



HUNTON & WILLIAMS LLP
1900 K STREET, N.W.
WASHINGTON, D.C. 20006-1109

TEL 202 • 955 • 1500
FAX 202 • 778 • 2201

ANDREA BEAR FIELD
MAKRAM JABER
CRAIG S. HARRISON
DIRECT DIAL: 202-955-1558
EMAIL: afield@hunton.com

FILE NO: 31531.450021

August 8, 2007

**VIA ELECTRONIC FILING/HAND DELIVERY TO DOCKET CENTER/MAILING
TO RTP**

Environmental Protection Agency,
EPA Docket Center (EPA/DC)
Air and Radiation Docket
Mail Code 6102T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Docket ID No. EPA-HQ-OAR-2005-0163

Dear Sir or Madam:

Enclosed are the comments of the Utility Air Regulatory Group ("UARG") on the Environmental Protection Agency's ("EPA's") Supplemental Notice of Proposed Rulemaking for Prevention of Significant Deterioration and Nonattainment New Source Review: Emission Increases for Electric Generating Units; Proposed Rule, 72 Fed. Reg. 26202 (May 8, 2007).

Included with this electronic filing of the UARG comments are two attachments.

- Attachment 1 is a related technical report by UARG's consultants, Lowell L. Smith and Michael C. Hein, *Analysis of the Upper Tolerance Limit Process Proposed by EPA for Determining the "Maximum Achieved Hourly Emissions Rate" for Electric Generating Units* (August 6, 2007). Because the background data for this report are too voluminous to transmit electronically, we have stored those data on a CD, which we are separately delivering to EPA's Docket Center today (along with a hard copy of the UARG comments) and also to EPA's Office of Air Quality Planning and Standards ("OAQPS") in Research Triangle Park, North Carolina.
- Attachment 2 is a copy of the comments UARG filed in response to EPA's October 2005 notice of proposed rulemaking on these issues.

ATLANTA AUSTIN BANGKOK BEIJING BRUSSELS CHARLOTTE DALLAS HOUSTON KNOXVILLE LONDON
LOS ANGELES McLEAN MIAMI NEW YORK NORFOLK RALEIGH RICHMOND SINGAPORE WASHINGTON
www.hunton.com



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If you have any questions, please call any of us. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Andrea Bear Field".

Andrea Bear Field

Makram Jaber

Craig S. Harrison

Maida O. Lerner

Enclosures

cc: Lisa Sutton, EPA OAQPS (with Enclosures, including CD)

**COMMENTS OF THE UTILITY AIR REGULATORY GROUP
ON THE
ENVIRONMENTAL PROTECTION AGENCY'S SUPPLEMENTAL
NOTICE OF PROPOSED RULEMAKING FOR PREVENTION OF
SIGNIFICANT DETERIORATION AND NONATTAINMENT NEW
SOURCE REVIEW: EMISSION INCREASES FOR ELECTRIC
GENERATING UNITS**

(MAY 8, 2007)

DOCKET EPA-HQ-OAR-2005-0163

HUNTON & WILLIAMS LLP

**Henry V. Nickel
F. William Brownell
Andrea Bear Field
Makram B. Jaber
Craig S. Harrison
Maida O. Lerner**

**1900 K Street, NW
Washington, DC 20006
(202) 955-1500**

Counsel for the Utility Air Regulatory Group

August 8, 2007

**COMMENTS OF THE UTILITY AIR REGULATORY GROUP
ON THE
ENVIRONMENTAL PROTECTION AGENCY’S SUPPLEMENTAL NOTICE
OF PROPOSED RULEMAKING FOR PREVENTION OF SIGNIFICANT
DETERIORATION AND NONATTAINMENT NEW SOURCE REVIEW:
EMISSION INCREASES FOR ELECTRIC GENERATING UNITS
(MAY 8, 2007)**

On May 8, 2007, the United States Environmental Protection Agency (“EPA” or “the Agency”) published a supplemental proposal to its October 2005 proposal to adopt a new emissions increase test under the New Source Review (“NSR”) program¹ of the Clean Air Act (“CAA”) for existing electric generating units (“EGUs”). *See* 72 Fed. Reg. 26202 . The October 2005 proposal announced that EPA was considering three “alternatives” for a revised emissions increase test for EGUs and discussed the legal and technical bases of EPA’s proposed action, but it did not provide specific regulatory language implementing any of the alternatives. *See* 70 Fed. Reg. 61081 (Oct. 20, 2005). UARG made a statement at a public hearing for that initial proposal and submitted written comments, which it incorporates and attaches herein.² EPA’s supplemental proposal lays out several options for the emissions increase test for EGUs and provides specific regulatory language for implementing some of these options.

¹ There are two new source review programs and thus two sets of regulations at issue in this rulemaking: the Prevention of Significant Deterioration (“PSD”) and the Nonattainment New Source Review (“NNSR”) rules (hereinafter, PSD and NNSR are collectively referred to as “NSR”)

² UARG’s comments, in addition to providing UARG’s views on the proposal, responded to certain wide-ranging objections to the proposal that were in the public record at the time. Because those objections will no doubt be repeated in this supplemental rulemaking, UARG respectfully submits that its original comments remain pertinent and are worth re-emphasizing in this rulemaking. Rather than repeating them, however, UARG has attached a copy of its earlier comments and respectfully directs EPA’s attention to them. *See* Attachment 2.

These are the comments of the Utility Air Regulatory Group (“UARG”) on EPA’s supplemental proposal. UARG is a voluntary, nonprofit group of electric generating companies and organizations and four national trade associations. UARG’s purpose is to participate on behalf of its members collectively in EPA’s rulemakings, in other CAA proceedings, and in related litigation matters that affect the interests of electric generators. Since 1977, UARG has participated in virtually all key CAA rulemakings affecting electric utility companies and in subsequent litigation related to those rulemakings. In particular, UARG has been an active participant in the rulemakings and litigation related to the Act’s NSR preconstruction permitting programs. For example, UARG was actively involved in the 1977-78 rulemakings to implement the NSR permitting requirements of the 1977 Clean Air Act Amendments, and UARG (participating under the names of its individual members) was the lead petitioner in the seminal NSR case, *Alabama Power Company, et al. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979). UARG has also been a participant in subsequent NSR rulemakings and litigation, including EPA’s rulemakings to implement the *Alabama Power* decision and subsequent litigation (*Chemical Manufacturers Association v. EPA*, No. 79-1112 (D.C. Cir.)); the Seventh Circuit litigation concerning an NSR issue at an individual company (*Wisconsin Electric Power Co. v. Reilly*, 893 F.2d 901 (7th Cir. 1990)); the 1992 “WEPCo” rulemaking (57 Fed. Reg. 32314 (July 21, 1992)); the meetings of the Clean Air Act Advisory Committee’s New Source Review Subcommittee (the Subcommittee first met in the summer of 1992 and met frequently over the next four years to discuss ways to “simplify” or “reform” the NSR program); and the 2002 and 2003 EPA rulemakings to revise portions of the NSR program and subsequent litigation (*New York v. EPA*, 413 F.3d 3 (D.C. Cir. 2005), also known as “*New York I*”; and *New York v. EPA*, 443 F.3d 880 (D.C. Cir. 2006), also known as “*New York II*”).

In addition to UARG's having familiarity with the history of NSR regulations, UARG's individual members have practical, hands-on experience with the application of the NSR programs and with other CAA programs, including EPA's new source performance standards ("NSPS") program under CAA §111.

Based on this extensive knowledge of the NSR program, UARG members strongly support EPA's proposal to adopt an hourly emissions increase test as a threshold requirement for what is a "modification" under the NSR program and to retain the source-wide significant net annual emissions increase requirements of the current NSR rules. In addition, UARG supports EPA's option that would adopt for the NSR program the same "maximum achievable" hourly emissions test that has been implemented successfully under the NSPS rules for more than a decade. If EPA ultimately decides to adopt an "achieved" test, however, UARG urges the Agency to account explicitly for the statutory requirement that there be a causal link between a change and any emissions increase and to establish the analytical approaches that may be used for implementing such a test.

I. EPA'S PLAN TO ADOPT AN HOURLY EMISSIONS RATE INCREASE TEST IS FULLY CONSISTENT WITH THE CLEAN AIR ACT.

EPA's proposed rule offers several alternative emissions tests for determining whether an EGU has undergone a "modification" under the NSR program. A common feature of all these tests is EPA's proposal to measure emission increases in hourly units for NSR applicability purposes. For the reasons set forth below, UARG supports EPA's use of hourly-based tests as a permissible and reasonable means for implementing the NSR provisions of the Clean Air Act. In addition, UARG agrees with EPA's assessment that the proposed rule would promote the safety, reliability, and efficiency of EGUs, and that it strikes an appropriate balance between the need for environmental protection and economic growth. *See* 72 Fed. Reg. at 26204.

A. The Clean Air Act Does Not Specify How Emission Increases Should Be Measured, Thus Leaving EPA With Discretion To Adopt An Hourly-Based Test.

Congress did not specify how emission increases were to be calculated under the NSR program. Under the NSR framework, whether an existing source should be subject to NSR requirements turns on whether the source has been “modified” as defined in § 111(a)(4) of the Act. Critically, although that definition of modification refers to emission increases, it provides absolutely no guidance as to how such emission increases should be measured. Specifically, § 111(a)(4) defines the term “modification” as “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.” 42 U.S.C. § 7411(a)(4). Given that § 111(a)(4) refers to “emission increases” without any instruction as to how those changes in emissions should be measured, well-established principles of administrative law dictate that the technical task of defining an emission increase is left to EPA’s reasonable discretion. *See Chevron v. Natural Resources Defense Council*, 467 U.S. 837, 842-43 (1984) (stating that if a statute “is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute”).

Indeed, recent court rulings confirm that the Clean Air Act does not specify how increases in emissions should be measured for purposes of § 111(a)(4).³ For example, in *New*

³ Some commenters have previously cited the Seventh Circuit’s decision in *Wisconsin Electric Power Company v. Reilly*, 893 F.2d 901 (7th Cir. 1990) (“*WEPCo*”), for the proposition that the PSD program requires an annual measurement of emission increases. These commenters, however, inappropriately take out of context a single sentence from *WEPCo*, stating that “PSD is concerned with changes in *total annual emissions*, expressed in tons per year,” *id.* at 915 (emphasis in original), and argue that this is a categorical statement of the requirements of the *statutory* PSD program. Nothing could be further from the truth. The *WEPCo* decision addressed the regulations implementing the PSD program, and this quote merely acknowledged (continued...)

York I, the D.C. Circuit rejected challenges to an EPA rule that allowed sources to measure emission increases by comparing post-change emissions to certain emissions averaged over a portion of the ten-year period leading up to the change. 413 F.3d at 21-27. In holding that EPA’s ten-year “look back” period was a permissible way of measuring emission increases under § 111(a)(4), the D.C. Circuit explicitly acknowledged: “In enacting the NSR program, Congress did not specify how to calculate ‘increases’ in emissions, leaving EPA to fill that gap while balancing the economic and environmental goals of the statute.” *Id.* at 27. The D.C. Circuit re-confirmed the inherent ambiguity in § 111(a)(4) again in *New York II*, stating that “Congress’s use of the word ‘increases’ necessitated further definition regarding *rate* and *measurement* for the term to have any contextual meaning.” 443 F.3d at 888-89 (emphasis added). That is precisely what this rulemaking is about: the Agency’s “further definition regarding rate and measurement” for the term “increases” as set forth in the statutory definition of modification.

Finally, most recently in *Environmental Defense v. Duke Energy Corporation*, 127 S.Ct. 1423 (2007), the Supreme Court, after rejecting the argument that EPA was compelled to adopt the same hourly test for NSR that the Agency had previously adopted for NSPS, noted that EPA

the unremarkable (and never disputed) fact that the PSD rules, at the time, defined “major modification” in terms of annual emissions, while the NSPS rules defined “modification” in terms of hourly emissions. This quote in no way addresses the underlying statutory requirements for PSD or restricts EPA’s discretion to interpret the statutory term “increase” in § 111(a)(4) differently than it did in the regulations then before the Seventh Circuit in *WEPCo*. Even if the *WEPCo* court were purporting to interpret the statute in that sentence (which it was not), that interpretation does not limit the Agency’s discretion, especially given that, as the D.C. Circuit plainly acknowledged in *New York I* -- a decision that directly addressed § 111(a)(4) -- “Congress did not specify how to calculate ‘increases’ in emissions,” 413 F.3d at 27. *See National Cable & Telecomm. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 980 (2005) (wherein the Court explained that *Chevron* requires a court to accept an agency’s reasonable construction of a statute to fill a statutory gap “even if the agency’s construction differs from what the court believes is the best statutory interpretation”).

retained “customary agency discretion” to adopt *any* test that falls “within the limits of what is reasonable, *as set by the Act’s common definition*” in § 111(a)(4). *Id.* at 1433-34 (emphasis added). An hourly rate test falls within such a reasonable limit given that the Act does “not specify how to calculate ‘increases’ in emissions.” *New York I*, 413 F.3d at 27. Thus, in light of the obvious ambiguity in the Act and the case law recognizing this ambiguity, EPA has correctly recognized in the preamble of the proposed rule that its various proposed hourly rate tests are an appropriate exercise of its discretion.

