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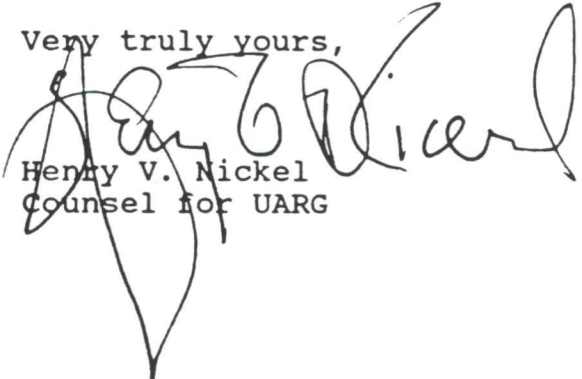
Comments on EPA's Proposed "WEPCo" Rulemaking

Dear Sir or Madam:

Enclosed are two copies of the comments of the Utility Air Regulatory Group (UARG) on EPA's Notice of Proposed Rulemaking on the applicability of new source review requirements to physical or operational changes at electric utility units, i.e., EPA's so-called "WEPCo" rulemaking. 56 Fed. Reg. 27,630 (June 14, 1991).

If you have any questions, please call William Brownell (202/955-1555), David Harlow (202/955-1568), or me (202/955-1561).

Very truly yours,



Henry V. Nickel
Counsel for UARG

Enclosures

Subject

File:

CAA/

WEPCO

COMMENTS OF
THE UTILITY AIR REGULATORY GROUP
ON EPA'S NOTICE OF PROPOSED RULEMAKING ON THE
APPLICABILITY OF NEW SOURCE REVIEW REQUIREMENTS TO
PHYSICAL OR OPERATIONAL CHANGES AT ELECTRIC UTILITY UNITS

I. Introduction

On June 6, 1991, the U.S. Environmental Protection Agency (EPA or the Agency) issued a notice of proposed rulemaking with respect to the Agency's so-called "WEPCo" interpretations. 56 Fed. Reg. 27,630 (June 14, 1991). In the preamble to the proposed rule, EPA has announced a "clarification" of its "WEPCo" interpretations that, in large measure, represents a return by the Agency to its past interpretations of its New Source Review (NSR) rules. In practical effect, the preamble restates those earlier interpretations and constitutes the currently operable law.

The Utility Air Regulatory Group (UARG) discusses specifically the major elements of both the preamble to the proposed rule and the proposed rule itself in section III below. Preceding this discussion, UARG provides, in section II, a short background on the Clean Air Act's modification provisions and the regulatory history of EPA's implementation of those provisions under both its New Source Performance Standards (NSPS) and Prevention of Significant Deterioration (PSD) programs.

At the outset, there are four broad points which UARG believes are important in assessing the proposed rule and its preamble in general.

First, as a whole, the proposed rule and its preamble send a welcome signal to the electric utility industry that EPA has moved away from its recent aberrant interpretations of its NSR rules -- its "WEPCo" interpretations -- that have cast a considerable "cloud" over pollution control projects and other legitimate utility activities at existing sources. That is, the inevitable consequence of EPA's continued adherence to its "WEPCO" practice of comparing "past actual" emissions to "future potential" emissions in the case of all non-routine projects would have been that all pollution control projects would trigger NSR. While EPA had issued guidance indicating that NSR would not apply to pollution control projects unless such projects led to increase in "actual" annual emissions, this approach was of limited utility, since it is generally understood that the use of control equipment to reduce emissions of one type of pollutant might in some instances lead to small increases in emissions of other pollutants. For example, the use of low NO_x burners -- the technology on which NO_x emission reductions mandated under Title IV are to be based -- may in certain cases cause a slight increase in emissions of carbon monoxide.

In this respect, the proposed rule and preamble recognize that EPA's NSR provisions have never contemplated that every activity that would lead to an emission increase should trigger NSR. For instance, from their inception, the NSR rules have excluded whole categories of activities at existing sources, such as switching to a higher polluting fuel that the source was

"capable of accommodating before January 6, 1975," and emission increases resulting from increases in hours of operation or production rate. Generally, these exclusions apply to activities that would be expected to occur at existing sources during their useful life under their original design and therefore are consistent with their continued grandfathered status.

Second, the proposed rule should be viewed as giving effect to the plain meaning of existing law, not as an expression of new law. Indeed, in contrast to EPA's "WEPCo" interpretations, the view of current law contained in the preamble to the proposed rule is in line with the agency's own historic understanding of its NSR rules.

Third, contrary to some criticisms that have been leveled against EPA's proposed rule, UARG believes it important to recognize that the proposed rule does nothing to authorize increases in emissions that threaten local air quality. A source's obligation to meet ambient requirements is independent of any obligation to meet NSR requirements. That an increase in emissions is found not to be a "modification" does not in any way authorize the source to exceed PSD increments, ambient standards, or a visibility related limitation. Nor would an increase in utilization of a unit be expected to threaten compliance with ambient requirements. Most if not all emission limitations implementing ambient standards or PSD increments are based on operations at maximum production levels.

As already noted, EPA has never considered its NSR program as addressing every type of activity within industry that potentially increases emissions. Small sources are not covered by the NSR provisions. See 40 C.F.R. § 52.21(b)(1)(i). The rules themselves exclude from the modification definition a variety of activities that can result in emission increases. For instance, emission increases attributable to "physical or operational" changes that are followed by an increase in a unit's hours of operation or production rate (i.e., annual utilization) are excluded, if not limited specifically by a term of a federally enforceable permit. See § 52.21(b)(2)(iii)(f).

In this regard, this exclusion was one of the major premises of the Administration's proposal on acid rain legislation. In its final 1989 Base Case Forecasts, EPA projected substantial increases in utilization of existing units over the next 10 years and this led to the recommendation of a SO₂ cap and additional NO_x controls on existing units. Any claims that increases in utilization of existing utility units are for the first time authorized by this notice (i.e., were somehow prohibited before this notice) have no basis in fact or law.

Fourth, any final rule should not be restricted to electric utility steam generating units over 25 megawatts. There is no legal or factual basis for EPA to exclude small units and other non-steam units such as combustion turbines from rules that govern electric utility units. Pollution controls at boilers less than 25 megawatts are no different than controls installed

at larger boilers. Small and larger units alike are called upon to increase utilization due to increases in system-wide load growth. Current NSR rules do not draw the distinctions that EPA proposes here, and no principled distinction exists, other than the fact that small units produce fewer emissions overall.

II. Background: **The Clean Air Act and the Modification Rules**

A. The 1970 Clean Air Act

The 1970 Clean Air Act (CAA) required states to adopt programs to ensure that concentrations of pollutants in the ambient air would remain below levels defined by the national ambient air quality standards (NAAQS), standards designed to protect public health and welfare. Through state implementation plans (SIPs), existing sources of emissions must be controlled as necessary to meet the NAAQS. CAA § 110.

Under the 1970 Clean Air Act, new sources were subjected to additional restrictions to be implemented through EPA rulemaking. Under § 111 of the Act, new sources must also meet new source performance standards (NSPS). In setting these emission standards for categories of new sources, EPA is required to take into account the capabilities of the best adequately demonstrated system of emissions control for "classes, types, and sizes" of facilities in that source category, as well as the economic, energy, and non-air quality environmental implications of the

proposed standards. See Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973).

Congress made clear that NSPS would not apply to facilities in existence (i.e., under construction or operating) when the NSPS were proposed, since such facilities could not incorporate the necessary control measures into facility design without retrofit. CAA § 111(a)(2), (6); see S. Rep. No. 91-1196, 91st Cong., 2d Sess. 15-16 (1970). Congress also provided, however, that existing facilities would become "new" sources if they were "modified" so as to create additional pollution. Congress defined "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.

CAA § 111(a)(4) (emphasis added).

In adopting these standards, EPA consistently assumed that they would only apply to new "greenfield" units, and not to existing units that were modified.^{1/} EPA based these assumptions on modification rules that the D.C. Circuit observed, citing EPA's brief in ASARCO v. EPA, 578 F.2d 319, 327 n.24 (D.C.

^{1/} In the adoption of the revised NSPS (Subpart Da) for the electric utility industry in 1978-79, all of the economic evaluations performed assumed that only newly constructed coal fired units would be subjected to the standards. Thus, EPA expressed its understanding that "[f]ew, if any, existing steam generators . . . are expected to qualify under the modification/reconstruction provisions; thus, few, if any, existing electric utility steam generating units will become subject to these standards." 44 Fed. Reg. 33,591 (1979).

Cir. 1978), were designed to "minimize" the impact of modification requirements on existing sources.

B. The 1977 CAA Amendments

In 1977, Congress amended the Act to include certain additional regulatory requirements for new sources. First, Congress provided that future NSPS for fossil fuel combustion sources must include a "percentage reduction" requirement for SO₂ emissions, so that new sources would be required in most cases to use continuous control technology to comply with NSPS. CAA § 111(a)(1)(A).^{2/}

Second, Congress added a statutory case-by-case new source permitting program, referred to as the "prevention of significant deterioration" (PSD) program, that required additional air quality and control technology review for new sources locating in areas that had attained the NAAQS. While Congress instructed EPA to define the scope and content of the PSD program through rulemaking, the PSD requirements in general limit emissions from new sources to levels at or below those required by the NAAQS.

Third, Congress adjusted the dates by which attainment of the ambient air quality standards was required. It also provided

^{2/} This provision was amended by § 403 of the Clean Air Act Amendments of 1990 to repeal the percentage reduction requirement, but requiring EPA to promulgate new rules within three years after enactment of the amendments that require new fossil fuel-fired sources to meet an emission rate not greater than that which would have been applicable under the old standard.

additional guidance for development by the states of new source permit programs for areas that remained out of compliance with the NAAQS, i.e., so-called "nonattainment" NSR requirements.

Finally, in the 1977 Amendments, Congress adopted the definition of "modification" developed by EPA between 1971 and 1977 under the NSPS rules for the new NSR programs and, in addition, clarified that certain involuntary coal conversions are not modifications. CAA § 111(a)(8). Specifically, in enacting the PSD program, Congress provided that "modification [has the meaning] . . . defined in section 111(a)" CAA § 169(2)(C). Similarly, in the nonattainment provisions, Congress provided that the "terms 'modifications' and 'modified' mean the same as the term 'modification' as used in [§ 111(a)(4)]." CAA § 171(4). The legislative history of the 1977 Amendments further explains that, by incorporating the NSPS definition into the NSR program, Congress intended "to conform" the definition of modification in PSD "to usage in other parts of the Act." 123 Cong. Rec. H11957 daily ed. Nov. 1, 1977.

In other words, Congress, by statute, incorporated the modification definition developed under § 111 into the new NSR programs. No rulemaking was required to give effect to the NSPS understanding of modification. Rulemaking was only required to change the NSPS usage to the extent required to reflect differences in the NSPS and NSR programs.

C. EPA's Implementation of the Clean Air Act

The NSPS modification requirement incorporated into the statutory NSR program is a regulatory term that was given meaning through rules adopted by EPA under § 111 and changed, in certain respects, through rulemaking under the NSR provisions of the Act, as EPA found appropriate given different policies underlying those two programs. These rules generally give effect to the intent of Congress that existing sources be grandfathered unless they underwent physical or operational changes that resulted in "new" pollution. See, e.g., National Asphalt Pavement Ass'n v. Train, 539 F.2d 775, 783 (D.C. Cir. 1976) (§ 111 is "designed to prevent new pollution problems").

1. NSPS

In the early 1970s, EPA promulgated NSPS rules defining "modification." Under those rules, a "modified" facility is one at which "any physical or operational change" occurs that "results in an increase in the emission rate of any pollutant to which a standard applies." 40 C.F.R. § 60.14; see 36 Fed. Reg. 24,877 (1971); 40 Fed. Reg. 58,419 (1975). Whether an increase occurs is determined using the facility's emission rate (in kilograms per hour) at maximum production rate levels. 40 C.F.R. § 60.14(b).

To further clarify the scope of this definition, EPA provided examples of activities that do not constitute a "modification," including, among other things, "routine"

maintenance, repair, and replacement and "increases" in production rate or hours of operation, so long as the increase does not result from a "capital expenditure" as defined in EPA's NSPS rules. 40 C.F.R. § 60.14(e). Also excluded from the NSPS definition of "modification" is the "addition or use of any system or device whose primary function is the reduction of air pollutants," except where that system is removed or is replaced by a "system which the Administrator determines to be less environmentally beneficial." Id. In proposing this pollution control exclusion, EPA specified that the addition of controls would not trigger NSPS "even though particulate emissions may increase due to" the addition of the control system. 39 Fed. Reg. 36,948 (1974).^{3/}

It is clear that EPA intended that its NSPS modification rule be narrow in focus and effect. See, e.g., ASARCO, 578 F.2d at 327 n.24 ("EPA candidly admits that it intended to 'develop a modification regulation . . . which minimizes [the] impact [of application of new source requirements] on existing sources"). For that reason, EPA did not, in its NSPS rules, create exemptions from its modification definition but, instead, provided examples of activities that did not constitute a modification.

^{3/} Subsequently, the U.S. Court of Appeals for the Sixth Circuit characterized the purpose of this exclusion as to "permit a source to install pollution control system that would bring about a major decrease in emissions of one pollutant while causing a smaller, incidental increase in emissions of another pollutant." National-Southwire Aluminum Co. v. EPA, 838 F.2d 835, 840 (6th Cir. 1988).

