a number of procedural attacks against the 2000 Rule. Specifically, petitioners claim that in promulgating the regulations, EPA: (1) failed to articulate a rationale for its decision to subcategorize on the basis of aggregate plant capacity; (2) failed to respond to significant comments; (3) promulgated a rule that was not a logical outgrowth of the rule the Agency originally proposed; (4) relied on late-docketed materials; and (5) wrongfully denied a request for a new round of public comment.

The Clean Air Act limits the scope of our review of these claims. In particular, we may not consider an objection to a rule or procedure unless it was raised “with reasonable specificity during the period for public comment.” 42 U.S.C. § 7607(d)(7)(B). Moreover, we may invalidate a rule because of procedural errors only if: (1) the agency’s failure to observe the required procedures was arbitrary or capricious, *id.* § 7607(d)(9)(D); and (2) the error was “so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made,” *id.* § 7607(d)(8); *see id.* § 7607(d)(9)(D); *Chemical Mfrs. Ass’n v. EPA*, 28 F.3d 1259, 1262 (D.C. Cir. 1994).

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standards it sets for small MWC units in Class I are substantially the same as those the 1995 Rule set for large MWC units. *See* Petitioners’ Br. at 15–16. As EPA points out, however, CAA § 129 does not mandate that the standards for small MWC units must necessarily differ from those for large MWCs. Instead, the section establishes statutory criteria and the methodology that EPA is to use in applying those criteria to calculate standards. As long as the Agency separately analyzes the two statutory categories, the fact that the ultimate standards are equivalent need not concern us. Indeed, as EPA explains, it is not surprising that emission standards would be the same for both existing Class I units and large units, since the best performing units in both groups already use similar control technology. Respondent’s Br. at 22–23.

### a. Absence of Rationale

Industry Petitioners first attack EPA for failing to set forth a rationale for its classification of units based on aggregate plant capacity. According to petitioners, even if EPA may legally distinguish among MWCs based on this characteristic, it did so here without explaining why such classification was appropriate. Although we would ordinarily consider a challenge to an agency’s rulemaking rationale as a form of substantive attack, in this case petitioners level only a procedural charge. That is, they do not contend that it would be substantively unreasonable for the Agency to distinguish among MWCs based on the aggregate capacities of the plants at which they are located. Rather, they simply contend that the Agency has failed altogether to proffer a rationale for so doing. Industry Petitioners assert that EPA’s failure violates the requirement of CAA § 307(d) that each proposed and promulgated rule be accompanied by a “statement of its basis and purpose” that includes a summary of “the major legal interpretations and policy considerations underlying” the rule. 42 U.S.C. § 7607(d)(3), (d)(6)(A).

EPA responds by claiming that petitioners are foreclosed from making this charge because they did not satisfy the exhaustion requirement of CAA § 307(d)(7)(B), 42 U.S.C. § 7607(d)(7)(B), by objecting with reasonable specificity to EPA’s failure to articulate a rationale during the public comment period. We disagree for two reasons. First, a number of commenters plainly did challenge the Agency’s failure to explain its subcategorization rationale during the rulemaking.<sup>12</sup> Second, as we held in *Appalachian Power Co.*

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<sup>12</sup> See Comments of Dutchess and Islip (J.A. 1830); Comments of Institute of Clean Air (J.A. 1841); Comments of Illinois Environmental Protection Agency (J.A. 2089). It is sufficient that an issue was raised by any commenter; the party petitioning for judicial review need not have done so itself. See *Reytblatt v. Nuclear Regulatory Comm’n*, 105 F.3d 715, 721 (D.C. Cir. 1997); accord *Cellnet Communication, Inc. v. FCC*, 965 F.2d 1106, 1109 (D.C. Cir. 1992) (“Consideration of the issue by the agency at the behest of another party is enough to preserve it.”).