B. No Other Provisions of the Act Compel EPA To Adopt A Yearly Test Or Any Other Type of Emission Increase Test.

In response to the 2005 proposed rule, some commenters argued that, because some provisions of the Act refer to emission measurements in yearly increments, EPA is compelled to measure emission increases for purposes of § 111(a)(4) in terms of yearly increments. These commenters typically admitted that § 111(a)(4) is silent as to how to measure emission increases, but cited other sections of the Act – namely, §§ 169(1) and 165(b) – for the proposition that EPA is prohibited from relying on an hourly rate test. This argument contains numerous flaws.

First, nothing in §§ 169(1) and 165(b) indicates that these provisions govern how an emission increase must be calculated under § 111(a)(4). Section 169(1) defines the term “major emitting facility” as meaning a source that emits or has the potential to emit at certain tons per year threshold of pollutant. Section 165(b) provides an exemption from certain required air quality analyses when, after modification, a source will have allowable emissions of less than fifty tons per year. These provisions address relatively narrow and *different* applicability issues than § 111(a)(4), and they certainly do not force upon EPA a certain test for measuring emission increases under § 111(a)(4). Simply because Congress spoke in specific terms regarding units of measurement in some NSR provisions does not establish that it intended (without making its

intentions clear) to force EPA into using those same units with respect to all NSR issues. Quite the contrary, it demonstrates that Congress knew how to specify a unit of measurement when it wanted to, and it chose not to do so in defining “modification.”

For these other provisions to have the impact on § 111(a)(4) that some have suggested, that impact must be explicit. In the past, commenters have argued that these provisions are sufficiently connected because they are all related to NSR. Such a connection is too general, however, to read into § 111(a)(4) a requirement that EPA must adopt a specific type of test for measuring emission increases. Indeed if, as the Supreme Court and the D.C. Circuit have held, even the *same* statutory definition can be given different meanings in different parts of the statute, then surely the fact that one provision specifies a particular unit of measurement for one purpose does not mean that another provision of the statute must be read to incorporate, *sub silencio*, that same unit of measurement.

Moreover, the *Duke Energy* decision’s analysis of the 1980 PSD regulations provides an example of the kind of more explicit connection that would be required to impart into one provision of a statute or regulation the rate specified elsewhere in that statute or regulation. That explicit connection exists when the definitional sections of the statute or rule inexorably lead to that conclusion. As the Court noted in *Duke Energy*, the 1980 PSD regulation, like § 111(a)(4), defined a modification as “a physical or operational change that ‘would result in a significant net emissions increase,’” but did not “on its face” define how that increase should be measured. 127 S.Ct. at 1434 (quoting 40 CFR § 51.166(b)(2)(i)). Unlike § 111(a)(4)’s definition of “modification,” however, the 1980 PSD regulations defined the component terms of “modification” to require an annual measurement for emissions. Specifically, the 1980 PSD regulations defined the term “major modification” as “any physical change in or change in the

method of operation of a major stationary source that would result in a *significant net emissions increase* of any pollutant subject to regulation under the Act.” See 40 C.F.R. § 51.166(b)(2)(i) (1987) (emphasis added). Critically, and as the Court noted in *Duke Energy*, “further regulations in turn addressed various elements of this definition.” 127 S.Ct. at 1429. Indeed, the 1980 regulations defined the term “‘net emission increase’” in part as any increase in “‘actual emissions,’” a term that itself was defined as “‘equal to the average rate, *in tons per year*, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation.’” See *id.* (quoting 40 C.F.R. §§ 51.166(b)(3), (21)(ii)) (emphasis added). And, the Court also noted, “the term ‘significant’ was defined as ‘a rate of emissions that would equal or exceed’ one or another enumerated threshold, each expressed in ‘tons per year.’” *Id.* (quoting 40 C.F.R. § 51.166(b)(23)(i)).

Thus, the definition of the term “modification” in the 1980 PSD regulations is built on component terms which in turn directly and expressly incorporated an annual emissions rate. In sharp contrast, the definition of “modification” found at § 111(a)(4) of the Act contains no component terms that in turn are defined using annual emission rates. Instead, and also in contrast to the 1980 PSD rules at issue in *Duke Energy*, the component terms of § 111(a)(4) lack definition. Had Congress used defined terms in § 111(a)(4) that could similarly be traced back to definitions that rely on yearly emission measurements, perhaps there would be grounds for an argument that other provisions of the Act preclude EPA from adopting an hourly rate test. Absent such a direct connection, the fact that other, unconnected sections of the Act refer to annual emission measurements cannot override the well-established principles of administrative law that provide EPA with discretion to interpret undefined statutory terms reasonably. See

Chevron, 467 U.S. at 844 (“considerable weight should be accorded to an executive department’s construction of a statutory scheme it is entrusted to administer”).

Finally, the definition of modification in § 111(a)(4) *pre-dates* all NSR provisions, including §§ 169(1) and 165(b), thus undermining any argument that these other NSR provisions somehow compel EPA to establish an annual emissions test for the pre-existing § 111(a)(4) modification definition. Congress established § 111(a)(4)’s definition of modification in 1970 as part of its enactment of NSPS. In the 1970 Act, there were no provisions that defined any emission thresholds or increases, whether in terms of hourly or annual rates. Thus, it seems axiomatic that EPA was free to adopt either such rate (or any other temporal measure for that matter) in interpreting the 1970 Act. When it established the NSR program in 1977, Congress subjected to PSD newly constructed or modified sources. *See* 42 U.S.C. § 7479(2)(C). Rather than providing a definition of “modification” unique for the NSR program, Congress simply referred back to the pre-existing NSPS definition. *See id.* (stating that the term construction includes the modification of any source or facility “as defined in [S]ection 7411(a)”). To the extent that any meaning attaches to Congress’ simultaneous borrowing of the NSPS modification definition while enacting unrelated NSR provisions referencing yearly emissions, these actions show that Congress knew how to impose yearly emission measurement requirements and unquestionably refrained from doing so with respect to emission increases that trigger NSR.

Congress’ decision to borrow the existing NSPS definition of “modification” at the time it enacted the NSR program is also noteworthy in that (as described in more detail below) the NSPS definition had an already-established body of regulations interpreting its meaning, including regulations adopting an hourly-rate test. Had it intended to bind EPA to an annual emission test in enacting NSR as some have suggested, it would have made no sense for

Congress to borrow a definition from another part of the statute that did not explicitly require an annual test and had already been reasonably interpreted by EPA as allowing an hourly-based test. Although *Duke* and *New York I* rejected arguments that Congress' borrowing of the NSPS definition included a borrowing of the then-existing regulatory gloss underlying that definition, these decisions do not alter the factual circumstances surrounding the enactment of the NSR program. It is undisputed that Congress could have included a NSR-specific definition of the term "modification" that, like §§ 169(1) and 165(b), explicitly referred to annual emission increases. Congress did not take this route, however, and instead elected to incorporate a pre-existing definition of modification that is silent as to measurement rate and, both then and now, leaves EPA free to adopt an hourly rate test.

C. EPA Has Reasonably Relied On Hourly-Based Emission Rate Tests For More Than Thirty Years.

EPA has relied on an hourly-rate approach to measuring emission increases since 1975. A brief review of the regulatory history demonstrates that EPA and the regulated community have relied upon these tests for decades as reasonable means for assessing emission increases under the Clean Air Act.

Congress set the foundation for the hourly rate test in 1970 by enacting a definition of the term "modification" in § 111(a)(4) that, as discussed above, was silent as to how to measure emission increases. At the same time it enacted this definition, Congress also directed EPA to promulgate more detailed regulations governing the NSPS. Under these regulations, issued in 1971, EPA defined "modification" in substantially the same way as § 111(a)(4):

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

40 C.F.R. § 60.2; 36 Fed. Reg. 24876 (1971).

In 1974, however, EPA initiated a new rulemaking that would eventually culminate in the 1975 revisions to the NSPS rules. 39 Fed. Reg. 36946 (Oct. 15, 1974). In that proposal, EPA explained that the term “modification” as “defined in the Act as well as in 40 C.F.R. § 60.2(h)” included “several terms and phrases” that were “not fully understood *outside the agency*.” *Id.* (emphasis added). The purpose of the proposed revisions to the NSPS rules, EPA said, was to “resolve any confusion that may exist as to what constitutes a modification” by clarifying the “terms and phrases” in 40 C.F.R. § 60.2(h) that were not “fully” understood by those “outside” the Agency. *Id.* In particular, EPA explained at considerable length in the 1974 preamble the rationale behind proposed paragraph (b) of a new section defining modification, 40 C.F.R. § 60.14, in which EPA explicitly defined emissions increase in terms of “kg/hr,” *i.e.*, an hourly rate. That provision was meant to “clarify the phrase in the definition of modification ‘increases the amount of any air pollutant.’” *Id.* In 1975, EPA adopted the proposed provision without change; under the NSPS rules, as adopted in 1975 and as they stand today, “Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere” 40 C.F.R. § 60.14(a), (b); 40 Fed. Reg. 58416 (1975).⁴

In short, since the very inception of the NSPS program, EPA adopted and applied an hourly emissions increase test to implement the statutory definition of “modification” found at

⁴ The Supreme Court, quoting the D.C. Circuit, stated in *Duke Energy*: “[N]either the 1975 regulation nor its preamble explained why EPA found it necessary to offer these two separate glosses [in 40 C.F.R. § 60.2 and 60.14] on ‘modification.’” 127 S.Ct. at 1428 n.1 (quoting *New York I*, 413 F.3d at 11-12). That statement is literally true but certainly does not support either curt’s conclusion that EPA’s rules have in them, without explanation, “two separate glosses” of what is an emissions increase for a modification. That is because these courts overlooked the unambiguous regulatory history discussed above (and in EPA’s October 2005 proposal, *see* 70 Fed. Reg. at 61088 n.24), where EPA discussed the very issue in the *proposal* for the 1975 rules.

CAA § 111(a)(4). That test has been explicit in the NSPS rules since 1975, and the Agency specifically explained that it was intended in the 1971 regulations.⁵ The 1975 NSPS rules were challenged in *ASARCO, Inc. v. EPA*, 578 F.2d 319 (D.C. Cir. 1978), and while that court struck down portions of them, it never questioned the propriety of EPA’s hourly emissions increase test. In *New York I*, the petitioners challenged EPA’s adoption in 1992 of a provision in the NSPS regulation setting a five-year baseline for the NSPS maximum achievable hourly test. The D.C. Circuit upheld that provision, and also did not question the maximum achievable hourly emissions increase test. *See* 413 F.3d at 27.

Thus, when Congress enacted NSR in 1977 and adopted the NSPS modification definition for NSR, the hourly-based emission test was well-established. To be sure, the Supreme Court and the D.C. Circuit have held this fact alone does not demonstrate that Congress intended to incorporate the hourly rate test in the statute. By the same token, however, by adopting the pre-existing statutory definition of “modification” for NSR, clearly Congress expressed no intent to *preclude* EPA from adopting in NSR rules further defining § 111(a)(4) “modification” the same emissions increase test that EPA had already reasonably adopted in the NSPS rules interpreting “the Act’s common definition.” *See Duke Energy*, 127 S.Ct. at 1434.

To the contrary, when Congress enacted NSR programs in 1977, it effectively enacted, with certain specific revisions, the preconstruction review and permitting program that EPA had earlier established in the PSD rules promulgated in 1974. *See* note 6, *supra*. (At the least,

⁵ In 1974, in response to a court injunction, EPA promulgated the PSD program for new and modified stationary sources. 39 Fed. Reg. 42510 (1974). As in the then-current 1971 NSPS rules, “modification” and “modified source” were also defined in the 1974 PSD rules to require an increase in “emission rate” and contained the same exclusions. EPA explicitly specified that these definitions were meant to be “consistent with the definition used in Part 60,” *i.e.* consistent with the NSPS regulations. 39 Fed. Reg. 42513 (1974). In this pre-1977 PSD regulatory program, EPA calculated emissions increases on an hourly emissions rate basis.