2. NSR

From the outset, EPA has recognized that Congress intended that the NSR program incorporate the NSPS definition of modification. Incorporation of § 111(a)'s "modification" definition in § 169(2)(C), EPA said, reflected a congressional intent to incorporate into the PSD program exclusions contained in "regulations promulgated under Section 111. . . ." 43 Fed. Reg. 26,396 (June 19, 1978).

Accordingly, EPA used the NSPS approach to define modification in the NSR program, defining it as a "physical change" or a "change in the method of operation" that "would result in" an "emissions increase." 40 C.F.R. § 52.21(b)(2); see 45 Fed. Reg. 52,735 (1980).^{4/} Similar to the NSPS modification rule, EPA provided that a "physical change or change in the method of operation" does not include "routine" maintenance, repair or replacement. Nor do they include an "increase in the

^{4/} The first definition of "modification" in the PSD context was promulgated by EPA on December 5, 1974 -- before Congress actually amended the Act to require a PSD program. This initial definition focused, as did the NSPS rule, on "actual" emissions from a facility. 39 Fed. Reg. 42,510, 42,514 (1974). On June 19, 1978, however, following enactment of the 1977 Amendments to the Act, EPA issued a revised rule that stated the measure of an emissions increase not in terms of actual emissions, but in terms of "potential to emit." 43 Fed. Reg. 26,388, 26,403-04 (1978). In Alabama Power Co. v. Costle, 636 F.2d 323, 399-402 (D.C. Cir. 1979), the 1978 modification definition was remanded to EPA. The court rejected as having "no reasonable basis . . . in the statute," EPA's regulatory exemption for source categories that emitted less than 100 tons per year and for individual stationary sources that emitted less than 250 tons per year of a regulated pollutant. In response to this remand, EPA promulgated final rules that rejected the "potential to emit" approach. 45 Fed. Reg. 52,676 (1980).

hours of operation or in the production rate," but, instead of imposing the "capital expenditure" qualifier in the NSPS rules, EPA imposed a different qualifier reflecting the different policies underlying the PSD and nonattainment programs: the "federally enforceable permit condition" on hours of operation or production rate requirement. 40 C.F.R. § 52.21(b)(2)(iii)(a), (f). Reflecting these same distinctions, and in contrast to its NSPS rules, EPA defined an "emissions increase" for NSR purposes (unless the increase was excluded either implicitly or explicitly from the modification definition) in terms of total annual emissions (that is, tons of a specific pollutant emitted per year), instead of in terms of kilograms of that pollutant per hour. 40 C.F.R. §§ 52.21(b)(3), 52.21(b)(21).

D. The WEPCo Decision

Beginning in 1988, EPA engaged in what it subsequently termed an "activist posture" regarding its NSR program, whereby it began to reinterpret its modification regulations so as to bring more sources under NSR. Memorandum from Gregory B. Foote, EPA Office of General Counsel, to William G. Rosenberg, Assistant Administrator for Air and Radiation (Nov. 24, 1989) (attached). EPA staff used a project at Wisconsin Electric Power Company's multi-unit Port Washington power plant as the principal vehicle for abruptly departing from its past interpretations of NSR.

WEPCo proposed various repairs and replacements of equipment at Port Washington, terming them, in filings with Wisconsin

regulatory authorities, collectively as a "life extension" project. The project included the "like-kind replacement" of deteriorated equipment that physically constrained maximum unit operations in the case of two of the units and that required the shutdown of a third for safety reasons.

In October 1988, EPA found that WEPCo's proposed activities at Port Washington would trigger PSD requirements. According to EPA, because the replacements were not "routine," the PSD rules required the Agency to compare the units' past actual emissions with their future "potential" emissions. EPA did not explain why this "past actual-future potential" comparison applied to units that had "begun normal operations." Cf. 40 C.F.R.

§ 52.21(b)(21)(iv) (providing that "[f]or any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date" (emphasis added)). Rather, the Agency asserted that, since the proposed activities did not fall within the listed exceptions to the rule's definition of "physical or operational change," the "past actual-future potential" test was mandated.

With respect to NSPS, EPA also found that this requirement would be triggered by the repairs WEPCo proposed to make at Port Washington. In making this determination, EPA compared emissions at the units' actual depressed hourly rates (in the case of the shut-down unit, zero operations) with projected full capacity hourly emission rates after the proposed repairs. EPA did not claim that these depressed emissions rates were "representative"

of maximum normal operations. Instead, it argued that the NSPS rules are concerned only with emission levels immediately before a repair, even if those levels were not representative of previous maximum achievable unit operations.

WEPCo challenged EPA's applicability determinations in the U.S. Court of Appeals for the Seventh Circuit. Wisconsin Electric Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990).

With respect to NSPS, the court upheld EPA's finding, ruling that the "life extension" project WEPCo proposed for Port Washington that included "like-kind" replacements were "physical changes" within the meaning of the NSPS rules. The court further held that EPA could, in the facts of the case, compare hourly emission rates immediately before the change with the hourly emission rates immediately after. Id. at 913-15. But the court reversed EPA's PSD determination, holding that the Agency could not compare "past actual" annual emissions with "future potential" annual emissions at a unit that had "begun normal operations." Id. at 915-18.^{5/} If EPA wanted to employ such a comparison in the case of units undertaking "like-kind

^{5/} Prior to WEPCo, the U.S. Court of Appeals for the First Circuit had upheld EPA's use of the "past actual-future potential" comparison at a facility that had constructed new wet kilns that had a much larger capacity than two dry kilns that had been operating for some time. Put simply, the First Circuit reiterated that EPA's modification rule plainly states that the "past actual-future potential" methodology was appropriate for units that had not "begun normal operations." Puerto Rican Cement Co., Inc. v. EPA, 889 F.2d 292 (1st Cir. 1989). By contrast, the Port Washington units, after the project, would be the same as they had been before the project and had a lengthy operating history, in a state identical to that after the changes.

replacements", the court added, the Agency would have to amend the rule through notice-and-comment rulemaking. Id. at 918.

Despite the court's ruling, after WEPCo, EPA staff continued to insist that the "past actual-future actual" comparison required by the court for PSD purposes applied only to "like-kind" replacements (the type of activity at issue in the WEPCo case). See, e.g., Letter from William G. Rosenberg, Assistant Administrator for Air and Radiation, to David Feltner, Ohio Edison Co. (Jan. 30, 1990). EPA staff argued -- incorrectly -- that the First Circuit's Puerto Rican Cement decision supported the Agency's claim that the "past actual-future potential" comparison was required where the proposed activities were not "like-kind" replacements. Id. Not only was this a misreading of the court's holding in Puerto Rican Cement, but a significant consequence of continued adherence by EPA staff to this position would have been to require utilities to obtain PSD permits before installing pollution controls. This, in turn, would have increased the cost of the acid rain provisions of Title IV of the 1990 Clean Air Act Amendments by billions of dollars, jeopardizing the achievement of the mandated reductions in gross annual emissions of SO₂ in the least costly manner.

III. Discussion

Each major element of EPA's proposed rule is discussed in turn below. Where applicable, UARG also addresses the Agency's

accompanying interpretation of currently operable law, as contained in the rulemaking preamble.

A. Pollution Control Projects

1. EPA's View of Current Law

EPA states that its current policy is to apply "its PSD regulations in harmony with its NSPS regulations, which exclude most pollution control projects." 56 Fed. Reg. 27,636. Taking note of the legislative history of the PSD provisions added to the Clean Air Act in 1977, the Agency points out that, in enacting § 169(2)(C), Congress intended "to conform" the definition of modification in PSD "to usage in other parts of the Act." Id., quoting 123 Cong. Rec. H11957 daily ed. Nov. 1, 1977. As noted above, EPA's contemporaneous interpretation of § 169(2)(C) was that, "by its reference to section 111(a), [§ 169(2)(C)] in effect adopts the definition of modification under Section 111(a) for purposes of PSD." 43 Fed. Reg. 26,396 (June 19, 1978). This incorporation was found by the Agency to reflect a congressional intent to incorporate exclusions contained in "regulations promulgated under Section 111." Id.^{6/}

^{6/} Significantly, at the time the NSR provisions were added to the Act, regulations promulgated under the NSPS provisions defining "modification" provided that the term "modification" does not include:

The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to

(continued...)

No petition for judicial review was filed challenging t.his interpretation of the statute.^{2/}

EPA further notes that it has in the past "interpreted its NSR regulations to incorporate the NSPS pollution control project exclusion." 56 Fed. 27,636. As support, EPA cites a memorandum from Edward Reich, Director, Stationary Sources Compliance Division and William F. Pedersen, Acting Associate General Counsel, Air, Noise, and Radiation Division to Allyn M. Davis, Region VI (April 21, 1983) (Pedersen Memorandum). In this memorandum, EPA said that it "agree[d] with the rationale" that "since the NSPS regulations provide an exemption from the modification provisions for replacement of control equipment, the PSD regulations must provide this exemption as well." Pedersen Memorandum at 2. This is true, the Agency continued, because the

Clean Air Act provides in Section 169(1)(c) that for PSD purposes the term modification shall be defined as that term is defined in Section 111(a) of the Act relating to NSPS. EPA has interpreted this to mean that for PSD purposes Congress intended the term modification to include all exemptions included in the NSPS regulations promulgated under Section 111 of the Act prior to the date of the enactment of Section 169. See 43 FR 26396. The control equipment exemption was promulgated prior to Section 169. Therefore, the term modification in the PSD

^{6/} (...continued)
be less environmentally beneficial.

40 C.F.R. § 60.14(e)(5).

^{2/} Since the nonattainment provisions similarly incorporated the § 111 modification definition, this legislative history is equally relevant to the nonattainment program.

regulations inherently encompasses the control equipment exemption.

Id.

While EPA recognizes that it had later "voiced concern about incorporating the precise NSPS pollution control language in the NSR context" because of the "ambient air quality component of NSR that is absent" from NSPS, EPA observes that the Agency has, in recent years, "consistently excluded pollution control projects from NSR provided that the proposed project would be environmentally beneficial, taking into account ambient air quality." 56 Fed. Reg. 27,636. EPA then "confirms" that "pending final action on the proposed regulatory exclusion for pollution control projects," the Agency will "continue to consider the overall environmental consequences of pollution control projects for NSR applicability on an interim basis." 56 Fed. Reg. 27,636 (emphasis added).

Thus, applying current law, pending adoption of a final rule, the "addition or use" of pollution control equipment at a major source will not be deemed by EPA to be a modification triggering NSR (the present scope of the current NSPS exclusion). The replacement of such equipment at a major source will not be considered a modification unless the replacement is determined to be "less environmentally beneficial." EPA continues that, "[by] its nature," a determination "whether or not a project renders a unit less environmentally beneficial involves a case-by-case assessment of its net emissions and overall impact on the environment." Id. (emphasis added). Because EPA "must consider

the overall emissions before and after the project, as well as any other relevant environmental factors," no "single factor can be identified in advance for purposes of making this determination." Id.

UARG is unaware of any pollution controls undertaken by utilities that do not result in a substantial reduction in overall emissions. Nor is UARG aware of any pollution control project that threatened any local air quality requirements as a result of the marginal increase in emissions of another pollutant occasioned by operation of the new controls.

2. The Proposed Rule

EPA's proposed rule would make explicit in the PSD rules the exclusion for pollution control projects that, the Agency recognizes, Congress provided statutorily through the 1977 Clean Air Act Amendments. EPA proposes, however, to amend this exclusion as it applies to pollution control projects undertaken at electric utility units and to narrow the scope of the exclusion as it applies to electric utility units by extending the "less environmentally beneficial" test to the addition or use of pollution control equipment.

Unlike current law, EPA's proposed pollution control project exclusion would not apply to "source categories other than electric utility steam generating units." 56 Fed. Reg. 27,635. EPA says that it has

so limited this provision because, in contrast with a general lack of experience

with other industries, EPA has extensive experience in addressing new source applicability issues regarding pollution control projects in the utility industry.

Id. This "experience," the Agency says, has led it to conclude that "pollution control projects in the utility industry are generally environmentally beneficial." Id.

Further, in contrast to current law (under which, as noted above, the NSPS exclusion for pollution control projects is a statutorily-prescribed element of the PSD program), EPA proposes to apply the "not less environmentally beneficial" test to the "addition" and "use," as well as to the "replacement" of pollution control projects at electric utility generating units. 56 Fed. Reg. 27,635. EPA states that "[t]his change reflects the distinct air quality component of the PSD and nonattainment programs." Id. The Agency goes on to say that it "expects that most, if not all, pollution control projects will reduce net actual emissions [*i.e.*, reduce total emissions of all pollutants]." Id. This conclusion, as noted above, is fully supported by any evaluation of known pollution control projects in the utility industry.

3. UARG's Position

UARG supports EPA's affirmation of its current policy of applying the PSD regulations "in harmony" with the NSPS program. UARG believes that EPA's interpretation of existing law as expressed in the preamble to the proposed rule is correct and should remove the "WEPCo cloud" that would have threatened timely

and successful efforts by the utility industry to meet the requirements of Title IV.