*v. EPA*, the EPA at all times “retains a duty to examine key assumptions as part of its affirmative burden of promulgating and explaining a nonarbitrary, non-capricious rule,” and therefore must justify its basic “assumption[s] even if no one objects . . . during the comment period.” 135 F.3d 791, 818 (D.C. Cir. 1998) (quoting *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 534–35 (D.C. Cir. 1983)) (internal quotation marks omitted). As there is no question that the validity of the distinction between large and small aggregate plant capacities was a key assumption underlying the 2000 Rule, EPA was duty-bound to set forth its rationale for subcategorizing on that basis.

We thus turn to the underlying question: Did EPA explain its decision to establish subcategories based on aggregate plant capacity? We are, frankly, stunned to find that it did not. As the Agency concedes, there is *not one word* in the proposed or final rule that explains why the Agency chose to distinguish among small MWCs on the basis of the aggregate capacities of the plants at which they are located. Indeed, other than arguing that petitioners are barred from raising the issue, the text of EPA’s brief does not even respond to Industry Petitioners’ argument that the failure to provide a rationale dooms the 2000 Rule.

In a footnote to its brief, EPA does assert that the Agency “articulated its rationale for distinguishing among MWC units based on aggregate capacity when it proposed the first comprehensive MWC regulations in 1989.” Respondent’s Br. at 32 n.31 (citing Emission Guidelines: Municipal Waste Combustors, 54 Fed. Reg. 52,209, 52,219–20 (Dec. 20, 1989)). That rationale, which was contained in the preamble to a rule that EPA proposed but never adopted, stated as follows:

The proposed capacity aggregation is necessary because of the common practice within the MWC industry of constructing multiple MWC’s at the same location. This aggregation ensures that similar MWC plants with similar emission potential are subject to the same emission guidelines regardless of the number of individual MWC’s at the plants. Because multiple MWC’s can have the

same emission quality impacts as a larger single MWC, it is reasonable to apply the proposed emission guidelines to all existing MWC's at the same location. . . .

54 Fed. Reg. at 52,219–20. At oral argument, EPA further asserted that this 1989 rationale was “incorporated” into the 2000 Rule, and thus was sufficient to satisfy the requirement of CAA § 307(d).

We are not persuaded. While an express statement of intent to incorporate a rationale contained in another, specific document might satisfy the Agency's statutory obligation, EPA made no such statement here. The sum and substance of the statement in the 2000 Rule that the Agency regards as incorporating the 1989 preamble reads as follows:

Docket No. A–98–18 [1998] and associated Docket Nos. A–90–45 [1990] and A–89–08 [1989] contain supporting information for the emission guidelines. The dockets are available for public inspection and copying. . . .

65 Fed. Reg. at 76,378; *see* 64 Fed. Reg. at 47,234 (identical statement in proposed rule). That statement does not expressly “incorporate” anything, let alone refer interested parties or the courts to a specific document containing the Agency's rationale. At best, it is an invitation to search through a mountain of documents, contained in three rule-making dockets stretching back over a decade, in pursuit of “supporting information.”

Such a vague reference cannot possibly satisfy § 307(d)'s instruction that each proposed and promulgated rule “*shall be accompanied by*” a “statement of basis and purpose” that “shall include a summary of . . . the major legal interpretations and policy considerations underlying the proposed rule.” 42 U.S.C. § 7607(d)(3) (emphasis added); *see id.* § 7607(d)(6)(A). A rationale buried in a document published in 1989 simply does not “accompany” a rule proposed and promulgated more than a decade later. Nor can such a reference satisfy the fundamental requirement of nonarbitrary administrative decisionmaking: that an agency set forth the reasons for its actions. *See Motor Vehicle Mfrs. Ass'n of*

*United States, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 48–50 (1983); *Appalachian Power Co.*, 135 F.3d at 818; *see also Small Refiner*, 705 F.2d at 551 (“A rule without a stated reason is necessarily arbitrary and capricious.”). Without a readily accessible statement of the agency’s rationale, interested parties cannot comment meaningfully during the rulemaking process. Nor can they, or the courts, determine whether the agency has acted capriciously or whether its statutory interpretation is reasonable under *Chevron*’s second step.