Congress nowhere indicated any disapproval of the regulatory definition of “modification” in the 1974 PSD rules, which was the same as NSPS.) As identified in CAA § 168(b), certain of those specific revisions were made immediately effective by Congress, while other changes to the 1974 PSD rules were to be implemented through EPA or state rulemakings. *See* CAA § 161. The balance of the 1974 PSD program was left intact, including the definition of “modification” (under which, again, EPA calculated emissions increases on an hourly emissions rate basis). Pursuant to CAA § 168(a), these provisions continued to govern the application of the new statutory NSR programs without the need for further rulemaking. Thus, Congress made it clear that, for purpose of the new NSR programs, EPA had discretion to continue to interpret CAA § 111(a)(4)’s definition of “modification” as it had under the 1974 rules.⁶

Moreover, the hourly emissions increase test has been in the NSPS rules for many years. EPA first applied that same test under the 1974 PSD rules, and that test remained in effect by operation of law (*see* CAA § 168(a)) until EPA adopted a different interpretation of “increases” in the 1978 NSR rules. *See* 43 Fed. Reg. 26388 (June 19, 1978) (adopting an annual “potential emissions” increase test). The “potential emissions” increase test was not challenged in the *Alabama Power* case, though other aspects of the 1978 rules were. EPA then changed the emissions increase test under the NSR rules again, to an annual “actual emissions” test, in the 1980 rules. And that test has undergone changes, most notably in 1992 and 2002 (both were

⁶ Nothing in *Duke Energy* is to the contrary. There, the Court observed that CAA § 168(a) provided that pre-existing rules were to remain in effect “[u]ntil such time as an applicable implementation plan is in effect,” a “temporary measure” that did not impose any “restriction on EPA’s authority to interpret the statutory PSD provisions reasonably in a manner that departs from the 1974 regulations.” *See Duke Energy*, 127 S.Ct. at 1434 n.6. Nowhere did the Court suggest, however, that the 1977 CAA Amendments worked to strip from EPA its discretionary authority to continue to define “modification” for purposes of the statutory NSR programs in a manner that was consistent with the definition the Agency had adopted under the 1974 rules.

reviewed in *New York I*). As the Supreme Court has explained, the very fact that EPA has adopted different interpretations of a single term under different provisions of the same statute and, indeed, under the same provision of a statute only goes to demonstrate further the broad discretion that Congress left to the Agency when it remained silent on some aspect of that term. *See Chevron*, 467 U.S. at 864 (“[T]he fact that the agency has adopted different definitions in different contexts adds force to the argument that the definition itself is flexible, particularly since Congress has never indicated any disapproval of a flexible reading of the statute.”).

D. The Proposed Hourly Emissions Tests Are Based on Actual Emissions.

The proposed hourly-based emission tests are based on actual emissions, and thus they are consistent with *New York I*, which read § 111(a)(4) as defining emission increases in terms of “actual emissions.” 413 F.3d at 39 (rejecting EPA’s proposed clean unit provision that would have measured emissions increases in terms of allowable emissions). Significantly, the D.C. Circuit’s opinion did not require EPA to adopt a particular rate for measuring those emissions -- rather, as discussed above, the D.C. Circuit explicitly acknowledged EPA’s discretion in defining rate -- and merely stands for the proposition that EPA must measure some unit of “actual emissions” in establishing an emissions increase test.

The “achievable” emissions increase test, which is the same as currently in NSPS, is a test based on “actual emissions.” *See* 72 Fed. Reg. at 26219; *see also* 39 Fed. Reg. 36946, 36946 (Oct. 15, 1974) (explaining that under the then proposed NSPS test, “for an existing facility to undergo a modification there must be an increase in actual emissions”). This is because, as EPA explained in the 2005 proposal, “The maximum achievable hourly emissions test measures what a source has been *actually* able to emit based on physical and operating capacity *during a representative period prior to the change*.” 70 Fed. Reg. at 61091 (emphasis added). In other words, unlike a test based on “allowable” or “potential” emissions, as these terms are defined in

the NSR rules, the maximum achievable hourly emissions test as implemented in NSPS and proposed here is *not* a theoretical maximum capability test that, in reality, may or may not be reasonably achievable under representative conditions. Indeed, the NSPS rules make clear, unless the use of emissions factors (and engineering analysis) “demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase,” *actual* testing must be used to evaluate the emissions rate of the unit. *See* 40 C.F.R. § 60.14(b). That *actual* testing must be conducted under the *same conditions* before and after the change, so as to isolate the effect, if any, of the change itself on the *actual* emissions rate of the unit under similar conditions. *Id.*

The “achieved” emission increase alternatives proposed by EPA also are plainly based on “actual emissions.” They require a comparison of the hourly rate actually achieved during the baseline period to the rate projected to be actually achieved after the project. Simply because EPA’s proposed alternatives rely on hourly units of measurement, as opposed to some other increment, does not preclude these tests from being ones that measure “actual emissions.” A test that compares an hour time period before a change to an hour time period after a change is just as much of a measure of “actual emissions” as a yearly-based test or any other time increment that EPA could have utilized.

Nevertheless, some commenters have previously claimed an hourly rate test is *per se* inconsistent with the Clean Air Act based on an overbroad reading of *New York I*. Specifically, these commenters have argued that an hourly rate test does not measure “actual emissions” because, essentially, “actual emissions” should be measured in annual increments. There is no support for the claim that actual emissions can be measured only in yearly increments. Neither *New York I* nor the Act itself defines actual emissions in these terms. In fact, *New York I*

undermines any argument that “actual emissions” must be measured in yearly (or any other specific) increments. In that case, petitioners challenged an NSR rule that defined emission increases by comparing post-change emissions to a pre-change baseline defined as “any consecutive 24-month period selected by the [source] within the 10-year period immediately preceding [the change].” *New York I*, 413 F.3d at 22 (quoting the definition of “baseline actual emissions” codified at 40 C.F.R. § 52.21(b)(48)(ii)(c)). The petitioners argued that this ten-year baseline window failed to capture real emission increases, which they reasoned had to be based on a comparison between emissions immediately before the change and emissions immediately thereafter. *Id.* at 22-23. In simple terms, the petitioners in *New York I* objected to EPA’s temporal framework for measuring emission increases and argued that their own offered timeframe was mandated under § 111(a)(4) of the Act. In rejecting the petitioners’ arguments, the court noted that the term “increases” did not set any such temporal boundaries, and upheld EPA’s reasonable interpretation of § 111(a)(4)’s emission increase concept. *Id.* at 23. Accordingly, rather than binding EPA to measure so-called “actual emissions” solely in terms of annual emissions, *New York I* specifically rejected placing a temporal limit on EPA’s reasonable discretion.

Another, closely related argument that some commenters make is that an hourly test is inconsistent with *New York I*’s reading of the Act because that test would allow, without triggering NSR, *some* “actual emission increase,” namely if “actual emissions” are averaged on a yearly basis. According to this argument, the hourly test is unlawful because the Act precludes *any* increase in “actual emissions.” That reasoning, however, was squarely rejected by the D.C. Circuit, when it upheld EPA’s choice of a 10-year baseline for NSR and the NSPS hourly emissions increase test for EGUs promulgated in 1992. Said the court:

[The Petitioners'] contention that the ten-year lookback period "administratively excise[s] the statutory word 'any' by excluding *some* emissions-increasing changes" from NSR, [Pets' Br.] at 13, is misplaced because the 2002 rule redefines the baseline such that 'any' change that increases emissions beyond the redefined baseline still triggers NSR. Environmental petitioners' similar contention that the 1992 rule violates the statutory term "any" by excluding some emissions-increasing changes from NSPS fails for the same reason.

New York I, 413 F.3d at 27. Here, EPA has proposed to "re-define" the baseline for "emissions increase" under NSR. As the D.C. Circuit held in *New York I*, this is comfortably within EPA's discretion under the statute.

In addition, the commenters' argument proves too much and, taken to its logical conclusion, is absurd. Any emissions increase test must be based on the operation of the unit during a particular period of time, whether that period is an hour, a day, a month, a year, a decade, etc. According to the commenters, an hourly emissions test allows some increases based on a yearly averaging period. But by the same token, a test based on the highest yearly average emissions during a given baseline (*e.g.*, 10 or 5 years, as is the case in the current NSR rules) would also allow "some increases" based on a longer averaging period of, say, 2 years, 5 years, a decade, etc. In fact, that test also would allow increases on a short-time basis, *e.g.*, hourly or monthly, so long as the annual emissions do not increase. If this logic was allowed to dictate the test EPA employs, EPA would never be able to adopt a suitable test, because whatever period EPA might use as the basis for calculating "actual emissions" would, purportedly, not capture "some" emissions increases averaged over a shorter or longer period.

Rather than reading the "actual emission" requirement in this seemingly absurd manner so as to preclude an emission tests based on hourly measurements, this requirement must be understood in the context of the opinion that established it and the plain language of the Clean Air Act itself. Specifically, in holding that § 111(a)(4) requires emission increases to be

measured in terms of “actual emissions,” the *New York I* court was not rejecting an hourly rate test. Rather, the *New York I* court was rejecting a proposal to exempt from NSR certain sources that agreed to install state-of-the-art pollution control technology so long as *allowable* emissions did not increase. 413 F.3d at 38-40. Thus, the choice faced in *New York I* was not between hourly or annual emission tests, but between a test based on theoretical, allowable emissions and one based on “actual emissions.” Given the issue at hand, *New York I*’s reference to “actual emissions” provides no basis for concluding an hourly-based test fails to capture such emissions. The Act also does not support such a conclusion, as it speaks in terms of emission increases without specifying how to calculate those increases. *Id.* at 27 (“In enacting the NSR program, Congress did not specify how to calculate ‘increases’ in emissions, leaving EPA to fill in that gap . . .”).

Quite simply, an increase in “actual emissions” can occur within any time increment, whether that increment is, for example, an hour, a day, a year, or a decade. Because Congress did not specify in § 111(a)(4) what increments EPA should employ in measuring emission increases, it left to EPA’s reasonable judgment what increment should be used. EPA has reasonably exercised its expertise in proposing hourly-rate based tests in this supplemental rulemaking.

II. RESPONSES TO SPECIFIC QUESTIONS RAISED IN EPA’S NOTICE

EPA’s supplemental proposal requests comment on several alternatives for, and specific aspects of, the Agency’s plans to implement an hourly emissions rate increase test for use in determining if projects at EGUs will trigger application of the NSR permitting program. The following are UARG’s comments on key aspects of EPA’s plans to implement an hourly emissions rate increase test.

A. Retention of the “Significant Net Emissions Increase Test”

The supplemental proposal sets forth two basic regulatory options. Option 1, which is EPA’s preferred option, in a nutshell, would base NSR applicability on both (1) a unit-level hourly emissions increase test and (2) the source-wide “significant net emissions increase test” currently in the NSR rules. A change at an EGU must result in both to trigger NSR. Option 2 would eliminate the current source-wide significant net emissions increase test and would base NSR applicability solely on a unit-level hourly emissions increase test. Option 2 would thus eliminate the significance thresholds and the opportunity for netting, *i.e.*, offsetting an increase in emissions at a source with a decrease elsewhere at the source so that there is no “net” emissions increase.

As UARG stated in its comments on the 2005 proposal, UARG strongly supports the retention of the “significant net emissions increase test” as a second step in the NSR applicability inquiry. UARG therefore supports EPA’s preferred option, Option 1. That option has several advantages. First, it minimizes the overall regulatory changes in this rulemaking. Second, and more importantly, both the “significance” and “netting” concepts are long-standing and have been recognized as implementing sound policy; there is no evidence anywhere in the record that even remotely questions their wisdom. Accordingly, there is no reason for EPA to change them. Third, any attempt by EPA to eliminate netting is, at the very least, highly suspect under the long-standing decision in *Alabama Power Co. v. Costle*. See also UARG’s Comments on 2005 Proposal, Attachment 2 at 11-12. Finally, the “significant net emissions increase test” that EPA proposes to retain under Option 1 is the same test that the D.C. Circuit upheld in *New York I*.

B. How To Measure Hourly Emissions Increases

The supplemental proposal sets forth a number of alternatives for measuring hourly emissions increases. EPA asks for comments on three aspects of these alternatives: (1)

“achievable” or “achieved” tests; (2) “input-based” or “output-based” tests; and (3) implementation methods for an “achieved” test, *i.e.*, “one-in-5-year” baseline or a statistical approach for determining the “achieved” level of emissions.

1. The “Achievable” and “Achieved” Tests

UARG supports the maximum achievable hourly emissions increase test for the following reasons. First, adoption of this test would make the applicability test for NSPS and NSR the same for EGUs, and that consistency makes sense. After all, Congress specifically provided that EPA should define “modification” under NSR “the same ... as used” under NSPS. 42 U.S.C. § 7501(4); *see also* § 7479(2)(C). The Supreme Court held this language does not *compel* EPA to adopt the same test for NSPS and NSR. But surely that language provides no basis for *precluding* EPA from doing so and, indeed, supports EPA’s adoption of the same test for the two programs. Second, the achievable test has been applied under NSPS by utilities and regulating agencies alike for many years. It has stood the test of time and has provided regulated entities and regulators with the type of bright-line test and ascertainable certainty that sound regulatory programs should strive for. *See also* UARG’s Comments on 2005 Proposal, at 20-21. Third, it is a test that inherently incorporates the statutory causal link requirement between a change and the emissions increase because it is a test that requires a comparison of hourly emissions before and after the change *under the same representative conditions* (save those that the change alters). In other words, UARG agrees, “any increase in the emissions under the [maximum *achievable*] hourly emissions test would logically be attributed to the change.” 72 Fed. Reg. at 26206. There is no need under that test to undertake any complex analyses, whether before a project is done or after it, to distinguish between emissions increases due to the change and emissions increases due to factors independent from the change.

If the Agency ultimately decides to adopt an “achieved” hourly emissions increase test, however, it must carefully consider two issues, namely (1) how to ensure that the statutory causal link requirement is incorporated into the regulatory language, and (2) how to ensure that the test adopted into the regulatory language properly accounts for the inherent variability in the measurement of emissions rates on a short-term basis.