With respect to the proposed rule itself, however, it is unclear whether EPA is merely narrowing the pollution control project exclusion as applied to pollution control projects at defined "electric utility generating units" or is eliminating that exclusion with respect to all other electric utility sources and all industrial units. For example, UARG is troubled by EPA's statement that the "pollution control project exclusion will not extend to source categories other than electric utility steam generating units." 56 Fed. Reg. 27,635. This, and certain other language from the preamble, suggests that, upon promulgation of a final rule, EPA will have implicitly repealed the existing pollution control project exclusion for all sources other than "electric utility steam generating units," as EPA has defined the term. Small utility units and industrial units that install pollution controls in order to meet requirements under Title I, Title III, or Title IV ("opt in" units) might therefore find themselves subject to NSR.

There is no justification for restricting the scope of the NSR pollution control project exclusion in this way. EPA's stated explanation (i.e., the Agency's purported "general lack of experience" in "addressing new source applicability issues regarding pollution control projects" in other industries) lacks factual support in the rulemaking record. Indeed, under the Agency's current NSPS regulations, which apply equally to

electric utility and non-electric utility sources, EPA is already required to determine whether a replacement pollution control system is "less environmentally beneficial." 40 C.F.R.

§ 60.14(e)(5).

Moreover, repeal of the pollution control project exclusion for all sources other than large steam electric utility units would be entirely inconsistent with congressional intent in promulgating the NSR program. As EPA recognizes, "Congress did not intend that pollution control projects be considered the type of activity that should trigger NSR." 56 Fed. Reg. 27,635.

In the final rule, therefore, EPA should make clear that the pollution control project exclusion extends to all sources, including utility combustion turbines and small utility boilers. At a minimum, the preamble to the final rule should state that promulgation of a pollution control project exclusion expressly restricted to electric utility units does not by implication repeal the NSPS exclusion statutorily incorporated into the NSR program in 1977 and currently available for all sources.

In addition, there is no basis for EPA's proposal to apply the "not less environmentally beneficial" test to the addition and use of pollution control equipment at electric utility units. EPA has long recognized Congress's intent that the PSD program incorporate the NSPS definition of modification, including the exclusions contained in "regulations promulgated under Section 111." 43 Fed. Reg. 26,396 (June 19, 1978). Yet, in proposing to apply the "not less environmentally beneficial" test to the

addition and use, as well as the replacement, of pollution control equipment, EPA declines, without adequate explanation, to give full force and effect, in the PSD context, to the pollution control exclusion in 40 C.F.R. § 60.14(e).

As a practical matter, UARG is confident that pollution control projects undertaken by its members are "environmentally beneficial." "Net" actual annual emissions of total pollutants emitted by utility units will be reduced in the case of all types of pollution controls that utilities are expected to install. For instance, while the use of low NO_x burners might result, in some cases, in small increases in emissions of CO, these small increases would be greatly outweighed by the expected resulting reductions in NO_x. Thus, the Agency itself has recognized that "most, if not all, pollution control projects will reduce net actual emissions." 56 Fed. Reg. 27,635. Nevertheless, any express pollution control project exclusion under the NSR program should be consonant with EPA's NSPS rules.^{8/}

^{8/} As a matter of simple regulatory construction, there is an error in the way EPA is proposing to define "pollution control project." As relevant here, the proposed rule defines the term as meaning "any physical change, or change in the method of operation at an existing electric utility steam generating unit for purposes of reducing emissions from such unit." Proposed 40 C.F.R. § 52.21(b)(32) (emphasis added). The proposed rule goes on to list certain examples of pollution control projects, including "a physical change, or change in the method of operation, to accommodate switching to a fuel which is less polluting than the fuel in use prior to the change including, but not limited to natural gas or coal reburning, co-firing of natural gas and other fuels for the purpose of controlling emissions." Proposed 40 C.F.R. § 52.21(b)(32)(ii) (emphasis added). Since EPA is proposing, under § 52.21(b)(2)(iii)(h), to exclude from the
(continued...)

B. Representative Annual Emissions

1. EPA's View of Current Law

EPA recognizes that, under current law, the "linchpin" for deciding whether to use "future actual" or "future potential" emissions in calculating an emission increase is whether the unit has "begun normal operations." 56 Fed. Reg. 27,633. While the meaning of the phrase "begun normal operations" was at the heart of two U.S. Court of Appeals cases, Puerto Rican Cement Co., Inc. v. EPA, 889 F.2d 292 (1st Cir. 1989) and Wisconsin Elec. Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990), neither of these decisions, EPA says, "specified the threshold for when a unit has 'begun normal operations.'" 56 Fed. Reg. 27,633.

Thus, states EPA, "based on these decisions, under its current regulations," the Agency must "consider the facts of each case and apply the actual-to-potential test only where the change is sufficiently significant to support a finding that 'normal operations' have not 'begun.'" 56 Fed. Reg. 27,633. EPA continues that "[a]t least for changes that are 'like kind replacements,' 'normal operations' have begun, and the actual-to-

^{8/} (...continued)
definition of "physical change or change in the method of operation" the "addition, replacement or use of a pollution control project," it is confusing and incorrect to use the phrase "physical change or change in the method of operation" in defining the term "pollution control project" or in listing any examples of such projects. UARG suggests that EPA employ a more general term, such as "activity," in place of "physical change or change in the method of operation" in defining "pollution control project."

potential test is impermissible." Id.^{2/} Pending final adoption of its proposed rule, EPA says that it will "continue to apply an actual-to-actual test to units that undertake 'like-kind replacements' and other units found to have 'begun normal operations.'" Id.

2. The Proposed Rule

EPA takes note that the "'begun normal operations' criterion is highly fact-dependent and its application is inherently case-by-case," and suggests that such a measure "may be an uncertain indicator of what emissions test will be applied in a given instance." 56 Fed. Reg. 27,633. Accordingly, the Agency proposes to adopt a "more useful criterion," by amending its rules to

apply the actual-to-actual test on all physical or operational changes at electric utility steam generating units save those that are an addition of a new unit or constitute a replacement of an existing unit.

^{2/} Significantly, the Agency embraces the definition of "like-kind" replacement that WEPCo itself had advanced before the Seventh Circuit, finding that the court

described a "like-kind replacement" as one that "does not 'change or alter' the design or nature of the facility. Rather, it merely allows the facility to operate again as it had before the specific equipment deteriorated."

Id., quoting WEPCo, 893 F.2d at 908.

Id. Under the proposed rule, EPA would consider a unit to be "replaced" if it would constitute a reconstructed unit within the meaning of 40 C.F.R. § 60.15.

As proposed, EPA's "representative actual annual emissions" methodology would require a utility to compare its existing unit's baseline emissions with that unit's future actual emissions in order to determine whether the proposed change would increase actual emissions. In establishing this pre-change baseline, EPA's current regulations define baseline emissions as

the average rate, in tons per year, at which the unit actually emitted the pollutant during a 2-year period which precedes the particular date and which is representative of normal source operation. The Administrator shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

40 C.F.R. § 52.21(b)(21)(ii). As the Agency notes, while "not required by the regulations, EPA has historically used the 2 years immediately preceding the proposed change to establish the baseline." 56 Fed. Reg. 27,636.

EPA proposes to retain this regulatory language but "to adopt a new presumption regarding its implementation." 56 Fed. Reg. 27,636. Under the proposed rule, EPA says that it will "presume that any 2 consecutive years within the 5 years prior to the proposed change is representative of normal source operations for a utility." Id. This presumption, EPA points out, is "consistent with the 5-year period for 'contemporaneous' emissions increases and decreases in 40 C.F.R.

§ 52.21(b)(3)(i)(b)." 56 Fed. Reg. 27,636. EPA also notes that source owners or operators desiring to "use other than a 2-year period or a baseline period prior to the last 5 years" may continue to seek a determination that some other period is "more representative of normal operations." Id.

As for determining "future actual emissions," EPA says that this projection is to be based on

(1) The hourly emissions rate, which is based on the unit's physical and operational capabilities following the change and federally-enforceable operational restrictions that would affect the hourly emissions rate following this change; and (2) projected capacity utilization, which is based on (a) the unit's historical annual utilization, and (b) all available information regarding the unit's likely post-change capacity utilization.

56 Fed. Reg. 27,636. Under the proposed rule, sources would base their projection of utilization "on the 2 years after the change, or a different consecutive 2-year period within the 10 years after the change," where EPA determines that such different period is more representative of normal source operations. Id. at 27,637.

3. UARG's Position

EPA strayed from the proper construction of its NSR rules in its "WEPCo interpretations," by seeking to apply the "potential to emit" concept to existing units that had, by any common sense meaning of the term, "begun normal operations." The Agency's recognition in the preamble to its proposed rule that the

"linchpin" for determining whether to use "future actual" or "future potential" emissions in calculating an emission increase is whether the unit has "begun normal operations" constitutes a welcome return by EPA to the correct view of the law.

As noted above, EPA itself had rejected the use of the "potential to emit" concept for existing units when its adopted final rules in 1980 in response to the Alabama Power remand. 45 Fed. Reg. 52,676 (1980). EPA's subsequent attempt, in its "WEPCo interpretations," to apply that concept to existing units could not be logically reconciled with the plain language of the regulations, as the court in WEPCo pointed out. 893 F.2d at 916-17. Indeed, the very rationale for the "potential to emit" approach is that units that have not begun normal operations have no past operating history on which to base an emissions calculation. In contrast, existing units have such an operating history.

As for EPA's proposed rule itself, UARG generally supports the Agency's decision to employ a "more useful criterion" for determining NSR applicability to electric utility units. With respect to establishing a "representative" pre-change baseline period, however, UARG believes that EPA should clarify its presumption to provide for the use of any two consecutive years within the last five years of operations. This would allow for the establishment of a more representative baseline for units that have been in a lengthy shutdown but still have an established pre-shutdown operating capability.

Clarifying the presumption in this way would be consistent with existing regulations, which provide that EPA "shall allow the use of a different time period upon a determination that it is more representative of normal source operation." 40 C.F.R. § 52.21(b)(21)(ii). Since, under EPA's proposed presumption, source owners or operators "desiring to use other than a 2-year period or a baseline period prior to the last 5 years may seek the Administrator's specific determination that such period is more representative of normal operations," 56 Fed. Reg. 27,636, clarifying the presumption would have the sole practical effect of reducing the number of case-specific determinations the Agency would be required to make.

With respect to projecting future actual emissions, UARG believes that, in almost all cases, the period of time most representative of "normal source operations" will be the two-year period immediately after the physical change or change in the method of operation. EPA should employ a presumption to that effect and use a different two-year period only where the Agency can clearly demonstrate that the two-year period immediately after the change is not representative.

C. The Causation Requirement

1. EPA's View of Current Law

Its current NSR rules, EPA acknowledges, require that a physical or operational change "result in" an increase in actual emissions "in order to consider that change to be a

modification." 56 Fed. Reg. 27,637. The Agency goes on to state that, "[i]n other words, NSR will not apply unless EPA finds that there is a causal link between the proposed change and any post-change increase in emissions." Id.

2. The Proposed Rule

Having confirmed in the preamble that, under current law, there must be a "causal link" between the physical or operational change and an increase in actual emissions in order for NSR to be triggered, EPA goes on to state that its proposed rule would "clarify" this "causal link" requirement "in the context of modifications at electric utility steam generating units." 56 Fed. Reg. 27,637. EPA says that its proposal "makes clear" that

where increased operations are in response to independent factors such as system-wide demand growth, which would have occurred and affected the unit's operations even in the absence of the physical or operational change, such increases do not result from the change and shall be excluded from the projection of future actual emissions.

Id. EPA continues that,

in assessing whether the proposed change will result in an increase in actual emissions, utilities need not include in their projection of post-change utilization that portion of the increased rate of utilization, if any, due to factors unrelated to the physical or operational change, such as an increase in projected capacity utilization due to the rate of electricity demand growth for the utility system (of which that source is a member) as a whole.

Id.

EPA further explains that, under the proposed rule, during a "representative baseline period," the plant must have been able to "accommodate the projected demand growth physically and legally even absent the particular change." Id. EPA says that "[i]ncreased operations (and resultant increases in actual emissions) that could not physically and legally be accommodated [during the baseline period] but for the proposed physical or operational change" are to be "considered to result from the change." Id.

3. UARG's Position

UARG agrees with EPA that existing NSR provisions require that a physical or operational change "result in" an increase in actual emissions in order for the change to be considered a modification. EPA's interpretation of current law regarding this so-called "causal link" issue signals a retreat by the Agency from its recent practice of finding emission increases without regard to whether the increase was actually connected to the physical or operational change at issue.

However, EPA's proposal to create a separate exclusion for increased operations attributable to system-wide demand growth is troublesome to the extent that it implies that increases in utilization that are not restricted by a federally enforceable permit can nevertheless trigger NSR. This is the case because excluding load growth from emission increase calculations at units that have begun normal operations is already generally

required under the exclusion provided in 40 C.F.R.

§ 52.21(b)(2)(iii)(f) for "an increase in the hours of operation or in the production rate." Thus, current law allows sources to increase their rate of utilization (and, thus, their emissions) in response to changing market conditions -- including, in case of electric utilities, system demand growth -- so long as the change is not prohibited by a federally enforceable permit condition.