Although EPA’s failure to set forth its rationale requires us to remand the 2000 Rule for further consideration, *see State Farm*, 463 U.S. at 57, that defect does not require us to vacate the rule. *See Allied–Signal, Inc. v. Nuclear Regulatory Comm’n*, 988 F.2d 146, 150 (D.C. Cir. 1993) (“An inadequately supported rule . . . need not necessarily be vacated.”). We decline to do so for several reasons. First, the 1989 rationale pointed to by EPA is sufficient to persuade us that the Agency “may be able to explain” the subcategorization decision it made in 2000. *Id.* at 151. That rationale also militates against a finding that the error was “so serious . . . that there is a substantial likelihood that the rule would have been significantly changed” if it had not been made. 42 U.S.C. § 7607(d)(8). At the same time, there is no doubt that “the consequences of vacating” would be “quite disruptive.” *Allied–Signal, Inc.*, 988 F.2d at 151. Indeed, it was concern over just such disruption of EPA’s pollution control program that ultimately persuaded us to remand rather than vacate the 1995 large-unit regulations, originally invalidated in *Davis*. *See Davis County Solid Waste Mgmt. v. EPA*, 108 F.3d 1454, 1458 (D.C. Cir. 1997) (expressing concern “that vacating the standards for large units could have significant deleterious effects on MWC emissions control”). Accordingly, rather than vacate, we remand the 2000 Rule to EPA “for it to develop a reasoned” explanation for its decision to subcategorize on the basis of aggregate plant capacity. *Allied–Signal, Inc.*, 988 F.2d at 151; *see, e.g., Radio–Television News Directors Ass’n v. FCC*, 184 F.3d 872, 888–89 (D.C. Cir.

1999); *American Mining Cong. v. EPA*, 907 F.2d 1179, 1190 (D.C. Cir. 1990).

#### **b. Response to Comments**

We next consider Industry Petitioners' second procedural charge: that EPA failed to respond to significant comments, as required by CAA § 307(d)(6)(B). That provision requires that "[t]he promulgated rule shall also be accompanied by a response to each of the significant comments . . . submitted in written or oral presentations during the comment period." 42 U.S.C. § 7607(d)(6)(B); *see Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1051 (D.C. Cir. 2001) ("While we generally uphold the EPA's authority to make emission projections and set emission limitations accordingly, we do so only where the EPA adequately responded to comments and explained the basis for its decisions.").

Petitioners assert, first, that EPA failed to respond to comments complaining about the high cost of retrofitting acid gas controls for certain units. This assertion fails on its facts. The Agency did respond to those complaints, explaining that the Clean Air Act does not permit it to take cost into account in setting MACT floors, and that (in its view) the beyond-the-floor standards strike the correct balance between cost and emissions reductions. EPA Response to Comments at 52 (J.A. 2199).

Industry Petitioners also claim that EPA failed to respond to comments asserting that § 129(a)(2) of the Clean Air Act bars the Agency from subcategorizing MACT floors on the basis of aggregate plant capacity. We need expend no further effort in analyzing that charge, however, as we have already decided to remand the 2000 Rule to EPA so that the Agency may explain its rationale for such subcategorization. *See supra* Part II.A.2.a. During the course of that remand, the Agency will have ample opportunity to respond to the cited comments and to cure this procedural failure as well.

#### **c. Adequate Notice**

The third procedural challenge is raised only by Industry Petitioner Northeast Maryland Waste Disposal Authority.

Northeast Maryland contends that, because the 2000 Rule differs from the rule EPA originally proposed, the Agency failed to provide the advance notice required by the Clean Air Act. *See* 42 U.S.C. § 7607(d)(3) (requiring EPA to publish a notice of proposed rulemaking “as provided under” 5 U.S.C. § 553(b)); 5 U.S.C. § 553(b)(3) (requiring each agency to publish notice of proposed rulemaking that includes “either the terms or substance of the proposed rule or a description of the subjects and issues involved”).