With respect to the first (“causal link”) issue, the supplemental proposal correctly recognizes that the statute requires a causal link between a proposed change and an increase in emissions for a modification to occur, just as EPA has recognized this requirement throughout the long history of the NSPS and NSR programs. *See* 57 Fed. Reg. 32314, 32326 (July 21, 1992) (“NSR will not apply unless ... there is a causal link between the proposed change and any post-change increase in emissions.”); *id.* at 32327 (Including into the NSR rules provisions that explicitly implement the causal link requirement “merely incorporates ... a requirement of the pre-existing statutory and regulatory scheme.”); 67 Fed. Reg. 80186, 80203 (Dec. 31, 2002) (same); *see also New York I*, 413 F.3d at 32-33 (noting, with approval, EPA’s acknowledgment that the language of CAA § 111(a)(4) “requir[es] ‘a causal link between the proposed change and any post-change increase in emissions.’”) (quoting 67 Fed. Reg. at 80203). In addition, EPA’s statement that both “the achieved and achievable tests eliminate the burden of ... distinguishing between emissions increases caused by the change from those due solely to demand growth,” 72 Fed. Reg. at 26206, is largely correct, to the extent “demand growth” generally affects long-term utilization of EGUs, not short-term utilization or emissions rates. But EPA’s next statement, that “any increase in the emissions under the hourly emissions tests would logically be attributed to

the change” is most certainly *incorrect* for the maximum achieved test.⁷ The reason is simple: “demand growth” is *not* the *only* independent factor that could affect a unit’s emissions rate. To be sure, demand growth affects capacity utilization, which is one of the determinants of a unit’s emissions rate. But emissions rates, as opposed to utilization, are affected by many more independent factors than demand growth. They are affected, for example, by coal quality, which includes the moisture content, sulfur content, heat content, ash content, and nitrogen content of the coal. Emission rates are also affected by the variability in the operation of control technologies, for example, ESPs, SCRs, and scrubbers. Control technology operations can affect emission rates both on a short-term basis (spikes) and long-term basis (catalyst changes, long-term deterioration and overhauls). In particular, control technology operations are affected by myriad ambient conditions, small and large -- including cooling tower efficiency, water temperature, and atmospheric pressure -- and they are affected by conditions that vary over cycles that can be longer than 5 years, *e.g.*, turbine overhauls at 7- or 8-year intervals. There is no reason to believe that a five-year baseline necessarily would capture all possible variability or changes in these factors.

The easiest example to illustrate this “causal link” issue is to look at a hypothetical change in sulfur content of the coal. It is well-established that the SO₂ emission rate of a boiler is essentially directly related to the sulfur content of the coal being burned in the boiler. Sulfur content is variable, however, even within the same type of coal or mine. After five or more years of operation with coal from one mine, the utility may, for whatever reason, start receiving coal from another mine or, even, a different seam at the same mine. Even a small increase in sulfur

⁷ As discussed above, UARG agrees with the statement for the “achievable” test because that test inherently accounts for the causal link requirement.

content of the coal would likely result in a commensurate increase in the SO₂ emission rate, all else equal. If the utility undertakes in the mean time a completely unrelated project that is a physical or operational change, it would clearly be incorrect to presume that the “increase in the [SO₂] emissions under the hourly emissions tests would logically be attributed to the change.” Quite the contrary, the increase might have nothing to do whatsoever with the change. Yet, a rote “maximum achieved” test that merely compares the maximum achieved hourly SO₂ emissions rate before the project to that achieved after the project would lead to the incorrect conclusion, *unless* the test accounts for causation.

2. Implementation Methods for a “Maximum Achieved” Test

EPA has proposed two methods for “computing maximum achieved emissions: (1) a statistical approach for determining if an EGU exceeds its pre-change maximum achieved hourly emissions rate based on the upper tolerance limit (“UTL”) process developed by the National Bureau of Standards; and (2) a “one-in-5-year baseline.” 72 Fed. Reg. at 26215. Because there is no evidence that the latter method appropriately accounts for measurement variability at EGUs and because we are unaware of any studies showing that five years of data is or is not long enough to account for such variability, UARG prefers the use of a statistical approach for computing maximum achieved emissions. UARG believes, however, that the specific statistical approach proposed by EPA is fatally flawed and should not be adopted as currently proposed. EPA’s proposed UTL method, however, could become a viable element of implementing a maximum achieved hourly emissions test under NSR if the method is slightly modified, along

the lines discussed below, to account both for the limitations of the method when applied to real data and the causation requirement.⁸

a) The statistical method, as proposed, is flawed.

The statistical method, as proposed, is fundamentally flawed primarily because it seeks to compare a statistical measure of a unit's performance in the baseline to the unit's performance *during every hour* of operation after a project. As EPA explains, "under the proposed methodology we would expect, with a 99 percent confidence level, 99.9 percent of the hourly emissions rate data to be less than the UTL value." *Id.* By the same token, therefore, assuming a unit operates in the post-project period *identically* to how it operated in the baseline period, one "would expect, with a 99 percent confidence level, [0.1] percent of the hourly emissions rate data to be [*more*] than the UTL value," not because of anything having to do with the project, but merely based on the statistical distribution of the data used to calculate the UTL. Thus, for example, for a unit that operates 8000 hours per year for the five-year period after the project, there will be 40,000 hourly data points. In a perfect statistical world (where the data are normally distributed), the UTL will include only 99.9% of those points, meaning that the remaining 0.1% of the points -- up to 40 hours -- will exceed the UTL. And with real data, which are likely not normally distributed,⁹ even more hours will exceed the UTL. In short, EPA's proposed test is one that units are bound to fail in the vast majority of circumstances, solely due to the variability of the data analyzed.

⁸ For the reasons discussed above, EPA has acknowledged that causation is a threshold statutory requirement for any emissions increase analysis under NSR.

⁹ See n. 10 and accompanying text for a more detailed discussion of real data that have been analyzed in a technical report that we are attaching to these comments.

In order to gain insight into the results that the UTL process might yield in practice and to determine if reasonable modifications could be made to the proposed process in order to improve it, UARG retained consultants to undertake an analysis of actual data from several units. Specifically, as explained in more detail in the attached report,¹⁰ UARG's consultants undertook analyses of NO_x and SO₂ emissions data for several EGU boilers with various combinations of coals and pollution control technologies. They assumed that after a hypothetical physical or operational change occurred in a given year, each boiler would operate in the same way -- *i.e.*, at the same loads, emissions, hours, etc. -- as it did during the five years before the change. That is, they assumed that the "change" undertaken by the boiler had no effect whatsoever on the unit's emissions profile for the entire five-year period following the change, as compared to the baseline. As discussed above, a purely theoretical analysis, assuming normally distributed data, would predict with near certainty that about 40 hours would exceed the UTL during the five years period. In fact, the review of actual plant data generally shows many more hours that would exceed the UTL. *See* UTL Report § 4 & Tables 2-3; § 5.5.2 & Tables 9-12, Figs. 3-4, App. B.

An additional problem with EPA's initial, proposed method is that the UTL would be based on hourly emissions rates reported in the CEMS during the highest ten percent of yearly operating hours in the baseline period, sorted by *heat input* rate, not emissions rate. Thus, under this method of sorting, it is entirely possible that some of the reported hourly emissions rates measured in the CEMS during hours not included in the dataset used to calculate the UTL would exceed the maximum emissions rate measured during hours upon which the UTL is based. Yet,

¹⁰ Lowell L. Smith and Michael C. Hein, *Analysis of the Upper Tolerance Limit Process Proposed by EPA for Determining the "Maximum Achieved Hourly Emissions Rate" for Electric Generating Units* (August 6, 2007) [hereinafter "UTL Report"] (enclosed as Attachment 1).

after the project, according to the proposed methodology, the emissions rates in *every* hour count. The flaw in this apples-to-oranges comparison is obvious.

- b) The statistical method, if modified, can be improved, but even with such improvements, false positives will not be avoided.

The UTL Report explored several variations on the statistical approach included in EPA's proposal. As discussed below, some yielded better results (*i.e.*, fewer false positives), but false positives could not entirely be avoided for all the units analyzed.

For example, a potential improvement on the heat-input sorting method proposed by EPA may include "sorting and extracting the data based on the hourly emissions rate itself" (as EPA suggested by requesting comment on such alternative sorting criteria), *see* 72 Fed. Reg. at 26216. The UTL Report evaluated such alternative sorting, as well as restricting the post-change dataset to the ten percent highest heat-input hours. These were improvements, but both alternative analyses still yielded large numbers of false positives. *See* UTL Report § 5.1-5.3 & Tables 4-6.

The UTL Report also evaluated possible modifications to other parts of the UTL process to respond to EPA's request for comment about varying the statistical parameters for the UTL method, namely "whether a 99 or 90 percentile of the population (of hourly emissions rate readings) would be more appropriate" than 99.9 percent; and "whether a 95 or 90 percent confidence level would be more appropriate" than 99 percent. Given that the proposed methodology is flawed at the levels proposed by EPA, it follows that the flaws would be greatly exacerbated if EPA were to use either a smaller threshold for the percentile of the population less than the UTL or a smaller confidence level. *See* 72 Fed. Reg. at 26216. Accordingly, the UTL Report explored whether *increasing* these values would help eliminate the problems with the UTL method.

Increasing the threshold for the percentile of the population and the confidence level would make sense because these parameters by definition reflect the likelihood and amounts of measurements that would be expected to exceed the UTL. In the NSPS setting context, EPA has used relatively high statistical measures to ensure no more than one exceedance in 10 years. Specifically, in the Subpart Da and subsequent NSPS rulemakings for utility steam generating units, EPA used a confidence interval of 99.9726 percent for 24-hour block measurements. For an hourly measurement, the equivalent confidence interval would be 99.9989 percent. In the NSPS or NSR applicability context, where *no* exceedance due to a physical or operational change may be allowed, it makes sense to use similarly high statistical measures.

The UTL Report thus analyzed the data for a threshold and confidence level of 99.98 percent. In addition, in these analyses, only the top 1 percent of data in the 365-day period were used to calculate the UTL, instead of the 10 percent sorting in the proposal. The rationale for that change is that, to the extent only a portion of the data are being used to calculate the UTL because the data provide a characterization of the unit at maximum operating conditions, 10 percent is too large, especially for cycling units. The results show that while increasing the threshold and confidence levels and using the highest 1 percent of the data would improve the results, there would still be false positives. *See* UTL Report § 5.4 & Table 7.

The UTL Report also looked at another slight variation to EPA's proposed UTL method, in which the UTL was calculated based on all hourly data (excluding those reflecting startup, shutdown or malfunction conditions) on a rolling 168-hour basis (roughly one week worth of data). *See* UTL Report § 5.6. The rationale for this variation, as explained more fully in the UTL Report, is that "[b]y selecting only the highest values of the parameters within the 365 day period, the process effectively distorts the natural variability of the data during that period." *Id.*

Thus, the use of roughly a week worth of data to calculate the UTL, without sorting or selecting a subset of that data, increases the likelihood that the data upon which the UTL would be based are (close to being) normally distributed and also capture “both the diurnal and weekly variations that typical utility EGUs experience during the year.” *Id.* This variation of the UTL method yielded significantly better results than others (in terms of fewer false positives), but still did not eliminate false positives altogether.¹¹

- c) If EPA adopts a statistical method to evaluate the maximum achieved hourly rate, it should further modify the method to ensure that it does not result in false positives, and it should explicitly account for the causal link requirement.

As discussed above, it is clear that the UTL method, as proposed, suffers from a fundamental flaw, in that it compares the statistical performance of a unit in the baseline period to its actual performance after a project, in a measurement environment that exhibits an extremely large variability. The consequence is a method that -- even if modified as also suggested above -- results in “false positives,” *i.e.*, circumstances in which the method finds an increase in the maximum achieved hourly emissions rate solely due to the variability of the data itself. Moreover, as also discussed earlier in these comments, a simple comparison of actual emissions achieved before a change to those actually achieved after that change -- without any consideration of whether the conditions under which these two values were measured are the same -- cannot possibly account, in and of itself, for the causal link requirement. Accordingly, if

¹¹ We also note that EPA’s statistical method has applicability limitations that we believe EPA should consider addressing in the preamble of the final rule. For example, it would appear that the statistical method may be difficult to apply (or be altogether inapplicable) for units that are not monitored with CEMS or PEMS, and for multiple units monitored with CEMS or PEMS in a combined stack (*i.e.*, a stack that serves more than one unit). Difficulties may arise also for pollutants that are controlled seasonally (*e.g.*, SCR operations during ozone season only).

EPA adopts a statistical methodology as part of an NSR maximum achieved hourly emissions increase test, it must address these issues.

As discussed in the remainder of this section of UARG's comments, we believe that EPA can address these issues by (1) adopting the same hierarchy for evaluating whether a project would result in an increase in the maximum achieved hourly emissions rate as EPA uses in the NSPS rules for evaluating maximum achievable emission rates; (2) changing the proposed statistical methodology to minimize the amount of baseline hourly data that would exceed the calculated UTL; and (3) explicitly accounting for causation in analyzing actual data.