In 1980, when it promulgated the "hours of operation/production rate" exclusion, EPA explained that it was "convinced that Congress could not have intended a company to have to get a NSR permit before it could lawfully change hours or rate of operation." 45 Fed. Reg. 52,704. Such a requirement, EPA continued, "would severely and unduly hamper the ability of any company to take advantage of favorable market conditions." Id. See Puerto Rican Cement Co., Inc. v. EPA, 889 F.2d 292, 298 (1st Cir. 1989) (§ 52.21(b)(2)(iii)(f) "permit[s] firms using existing capacity simply to increase their output") (emphasis in original). Prior to WEPCo, EPA's practice was to apply the "hours of operation/production rate" exclusion where an emissions increase was attributable to increased capacity utilization, even if the increase in production rate was preceded by nonroutine physical changes at the facility.^{10/} For example, when EPA issued a

^{10/} In WEPCo, EPA argued, over WEPCo's objection, that the "hours of operation/production rate" exclusion did not apply where there was a contemporaneous nonroutine physical change at a facility. The court, without explanation, deferred to the
(continued...)

determination that PSD would not apply to a project that involved physically converting stationary gas turbines from oil to gas, a "nonroutine," once-in-a-lifetime physical change that would enable the facility to burn gas and operate a great portion of time, EPA stated that

[a]ctual emissions could increase only if there is an increase in the production rate or hours of operation, both of which are specifically exempt from PSD review. (See 40 C.F.R. 52.21(b)(2)(iii)(f)).

Memorandum from Edward Reich to Amasjit Gill (June 24, 1981).

The final rule should reconcile the "demand growth exclusion" with the existing "hours of operation/demand growth" exclusion. The Agency should confirm that increases attributable to system-wide demand growth are already excluded under the "hours of operation/production rate" exclusion (unless limited by a federally enforceable permit term) and therefore the "demand growth exclusion" only applies where there is a federally enforceable permit term limiting hours of operation or production rate.

^{10/} (...continued)

Agency's view. WEPCo, 893 F.2d at 916 n.11. While UARG agrees that the "hours of operation/production rate" exclusion is inapplicable where a unit has not begun normal operations, EPA's interpretation of the exclusion in the WEPCo case was simply not consistent with the plain meaning of the regulations. As the court in WEPCo rejected the Agency's use of the "potential to emit" test on the facts of that case, and given that EPA has recognized, in the preamble to its proposed rule, that the "potential to emit" test cannot be applied where a unit has begun normal operations, EPA should now revisit its interpretation of the "hours of operation/production rate" exclusion.

D. Calculation of NSPS Baseline

1. EPA's View of Current Law

Under existing regulations, EPA notes, the NSPS baseline is determined "during a period that is roughly contemporaneous with the proposed change at the affected facility." 56 Fed. Reg. 27,638. EPA recognizes that the regulatory interpretation that it employed since WEPCo places "undue emphasis on the physical condition of the affected facility immediately prior to the change." Id. Without the proposed revision, EPA argues, its NSPS regulations may "unduly burden utilities undertaking physical or operational changes in conjunction with the acid rain program." Id.

2. The Proposed Rule

EPA's proposed rule provides that, for an existing electric utility steam generating unit, the pre-change baseline for NSPS applicability purposes "shall be calculated using the highest hourly emissions rate achievable at any time during the 5 years prior to the change." 56 Fed. Reg. 27,638 (emphasis added). EPA states that this "more flexible" provision retains the "key concept" from its existing regulations that the baseline be determined using a period that is "roughly contemporaneous" with the proposed change. Id. But the proposal, while "modest," EPA says, would avoid "undue emphasis" on the physical condition of the affected facility immediately before the change. Id.

Explaining the potential of its current NSPS rules to "unduly burden" utilities undertaking physical or operational changes in order to comply with the acid rain provisions of the 1990 Clean Air Act Amendments, EPA points out that "if a unit has broken down and is in need of repairs, the utility's baseline will be artificially low." 56 Fed. Reg. 27,638. The proposal, the Agency says, "will allow utilities to demonstrate that an earlier, higher capacity was more representative of the unit's maximum hourly emissions rate." Id.

3. UARG's Position

UARG agrees with EPA's determination that the Agency's WEPCo interpretation of the NSPS rules has placed "undue emphasis" on the physical condition of the facility immediately prior to the physical or operational change. The plain language of § 111(a)(4) of the Clean Air Act and the Agency's historic understanding of the NSPS modification provision require reconsideration of the WEPCo interpretation.

The very terms by which Congress defined "modification" clearly indicate that, for there to be a modification, emissions at a unit following a physical or operational change must be greater than emissions representing the unit's historically demonstrated maximum capabilities. The 1970 Clean Air Act defined "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.

CAA § 111(a)(4). The very notion that a unit's emissions of air pollutants might "increase" following the change necessarily implies consideration of the unit's highest previously demonstrated level. Only by comparing post-change emissions with the unit's emissions at its previously demonstrated maximum capacity can it truly be determined whether there has been such an "increase." Finally, this approach is consistent with the language governing emissions of a new pollutant, which makes clear that the focus is on the plant's entire past operating history ("previously emitted"), not on what was emitted immediately before a change.

Prior to WEPCo, EPA consistently interpreted its NSPS regulations in such a way that activities that merely restore normal operation consistent with historical plant design and past plant operations do not trigger NSPS. For example, in 1973, EPA determined that even in the case of a source that had been closed for a substantial period of time, those steps undertaken by the source's owner that changed "neither the source's physical structure nor its method of operation . . . from its condition under previous operation" and which were merely "necessary to return [the] plant to its former operating condition" were not a modification triggering NSPS. Memorandum from Michael A. James, Attorney, Air Quality and Radiation Division, to Jack R. Farmer, Chief, Standards Development Branch, at 2 (Feb. 14, 1973). Similarly, in 1976, the year after the NSPS modification

regulation was promulgated in its current form, EPA outlined its contemporaneous interpretation of the modification provision as follows:

EPA has previously interpreted Section 111 of the Clean Air Act, and the implementing regulations found in 40 C.F.R. Part 60, to exclude from their operation those facilities which meet the following conditions:

1. They were constructed before the effective date of a New Source Performance Standard.
2. They were closed or moved to a different location.
3. They were later operated in the same manner as they had been previously designed to operate.
4. They emitted no more of the specified pollutants than the original facility had.

Letter from O.W. Lively, Acting Director, EPA Enforcement Division, to Gary D. Whaley, Ozark-Mahoning Company, at 2 (Oct. 1, 1976) (emphasis added).

In 1980, in a memorandum prepared with the concurrence of the Office of General Counsel, EPA reiterated that NSPS was not triggered where a source owner was "merely taking those steps necessary to return the plant to its former operating condition." Memorandum from Edward Reich, Director, Division of Stationary Source Enforcement, to William N. Sawyer, Attorney, General Enforcement Branch, EPA Region II, at 2 (Sept. 16, 1980). More recently, in a letter dated January 30, 1990, from David Kee, EPA Director, Region V, Air and Radiation Division, to Timothy J. Method, Assistant Commissioner, Office of Air Management, Indiana Department of Environmental Management (IDEM), EPA recited its

agreement with IDEM's finding that NSPS did not apply to the Clean Coal Technology (CCT) project at Northern Indiana Public Service Company's Bailly power plant. EPA stated that the Bailly facility "would not be subject to NSPS at the conclusion of the project . . . as the result of an increase in emissions rates back up to the levels which existed before the changes were made to accommodate the temporary demonstration project." The Agency noted that the "removal of temporary controls will not result in a level of emissions higher than that experienced in the past."

Thus, EPA's practice, both before and, in at least one case, after its WEPCo decision, has been to recognize that maximum past performance is an essential consideration in calculating the pre-change baseline for NSPS purposes. UARG welcomes EPA's recognition that, consistent with pre-WEPCo practice, maximum past operating capabilities should be the key consideration in establishing the pre-change baseline.

At the same time, UARG objects to the proposed rule to the extent that it restricts the "look back" to a static five-year period. At a minimum, the proposed rule should be clarified to provide for the establishment of a baseline on the basis of the last five years of the unit's operations. Otherwise, in the case of a unit that has been in a lengthy shutdown, the decision by the owner/operator to bring the unit back on line would automatically trigger NSPS. Plainly, a period of non-operation, due to safety considerations or some other similar factor, is by definition an inappropriate reference point for determining a

unit's maximum physical and operational capacity and is inconsistent with EPA's long-standing, pre-WEPCo interpretation of its NSPS rules.

UARG also believes that there is no basis for EPA to restrict its proposal to large electric utility steam generating units only. As EPA has recognized in its past applicability determinations, under current law, the concept of maximum past operations applies equally to all sources covered by the NSPS rules, including combustion turbines and small boilers.

E. Utility BACT Presumption for NO_x

1. The Proposed Rule

In addition to issues directly associated with EPA's clarification of its "WEPCo" interpretations, EPA proposes to adopt a presumption that, in the case of PSD permits issued by EPA under 40 C.F.R. § 52.21, "best available control technology" (BACT) for emissions of nitrogen oxides (NO_x) from existing coal-fired electric utility steam generating units undergoing a modification is "low NO_x burners" or some similar, cost-effective technology. 56 Fed. Reg. 27,638. EPA notes that it has in the past issued guidance documents "effectively creating presumptions that certain technologies constituted BACT for certain source categories," and states that such a presumption is "appropriate" here, "in light of the strong congressional policy judgment favoring use of that technology [i.e., low NO_x burners] for acid rain control reflected in section 407." Id.

Citing the definition of BACT in § 169(3) of the Clean Air Act, EPA continues that its proposed presumption is "consistent with BACT requirements because it does not purport to relieve the permitting authority of the obligation to weigh the statutory factors in reaching BACT determinations." 56 Fed. Reg. 27,639. Rather, according to EPA, the proposed presumption

reflects an exercise of policy judgment by EPA where it is the permitting authority that in most cases a BACT analysis of currently demonstrated technologies for retrofitting existing utility boilers would lead to the selection of low NO_x burners and/or combustion modifications identified in section 407(b)(1).

Id. EPA concludes that, while the presumption "would not apply in States with PSD programs that have been incorporated into state implementation plans," such states are "encouraged to adopt this presumption as a matter of state policy." Id.

2. UARG's Position

UARG agrees with EPA that the presumption for modified units is appropriate, given the strong congressional policy judgment favoring the use of low NO_x burners for NO_x control at existing units under title IV. Addressing the requirements of § 407, the Joint Explanatory Statement of the Committee of Conference provides that "NO_x reductions from existing units mandated under section 407 are to be accomplished by use of conventional, available burner technology ('low-NO_x burners')." 136 Cong. Rec. H13199 (daily ed. Oct. 26, 1990). UARG notes that, as BACT is a

more stringent standard than "reasonably available control technology" (RACT), the presumption that low NO_x burners are BACT for existing units under PSD definitionally establishes that low NO_x burners constitute, as well, RACT for NO_x under title I.

F. Exemption for CCT Demonstration Projects

1. The Proposed Rule

Finally, EPA proposes to adopt rules implementing the exemption from NSPS, NSR, and nonattainment requirements that was created by Title IV of the 1990 Clean Air Act Amendments for temporary CCT projects. Under EPA's proposed rule, at the "end of a temporary project, the facility must be returned to pre-demonstration conditions and hourly emission rates (or lower)."

56 Fed. Reg. 27,637. The Agency continues that the

return of the facility to its pre-demonstration physical and operational condition would not result in the loss of the actual emissions margin between pre-demonstration actual emissions rate and SIP allowable emissions rates for that facility. Rather, the facility would be treated as if the temporary demonstration project had never occurred.

Id. EPA also proposes to implement an exemption from NSPS and NSR requirements for repowering projects that are awarded funding from DOE as permanent CCT demonstration projects (or similar such projects funded by EPA), "so long as potential emissions . . . from the unit do not increase as a result of the project." Id.

2. UARG's Position

UARG supports the proposed exemptions, which, as EPA points out, "merely implement straightforward statutory exemptions that were immediately effective upon passage of the 1990 Amendments." 56 Fed. Reg. 27,638.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

NOV 24 1989

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: Court of Appeals Decision Upholding PSD
"Actual-to-Potential" Applicability Rules
Puerto Rican Cement Co., Inc. v. EPA,
No. 89-1070 (1st Cir.)

FROM: Gregory B. Foote, Attorney *GBF*
Air and Radiation Division (LE-132A)

THRU: Alan W. Eckert *AWE*
Associate General Counsel
Air and Radiation Division (LE-132A)

TO: William G. Rosenberg
Assistant Administrator
for Air and Radiation

The First Circuit Court of Appeals has issued a decision which, in resounding terms, upholds the rules governing applicability of PSD to major modifications under the Clean Air Act. In Puerto Rican Cement Co., Inc. v. EPA, No. 89-1070 (slip op. Oct. 31, 1989) (copy attached), the court affirmed EPA's position that when a company makes a "physical or operational change" at an existing facility, there is a "major modification" subject to PSD review if a comparison of actual emissions before the change with potential emissions thereafter shows a "significant net increase." Essentially, the court embraced our view that alterations at a plant provide an economic incentive to increase production, and must undergo PSD review unless the company agrees to limit its actual emissions to current levels. The facts of the case and the court's holdings are summarized below.