As we have discussed, the final 2000 Rule subcategorizes small MWC units into two classes based on aggregate plant capacity: Class I units are those located at plants with aggregate capacities greater than 250 tpd; Class II units are those located at plants with aggregate capacities equal to or less than 250 tpd. By contrast, the proposed rule established three classes for existing small MWCs: it subcategorized them not only on the basis of aggregate plant capacity, but also based on whether a unit utilized “refractory” or “nonrefractory” technology. 64 Fed. Reg. at 47,237.<sup>13</sup> The three proposed classes were: Class A, for nonrefractory units located at plants with aggregate capacities of more than 250 tpd; Class B, for refractory units located at plants with the same aggregate capacities; and Class C, for all units located at plants with aggregate capacities equal to or less than 250 tpd. *Id.* The proposed rule subjected the Class A units to the most stringent emission standards.

EPA initially distinguished between refractory and nonrefractory units based on its belief that refractory units were less amenable to pollution control technology. The Agency thought that refractory units generated significantly more exhaust (flue gas) per ton of waste burned, and that emission control devices were less efficient at removing pollutants from larger air volumes with lower concentrations. *Id.* However,

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<sup>13</sup> The refractory-nonrefractory distinction hinges on a unit’s cooling technology. After combustion, refractory units are cooled by circulating excess air. Nonrefractory MWC units are lined with water-filled steel tubes. Cool water flows through the tubes to remove heat and protect the unit’s structure.

after receiving public comments opposing the subcategorization scheme and reanalyzing the issue, EPA ultimately concluded that any difference in flue gas flow rates between refractory and nonrefractory units was insufficient to justify the imposition of different emission standards. 65 Fed. Reg. at 76,380. Accordingly, in the final rule, EPA collapsed Class A and Class B into a single class — Class I — composed of all units located at plants with aggregate capacities exceeding 250 tpd. *Id.*

Because the proposed rule indicated that EPA was considering three subcategories, while the final rule establishes only two, Northeast Maryland contends that it was deprived of proper notice of the Agency’s intentions. As petitioners recognize, however, EPA is not required to adopt a final rule that is identical to the proposed rule. Indeed, “[i]f that were the case, [EPA] could learn from the comments on its proposals only at the peril of subjecting itself to rulemaking without end.” *First Am. Discount Corp. v. Commodity Futures Trading Comm’n*, 222 F.3d 1008, 1015 (D.C. Cir. 2000) (internal quotation marks omitted); see *American Water Works Ass’n v. EPA*, 40 F.3d 1266, 1274 (D.C. Cir. 1994). Agencies, are free — indeed, they are encouraged — to modify proposed rules as a result of the comments they receive. See *Arizona Pub. Serv. Co. v. EPA*, 211 F.3d 1280, 1300 (D.C. Cir. 2000) (noting that “the Agency’s change of heart . . . only demonstrates the value of the comments it received”); *Kooritzky v. Reich*, 17 F.3d 1509, 1513 (D.C. Cir. 1994) (“It is an elementary principle of rulemaking that a final rule need not match the rule proposed, indeed must not if the record demands a change.”).

In light of these considerations, we have held that an agency satisfies the notice requirement, and need not conduct a further round of public comment, as long as its final rule is a “logical outgrowth” of the rule it originally proposed. *First Am. Discount Corp.*, 222 F.3d at 1015; *Arizona Pub. Serv. Co.*, 211 F.3d at 1299. A rule is deemed a logical outgrowth if interested parties “should have anticipated” that the change was possible, and thus reasonably should have filed their comments on the subject during the notice-and-comment

period. *City of Waukesha v. EPA*, 320 F.3d 228, 245 (D.C. Cir. 2003); see *First Am. Discount Corp.*, 222 F.3d at 1015; *National Mining Ass'n v. Mine Safety & Health Admin.*, 116 F.3d 520, 531 (D.C. Cir. 1997); *Kooritzky*, 17 F.3d at 1513.