Adopting the NSPS hierarchy for evaluating whether a project would result in an increase in the maximum achieved hourly emissions rate. Under the NSPS rules, EPA recognizes that whether a project might increase the maximum achievable hourly emissions rate of a unit can, in the vast majority of cases, be easily determined on the basis of engineering analyses. *See* 40 Fed. Reg. 58416, 58416 (Dec. 16, 1975) (explaining the rationale for requiring the use of emission factors in the first instance to evaluate emissions increases under NSPS). This is because a comparison of maximum achievable hourly emissions rates necessarily requires holding all conditions constant (and at values that would result in the maximum achievable rates), except for those conditions that are altered by the project. Thus, the analysis boils down to two inquiries: does the project result in the unit's (1) being able to burn more fuel than before or (2) emitting more of the pollutant in question per unit of fuel burned. These are questions that -- for most projects -- are easily answered with an engineering analysis. *See id.* In those situations in which an engineering analysis is inconclusive or "does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase," CEMS or manual emissions tests may

be used to evaluate the effect of the change on emissions. 40 C.F.R. § 60.14(b). Importantly, whether CEMS or manual tests are used, the statistical procedures in Appendix C (of part 60) must be used. These procedures, in a nutshell, require testing under the *same representative conditions* before and after the project, thus ensuring that any difference in measured emission rates before and after a change are caused by the change, not by extraneous independent factors. These procedures also require a statistical comparison of the before and after results, not a comparison of a statistical measure before to every test point after. *See id.* pt. 60, App. C (using “Student’s t-test” to determine whether the mean of results before the change is significantly different from the mean of results after the change).

If the Agency is inclined to adopt an “achieved” test, UARG urges EPA to adopt a similar framework for determining whether a change would increase a unit’s maximum achieved hourly emissions rate. Such a framework would thus require the source to determine the baseline based on some measure of “achieved” hourly emissions (*e.g.*, a statistical methodology, such as the UTL method or a variation thereof) and an engineering analysis of whether the project would increase that rate under the same conditions as in the baseline, except for those conditions altered by the project. If the results of that analysis are unclear or disputed, then the source may rely on testing conducted under representative, *achieved* conditions before and after the change, using a statistical comparison similar to the Student’s t-test used in the NSPS rules. Under these two steps -- engineering analysis and manual tests -- causation is automatically accounted for because the conditions are the same before and after the change (except for any conditions that the project alters).

Changing the proposed statistical methodology to minimize the amount of baseline hourly data that would exceed the calculated UTL. Even if EPA adopts, for NSR purposes,

the NSPS hierarchy for evaluating whether a project would result in an increase in the maximum achieved hourly emissions rate, that would not eliminate the need for an evaluation of actual post-project data. Such an analysis would be warranted, for instance, in a situation in which there is a question after the fact as to whether a project may have increased the maximum achieved hourly emissions rate, especially where no manual test was undertaken (presumably because the source believed an engineering analysis was sufficient). For such an evaluation, UARG suggests that the final rule should require a comparison of post-project actual hourly measurements to a UTL calculated based on one of the two above-described UTL method variations that minimize the amount of exceedences in the baseline period, *i.e.*, (i) a UTL based on a rolling 168-hour analysis, *see* UTL Report § 5.6; or (ii) a UTL based on 99.98 percent confidence interval and the highest 1 percent of the measurements in any 365-day period in the baseline period, *see id* § 5.4. Either of these two approaches could be made workable, but UARG prefers the first option because it is theoretically more robust (for the reasons discussed above and in the UTL Report), and because it is more easily implemented (*i.e.*, it does not require sorting).

Explicitly accounting for causation in analyzing actual data. In addition, the final rule should explicitly account for causation. There are several reasons for this. First, because the above-recommended variations of the UTL method still show some data in excess of the UTL in the baseline period, the final rule should provide that the project could not have resulted in an increase in a unit's maximum achieved hourly emissions rate where the unit has the same or smaller number of measured hourly data in excess of the UTL after the project as it did during the baseline period. Second, and more generally, the final rule should make clear that if a unit's actual hourly emissions exceed the pre-project hourly emissions, the source may exclude from

the post-project emissions rate any emissions that the unit could have accommodated in the baseline period and that are unrelated to the project.

UARG believes that the framework and hierarchy of analysis described above, including a modified UTL method, would provide a reasonably robust way of evaluating whether an activity is projected to -- or does -- increase a unit's maximum achieved hourly emissions rate. Also as noted above, the modified UTL method would be superior to the "one-in-5-year baseline" approach, which does not necessarily account for all potential variability in CEMS data. Whatever method EPA may adopt for an achieved test, however, merely looking at measured emissions rates without considering underlying conditions cannot *ispo facto* account for whether any apparent change in emissions rates is due to an intervening project or some other, independent factor. Therefore, an achieved method must explicitly recognize the statutory causal link requirement for a "modification" to occur.

3. Input-Based and Output-Based Measures

In addition to proposing two different tests for determining a unit's pre-change maximum emissions rate (*i.e.*, the statistical approach and the one-in-5-year baseline approach), EPA proposes to let source owners have a choice of implementing the ultimately chosen test on either an emissions input basis (expressed in lb/hr) or output basis (expressed in lb/MWh). *See* 72 Fed. Reg. 26215-16. In its October 2005 proposal, EPA suggested it was considering allowing sources to use an output-based approach in order to encourage certain efficiency improvement projects.

If EPA's final rule includes only one of the proposed approaches (*i.e.*, an input-based approach *or* an output-based approach), UARG urges EPA to choose an input-based test. This would encourage both (a) projects that will improve efficiency, and (b) projects that are essential to maintaining the safety, reliability, and productive capacity of EGUs but that may result in a

small or even marginal decrease in efficiency. Examples of beneficial projects in the latter category include certain pollution control projects (which are now potentially subject to NSR due to the vacatur of the pollution control project exclusion in *New York I*).

Alternatively, UARG would support an approach under which EPA, in its final rule, allows source owners and operators to choose to use either an input-based or output-based approach. We would note, though, that if EPA wants to give source owners the option of using an output-based approach, it might first have to resolve a technical issue. It is well-established that, at least for coal-fired EGUs, the efficiency of the unit (often expressed in terms of “heat rate”) is not constant across the entire load spectrum and, indeed, typically is better at high load levels. Accordingly, all else being equal, one would expect a unit’s maximum hourly output-based emission rate to occur at low load levels, not at maximum (or near) load capacity. It is questionable whether it is appropriate, though, to base NSR applicability on an emissions rate measured at low load levels.

UARG would not support a program that *requires* an output-based test as the only option for source owners and operators. Requiring the use of an output-based test would have the unintended and detrimental effect of discouraging projects that are essential to maintaining the safety, reliability, and productive capacity of EGUs if those beneficial projects could result in a marginal decrease in efficiency.

C. Geographic Applicability

EPA proposes to apply the hourly emissions increase test for EGUs nationwide, but nonetheless requests comment on whether the applicability of the test should be limited to the geographic area covered by EPA’s Clean Air Interstate Regulation (“CAIR”), or to the geographic area covered by both CAIR and requirements for the installation of best available retrofit technology (“BART”). *See* 72 Fed. Reg. at 26218. UARG believes EPA should adopt a

rule of nationwide applicability, as proposed. The record strongly supports EPA's proposal to apply the rule nationwide and provides no basis for limiting the rule geographically. First, as EPA explained at the outset, the proposed rule, if adopted, would promote the safety, reliability and efficiency of EGUs. There is no reason to believe that these goals are any less important in areas not subject to CAIR or BART. Second, EPA conducted in this rulemaking a very thorough analysis of the potential impact of the rule on emissions from the electric utility sector, in terms of regional versus local effects as well as pollutants subject to the Acid Rain program, CAIR, and BART versus pollutants that are not subject to these programs. The results are unequivocal. There is no basis for limiting the rule geographically to the CAIR or CAIR/BART areas.

D. Pollutant Applicability

EPA proposes to apply the hourly emissions increase test for EGUs to all regulated NSR pollutants, but nonetheless requests comment on whether the applicability of the test should be limited to SO₂ and NO_x. *See* 72 Fed. Reg. at 26218. For the same reasons as those discussed above in connection with the geographic applicability of the proposed rule, UARG supports EPA's proposal to apply the rule to all regulated NSR pollutants. The goal of promoting the safety, reliability and efficiency of EGUs is better achieved by applying the rule to all regulated NSR pollutants. And, as discussed above, EPA's thorough analysis of the potential impact of the rule on emissions from EGUs, in which EPA specifically looked at the potential effects on emissions of regulated NSR pollutants other than SO₂ and NO_x, shows there is no basis for limiting the applicability of the rule to SO₂ and NO_x.

E. Recordkeeping and Reporting Requirements

UARG agrees with EPA that no additional recordkeeping and reporting requirements are required for this rule because EGUs already keep records and report vast amounts of data potentially relevant to determining whether a project resulted in an increase in maximum hourly

emissions rates (whether “achievable” or “achieved”). UARG believes that the Agency should not require additional recordkeeping and reporting for EGUs that are not using CEMS, because these EGUs are few and relatively small. Moreover, UARG believes that EPA’s over-reliance on CEMS is not justified, because the CEMS (1) exhibit extreme volatility for short-term measurements and (2) do not and cannot account for causation issues. For the vast majority of projects, a determination that a project does or does not increase maximum hourly rates can be readily made based on the engineering characteristics of the project, whether before or after the project. Only for those projects for which an engineering analysis is not sufficient to “demonstrate[] that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase,” *cf.* 40 C.F.R. § 60.14(b), is it potentially justified to impose on EGUs that do not use CEMS some requirement to document its determination of non-applicability.

* * * * *

UARG appreciates this opportunity to comment on EPA’s supplemental proposal. As noted above, UARG strongly supports EPA’s proposal to adopt an hourly emissions increase test as a threshold requirement for what is a “modification” under the NSR program and to retain the source-wide significant net annual emissions increase requirements of the current NSR rules. In addition, UARG supports EPA’s option that would adopt for the NSR program the same “maximum achievable” hourly emissions test that has been implemented successfully under the NSPS rules for many years. If EPA ultimately decides to adopt an “achieved” test, however, UARG urges the Agency to account explicitly for the statutory requirement that there be a causal link between a change and any emissions increase and to establish the analytical approaches that may be used for implementing such a test.

Attachment 2

COMMENTS OF THE UTILITY AIR REGULATORY GROUP
ON THE ENVIRONMENTAL PROTECTION AGENCY’S
PROPOSAL TO IMPLEMENT AN EMISSIONS TEST FOR
EXISTING ELECTRIC GENERATING UNITS SUBJECT TO THE RULES
GOVERNING THE PREVENTION OF SIGNIFICANT DETERIORATION AND
NONATTAINMENT MAJOR NEW SOURCE REVIEW PROGRAMS

These are the comments of the Utility Air Regulatory Group (“UARG”) on the Environmental Protection Agency’s (“EPA’s” or the “Agency’s”) October 20, 2005 preamble explaining Agency plans for implementing an emissions test that determines which activities at existing electric generating units (“EGUs”) will trigger applicability of the Prevention of Significant Deterioration of Air Quality (“PSD”) and nonattainment New Source Review programs (collectively “NSR”) established by Parts C and D of Title I of the Clean Air Act (“CAA” or the “Act”). See 70 *Fed. Reg.* 61081.

UARG is an unincorporated group of approximately 50 individual electric utility companies and four trade associations: the American Public Power Association, Edison Electric Institute, National Rural Electric Cooperative Association, and National Mining Association. Since 1977, UARG has participated in virtually all key CAA rulemakings affecting electric utility companies and in subsequent litigation related to those rulemakings. In particular, UARG has been an active participant in the rulemakings and litigation related to the Act’s NSR preconstruction permitting programs. For example, UARG was actively involved in the 1977-78 rulemakings to implement the PSD permitting requirements of the 1977 Clean Air Act Amendments, and UARG (participating under the names of its individual members) was the lead petitioner in the seminal NSR case, *Alabama Power Company, et al. v. Costle*, 323 F.2d 636 (D.C. Circuit 1979) (hereinafter “*Alabama Power I*”¹). UARG has also been a participant in subsequent NSR rulemakings and litigation, including EPA’s rulemakings to implement the *Alabama Power II* decision and subsequent litigation (*Chemical Manufacturers Association v. EPA*, No. 79-112 (D.C. Cir.)); the Seventh Circuit litigation concerning an NSR issue at an individual company (*Wisconsin Electric Power Co. v. Reilly*, 893 F.2d 901 (7th Cir. 1990)) and the subsequent “WEPCo” rulemaking in 1992; the meetings of

¹ The D.C. Circuit issued a preliminary decision in the case, which appears at 606 F.2d 1068 and which is hereafter referred to as *Alabama Power I*.

the Clean Air Act Advisory Committee’s New Source Review Subcommittee (the Subcommittee first met in the summer of 1992 and met frequently over the next four years to discuss ways to “simplify” or “reform” the NSR program); the 2002 and 2003 EPA rulemakings to revise portions of the NSR program and subsequent litigation (*New York v. EPA*, 413 F.3d 3 (D.C. Cir 2005), also known as “*NSR I*”; and *New York v. EPA*, No. 03-1380 (D.C. Cir.), also known as “*NSR II*”). Also, UARG has been an intervenor in some of the litigation arising out of EPA’s late 1990s NSR enforcement initiative (e.g., *U.S. v. Duke Energy Corp.*, 411 F.3d 539 (4th Cir. 2005)).