Puerto Rican Cement planned to convert cement kilns from a "wet" process to a "dry" process. Overall production capacity would have increased, but because the new process was inherently less polluting, both total potential emissions and emissions per unit of production would have decreased. Nevertheless, because the plant had operated at 60% capacity in recent years, a comparison of actual emissions before the conversion with potential emissions thereafter showed a significant increase. The PSD regulations provide that a physical or operational change is subject to review as a major modification if there will be a significant net increase in actual emissions. However, because

actual emissions cannot be predicted before the modification occurs, the rules also provide that where a source has not begun "normal operations," its actual emissions are assumed to be its potential to emit. See, e.g., 40 C.F.R. § 52.21(b)(2)(i), (b)(3), (b)(21)(i), and (b)(21)(iv). Region II advised the company that potential emissions would be considered here, because the modified unit had not yet begun normal operations. Hence, the Region found, PSD would apply because there would be a significant net increase (taking contemporaneous increases and decreases into account). The company then sought review in the court of appeals.¹

The court held first that EPA's "actual-to-potential" method of measuring emissions increases where an emissions unit has not begun normal operations is consistent with the terms of the regulations themselves and with the preamble. See slip op. at 13-16. The court also found that it was proper for EPA to apply this calculus to modified units as well as to new units. See slip op. at 19.

Second, the court rejected the company's argument that EPA's position would suppress the development of newer, less-polluting facilities, accepting instead EPA's rationale that modifications provide an economic incentive to increase production, and hence, emissions:

[the] company argues that EPA's interpretation . . . makes little sense because it would significantly discourage the Company, and others like it, from installing more efficient machinery that, at any production level, emits significantly less pollution. But we cannot agree. EPA has simply taken account of, and given controlling weight to, a different consideration: the fact that a firm's decision to introduce new, more efficient machinery may lead the firm to decide to increase the level of production, with the result that, despite the new machinery, overall emissions will increase.

Slip op. at 16 (emphasis in original).

¹ However, the parties also agreed that if EPA were upheld, Puerto Rican Cement would accept federally enforceable operational restrictions on its potential to emit, such that there would be no net increase, and no PSD coverage.

Third, the court ruled that the provision in the PSD regulations that excludes emissions increases due to increased production rates or hours of operations (see, e.g., 40 C.F.R. § 52.21(b)(2)(iii)(f)) does not apply where those increases are linked to a physical or operational change. The company had argued that under this provision, it could increase production at its old kilns to 100 percent of capacity, and should also be allowed to do so with the more efficient kilns. The court rejected this claim, pointing to the statute's focus on "construction" of facilities (see section 169(2)(C)), and to "a prediction that, as a general rule, new building will more likely lead to increased emissions levels." Consequently, the court found no contradiction between allowing increased output at existing facilities to avoid review while subjecting increased output of new capacity to PSD coverage. Slip op. at 18-19.²

The issues addressed in Puerto Rican Cement are among those still pending before the Seventh Circuit in Wisconsin Electric Power Co. v. Reilly, Nos. 88-3264 and 89-1339 ("WEPCO"). We have advised that court of the First Circuit decision, which should have a favorable impact for us.

The Puerto Rican Cement decision is a ringing endorsement of an important facet of EPA's recent activist posture on PSD issues. It can be read as a green light for the Agency to proceed to rigorously apply new source requirements to a broad range of physical or operational changes at existing facilities where the changes provide an economic incentive that might result in increased emissions. However, there are many potential

²In addition, the court found that an isolated prior inconsistent interpretation of EPA's applicability rules did not invalidate the Agency's determination as to Puerto Rican Cement. Slip op. at 19-22. Also, the court upheld EPA's interpretation that the time period for calculating "contemporaneous" emissions increases and decreases runs backward from the commencement of construction on the particular change, not from the time the company sought a nonapplicability determination from EPA. Slip op. at 24-26. Finally, the court rejected Puerto Rican Cement's attempt to gain judicial review of the lawfulness of the PSD regulations themselves. The First Circuit noted that under section 307(b)(1), challenges to nationally applicable regulations may be lodged only in the District of Columbia Circuit, and that such a challenge is still pending in Chemical Mfrs. Ass'n v. EPA, No. 79-1112.

pitfalls to the Agency's approach. This case and the upcoming ruling in the WEPCO case thus underscore the need for EPA to address in a comprehensive manner the various PSD applicability issues that have arisen in the last year or so. They also increase the likelihood that industry petitioners will attempt to revive Exhibit B of the settlement agreement in Chemical Manufacturers Association v. EPA, No. 79-1112 (D.C. Cir.). Under that long-dormant agreement, EPA pledged to propose and take final action on revisions to the new source review regulations that would replace the actual-to-potential calculus with an applicability system based on changes in potential emissions. We are preparing a memorandum for Mike Shapiro on all of these issues, and hope to brief him on them in the near future.

Attachment

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5/30/91

[revised pp. 15-18]

(a)

2. The WEPCo and Puerto Rican Cement Decisions

As noted above, to calculate whether a physical or operational change "increases" emissions, EPA regulations ~~call for a comparison between past actual emissions to future actual emissions~~. 40 CFR 52.21(b)(3)(i). ~~If, however, the emissions unit has not "begun normal operations," EPA regulations recognize that future actual emissions are difficult to predict and so employ future "potential" emissions as a proxy.~~ 40 CFR 52.21(b)(21)(iv). The linchpin under the current regulations for predicting future emissions after a modification ~~whether to apply the actual-to-actual or the actual-to-potential test~~ is thus whether the unit has "begun normal operations."

Two recent federal appellate court decisions have addressed EPA's interpretation of the phrase "begun normal operations." These decisions, Puerto Rican Cement Co., Inc. v. US EPA, 889 F.2d 292 (1st Cir. 1989) and Wisconsin Elec. Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990) ("WEPCo"), occasion a reexamination of EPA's interpretation of the phrase, and of the usefulness of the regulatory language itself. The meaning of the phrase is highly fact-dependent, and ~~has proved ambiguous and troublesome in application~~; thus, as described later in this notice, EPA today proposes to change its regulations ~~to remove the "begun normal operations" test and to replace it with a more useful criterion.~~

Both cases involved physical changes to existing emissions units, but changes of differing extent, nature and result. In Puerto Rican Cement, the owner of a cement plant¹ with several kilns sought to convert one "wet" kiln into a "dry" kiln, and to combine that kiln with another kiln. 889 F.2d at 293. The court observed that the total production capacity of the renovated single kiln would exceed the combined production capacity of the previous two separate kilns by "about 35%." Id. It noted that the renovated single kiln would employ a different "cement-making process" than the original kiln from which it was "converted," id. And it said that the new kiln would be "more efficient [and] may lead the firm to decide to increase the level of production," id. at 297 (emphasis in original). In reviewing EPA's interpretation of "begun normal operations," the court

¹ Puerto Rican Cement involved a cement plant, not an electric utility, but the court's legal analysis of the phrase "begun normal operations" in the current regulations is relevant to all facilities.

applied a highly deferential standard of review, since an agency's interpretation of its own regulatory language is typically given "controlling weight unless it is plainly erroneous or inconsistent with the regulation." 889 F.2d at 297, quoting Udall v. Tallman, 380 U.S. 1, 16-17 (1965) (citation omitted). The court concluded that on the facts of the case, EPA's interpretation that "normal operations" had not begun was not "arbitrary or irrational," id. at 298, and hence EPA's application of the actual-to-potential test to predict future emissions was permissible.

In WEPCo, 893 F.2d 901, the Seventh Circuit was faced with a different kind of modification. There renovations were proposed for several older (35 to 50 year old) coal-fired electric utility boilers. The physical changes involved repair and replacement of turbine-generators, steam drums and other major components. EPA contended, as it had in Puerto Rican Cement, that these changes went beyond "normal operations" and thus warranted use of future potential emissions as the test for an emissions increase over past actual emissions. Here the court disagreed with EPA's interpretation that "normal operations" had not begun. The court noted that none of the repairs or replacements would have "changed or altered the design of the facility," id. at 908. ~~The method of production and design capacity would remain unchanged.~~ The court coined the phrase "like-kind replacement" to describe the type of renovation occurring at the WEPCo plant. Id. at 917. It said that where the renovations were "like-kind replacements," EPA could not reasonably interpret its regulations to say that such a unit was so different that it had not "begun normal operations." Thus, it concluded that the "actual-to-potential" test could not be applied, under EPA's regulations, to units simply undergoing "like-kind replacements."²

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Based on these decisions, ~~these two decisions compel one result:~~ under its current regulation, EPA must consider the facts of each case and apply the actual-to-potential test only where the change is sufficiently significant to support a finding that "normal operations" have not "begun." At least for changes that are "like kind replacements," "normal operations" have begun, and the actual-to-potential test is impermissible.

Neither ^{of these} decision specified the ^{threshold} ~~dividing line~~ for ^{when a unit has} "begun normal operations." The court in WEPCo said that "like kind replacements" -- a term not found in the statute or the regulations -- fall within "normal operations," but did not say

² On remand, EPA employed an actual-to-future actual test, comparing WEPCo's representative actual emissions for the baseline period to estimated future actual emissions based on all the available facts in the record.

that "like kind" is the boundary of the phrase. The court in Puerto Rican Cement thought the set of facts before it could reasonably be said to go beyond "normal operations," but it did not say that this was the only reasonable interpretation of these facts, nor what the threshold is for future cases.

INSERT A →

To clarify this state of affairs, EPA could expressly interpret the phrase "begun normal operations" to explain what facts will satisfy or depart from this criterion. The phrase, however, has ~~not~~ proved adequate to inform industry and the public, or to give EPA reliable indicators of when future emissions are insufficiently predictable for an actual-to-actual test and thus warrant an actual-to-potential test. Consequently, as explained below, EPA is today proposing to revise its regulations to apply the actual-to-actual test to all ~~phys.~~ ^{phys. or oper. changes} modifications save those that are an addition of a new unit or constitute a replacement of an existing unit.³ Pending final adoption of this new rule, EPA will continue to apply an actual-to-actual test to units ~~that~~ have "begun normal operations," such as the ~~"like kind replacements"~~ considered by the court in WEPCo.

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³ As an illustration, had this new test governed the facts in WEPCo or the facts in Puerto Rican Cement (were it an electric utility), EPA would have applied the actual-to-actual test.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 52, and 60

[FRL -----]

Requirements for Preparation, Adoption,
and Submittal of Implementation Plans;
Approval and Promulgation of
Implementation Plans; Standards of
Performance for New Stationary Sources.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Proposed Rule

SUMMARY: The applicability of the new source requirements of Title I of the Clean Air Act (CAA) to physical or operational changes at electric utility generating units is an issue of considerable interest at this time because of the recent passage of the 1990 Clean Air Act Amendments (CAAA). Many utilities will be undertaking major pollution control projects at their units in the next few years. In enacting Title IV, Congress did not suspend any Title I requirements for this work. However, the massive industry-wide undertakings of pollution control projects warrants a clarification of the new source review requirements of Title I. In particular, New Source Review (NSR) provisions should not inadvertently bias a utility towards or against any means of complying with the acid rain provisions. The EPA believes the amendments proposed today and the clarification of its current policy under its present NSR regulations provide adequate assurances that utilities can undertake Title IV pollution control projects without uncertainty as to the applicability of the various Title I new source requirements. At the same time,

the applicability of existing new source regulations to modifications has been the source of two recent federal appellate decisions, Wisconsin Electric Power Co. v. Reilly, (WEPCO), 893 F.2d 901 (7th Cir. 1990), and Puerto Rican Cement Co. v. EPA, 889 F.2d 292 (1st Cir. 1989). As a result, EPA is today proposing clarifying amendments to these regulations and confirming its policies regarding some of these provisions as they apply to utility projects pending adoption of the proposed amendments.

The EPA today proposes to adopt a broad NSR exclusion for utility pollution control projects and, until these proposed regulations are adopted in final form, to adhere to its policy that new source regulations already generally exclude coverage of pollution control projects undertaken at electric utility units. Similarly, EPA today proposes to adopt an "actual to future actual" methodology for determining whether all other nonroutine physical or operational changes at utilities (other than the replacement of a unit or addition of a new unit) are subject to new source review under either prevention of significant deterioration (PSD) or nonattainment provisions and to maintain in the interim that this methodology is applied where the unit has "begun normal operations." For those utility projects which undergo PSD new source review, today's notice proposes a presumption that for EPA-issued permits, "low-NOx burners" can satisfy the best available control technology (BACT) requirements.

In addition, EPA also proposes to modify its regulations implementing the modification provisions of the Title I new source performance standards (NSPS) program to provide that a utility may use for its pre-change baseline the highest hourly emissions rate achievable at any time during the 5 years prior to the physical or operational change. The EPA also proposes to modify its regulations to reflect changes made by Congress in the 1990 Amendments to the applicability of new source requirements to clean coal technology (CCT) and repowering projects, and to "very clean" units.

DATES: Comments. Comments on the revisions proposed today must be received on or before _____ (60 days after publication in the Federal Register).

Public Hearing. A public hearing is scheduled for 10:00 a.m., July __, 1991, at the U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. The hearing may be canceled if no speakers have requested time to present their comments 15 days prior to the scheduled hearing date. Written comments in lieu of testimony are encouraged.

ADDRESSES: Supporting information used in developing this proposed rule is contained in docket A-90-06. This docket is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., weekdays at EPA's Air Docket (LE-131), Room M-1500, 401 M Street S.W., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Chebryll Edwards, New Source Review Section (MD-15), Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina 27711, (919) 541-2343.