We conclude that the final 2000 Rule, which merely collapses the proposed rule's three categories into two, is a logical outgrowth of the proposed rule. By announcing that it proposed to distinguish between refractory and nonrefractory units, EPA invited comments on both the pros and cons of that distinction. It thus effectively served notice that, if persuaded that the latter outweighed the former, the distinction might not survive. Nor did the interested parties misread either the invitation or the stakes involved. Numerous commenters — including two that are among the Industry Petitioners here — filed comments that were critical of the distinction between refractory and nonrefractory units.<sup>14</sup> On the other side, Northeast Maryland's predecessor, WEP, filed comments that supported the distinction. Comments of WEP at 1 (J.A. 2093). Accordingly, we reject Northeast Maryland's contention that the evolution of the rule deprived it of adequate notice and an opportunity to comment. See *Appalachian Power Co.*, 135 F.3d at 816 (finding that a rule was a logical outgrowth where commenters "clearly understood" that a matter was under consideration, since "the agency received comments on [the matter] from several sources").

#### **d. Late Docketing of Materials**

Next, Industry Petitioners assert that, in promulgating the 2000 Rule, EPA improperly relied on documents added to the docket after the close of the comment period and too late for effective rebuttal. While the docket for this rulemaking closed on October 29, 1999, EPA docketed a number of materials in late September 2000, approximately two months

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<sup>14</sup> See, e.g., Comments of Dutchess and Islip at 2 (J.A. 1832); see also, e.g., Comments of Institute of Clean Air Companies at 1 (J.A. 1917); Comments of Wasatch Clean Air Coalition at 1 (J.A. 1921); Supplemental Comments of Institute of Clean Air Companies at 1 (J.A. 1839).

before the rule's December 6, 2000, publication. Industry Petitioners specifically complain about Document IV-B-5, an EPA-drafted memorandum that set forth EPA's rationale for eliminating the refractory-nonrefractory distinction. EPA Combustion Group Mem. (docketed Sept. 28, 2000) (J.A. 1801).

In this case, as Industry Petitioners concede, all of the documents at issue were docketed by the time the 2000 Rule was promulgated. Hence, EPA did not violate the letter of CAA § 307(d)(6)(C), which bars EPA from basing a rule on data "which has not been placed in the docket as of the date of [the rule's] promulgation." 42 U.S.C. § 7607(d)(6)(C). Nevertheless, as petitioners correctly point out, our cases hold that EPA violates "the structure and spirit of section 307" if it "submit[s] so late as to preclude any effective public comment" a document "vital to EPA's support for its rule." *Sierra Club v. Costle*, 657 F.2d 298, 398 (D.C. Cir. 1981); see *Small Refiner*, 705 F.2d at 540.

But Document IV-B-5 is not the kind of document to which our cases refer. Document IV-B-5 expressed EPA's response to, and agreement with, public comments that it had received indicating there was no significant difference in flue gas flow rates between refractory and nonrefractory units. In effect, then, the memorandum was little more than a statement of the Agency's response to comments and of its rationale for eliminating the proposed distinction between Classes A and B. It is thus the kind of statement that would ordinarily not appear until the notice of final rulemaking, and the fact that EPA placed it in the docket in advance of that notice cannot be regarded as a procedural defect. See *Costle*, 657 F.2d at 352-53 ("It is entirely proper and often necessary for the agency to continue its deliberations and internal decisionmaking process after the close of public comment in order to assimilate those comments and arrive at a policy choice.").

#### **e. Petition for Reconsideration**

Finally, we address Industry Petitioners' claim that EPA erred in refusing to "convene a proceeding for reconsidera-

tion,” pursuant to CAA § 307(d)(7)(B), 42 U.S.C. § 7607(d)(7)(B), in response to a petition for reconsideration that WEP filed after publication of the final rule. That petition sought reconsideration principally on the grounds that the final rule was not a logical outgrowth of the proposed rule, and that reliance on the late-docketed Document IV-B-5 violated the Clean Air Act. As we have concluded that neither of those claims of procedural error has merit, there is no ground for holding that a reconsideration proceeding was required, *see* 42 U.S.C. § 7607(d)(7)(B), or that the denial of WEP’s request had a prejudicial effect, *see id.* § 7607(d)(8).