In addition to UARG’s having familiarity with the history of NSR regulations, UARG’s individual members have practical, hands-on experience with the application of the NSR programs and with other Clean Air Act programs, including EPA’s new source performance standards (“NSPS”) program under CAA §111.

Based on this extensive knowledge of NSR, UARG members strongly support EPA’s plan to implement the approach described in the October 20, 2005 notice for determining if a project at an existing EGU will trigger applicability of the NSR regulatory programs. In particular, UARG supports the plan to make the test the same as that in the NSPS program.

I. OVERVIEW OF UARG’S COMMENTS

In its October 20, 2005 preamble, EPA says it plans to propose rules that will, at least for utility sources, limit NSR preconstruction permitting of projects at existing emission units to those that are “modifications” under EPA’s NSPS program. Under the NSPS program, a project at an existing unit of a major stationary source will be considered a “modification” if the project is one that increases the unit’s maximum hourly emission rate. UARG supports EPA’s use of the maximum hourly emission rate increase test. UARG believes this approach is fully consistent with the requirements of the CAA and with the recent court decisions interpreting the NSR provisions of the Act.

In addition, UARG supports retention of the current annual emissions increase test for determining if a project is a “major modification” under the Clean Air Act. It is UARG’s view that the hourly emissions test is a component of the annual emissions test, as explained by the court in *U.S. v. Duke Energy*, 278 F.Supp.2d 619, 643 (M.D.N.C. 2004). Specifically, if a project is determined not to be a “modification” under the hourly

maximum emissions rate increase test, then that project would not need to be evaluated to determine if it is a “major modification” under the annual emissions increase test of the NSR rules. If, however, a project is determined to be a “modification” under a maximum hourly emissions rate increase test, then -- to determine whether it is also subject to NSR -- the project should be evaluated to determine if it is a “major modification” under the annual emissions increase test of the NSR rules. In this way, only if the project is deemed to be both a “modification” under the maximum hourly emissions rate increase test and a “major modification” under the annual emissions increase test would the project be subject to NSR.

II. EPA’S PLAN TO ADOPT AN HOURLY EMISSIONS RATE INCREASE TEST IS FULLY CONSISTENT WITH THE CLEAN AIR ACT

As described in more detail below, EPA at a minimum has discretion to exclude from the NSR process projects at existing sources that are not NSPS “modifications.” Specifically, EPA may -- as it is proposing to do -- use the NSPS regulatory definition of “modification” (which includes an hourly emissions rate increase test) to determine if a source triggers application of the new source review process. EPA’s proposed change is wholly consistent with the text of the Clean Air Act, with congressional intent, with EPA’s regulations under the Clean Air Act, and with past EPA actions. It is also consistent with recent case law.

A. The Clean Air Act, At a Bare Minimum, Authorizes EPA to Define “Modifications” in the Same Way for the NSR and NSPS Programs.

Congress did not specify how emissions increases were to be calculated under the NSR program. Both the plain language and legislative history of the Clean Air Act, however, support (if not require) EPA’s using the same test for triggering applicability of the NSPS and NSR programs.

Congress in 1970 defined the term “modification” under the Clean Air Act’s NSPS provisions as “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emissions of any air pollutant not previously emitted.” 42 U.S.C. § 7411(a)(4). The 1970 CAA also directed EPA to promulgate more detailed regulations

governing the NSPS. Under these regulations, issued in 1971, EPA defined “modification” in substantially the same way:

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

40 C.F.R. § 60.2; 36 Fed. Reg. 24,876 (1971).

Under these 1971 rules, certain activities, including certain increases in production rate and increases in the hours of operation of a source, were specifically excluded from the definition of “modification.” 40 C.F.R. § 60.2(h) (1971). Thus, from the earliest days of the Clean Air Act and the NSPS program, EPA’s regulations provided that only activities that increased the operating design capacity of a source to increase the temporal emission rate of an air pollutant would be considered “modifications.”

In 1975, EPA clarified that this temporal measure would be hourly: “Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere” 40 C.F.R. § 60.14(a), (b); 40 Fed. Reg. 58,416 (1975). In other words, the test to determine whether an emissions increase had occurred so as to constitute a “modification” at an existing source would look to whether the emissions in kilograms per hour after the change were higher than the emissions in kilograms per hour before the change. If they were higher, the source would be subject to NSPS permitting requirements unless otherwise excluded. The test would not rely on annual increases in pollutants as a basis for determining a modification.

In 1974, in response to a court injunction, EPA promulgated the PSD program for new and modified stationary sources. 39 Fed. Reg. 42,510 (1974). “Modification” and “modified source” were also defined here to require an increase in “emission rate” and contained the same exclusions as those under the NSPS December 1971 rules. EPA specified that these definitions were meant to be “consistent with the definition used in Part 60” of the Clean Air Act. 39 Fed. Reg. 42,513 (1974). In this pre-1977 PSD regulatory program, EPA calculated emissions increases on an hourly emissions rate basis.

When Congress debated and passed the comprehensive 1977 Amendments to the Clean Air Act, it did not change the emissions rate increase test for determining if a project would trigger applicability of the new source review process. Specifically, in codifying in part EPA's PSD program, Congress allowed that certain of EPA's 1974 NSR rules (including the rule defining "modification"), would continue in effect without change. Congress also specifically defined NSR program coverage in reference to the NSPS statutory definition of "modification" under 42 U.S.C. § 7411(a)(4). Thus, Congress legislated in direct reference to the existing regulatory PSD program, did not change the 1974 PSD rules' definition of "modification," and added language assuring that, as in 1970, "modification" would be consistently applied under all the new source programs -- NSPS, PSD and nonattainment NSR.

In 1978, EPA issued new NSR rules in response to the 1977 Clean Air Act Amendments. 43 Fed. Reg. 26,388. Although the 1978 rules introduced new concepts into the NSR regulatory program, including a definition of "major modification,"² they did not change the regulatory definition of "modification."

In short, EPA's original new source review rule's definition of "modification" -- which has remained on the books virtually unchanged since 1974 and has not been altered by Congress -- gives EPA the discretion to define that term in the NSR program exactly as it now plans to do: making the definition of that term fully consistent with its meaning under the NSPS program.

B. Recent Court Decisions Confirm EPA's Authority to Define "Modification" the Same Way Under Both the NSPS and NSR Programs.

Recent court decisions confirm that EPA may define the term "modification" the same way in both the NSPS and NSR programs. In fact, the Fourth Circuit went even further in its June 2005 decision in *U.S. v. Duke Energy*, 411 F.3d 539 (4th Cir. 2005), holding that Congress had mandated that the PSD program's definition of "modification" be identical to the NSPS definition, and thus that EPA cannot interpret "modification"

² The 1978 rules limited NSR applicability to those NSPS modifications that were "major modifications." A "major modification" was defined in those rules to mean a change that increased a source's "potential emission rate" by a certain number of tons per year.

under NSR inconsistently with the way it interprets that term under NSPS. *Duke Energy*, 411 F.3d at 547. Shortly thereafter, the D.C. Circuit, in *New York v. EPA*, 413 F.3d 3 (D.C. Cir. 2005) (“*NSR I*”), expressly declined to address the significance of the Fourth Circuit’s holding on this point, thus not putting any judicial roadblocks in the path of EPA’s current plan to define “modification” the same way under both the NSPS and NSR programs. Indeed, the D.C. Circuit in *NSR I* expressly held that EPA has the discretion to define how emission increases are to be calculated because congress did not specify this. *See id.* at 27.

In sum, the entire history of statutory and regulatory enactments and interpretation of the Clean Air Act bolsters the legal underpinnings of EPA’s proposed hourly emissions increase test. EPA may -- indeed, we believe, EPA must -- use the NSPS program’s definition of “modification” to decide whether a project is a “modification” under the Act and thus subject to the permitting requirements of the NSR program.

III. RESPONSES TO SPECIFIC QUESTIONS RAISED IN EPA’S NOTICE

EPA’s October 20, 2005 preamble asks for guidance on specific aspects of the Agency’s plans to implement an hourly emissions rate increase test for use in determining if projects at EGUs will trigger application of the NSR permitting program. The following are UARG’s preliminary responses to some of those questions. UARG plans to provide additional comments and in certain instances more detailed comments on these and other issues once EPA develops a more specific proposal (including regulatory language).

A. How To Measure Emissions Increases

EPA says it is considering three different forms of an “hourly emission rate increase” test. Its preferred approach is one that would parallel the language/approach in the NSPS program: comparing the maximum hourly emissions rate *achievable* at a unit during the 5 years preceding a physical or operational change to the maximum hourly emissions rate achievable at that unit after the change to determine whether an emissions increase would occur. Alternatively, EPA asks for public comment on a test comparing maximum hourly emissions rate *achieved* at a unit before a change to the maximum hourly emissions rate achieved at the unit after the change. EPA also asks for comment

on another alternative or additional test under which an emission increase would be based on “mass of emissions per unit of energy output, such as lb/MW hour or nanograms/per Joule.”

1. The “Achievable” and “Achieved” Tests

EPA suggests there is no meaningful difference between the *achievable* test and *achieved* test because for “most, if not all EGUs, the hourly rate at which the unit is actually able to emit is substantively equivalent to that unit’s historical maximum hourly emissions.” 70 Fed. Reg. 61091 col. 1. The two tests are not equivalent in many instances, however, and when they are equivalent, that might not be for the reasons that EPA states.

An example can be used to explain this point. Consider a comparison of pre-project and post-project SO₂ emissions at a source, where -- during the pre-project period -- the source has burned coal with a lower-than-allowed sulfur content. This may happen because the coal available to a source during the pre-project period is lower in sulfur content than is permitted. Or it may happen because the source owner -- as a part of its strategy to implement Title IV and CAIR requirements -- does a variety of things to operate its facility so that its SO₂ emission rate is well below permitted levels. In this example -- and in similar examples (involving NO_x and particulate matter) -- if a unit’s post-project emissions rate for a pollutant is higher, it will not necessarily be higher as a result of the change. Rather, it may be higher as a result of factors entirely independent of the change (*e.g.*, the variability of the sulfur content in the coal being burned). Because of this, if EPA chooses to use the *achieved* test in its regulatory proposal, EPA should ensure that the *achieved* test is drafted so as to take “causation” into account. EPA can do this by holding constant operating conditions before and after a project. Of course, by making the *achieved* test a comparison of a unit’s “achieved emissions rate before the change” with the unit’s “achieved emissions rate under similar operating conditions after the change,” the test becomes essentially equivalent to the *achievable* test that EPA has described. For these reasons, UARG supports EPA’s preferred option, *i.e.*, using the maximum hourly emissions rate *achievable* test.

UARG offers the following additional comments in support of the adoption of the *achievable* test. First, adoption of the *achievable* test would make the applicability test

for NSPS and NSR the same for EGUs, and that consistency makes sense. After all, Congress specifically provided that EPA should define “modification” under NSR “the same ... as used” under NSPS. 42 U.S.C. § 7501(4); *see also* § 7479(2)(C). Also, the **achievable** test is workable and enforceable; it has effectively been used for decades to determine applicability of the NSPS.³

Moreover, as discussed further below, the “achievable” test is consistent with the court decisions in *NSR I* (which upheld the NSPS utility “achievable” test with a 5-year look-back period),⁴ *Duke Energy*, *WEPCo*, and *Alabama Power*.⁵

³ We also urge EPA to implement the NSR hourly emission rate increase test the same way it implements the NSPS **achievable** emission rate increase test, which allows source owners to use alternative approaches for evaluating whether a project will result in an emission rate increase. Under 40 C.F.R. Part 60.14 (b)(1), parameters unrelated to the physical change being evaluated (typically, these would include fuel characteristics and whether the unit is operating flat out or at some other level) are held constant, and emission factors like those in AP-42 can be used to evaluate whether a particular project will result in an hourly emissions rate increase. Under 40 C.F.R. Part 60.14 (b)(2), actual measurements can be used to determine if an increase in a unit’s maximum hourly emissions rate has occurred. When this approach is followed, though, statistical methodologies are used to evaluate whether a slight change in a measured reading taken after a project reflects a true emissions rate change or whether, instead, the post-project measured “change” is the result of the inherent variability of the measurement technique(s) being used to evaluate EGU performance. Specifically, 40 C.F.R. Part 60, Appendix C directs a project evaluator to look at several emission rate measurements before a change and several emission rate measurements under the same operating conditions after the change, and only if the difference between the two sets of readings is statistically “significant” would one conclude that a project has resulted in an hourly emissions rate increase.