SUPPLEMENTARY INFORMATION:

I. INTRODUCTION

The EPA today proposes to amend its regulations implementing the various Title I new source requirements governing physical or operational changes at electric utility generating units. Specifically, these proposed changes are being issued to clarify the coverage of the NSPS, PSD and nonattainment preconstruction review requirements of Title I of the Clean Air Act to projects undertaken at electric utility steam generating units.¹

The EPA proposes to amend the definition of "major modification" in 40 CFR Parts 51 and 52 to set forth the conditions under which the addition, replacement or use at existing electric utility generating units of any system or device whose primary function is the reduction of air pollutants (including the switching to a less polluting fuel where the primary purpose of the switch is the reduction of air pollutants) will or will not subject the source to preconstruction review.

¹ The proposed regulations define electric utility steam generating units as any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW of electrical output to any utility power distribution system for sale. See, e.g., proposed 40 CFR 51.165(xx).

Specifically, EPA proposes in PSD and nonattainment areas to adopt a regulatory exclusion explicating its authority under the statutory definition of modification and confirming EPA's current practice that pollution control projects which "do not render the unit less environmentally beneficial" are not "physical or operational changes," and hence, are not modifications for the purposes of Parts C and D of Title I and are not "major modifications" for the purposes of EPA's regulations implementing those provisions. The EPA is today also proposing to amend its PSD and nonattainment new source review regulations (40 CFR Parts 51 and 52)² as they apply to utilities to (1) clarify the NSR baseline for determining whether a proposed physical or operational change will subject a utility to the preconstruction review requirements of these provisions; (2) set forth an actual to future actual methodology for determining whether a physical or operational change is subject to NSR; (3) provide further clarification of the existing regulatory requirement that only those increases in emissions that actually result from the physical change or change in the method of operation can be considered in determining whether the proposed change subjects the utility to NSR requirements; and (4) implement sections 409 and 415 of Title IV of the Clean Air Act Amendments of 1990 which

² For the purposes of this notice, references to "new source review" (or "NSR") refer to the preconstruction review requirements of both Part C (PSD) and Part D (nonattainment) of the Clean Air Act, unless otherwise indicated.

create special NSPS treatment for certain repowering projects and limited NSR exemptions for temporary and permanent CCT projects, and for certain "very clean" units. Finally, EPA is also proposing to amend its NSPS regulations (40 CFR Part 60) to allow a utility to use as its pre-change baseline its highest hourly emissions rate achievable during the 5 years prior to the proposed physical or operational change. To the extent the proposed amendments implement existing EPA policies, EPA will continue to administer its regulations in a manner consistent with these policies pending adoption of the regulations proposed today.

Today's proposal addressing pollution control projects and other non-routine physical and operational changes at electric utility units is timely for several reasons. First, the 1990 Clean Air Act amendments establish, in Title IV, a new control scheme for addressing the acid rain problem which focuses exclusively and immediately on utility power plants. Title IV will force most electric utility steam generating units to undertake pollution control projects and provides full flexibility to achieve compliance without a bias towards or against any particular pollution control method. Second, the Agency believes its extensive experience with other non-routine physical and operational changes at such units and the unique characteristics of the electric utility industry (e.g., the general similarity of equipment within the category and the

extent of publicly available information) support a revision to the new source review applicability criteria for this source category. Further, while Congress did not make significant changes in the NSR and NSPS statutory language in 1990, the conference committee provided the following guidance to EPA in its Joint Explanatory Statement:

"[T]he deletion of most provisions relating to the WEPCO decision is not intended to affect or prejudice in any way the issues or resolution of the WEPCO matter. At the same time, the conferees urge a quick resolution of the WEPCO matter by EPA as appropriate."

Conference Comm., Joint Explanatory Statement of the Committee of the Conference to Accompany S. 1630, Rep. 101-952, 101st. Cong., 2nd Sess. (1990) pp. 344-45. In passing Title IV, Congress did not suspend any requirements of title I. However Title I and Title IV are clearly intended to work in concert, not conflict, and today's ruling is intended to ensure that harmony. Portions of the preamble of today's proposal set forth EPA's present policies under its current regulations, and may be relied on as such pending final action on today's proposal.

II. BACKGROUND

A. The New Source Performance Standards, Prevention of Significant Deterioration and Nonattainment Programs of Title I

Title I of the Clean Air Act has three programs specifically designed to ensure that no new air pollution -- whether from new sources or from modifications to existing sources -- can be emitted unless the source complies with new source requirements.

The 1970 Clean Air Act required EPA to promulgate technology-based new source performance standards applicable to the construction or modification of stationary sources that cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. Clean Air Act ("CAA") § 111(b)(1)(A), 42 U.S.C. 7411(b)(1)(A). The NSPS provisions were "designed to prevent new air pollution problems" by regulating newly-constructed sources and changes occurring at existing sources that result in emissions increases. See National Asphalt Pavement Assoc. v. Train, 539 F.2d 775, 783 (D.C. Cir. 1976); see also H.R. Rep. No. 1146, 91st Cong., 2d Sess. 3, reprinted in 1970 U.S. Code Cong. & Admin. News 5356, 5358. Congress defined 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." See CAA § 111(a)(4), 42 U.S.C. 7411(a)(4).

In 1977, Congress adopted additional amendments to the Clean Air Act. These changes included preconstruction permitting requirements for major new and modified sources under two programs, prevention of significant deterioration (PSD) and nonattainment new source review (respectively, Parts C and D of the Clean Air Act). Congress intended these programs to apply generally where industrial changes might increase pollution in an

area. Alabama Power Co. v. Costle, 636 F.2d 323, 400 (D.C. Cir. 1979). Congress incorporated in Parts C and D the same definition of the term "modification" set forth in the NSPS provisions. See CAA § 111(a)(4), 169(2)(C), and 171(4).

The NSR program for PSD (CAA §§ 160-169) applies in attainment areas, i.e., those areas which have attained the national ambient air quality standards (NAAQS). To receive a PSD permit, a prospective major new source or major modification must (among other things) show that (1) it will not cause or contribute to a violation of the available air quality "increment" (designed to prevent ambient air quality from deteriorating by more than certain specified levels), (2) it will not cause or contribute to a violation of a NAAQS, and (3) it will use the "best available control technology (BACT)," which must be at least as stringent as any applicable NSPS or hazardous pollutant standard under section 112 of the Act.

Part D of the 1977 Amendments applies to nonattainment areas, i.e., those areas which have not met the NAAQS under section 109. To receive a permit in such areas, major new and modified sources must (among other things) (1) obtain emissions offsets, thereby assuring that reasonable progress toward

attainment of the NAAQS will occur, and (2) comply with the "lowest achievable emission rate (LAER)." See CAA § 171-173.³

B. The Two-Step Test for Modifications

The modification provisions of the NSPS and NSR programs are based on the broad NSPS definition of "modification" in section 111(a)(4) of the Act. That section contemplates a two-step test for determining whether activities at an existing facility constitute a modification subject to new source requirements. In the first step, which is largely the same for NSPS and NSR, the reviewing authority determines whether a physical or operational change will occur.⁴ If so, the reviewing authority proceeds in the second step to determine whether the physical or operational change will result in an emissions increase over baseline levels. In this second step, the applicable rules branch apart, reflecting the fundamental distinctions between the technology-based provisions of NSPS and the air quality-based provisions of NSR.

³ The 1970 Clean Air Act also included a provision applicable to construction or modification of any stationary source. This provision is presently set forth in section 110(a)(2)(C). Today's notice does not propose to change the scope of the regulations implementing this provision. See 40 CFR 51.160-164.

⁴ This is further described in section III.H below.

Briefly, the NSPS program examines maximum hourly emissions rates, expressed in kilograms per hour.⁵ Emissions increases for NSPS purposes are determined by changes in the hourly emissions rates at maximum physical capacity. On the other hand, the NSR regulations examine total emissions to the atmosphere. For applicability determination purposes, emissions increases under NSR are determined by changes in annual emissions as expressed in tons per year (tpy).⁶

C. Step One: Physical or Operational Change

The EPA has always recognized that the definition of physical or operational change in section 111(a)(4) could, standing alone, encompass the most mundane activities at an industrial facility (even the repair or replacement of a single leaky pipe, or a change in the way that pipe is utilized). However, EPA has always recognized that Congress obviously did

⁵ An hourly emissions rate may be determined by a stack test or calculated from the product of the instantaneous emissions rate, i.e., the amount of pollution emitted by a source, after control, per unit of fuel combusted or material processed (such as pounds of sulfur dioxide emitted per ton of coal burned) times the production rate (such as tons of coal burned per hour). See section 60.14.

⁶ Annual emissions may be calculated as the product of the hourly emissions rate times the utilization rate, expressed as hours of operation per year, or as the product of an emissions factor (e.g., from Compilation of Air Pollutant Emission Factors, AP-42, 4th Ed. and subsequent supplements) in units of mass emitted per unit of process throughput times the annual throughput. See 40 CFR 52.21(b)(21).

not intend to make every activity at a source subject to new source requirements.

As a result, EPA has defined "modification" in the NSPS and NSR regulations to include common-sense exclusions from the "physical or operational change" component of the definition. For example, both sets of regulations contain similar exclusions for routine maintenance, repair, and replacement; for increases in the hours of operation or in the production rate; and for certain types of fuel switches. See e.g., 52.21(b)(2)(iii) and 60.14(e). In addition, with respect to pollution control equipment, the NSPS regulations contain an exclusion for:

The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emissions control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

40 CFR 60.14(e)(5). As will be discussed, in recent individual applicability determinations EPA has excluded pollution control projects from NSR following a similar "environmentally beneficial" test.

D. Step Two: Emissions Increases for NSPS Applicability

The EPA's NSPS regulations define the term "modification" as any "physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies." See 40 CFR 60.2 and 60.14. Under current NSPS regulations, emissions increases, for applicability purposes, are calculated by comparing the hourly

emission rate, at maximum physical capacity, before and after the physical or operational change. That is, to determine whether a change to an existing facility will increase the emissions rate, the existing NSPS regulations authorize the use of an "emissions factor analysis," or a materials balance, continuous monitoring, or manual emissions test to evaluate emissions before and after the change. 40 CFR 60.14(b)(2).

Absent the exclusions from modifications specified at 40 CFR 60.14(e), any increase in emissions to the atmosphere over the previous emissions rate will subject the unit to NSPS. See 40 CFR 60.14(a) and (b). In addition, under the "reconstruction rules," physical or operational changes which would cost 50 percent or more of the total cost of a comparable new facility may be classified as reconstructions (see 40 CFR 60.15) and are subject to NSPS as a new source, even if there is no emissions increase.

E. Step Two: Emissions Increases Under NSR Requirements

1. Existing Regulations

The EPA's regulations implementing the PSD and nonattainment programs require preconstruction review for sources undertaking a "major modification," i.e., a physical change or change in the method of operations "that would result in a significant net emissions increase of any pollutant subject to regulation under the Act." 40 CFR 52.21(b)(2)(i) and (3)(i);

52.24(f)(5).⁷ A "net emissions increase" is defined as the increase in "actual emissions" from the particular physical or operational change together with any other "contemporaneous" increases or decreases in actual emissions. 40 CFR 52.21(b)(3)(i).⁸

Applicability of the Act's new source review provisions must be determined in advance of construction and is pollutant specific. In cases involving existing sources, this requires a pollutant-by-pollutant projection of the emissions increases, if any, that will result from the physical or operational change. Specifically, to determine whether a proposed physical or

⁷ The current PSD program is set forth in two sets of regulations. One of the regulations cited (40 CFR 52.21) is part of the federal PSD permit program which applies as part of a Federal implementation plan for States that have not submitted a PSD program meeting the regulatory requirements of 40 CFR 51.166 (standards for PSD provisions in State implementation plans). In most States where the federal requirements apply, EPA has delegated the authority to implement the PSD program back to the State. Roughly two-thirds of the States are implementing their own PSD program pursuant to an EPA-approved state implementation plan. Sections 52.21 and 51.166 have identical modification provisions.

EPA's regulations for nonattainment areas are set forth at 40 CFR § 51.165, 52.24 and in Part 51, Appendix S. These sections contain applicability provisions regarding modification that are largely identical to those in the PSD provisions.

⁸ Roughly speaking, "contemporaneous" emissions increases or decreases are those which have occurred between the date five years preceding the proposed physical or operational change and the date that the increase from the change occurs. 40 CFR 52.21(b)(3)(ii). Once a modification is determined to be major, the PSD requirements apply only to those specific pollutants for which there would be a significant net emissions increase. E.g., 40 CFR 52.21(j)(3) (best available control technology); 40 CFR 52.21(m)(1)(b) (air quality analysis).

operational change will result in an emissions increase, the source must first determine a baseline level of actual emissions. The regulations define actual emissions on a particular date as "the average rate, in tons per year, at which the unit actually emitted the pollutant during a 2-year period which precedes the particular date and which is representative of normal source operation." The Administrator "shall" allow use of a different time period "upon a determination that it is more representative of normal source operation." Id. The EPA has typically used the 2 years immediately preceding the physical or operational change to establish the baseline. See 45 Fed. Reg. 52676, 52705, 52718 (1980). However, it can allow the use of an earlier 2-year period that is more representative of normal source operations. For example, in WEPCO, EPA found the fourth and fifth years prior to the modification more representative of WEPCO's normal operations.