### **B. *Sierra Club Challenges***

Sierra Club challenges the 2000 Rule on three grounds. We address each ground in turn.

#### **1. Permit-Based MACT Floors for Existing Small Units**

First, Sierra Club challenges EPA’s decision to base existing small unit MACT floors on the emission limits contained in state permits. As in the 1995 Rule, in the 2000 Rule EPA based the MACT floor on the limits set for state-permitted MWC units in the particular subcategory. For each pollutant, EPA calculated the MACT floor by averaging the most stringent 12% of state permit limits in each class.<sup>15</sup> For pollutants for which there were too few permitted units, EPA assigned a “default” emission level, namely, the estimated emission level of a totally uncontrolled unit. Sierra Club contends there is nothing in the record to demonstrate that state permit limits or the uncontrolled default levels reflect “the average emissions limitation achieved by the best performing 12 percent of units in the category,” the floor required by § 129(a)(2), 42 U.S.C. § 7429(a)(2). We agree with Sierra Club and conclude that the MACT floors for existing small units must therefore be remanded.

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<sup>15</sup> EPA extracted the permit limits from its 1995 rulemaking database. EPA Permit Basis Mem. at 2 (J.A. 1757).

In *Sierra Club v. EPA*, 167 F.3d 658 (D.C. Cir. 1999), the court rejected EPA's similar use of state permit limits to set the MACT floor for medical waste incinerators (MWIs). The court recognized that CAA § 129 may permissibly be construed "to permit the use of regulatory data" but only "if they allow EPA to make a reasonable estimate of the performance of the top 12 percent of units." 167 F.3d at 662. The court rejected the use of such data in that case because "[a]lthough EPA said *that* it believed the combination of regulatory and uncontrolled data gave an accurate picture of the relevant MWIs' performance, it never adequately said *why* it believed this." *Id.* at 663. EPA fares no better here. It offered the following justification for deciding to use state permit limits:

The EPA used a permit approach to determine the MACT floors in the 1995 emission guidelines (40 CFR part 60, subpart Cb) and believes that using the permit approach is appropriate for this rulemaking. Permit limits and regulatory limits provide a reasonable estimate of the actual performance of the best performing units under the worst reasonably foreseeable circumstances, making this approach consistent with the court opinion in the *Sierra Club* case. Permits include a margin for compliance and must be achievable.

EPA Response to Comments at 75 (J.A. 2222). As in *Sierra Club*, EPA here stated only that it "believes" state permit limits reasonably reflect the actual performance of the best performing units without explaining why this is so. There is also evidence here that the MWCs, like the MWIs in *Sierra Club*, "might be substantially overachieving the permit limits," that is, "the regulatory limits are in fact much higher than the emissions that units achieve in practice," 167 F.3d at 663. *See* *Sierra Club's Br.* at 22 (asserting, with record evidence, that EPA's testing data show MWCs in general (and small MWCs in particular) "routinely overachieve their permit limits"). Given the absence of evidence that the permit levels reflect the emission levels of the best-performing 12 percent of existing MWCs and the affirmative

evidence that they do not, we cannot uphold the MACT floors for existing units under the CAA.

In support of using state permit levels, EPA points to its determinations that emission levels are inherently variable, EPA Response to Comments (1995 Rule) (J.A. 1570), and that basing MACT floors on the Agency’s test data would not accurately reflect this variability, *id.* at J.A. 1633 (noting “it is not unusual for one or more of the annual tests to produce emissions that fall within the best 12-percent data, while the remaining annual test data fall outside this range”). Even assuming actual testing data should not be used for setting MACT floors, EPA must still justify selecting state permit and uncontrolled default levels as alternative bases for the floors.