⁴ *NSR I* should not be read to suggest that the achievable test is inconsistent with the use of actual emissions. Indeed in *NSR I*, the D.C. Circuit rejected the Environmental Petitioners’ challenge (Opening Brief of Environmental Petitioners at 46 n.21) to “the lawfulness of the ‘hourly emissions rate at maximum operating capacity’ comparison, or the lawfulness of the ‘hourly emissions rate’ test generally.” *NSR I*, 413 F.3d at 27. In rejecting this argument, the D.C. Circuit likewise rejected the Environmental Petitioners’ argument that the NSPS rule for electric utility sources (which requires an increase in hourly emission rate “above the maximum hourly emissions achievable at that unit during the 5 years prior to the change”) was illegal because it allowed emission increases. *Id.* at 46. Thus *NSR I* upheld the hourly emissions rate approach that EPA is proposing in this rule.

⁵ The “achievable” test is consistent with *Alabama Power I* and *Alabama Power II* in that it is based upon actual emissions. One of the issues evaluated by the court in

2. The Output-Based Hourly Emissions Increase Test.

EPA has asked for comment on a possible third hourly emissions increase test, *i.e.*, one that would be based on “mass of emissions per unit of energy output, such as lb/MW hour or nanograms/per Joule.” Before UARG members can comment on such a test, however, we need to understand better how this approach would work. Even if the test is based on admirable goals and even if it is workable, however, it cannot be a substitute for the maximum hourly emissions rate increase test and the annual emissions increase test. If EPA proceeds with an output-based approach in the subsequent more specific proposal, UARG strongly suggests that this option be an alternative test at the election of the owner or operator of the source and not the sole hourly emissions rate increase test.

B. Retention of the Annual Emissions Increase Test

EPA asks for comment on whether it should retain the current annual emissions increase test for determining if a utility project is a “major modification” under the Clean Air Act. It is UARG’s view that EPA must retain the annual emission increase test.⁶ As explained by the court in *U.S. v. Duke Energy*, 278 F.Supp.2d 619, 643 (M.D.N.C. 2003),

Alabama Power was the statutory language referring to facilities “which emit or have the potential to emit” pollutants. In defining a major emitting facility’s “potential to emit” under the 1978 PSD rules, EPA had failed to give credit to emission reductions attributable to the installation and operation of pollution control devices. The *Alabama Power* court sustained a challenge brought to this aspect of EPA’s “potential to emit” definition, holding that EPA must take into account the operation of pollution controls in applying the term. The court reasoned that “[w]hen potential emissions are calculated, as EPA provided, by assuming operation at full capacity, without any reduction to take into account the operation of the facility’s air pollution control equipment, then potential emissions will always and inherently exceed actual emissions.” *See Alabama Power II*, 636 F.2d at 353. That, continued the court, would essentially write out of the statute the word “emit” in the phrase “emit or have the potential to emit.” To prevent that from happening, the D.C. Circuit explained that the term “emit” refers to those instances where the pollution control equipment “has not been operated, or has been operated at variance from design.” *Id.*

⁶ Retaining the current annual emissions increase test for evaluating whether utility projects are “major modifications” under the CAA also minimizes the overall regulatory changes EPA would have to make when implementing the NSR hourly emissions rate increase test.

the hourly emissions test is a component of the annual emissions test. Specifically, if a project is determined not to be a “modification” under the hourly maximum emissions rate increase test, then that project would not need to be evaluated to determine if it is a “major modification” under the annual emissions increase test of the NSR rules. If, however, a project is determined to be a “modification” under a maximum hourly emissions rate increase test, then -- to determine whether it is also subject to NSR -- the project should be evaluated to determine if it is a “major modification” under the annual emissions increase test of the NSR rules.⁷ In this way, only if the project is deemed to be both a “modification” under the maximum hourly emissions rate increase test and a “major modification” under the annual emissions increase test would the project be subject to NSR unless otherwise excluded.

C. EPA’s Proposal to Eliminate “Significance” Levels.

Under the *annual* emissions increase test, an annual increase in the amount of a regulated pollutant emitted by a unit will not trigger the NSR process unless it is a “significant” net emissions increase. The current rules then include specific levels of emissions that are deemed to be “significant” on an annual basis, *e.g.*, anything greater than 40 tons per year for sulfur dioxide. In contrast the maximum hourly emissions rate increase test described in EPA’s October 2005 preamble would not incorporate any exclusion for an hourly emission rate increase that is small or “insignificant.” EPA’s stated reason for this approach is administrative convenience. In originally creating the annual “significance levels,” EPA says it relied on its “belief that Congress did not intend to regulate every physical or operation change at a major source.” Now that it is focusing on the maximum hourly emissions rate increase test, however, EPA says it is “more administratively efficient to eliminate the need to compute significant emission rates from the proposed emissions test.” 70 Fed. Reg. 61092 col. 3.

⁷ In that case, the “actual annual emissions increase” test under the NSR rules should apply. In implementing the actual annual emissions increase test, however, we recommend that EPA adopt the same look-back period for utilities that it has for other sources, *i.e.*, a 10-year look-back period rather than the 5-year look-back period now applicable to utilities. There is no basis to have look-back periods of different lengths in the rules.

UARG cannot assess the reasonableness of this approach until EPA provides regulatory language to implement the NSR hourly emissions rate increase test. Once EPA does that -- for example, indicating that it plans to use the same approach it has used to implement the NSPS *achievable* hourly emissions rate increase test -- then UARG will try to provide comments on EPA's suggestion that it need not exclude an hourly emission rate increase that is *de minimis*.

In any event, EPA's decision on whether or not to incorporate "significance" levels into the maximum hourly emissions rate increase NSR test should have no impact on the continued incorporation of significance levels into the annual emissions increase test.

D. Proposal to Eliminate Netting.

EPA proposes to eliminate netting when it implements the maximum hourly emissions rate increase test. Although UARG is not yet prepared to comment on whether EPA should include netting in implementing the maximum hourly emissions rate increase test (that depends upon whether EPA can find a way to address the complications it has referred to in its preamble⁸), UARG strongly believes that EPA cannot eliminate netting entirely when determining if a project is subject to new source review.

When Industry challenged EPA's PSD rules in *Alabama Power* because it wanted to be able to "make changes in a single emitting facility, without prior permit or authorization, provided such a change in design or operation that increases emissions is offset by other contemporaneous changes that decrease emissions so there is no net increase in the potential to emit any air pollutant" (*Alabama Power*, 606 F.2d at 1081), the D.C. Circuit ruled that EPA's regulations that restricted "the ability of the emitter to make such offsetting changes without permission . . . are beyond EPA's authority." *Id.* The court held that EPA's authority to circumscribe industry's freedom to offset is confined to the Agency's "broad discretion to define the components of the term

⁸ To address this issue, EPA should consider adopting the netting approach used in the 1975 NSPS rules. Although that test was deemed to be inappropriate for use in an NSPS program that excludes netting (see *ASARCO, Inc. v. EPA*, 578 F.2d 319 (D.C. Cir. 1978)), there is no reason it couldn't be incorporated into the NSR program where -- as discussed below -- netting is required.

‘stationary source’ so as to provide a narrow scope.” *Id.* The original *Alabama Power* summary opinion was superseded by a longer opinion, *Alabama Power v. Costle*, 636 F.2d 323, 343 (D.C. Cir. 1979), that sustained the original decision with respect to netting in all pertinent respects. The court held that the restrictions that EPA had placed on the “bubble concept” in its rules “was never intended by Congress in enacting the Clean Air Act Amendments.” *Id.* at 401. In holding that the Act requires EPA to allow netting, the D.C. Circuit emphatically stated

[w]here there is no net increase from contemporaneous changes within a source, we hold that PSD review, whether procedural or substantive, cannot apply.

Id. at 403.

Although we believe the law requires EPA to make netting a part of any PSD analysis, we believe that netting can be incorporated into PSD reviews even if a reasonable way cannot be found to include netting when determining if a project is a “modification” under the maximum hourly emissions rate NSR test. Specifically, netting could still be taken into account in determining if a project is a “major modification” under the current NSR rules. In other words, if a project is deemed to be a “modification” following the application of the maximum hourly emissions rate test, then we would urge that the source owner be allowed to proceed to determine if the project would nevertheless be excluded from the NSR process because it is not a “major modification” under the current NSR rules, which include netting provisions.

On a related point, EPA has said that if the Agency makes netting a part of the maximum hourly emissions rate increase test, it might shorten the “contemporaneous” period to the time of construction and allow EGUs to use only “project” netting in computing whether a physical or operational change results in an emissions rate increase. Given the lack of information available on how EPA would define an individual “project,” UARG cannot now support this approach. If EPA continues to work on this, we urge the Agency to describe its approach in sufficient detail so that commenters can intelligently address it in the next round of comments (when EPA is expected to propose the regulatory language for implementing its proposal).

E. Pollutants to Which the Applicability Test Would Apply

EPA asks for comment on whether its NSR hourly emission rate increase test should apply to all Clean Air Act-regulated NSR pollutants or only to some subset of those regulated pollutants. EPA believes that it is legally required by the statute and *Alabama Power* to evaluate each Clean Air Act-regulated pollutant⁹ for which a plant modification has resulted in an emissions rate increase. We agree with that conclusion. We disagree, however, with EPA's suggestion that this will not present any meaningful burdens on permit applicants because "the application of the major NSR program to EGU emissions increases of regulated NSR pollutants other than SO₂ or NO_x would be unlikely to result in the implementation of any additional controls." 70 Fed. Reg. 61092, col. 3. Even if the application of the program to other pollutants -- *e.g.*, CO, lead, or VOCs -- would not result in the installation of additional controls on those pollutants, the inclusion of those pollutants in the overall analysis would cause permitting delays while modeling or BACT reviews are done. Those delays are all the more wasteful and unwarranted given that the modeling and BACT reviews are highly unlikely to result in any additional controls, as EPA acknowledges.

This has become a much more troubling issue for many planned utility projects since the D.C. Circuit struck down the Agency's pollution control project exclusion in the NSR rules in *NSR I*. That might be less of an issue in the implementation of the maximum hourly emissions rate increase test if (as recommended above) EPA also retains its annual emissions increase test and applies it in those circumstances where, for one or more regulated pollutants, a project is deemed to be a "modification" under the hourly emissions increase test. In those circumstances, the project could then be evaluated to determine if it is a "major modification" for those pollutants failing the first test. If the emissions increases for those pollutants are then evaluated under the annual emissions increase test and are found to be insignificant (as that term is defined under the current NSR rules), then the project would not trigger NSR review. EPA's

⁹ Clean Air Act-regulated pollutants exclude those pollutants regulated under §112 of the Act. See 42 U.S.C. §7412(b)(6).

implementation of the program in this way would satisfactorily address our concerns about EPA's evaluation of other Clean Air Act-regulated pollutants.

F. The Maximum Hourly Emissions Rate Increase Rule Should Apply to the Entire Nation.

After devoting much column space to explaining that the CAIR and BART rules will result in nationwide reductions in emissions from EGUs and thus that one need not depend on an NSR program to get any needed reductions, EPA says it prefers to apply the program nationwide, but asks for comment on whether its proposed emissions increase test should apply nationwide or only in part of the country (*e.g.*, only in CAIR states).

UARG agrees with EPA's preferred approach of applying the program nationwide. UARG, however, disagrees with parts of EPA's rationale for making the program nationwide (*i.e.*, just because of the existence of CAIR and BART). As discussed above in section II of these comments, regardless of CAIR and BART, the statute requires an evaluation of whether a project located anywhere in the United States will result in an hourly emissions rate increase in order to evaluate whether that project constitutes an NSR modification. NSR applicability is not dependent upon the existence of other regulatory programs. As discussed more fully later (section IV.E) and as acknowledged by EPA, NSR is not an emissions reduction program. It is a program to regulate expansions of capacity, *i.e.*, growth. Other CAA programs amply provide the means to, for example, bring nonattainment areas into attainment and otherwise protect air quality.

G. The Rule Should Be Part of EPA's Core Program.

EPA proposes making its emissions increase test a core, mandatory minimum program element for SIPs implementing the Part C and Part D major NSR programs. UARG agrees with this position.

H. Computing Offsets and Emissions

EPA is not proposing to change its current method for computing the availability of offsets in nonattainment areas or for computing emissions for purposes of conducting an ambient impact analysis. UARG agrees with EPA's approach.

I. The Definition of EGUs

EPA has proposed broadening the definition of EGUs to include combustion turbines, both simple and combined cycle. UARG agrees with EPA's approach.

J. Record-keeping and Reporting

EPA's October 2005 preamble does not include information on what, if any, record-keeping needs to be done to verify that an emissions rate increase has not occurred. The utility industry is currently one of the heaviest regulated industries. Our sources are required to develop and report extensive amounts of data. Therefore, we would hope that EPA would, in implementing the program, make use of the large, existing data base and would not require the creation of yet more data.

IV. THE MAXIMUM ACHIEVABLE HOURLY EMISSIONS RATE INCREASE TEST WILL BE SIMPLE AND STRAIGHTFORWARD TO IMPLEMENT AND ENFORCE.

EPA's plan to develop a maximum hourly emissions increase rate test for NSR applicability has been criticized by some in the press and at EPA's public hearing on this proposal as being inconsistent with the Clean Air Act and difficult (if not impossible) to implement. Section II of UARG's comments responds to criticisms concerning the legal basis for the rule. This section of UARG's comments responds to criticisms regarding the rule's "implementability" or "enforceability."