Because the applicability determination must be made in advance of construction, EPA's NSR regulations provide that when an emissions unit "has not begun normal operations," actual emissions equal the "potential to emit of the unit." 40 CFR 52.21(b)(21)(iv). This approach is referred to as the actual to potential methodology. This regulatory provision may be overcome -- and new source review will not apply -- if the source owner agrees, in a federally enforceable instrument -- not to increase

its actual emissions above baseline levels. See e.g., 40 CFR 52.21(b)(4).

2. The WEPCO and Puerto Rican Cement Decisions

As noted above, to calculate whether a physical or operational change "increases" emissions, EPA regulations require it to find an increase in actual emissions. 40 CFR 52.21(b)(3)(i)(a). Where the emissions unit has not "begun normal operations," EPA regulations recognize that future actual emissions are difficult to predict and employ future "potential" emissions as a proxy. 40 CFR 52.21(b)(21)(iv). The linchpin under the current regulations for predicting future emissions after a modification is thus whether the unit has "begun normal operations."

Two recent federal appellate court decisions have addressed EPA's interpretation of the phrase "begun normal operations." These decisions, Puerto Rican Cement Co., Inc. v. US EPA, 889 F.2d 292 (1st Cir. 1989) and Wisconsin Elec. Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990) ("WEPCO"), occasion a reexamination of EPA's interpretation of the phrase, and of the usefulness of the regulatory language itself. The meaning of the phrase is highly fact-dependent, and these decisions have created uncertainty regarding its application; thus, as described later in this notice, EPA today proposes to change its regulations for electric utility steam generating units to employ more useful criterion.

Both cases involved physical changes to existing emissions units, but changes of differing extent, nature and result. In Puerto Rican Cement, the owner of a cement plant⁹ with several kilns sought to convert one "wet" kiln into a "dry" kiln, and to combine that kiln with another kiln. 889 F.2d at 293. The court observed that the total production capacity of the renovated single kiln would exceed the combined production capacity of the previous two separate kilns by "about 35%." Id. It noted that the renovated single kiln would employ a different "cement-making process" that the original kiln from which it was "converted," id. And it said that the new kiln would be "more efficient [and] may lead the firm to decide to increase the level of production," id. at 297 (emphasis in original). In reviewing EPA's interpretation of "begun normal operations," the court applied a highly deferential standard of review, since an agency's interpretation of its own regulatory language is typically given "'controlling weight unless it is plainly erroneous or inconsistent with the regulation.'" 889 F.2d at 297, quoting Udall v. Tallman, 380 U.S. 1, 16-17 (1965) (citation omitted). The court concluded that on the facts of the case, EPA's interpretation that "normal operations" had not begun was not "arbitrary or irrational," id. at 298, and hence EPA's

⁹ Puerto Rican Cement involved a cement plant, not an electric utility, but the court's legal analysis of the phrase "begun normal operations" in the current regulations is relevant to all facilities.

application of the actual-to-potential test to predict future emissions was permissible.

In WEPCO, 893 F.2d 901, the Seventh Circuit was faced with a different kind of modification. There renovations were proposed for several older (35 to 50 year old) coal-fired electric utility boilers. The physical changes involved repair and replacement of turbine-generators, steam drums and other major components. The EPA contended, as it had in Puerto Rican Cement, that these changes went beyond "normal operations" and thus warranted use of future potential emissions as the test for an emissions increase over past actual emissions. Here the court disagreed with EPA's interpretation that "normal operations" had not begun. The court coined the phrase "like-kind replacement" to describe the type of renovation occurring at the WEPCo plant. Id. at 917. The court described a "like-kind replacement" as one that "does not 'change or alter' the design or nature of the facility. Rather, it merely allows the facility to operate again as it had before the specific equipment deteriorated." Id. at 908. In determining whether such a "like-kind replacement" had "begun normal operations," id. at 917, the court considered whether a "realistic assessment of [the] impact [of the change] on ambient air quality levels is possible." Id. at 917 (quoting Alabama Power Co. v. Costle, 636 F.2d 323, 379 (D.C. Cir. 1979)). The court said that where the renovations were "like-kind replacements," EPA could not reasonably interpret its regulations

to say that such a unit was so different that it has not "begun normal operations." Thus, it concluded that the "actual-to-potential" test could not be applied, under EPA's regulations, to units simply undergoing "like-kind replacements."¹⁰

Neither of these decisions specified the threshold for when a unit has "begun normal operations." Based on these decisions, under its current regulations, EPA must consider the facts of each case and apply the actual-to-potential test only where the change is sufficiently significant to support a finding that "normal operations" have not "begun." At least for changes that are "like kind replacements," "normal operations" have begun, and the actual-to-potential test is impermissible.

Because the "begun normal operations" criterion is highly fact-dependent and its application is inherently case-by-case, it may be an uncertain indicator of what emissions test will be applied in a given instance. However, EPA's extensive experience with electric utilities, and the generally similar nature of operations within this source category, provide EPA an adequate basis on which to predict future actual emissions from such units in most cases. Consequently, as explained below, EPA is today proposing to revise its regulations to apply the actual-to-actual test on all physical or operational changes at electric

¹⁰ On remand, EPA employed an actual-to-future actual test, comparing WEPCo's representative actual emissions for the baseline period to estimated future actual emissions based on all the available facts in the record.

utility steam generating units save those that are an addition of a new unit or constitute a replacement of an existing units.¹¹ Pending final adoption of this new rule, EPA will continue to apply an actual-to-actual test to units that undertake "like-kind replacements" and other units which are found to have "begun normal operations."

F. The Clean Air Act Amendments of 1990

1. New Source Review and the Acid Rain Provisions

The Clean Air Act Amendments of 1990 made numerous changes in the nonattainment provisions of the Clean Air Act and added a new title to address the problem of acid rain. The amendments attack nonattainment problems with a broad array of new requirements all designed to bring all areas of the country into attainment with the national ambient air quality standards for all pollutants. These requirements include traffic reduction strategies, use of alternative clean fuels, increased offset requirements for stationary sources, and changes in the threshold size of stationary sources subject to new source review. A principal theme of the legislation is the establishment of categories of nonattainment areas based on the severity of the pollution problem. The more severe the area, the more controls Congress required be imposed.

¹¹ As an illustration, had this new test governed the facts in WEPCo or the facts in Puerto Rican Cement (where it an electric unity), EPA would have applied the actual-to-actual test.

The Amendments also establish, in Title IV, a new control scheme for addressing the acid rain problem. The exclusive focus of this program is on utility power plant emissions of sulfur dioxide and nitrogen oxides. The 1990 Amendments require sulfur dioxide emissions from utilities to be reduced by approximately 10 million tons annually in two phases -- the first to take effect in 1995, the second in 2000. A total of 111 specific plants are targeted in Phase I, and will be required to reduce their SO₂ emissions to specified emissions limits. In Phase II, these plants, and almost all others, are subject to even lower SO₂ emissions limits. This reduction program is to be implemented through a new market-based system under which emissions allowances reflecting the required reduction in current emissions are allocated to existing utility plants. Plant owners, who are required to hold allowances equal to their actual emissions, are then free to trade these allowances. Thus, the emissions of individual units may vary from the initial allocation of allowances, but aggregate emissions are always held to the program's overall target level. This program will provide powerful incentives to sources to undertake pollution control projects.

Because of these requirements, many of the plants subject to Phase I controls must make compliance decisions within the next year in order to assure that the complicated control equipment

that may be necessary to meet Phase I standards is in place by the 1995 deadline.

2. Repowering and CCT Projects

In Title IV of the 1990 Amendments, which creates the acid rain program, Congress made changes in the applicability of new source requirements to changes involving repowering and CCT projects.

Section 409 grants an extension of the acid rain controls deadline to sources that seek to comply with the acid rain reductions by repowering a unit with qualifying clean coal technology. Section 402(12) defines repowering as:

[The] replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of the date of enactment of the Clean Air Act Amendments of 1990. Notwithstanding the provisions of §409(a), for the purpose of this title, the term 'repowering' shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

See CAA, §§ 402(12) and 409(a).

Congress provided that repowering projects that qualify for a Phase II compliance extension would also be exempt from NSPS requirements, so long as the repowering "does not increase actual hourly emissions for any pollutant regulated under the Act." See CAA, § 409(d). An operator can qualify for the 3-year extension of the Phase II emissions limitation by demonstrating (by December 31, 1997) to the permitting authority that one or more units will be repowered with a qualifying clean coal technology to meet the Title IV restrictions. The operator must provide, no later than January 1, 2000, additional documentation of the repowering project including a preliminary design and engineering effort for the project and a binding contract for the majority of the equipment needed, as well as any additional information the reviewing authority requires.

Today's proposal also implements an exemption from new source requirements for CCT demonstration projects created by Congress in section 415 of Title IV of the 1990 Amendments. In these provisions, CCT is defined as any technology not in widespread use on the date of enactment that achieves significant reductions in SO₂ or nitrogen oxides (NO_x) emissions associated with burning coal in the generation of electricity, process steam, or industrial products. See § 415(a). A CCT

"demonstration project" is a project funded under DOE's CCT program or a similar project funded by EPA.¹²

Repowering projects that are awarded funding from the Department of Energy (DOE) as permanent CCT demonstration projects (or similar projects funded by EPA) are exempt from NSPS and PSD requirements so long as potential emissions (see 52.21(b)(4)) from the unit do not increase as a result of the project. Id. § 415(b). These funded projects may still be required to comply with the nonattainment NSR provisions of Title I of the Act, unless they are excluded as pollution control projects.

The installation, operation, cessation, or removal of a temporary CCT demonstration project that is operated for 5 years or less is exempt from NSPS and both PSD and nonattainment new source requirements. See § 415(b)(2). However, the facility still must comply with the applicable SIP and other requirements necessary to attain and maintain the NAAQS.

Finally, in section 415(c), Congress provided an exemption from NSPS and PSD for the reactivation of "very clean units" otherwise in compliance with the Act that had been shut down for

¹² Section 415(b)(1) defines a CCT project as a project "using funds appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the EPA."

at least the 2 years prior to enactment of the 1990 Amendments and that, prior to the shutdown, had been equipped with pollution controls with a removal efficiency of at least 85 percent for sulfur dioxide and 98 percent for particulates, and had been equipped with low-NOx burners.

III. DISCUSSION

A. Pollution Control Projects

1. Proposed Regulatory Changes for Pollution Control Projects

The EPA proposes to amend its PSD and nonattainment regulations as they pertain to utility pollution control projects by exercising its authority under the statutory definition of "modification" and confirming the Agency's current policy that such projects are not subject to NSR unless they render the unit less environmentally beneficial. Generally, pollution control projects at existing stationary sources are not major modifications subject to new source review requirements for the simple reason that they do not result in an increase in actual emissions. In addition, EPA has always recognized that Congress did not intend that every activity at an existing facility be considered a physical or operational change for purposes of the new source review.¹³

¹³ For instance, EPA has specifically recognized that routine maintenance, repair and replacement, and changes in hours of operation or in the production rate are not considered a physical change or change in the method of operation. See 40 CFR 52.21(b)(2)(iii), 52.24(f)(5)(iii).

To address this concern, EPA is today proposing to adopt revisions to its PSD and nonattainment regulations for the addition, replacement or use at an existing electric utility steam generating unit of any system or device whose primary function is the reduction of air pollutants (including the switching to a less-polluting fuel where the primary purpose of the switch is the reduction of air pollutants). Under today's proposal, a utility pollution control project will not be treated as a physical or operational change unless the project renders the unit less environmentally beneficial.

As indicated above, the key to this addition to the list of exclusions from the term physical or operational change is EPA's judgment that Congress did not intend that pollution control projects be considered the type of activity that should trigger NSR. The EPA is today issuing regulatory language to explicate and formalize its statutory authority to exclude pollution control projects under the NSR provisions. In 1977, when Congress enacted the NSR provisions of the Act, it provided that the term "modification" in NSR shall have the same meaning as the term "modification" under NSPS. See §§ 169(2)(c), 171(4). At the time, regulations promulgated under the NSPS provisions defining "modification," § 111, provided that the term "modification" does not include:

The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emissions control system is removed or is replaced by a

system which the Administrator determines to be less environmentally beneficial.

40 CFR 60.14(e)(5). In 1978, EPA noted that "in adding section 169(2)(c) to the Act, Congress indicated that it intended to conform the meaning of 'modification' to 'usage in other parts of the Act.' 123 Congr. Rec. H11955, 11957 (Nov. 1, 1977)." 43 Fed. Reg. 26396 (June 19, 1978). Thus, just as EPA had the statutory authority to exclude pollution control projects by regulation from NSPS, the statutory authority exists for EPA to explicate by regulation an exclusion for pollution control projects from Parts C and D of Title I.

As discussed in greater detail in a subsequent section, this exclusion under NSR reflects the existing regulatory exclusion for pollution control activities under NSPS regulations, and several recent case-specific nonapplicability determinations under the new source review programs. The NSPS regulatory exclusion contains the proviso that the replacement of a pollution control system or device cannot be less "environmentally beneficial" to qualify for the exclusion. See 40 CFR 60.15(e)(5). With respect to new source review, today's proposal adopts a similar regulatory exclusion for pollution control projects in the PSD and nonattainment context. The major difference in the proposed NSR exclusion is that it would apply the "not less environmentally beneficial" test to the addition and use, as well as the replacement, of a pollution control system or device. This change reflects the distinct air quality

component of the PSD and nonattainment programs. By focusing on whether a pollution control project is a physical or operational change within the meaning of the new source review regulations, today's ruling avoids the need to undertake a quantitative emissions increase calculation in every case, as would be necessary if such projects were deemed to be physical or operational changes. The EPA expects that most, if not all, pollution control projects will reduce net actual emissions. Nevertheless, the Administrator's authority to consider individual pollution control projects provides an adequate opportunity to determine that a pollution control project would somehow result in an adverse environmental impact and thus conclude that the project renders the unit less environmentally beneficial, and is therefore a physical or operational change that may be subject to NSR.