## 2. Technology-Based MACT Floors for New Small Units

The CAA requires that the MACT floor for new small units be set at the “emissions control that is achieved in practice by the best controlled similar unit.” 42 U.S.C. § 7429(a)(2). To satisfy this requirement, EPA must “demonstrate with substantial evidence — not mere assertions” that the chosen floors “represent ‘a reasonable estimate of the performance of the [best-performing] units.’” *Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855, 866 (D.C. Cir. 2001) (quoting *Sierra Club v. EPA*, 167 F.3d 658, 662 (D.C. Cir. 1999)) (alteration in original). To set the floors for new small MWC units, EPA (1) reviewed available MWC emissions test data associated with all types of combustors and all types of emission control technologies currently used to control emissions of specific pollutants, (2) identified the best controlled unit and reviewed the performance of its associated control technology and (3) set the floor for each pollutant at the level of emissions that units equipped with that technology can continuously achieve in practice (based on 24-hour averaging periods or, if continuous emission monitoring was unavailable, on annual stack tests). *See* 59 Fed. Reg. at 48,214–16. Sierra Club asserts EPA has not demonstrated that that technology alone, without regard to other technologies or to

non-technology factors, achieves “the emissions control that is achieved in practice by the best controlled similar unit,” as CAA § 129(a)(2) requires. We agree that EPA has not shown that the technology-based approach will achieve a reasonable estimate of the emission level achieved by the best performing MWC unit and, accordingly, remand to the Agency to establish MACT floors for new units that do. Because we remand for new MACT floors, we need not consider Sierra Club’s alternate contention that the Agency should have considered how factors other than the chosen technology affect emissions.

In setting the MACT floor, the EPA reasoned that “[b]ecause MACT must be achievable and there is inherent variation in emissions among MWC units, . . . the floor emission levels are set at levels that are demonstrated to be achievable by the population of MWC units with the best technology.” EPA Response to Comments at 31 (J.A. 2178). This is precisely the rationale we rejected in *Cement Kiln*. As we explained in *Cement Kiln*, “[w]hile standards achievable by all sources using the MACT control might also ultimately reflect what the statutorily relevant sources achieve in practice, EPA may not deviate from [the statute’s] requirement that floors reflect what the best performers actually achieve by claiming that floors must be achievable by all sources using MACT technology.” *Cement Kiln*, 255 F.3d at 861 (citing *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842–43 (1984)). EPA has once again improperly invoked achievability (incorrectly relying on the emission variability of *all* MWCs that use the technology rather than on the variability of the *best performing* unit) to gloss over the actual achievement requirement.

### 3. Beyond-the-Floor Standards

Finally, Sierra Club raises three objections to EPA’s beyond-the-floor standards. First, Sierra Club asserts that in deciding whether to set beyond-the-floor standards for certain pollutants — namely Hazardous Air Pollutant (HAP) metals (mercury, lead and cadmium) and dioxins — EPA

failed to consider “nonair quality health and environmental impacts,” such as the impacts of deposition, persistence and bioaccumulation, as required under 42 U.S.C. § 7429(a)(2). Second, Sierra Club contends EPA failed to require pre-combustion separation of pollutants from the waste as required by CAA § 129(a)(3), which provides that standards “shall be based on methods and technologies for removal or destruction of pollutants before, during, or after combustion.” 42 U.S.C. § 7429(a)(3). And third, Sierra Club challenges EPA’s decision to set “no-control” floors and beyond-the-floor standards for nitrogen oxide emissions from new and existing Class II MWC units. These no-control standards, according to Sierra Club, violate 42 U.S.C. § 7429(a)(4) and (a)(2), as well as our holding in *National Lime Ass’n v. EPA*, 233 F.3d 625 (D.C. Cir. 2000). In light of our remand of all of the MACT floors, we need not address these objections at this time. As Sierra Club’s counsel acknowledged at oral argument, the Agency’s beyond-the-floor determinations cannot be evaluated if, as we have concluded, the MACT floors themselves were improperly set.

### III.

For the foregoing reasons, we grant the petitions in part and deny them in part and remand to EPA to: (1) explain its decision to subcategorize small MWC units according to the aggregate capacities of the plants at which they are located; (2) establish new MACT floors for new and existing small units; and (3) readdress the beyond-the-floor standards as required.

*So ordered.*