A. The Proposed Rule Will Address Capacity Increases

Critics of the proposal have claimed that certain "known capacity increases" would escape new source review permitting under the terms of the proposal. The problem with their analysis, however, is that it is based upon the preconceived -- and often incorrect -- notion that any time there is an annual emissions increase after a project is undertaken, the increase is due to a capacity increase.

For example, one criticism suggests that utilities frequently undertake projects such as redesigns of reheaters or similar equipment that transform smaller units into units with 10-15% more capacity resulting in post-project annual increases of SO₂ and NO_x emissions. If any such project did result in an actual increase in the emitting capacity of a unit such that there would be a 10-15% increase in the unit's maximum hourly emission

rate, then the project should be subject to new source review and would be subject to such review under EPA's proposal. Under EPA's proposal, though, if this project did not result in an increase in the unit's previous hourly emissions rate capacity, then it would not be covered by the NSPS or new source review preconstruction permitting requirements, a result that is fully consistent with the Clean Air Act and Congressional intent (see section II of these comments above).

The critics who raise these concerns seem to refer to "capacity" as a source's annual emissions. But annual utilization of a unit, and therefore its annual emissions, fluctuate from year to year, depending primarily on factors which are unrelated to any projects at a unit, including demand for electricity, dispatch economics, and the status of other units on the system. These critics confuse the terms "capacity" with "capacity utilization."¹⁰ Consistent with the exclusions in the existing rule for changes in hours of operation, production rate, alternative fuels, etc., we believe that the appropriate focus of the NSPS and PSD programs should be on regulating capacity expansion, not a unit's already permitted and analyzed capacity utilization. A unit that is permitted to emit at a given capacity does not become a "new" unit under the CAA because its capacity utilization changed from year to year. Thus, UARG believes that in both the NSPS program and PSD program, "capacity" must be (and is appropriately) measured in terms of a source's maximum hourly emission rates, not fluctuations in annual emissions from year to year. If there is no hourly emission rate increase from a project, there is no capacity increase. With this approach, the appropriate focus for both EPA and state air agencies will be "on reviewing all changes that result in increases in existing capacity," 70 Fed. Reg. at 61092, col. 3, while at the same time allowing "changes that, without increasing existing capacity, promote the safety, reliability and efficiency of EGUs." *Id.* at 61093, col. 3.

¹⁰ "Capacity" is typically a set quantity that is readily determined by the unit's physical capability. "Capacity utilization" is a changing quantity that depends on multiple factors, most of which are external to and independent of the unit. Units are permitted under state and CAA programs, and analyzed under the SIPs, on the basis of their capacity, not what happens to be their capacity utilization in one year or the other.

B. Response to Calls for the Use of “Representative” Emissions

Claiming there would be “difficulties” associated with implementing a maximum achievable hourly emissions rate increase test, some have recommended that any hourly emissions rate increase test be based on the use of “representative” rather than “maximum achievable” emissions. As discussed above, the difficulties some identify as associated with EPA’s current proposal have not manifested themselves in the decades-old NSPS program, which is based on the use of a maximum hourly achievable emissions rate test; thus, we question why those difficulties would suddenly appear if the same test were to be used to evaluate NSR applicability.

In addition, we question why the use of a “representative” emissions test approach would be devoid of complications. Complications would certainly arise if EPA followed the recommendations of those urging it to use various data adjustments or corrections to create a “representative” hourly emissions rate baseline. (Some have even suggested there might be circumstances in which actual hourly emissions rate data could be excluded from consideration if the data, though real and actual, were not “representative.”)

Pursuing the idea of using representative hourly emissions rate data as part of this proposal would continue the uncertainty created by EPA’s enforcement approach to NSR, where “it can be difficult for the owner or operator to know with reasonable certainty whether a particular activity would trigger major NSR” under the current rules. 70 Fed. Reg. at 61093, col. 3. EPA has observed that with the uncertainty created by the current rules “there is a possibility that EPA could ... make a different applicability determination than the State has made.” *Id.* at 61094, col. 1. UARG strongly endorses a bright-line test, which would allow sources to make compliance determinations in a timely and clear-cut manner. *Id.*, col. 2. Any regulatory approach where ad hoc “adjustments” or “corrections” would need to be made to past emissions would be the antithesis of having clear rules.

For these reasons and others discussed above, we believe that EPA’s proposal to use a maximum achievable hourly emissions rate increase test makes sense and the use of an alternative approach that does not recognize a source’s actual capacity to emit does not make sense.

C. EPA's Proposed "Achievable" Test Is Enforceable.

Some opponents of this approach believe that utilities have many ways to show that a particular capacity is or was theoretically achievable, which makes analysis of the impact of the test difficult and application of the test largely unenforceable. This is incorrect. The maximum hourly achievable emissions rate test that EPA is planning to develop for use in the NSR program is the same test that has been in force -- and has been enforceable -- under the NSPS program for decades.

Under the NSPS rules, the emission rate is determined as follows:

Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors," EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (b)(1) of this section does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (b)(1) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

40 C.F.R. § 60.14 (b). Moreover,

No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.

40 C.F.R. § 60.14 (h).

These regulatory provisions have been interpreted and implemented by agencies and utilities for decades without problems. Contrary to the assertions by some, we are unaware of any state enforcement agencies that have expressed concerns about difficulties in implementing the NSPS emissions rate increase test since it was established in 1971. Indeed, before late 2005 (when this preamble statement was issued), no one – either within or outside EPA – had ever expressed a concern with the enforceability of the NSPS emissions increase test, which has been on the books and has been implemented by EPA and the states for more than three decades. Utilities have long been able to establish whether a project might affect a unit's maximum achievable hourly emission rates (kg/hour) by, for example, measuring or evaluating parameters that are directly related to emissions rates, such as steaming rates or coal-burning capacity. For example, in the WEPCo matter, the Agency and the Company readily agreed to measure the unit's steaming rates before the project to determine whether restoration of the unit's capacities would increase their maximum hourly emissions rates. We acknowledge that a variety of ambient and equipment parameters can affect what is actually achieved on a particular day. For example, heat input at full load can vary a significant amount due to, for example, cooling tower temperature. But so long as the same conditions are considered before and after a project, it is readily feasible to evaluate whether a particular project will affect a unit's emissions rate.

Given the relatively straightforward means available to establish a unit's achievable hourly emission rate, we disagree with the assertion that a permitting authority would have an exceedingly difficult time assessing whether or not a change at an EGU triggered NSR and that this would then lead to a “battle of the experts” and handicap the efficient administration of a pre-construction permitting program.

As explained above, a utility can readily provide information as to how it established an EGU's maximum hourly achievable emission rate, and an enforcement authority is free to challenge any of the inputs. Unless an enforcement authority is extremely litigious, however, there should not be much call for experts to battle about parameters that are readily measured or susceptible to straightforward engineering evaluation at most power plants. While what may be deemed a "representative" maximum heat input level or steaming rate may be somewhat less black and white, it is not more complicated than a variety of other CAA/NSR concepts.

Moreover, we question the basis for the critics' hand-wringing about a "battle of the experts" if the test is based on maximum achievable emissions rates. The critics' argument suggests, without explicitly stating it, that the current emissions increase test – the annual, actual-to-projected-actual test – is somehow free of doubt or "expert" disagreement. In fact, even the most cursory review of the voluminous expert reports filed in every NSR enforcement case since 1999 (*e.g.*, TVA, Ohio Edison, SIGECO; AEP; Duke Energy; Cinergy; EKPC) demonstrates that the actual-to-projected-actual test is subject to much more elaborate "battles of the experts" than the maximum hourly emissions test can ever be. Indeed, while the latter depends only on an engineering assessment of the unit's capability before and after a project, the former depends on that same factor along with myriad other, more complex factors, such as demand forecasts on the system and the unit, dispatch economics and modeling, the status of other units on the system, off-system sales, etc.

D. Concerns Over the Paucity of NSPS Violations

Building upon the fact that the NSR hourly emission rate increase test is consistent with the longstanding NSPS emissions rate increase test, critics of the NSR hourly test suggested -- at EPA's public hearing -- that one way to evaluate the enforceability of an NSR hourly emission rate increase test would be to evaluate whether any companies have triggered NSPS in the past. Knowing that few, if any, companies have triggered applicability of the NSPS program, they want to conclude that means the NSPS program is not enforceable. In fact, companies rarely trigger the NSPS program because they modify their behavior (*i.e.*, they avoid undertaking projects) so as to avoid

triggering the NSPS rules.¹¹ The director of EPA's Office of Air Quality Planning and Standards wrote in 1996 that "no existing utility unit has become subject to the utility NSPS under either the modification or reconstruction provision."¹² And EPA has not found hoards of NSPS violations in the course of OECA's utility enforcement initiative.¹³

In short, the absence of NSPS violations indicates that utilities operating in a highly regulated environment with clearly written Agency rules applying only when there is a kg/hr increase in the emissions of regulated pollutants will comply with those clearly written rules by modifying their behavior and avoiding projects where there might be any kg/hr emissions increase. Contrary to critics' suggestions, this is the way regulatory programs are supposed to work: communicate ascertainably certain standards through clear and transparent regulatory language, so that regulated entities can readily conform their conduct to the rules.

E. Claims Relating to the Need for More Emission Reductions

Some critics of EPA's proposal for a maximum hourly emissions rate increase test try to undercut the Agency's proposal by claiming that a more stringent NSR applicability test is needed to address specific air quality problems remaining in parts of the country. In response, the October 2005 preamble discusses in several places the

¹¹ The only example we can recall where a *proposed* utility project would have triggered NSPS was at WEPCo's Port Washington plant. In that example, though, after the Seventh Circuit agreed that the proposed project would trigger NSPS at Unit 5, the company shut the unit down because the costs of complying with NSPS would have been prohibitive. For the other two units that the court found would have triggered NSPS if implemented as initially proposed by WEPCo, the company implemented minor adjustments to the units' emissions controls so as to *avoid* triggering NSPS. See Letter from W.G. Rosenberg, EPA Assistant Adm'r for Air and Radiation, to J. Boston, President, WEPCo, at 10 (June 8, 1990); Memorandum from G.A. Emison, Director, office of Air Quality and Standards, to W.G. Rosenberg, EPA Assistant Adm'r for Air and Radiation (May 25, 1990) (discussing EPA's settlement with WEPCo).

¹² Letter from John S. Seitz, Director OAQPS, to Senator Robert C. Byrd (January 26, 1996).

¹³ Although EPA has several times made allegations of violations of NSPS in OECA's utility enforcement initiative, most of those claims have been dropped during discovery.

significant improvements in air quality that have resulted or will result from implementation of several non-NSR CAA programs including the Acid Rain Control Program, the NO_x SIP call, CAIR, and BART, which all mandate large reductions in emissions from EGUs.

As discussed in section II of these comments, UARG believes that the legal basis for EPA's plan to develop a maximum hourly emissions rate test for NSR applicability is not tied to the fact that these other CAA programs exist and are successful, nor is EPA's proposal flawed because it does not address all the remaining air quality problems in this country. Nevertheless, we believe it is important to correct some of the misinformation that exists concerning the effectiveness of the other EPA-identified emission reduction programs. In particular, it is important to respond to critics' claims that after the implementation of various non-NSR emission reduction programs, some areas will remain in nonattainment. Even if this is true in some areas, the CAA's NSR program is not the remedy for that situation.

EPA has done studies that predict that after implementation of the extensive regional air pollution production programs mandated by the Clean Air Act (*e.g.*, the Acid Rain Control Program, NO_x SIP Call, CAIR, and BART), the number of remaining nonattainment areas will dwindle and the cause of those remaining nonattainment areas will be due more to localized conditions or sources. At that point, if a nonattainment area remains in a state, the appropriate response for that state under the Clean Air Act is to use air quality data and modeling tools to identify the causes of the continuing nonattainment. Once the sources contributing to nonattainment are identified, the state's implementation plan can be crafted to mandate emission reductions from the emission-contributing sources, regardless of their age. As Congress envisaged, this is the direct and appropriate way to address the nonattainment concerns expressed by program critics. Twisting the NSR program to try to do this would usurp the discretion Congress accorded the states in deciding how to achieve attainment of the national ambient air quality standards.

Those criticizing the October 2005 preamble seem to have a misconception that the primary purpose of the major NSR program is to reduce emissions, a view that is inconsistent with the CAA, the legislative history, and the regulatory history. EPA has rejected such a view and has emphasized that the program is intended "to minimize

emissions increases from new source growth.” 70 Fed. Reg. at 61088, col. 1. We agree with EPA’s interpretation of the CAA as showing “that Congress intended the modification definition to apply to expansions in capacity, but not to apply to the use of existing capacity.” *Id.* at 61099, col. 1; *see also id.* at 61095, col. 2 (“[A]t a minimum, Congress was concerned about regulating new sources of emissions caused by expanded or modified capacity” through the new source programs.).

V. CONCLUSIONS

UARG supports EPA’s plans to propose rules that will, at least for utility sources, limit NSR preconstruction permitting of projects at existing emission units to those that are “modifications” under EPA’s NSPS program. UARG believes this approach is fully consistent with the requirements of the CAA and with the recent court decisions interpreting the NSR provisions of the Act.