For the purposes of this proposal, a pollution control project refers to a project undertaken at a utility unit for purposes of reducing emissions from such unit. These changes are limited to the installation of conventional or innovative emissions control equipment, including, but not limited to, installation of conventional and advanced flue gas desulfurization, sorbent injection for SO₂ and NO_x controls, electrostatic precipitators, and projects undertaken to accommodate switching to a less polluting fuel, including natural

gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling SO₂ and NO_x emissions.

Likewise, any activity that is necessary to accommodate switching to a less polluting fuel is considered to be part of the pollution control project. In some instances, this may involve changes to the pollution generating equipment (e.g., boiler), but only if the changes are necessary to maintain the normal operating capability of the unit at the time of the project, where the capability would otherwise be impaired as a result of the fuel switch. For example, an electric utility steam generating unit that switches from a higher sulfur bituminous coal to a low-sulfur subbituminous coal may need to make certain changes to the boiler in order to avoid derating the unit.

Changes that are intended primarily to restore original capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for purposes of this proposal. Such changes are addressed elsewhere in this proposal. Also, the source still must comply with all applicable SIP limits and requirements, permit conditions and applicable NAAQS or PSD increment limits.

As proposed, this pollution control project proposal will not extend to source categories other than electric utility steam generating units. The EPA has so limited this provision because, in contrast with a general lack of experience with other

industries, EPA has extensive experience in addressing new source applicability issues regarding pollution control projects in the utility industry. That experience has led EPA to conclude that pollution control projects in the utility industry are generally environmentally beneficial.

2. Additional Modeling Requirements

A proposed pollution control project or physical or operational change cannot result in an emissions increase that will cause or contribute to a violation of a national ambient air quality standard, PSD increment, or visibility limitation. See CAA §§ 110(a)(2)(c), 165, 169A(b), 173. The pollution control projects exclusion does not authorize any significant net increase in emissions that would have this proscribed impact. It is possible that a pollution control project, while not causing any increase in maximum hourly emissions, will cause a significant net increase in actual emissions, which in turn could cause or contribute to the violation of a National Ambient Air Quality Standards (NAAQS), increment or visibility limitation. For this reason, under today's proposal, the reviewing authority may require a source to perform an air quality impact analysis (modeling) whenever it has reason to believe that a proposed change will result in a significant net increase in actual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis. If this modeling indicates that this increase in emissions will cause or

contribute to a violation of any ambient standard, PSD increment or visibility violation, the pollution control exclusion does not apply.

3. The EPA's Existing Policy Regarding Pollution Control Projects

As noted above, generally pollution control projects at existing stationary sources are not major modifications subject to new source review because they do not usually result in an increase in actual emissions, and EPA believes that, in general, pollution control projects were not intended by Congress to be considered physical or operational changes for purposes of NSR.

The EPA currently applies its PSD regulations in harmony with its NSPS regulations, which exclude most pollution control projects. See 40 CFR 60.14(e)(5). In 1977, Congress incorporated the NSPS definition of modification into the PSD and nonattainment statutes. CAA §§ 111(a)(4), 169(a)(c), 171(4). In addition, the legislative history reflects that, as a general matter, Congress intended to conform the meaning of "modification" for PSD purposes to the usage under the NSPS program. See 123 Cong. Rec. H11957 (November 1, 1977). The EPA reiterated this view in 1978. See 43 FR 26396, June 19, 1978. Subsequently, EPA interpreted its NSR regulations to incorporate the NSPS pollution control project exclusion.¹⁴ The EPA later

¹⁴ Memorandum from Edward Reich, Director, Stationary Source Compliance Division and William F. Pedersen, Acting Associate General Counsel, Air, Noise, and Radiation Division to Allyn M. Davis, Region IV (April 21, 1983).

voiced concern about incorporating the precise NSPS pollution control language in the NSR context absent explication through notice-and-comment rulemaking largely because of the ambient air quality component of NSR that is absent from the NSPS program.¹⁵ In recent years however, EPA has consistently excluded pollution control projects from NSR provided that the proposed project would be environmentally beneficial, taking into account ambient air quality.¹⁶ In light of the Title IV requirements and other provisions of the Clean Air Act Amendments of 1990, EPA confirms that it will continue to consider the overall environmental consequences of pollution control projects for NSR applicability on an interim basis pending final action on the proposed regulatory exclusion for pollution control projects.

B. Representative Actual Annual Emissions

As described above, EPA proposed to revise its methodology for calculating emissions increases at electric utility steam generating sources. The EPA proposes to compare actual emissions before and after changes for all physical or operational changes at an existing electric utility steam

¹⁵ See, Memorandum from Gerald A. Emison, Director, OAQPS, to Regional Division Directors (July 7, 1986).

¹⁶ See, Letter, William G. Rosenberg Assistant Administrator, EPA, to Andrew Aitken, Vice President, New England Power Service Co., March 26, 1991; Letter, Rosenberg to Patrick M. McCarter, Senior Vice President, Public Service Co. of Colorado, July 23, 1990; Letters, David Kee, Director, Air and Radiation Division, EPA Region V, to Timothy J. Method, Assistant Commissioner, Indiana Dept. of Environmental Management, January 30, 1990 and March 8, 1990.

generating unit other than the addition of a new unit or the replacement of an existing unit. Under today's action, EPA proposes to consider a unit to be replaced if it would constitute a reconstructed unit within the meaning of 40 CFR 60.15. Since there is no relevant operating history for wholly new units and replaced units, it is not possible to reasonably project post-change utilization for these units, and hence, their future level of "representative annual actual emissions." For other changes, past operating history, and other relevant information, provides a basis for reasonable projections.

As proposed today, the "representative actual annual emissions" methodology requires the utility to compare its baseline emissions with its future actual emissions to determine if the proposed change will increase actual emissions. The EPA's existing regulations define baseline emissions as "the average rate, in tons per year, at which the unit actually emitted the pollutant during a 2-year period which precedes the particular date and which is representative of normal source operation." See, e.g., 40 CFR 52.21. The Administrator "shall" allow use of a different time period "upon a determination that it is more representative of normal source operation." Id. Although not required by the regulations, EPA has historically used the 2 years immediately preceding the proposed change to establish the baseline. (See 45 Fed. Reg. 52676, 52705, 52718 (1980).) However, in some cases it has allowed the use of earlier periods.

For example, in WEPCO, EPA found the fourth and fifth years prior to the modification more representative of WEPCO's normal operations since the source's capacity was reduced due to physical problems. The EPA proposes today to retain this regulatory language, but to adopt a new presumption regarding its implementation.

Under today's action, the Administrator will presume that any 2 consecutive years within the 5 years prior to the proposed change is representative of normal source operations for a utility. This presumption is consistent with the 5-year period for "contemporaneous" emissions increases and decreases in 40 CFR 52.21(b)(3)(i)(b).¹⁷ Source owners or operators desiring to use other than a 2-year period or a baseline period prior to the last 5 years may seek the Administrator's specific determination that such period is more representative of normal operations.¹⁸

¹⁷ This presumption does not apply to past modifications at an emissions unit for the purpose of determining contemporaneous emission changes at a source and cannot be used to extend the five year period specified in that provision. See 40 CFR 52.21(b)(3)(1)(b).

¹⁸ The level of baseline emissions selected must be consistent with current assumptions regarding the source's emissions that are used under the state implementation plans (SIP) for planning or permitting purposes. Thus, the source may not select a level of baseline emissions higher than that used by the permitting authority in issuing a PSD or other construction permit to a source in the area, if such higher level would result in a NAAQS or increment violation, or violate a visibility limitation.

The future actual projection is the product of: (1) the hourly emissions rate, which is based on the unit's physical and operational capabilities following the change and federally-enforceable operational restrictions that would affect the hourly emissions rate following this change; and (2) projected capacity utilization, which is based on (a) the unit's historical annual utilization, and (b) all available information regarding the unit's likely post-change capacity utilization.¹⁹ The projection of post-change capacity utilization for applicability purposes should be based on a projection of utilization for a period after the physical or operational change. Specifically, EPA today proposes to allow sources to base the projection of utilization on the 2 years after the change, or a different consecutive 2-year period within the 10 years after the change, where the Administrator determines that such period is more representative of normal source operations.

C. The Causation Requirement

The NSR regulatory provisions require that the physical or operational change "result in" an increase in actual emissions in order to consider that change to be a modification. See e.g. 40 CFR 52.21(2)(i). In other words, NSR will not apply unless EPA

¹⁹ In projecting future utilization and emissions factors, the permitting authority may consider the company's historical operational data, its own representations, filings with Federal, State or local regulatory authorities, and compliance plans developed under Title IV of the 1990 Amendments.

finds that there is a causal link between the proposed change and any post-change increase in emissions. The EPA today proposes to amend its rules to clarify this provision in the context of modifications at electric utility steam generating units.

Under these proposed regulations, any emissions increase attributable to a physical or operational change, such as a physical or operational change that significantly alters the efficiency of the plant, (see, Puerto Rican Cement, 889 F.2d at 297-8), must continue to be included in the post-change emissions calculation. Today's proposal makes clear that where increased operations are in response to independent factors, such as system-wide demand growth, which would have occurred and affected the unit's operations even in the absence of the physical or operational change, such increases do not result from the change and shall be excluded from the projection of future actual emissions. Thus, in assessing whether the proposed change will result in an increase in actual emissions, utilities need not include in their projection of post-change utilization that portion of the increased rate of utilization, if any, due to factors unrelated to the physical or operational change, such as an increase in projected capacity utilization due to the rate of electricity demand growth for the utility system (of which that source is a member) as a whole.

Under this proposal, during a representative baseline period (see supra), the plant must have been able to accommodate the

projected demand growth physically and legally even absent the particular change. Increased operations (and resultant increases in actual emissions) that could not physically and legally be accommodated but for the proposed physical or operational change should be considered to result from the change.

D. Repowering

As previously mentioned, Title IV of the 1990 Amendments grants special treatment to utilities that seek to comply with the mandated acid rain reductions by repowering a unit with qualifying clean coal technology. 1990 Amendments §§ 402(12), 409(a). Specifically, repowering projects that qualify for a Phase II compliance extension will also be exempt from NSPS requirements, so long as the repowering "does not increase actual hourly emissions for any pollutant regulated under the Act." § 409(d). The EPA interprets the requirement that the repowering not lead to an increase in "actual hourly emissions" as an expression of Congressional intent that with respect to repowering projects, EPA should use the same general approach to determining applicability as it has for other physical or operational changes, discussed above. Accordingly, EPA today proposes rules that provide that a repowering project which results in an increase over baseline in a unit's post-modification hourly emissions will not be eligible for this limited NSPS exemption.

The proposed NSPS exemption applies to repowering of existing units at existing sources, so long as the project qualifies for the Phase II extension and satisfies the "actual hourly emissions" increase test. Because of this provision, the reconstruction limitations specified in 40 CFR 60.15 are not applicable to qualifying repowering projects. However, no special treatment can be afforded to a new unit which is located at a different site than the existing unit it replaces. See CAA § 409(d).

Pursuant to section 409(e), EPA will provide expedited NSR processing for repowering projects and will encourage State permitting authorities to do the same.

E. Clean Coal Technology Demonstration Projects

Today's notice also proposes rules implementing the new CCT exemption created by the 1990 Amendments. For the purposes of this proposal, temporary CCT demonstration projects are defined as those CCT demonstration projects lasting 5 years or less. Title IV gives these projects an exemption from NSPS, PSD and nonattainment requirements. Id., § 415(b)(2). However, the facility would still be subject to any applicable SIP and must comply with any other requirements necessary to attain and maintain NAAQS. This ruling proposes to implement this provision and clarifies that EPA considers the 5 year period as starting on the date of startup (as defined in 40 CFR 60.2). A temporary demonstration project may be converted to a permanent status at

any time, provided it meets all the requirements that apply to a permanent CCT project criteria at the time of conversion.

Further, EPA proposes that at the end of a temporary project, the facility must be returned to pre-demonstration conditions and hourly emission rates (or lower). The return of the facility to its pre-demonstration physical and operational condition would not result in the loss of the actual emissions margin between pre-demonstration actual emissions rate and SIP-allowable emissions rates for that facility. Rather, the facility would be treated as if the temporary demonstration project had never occurred.²⁰

This proposal does not extend to emissions increases that are unrelated to the conduct of temporary demonstration projects. The EPA considers emissions increases (above the pre-demonstration levels) that are attributable to physical or operational changes, other than those necessary to restore that unit to its pre-demonstration condition, to be beyond the scope of the Congressional exemption.

²⁰ This would be the case even if there were small differences in the post-demonstration physical and operational conditions due to a technical inability to restore the unit to its precise pre-demonstration condition, or due to normal variability in the coal used. Thus, EPA would not seek to apply NSPS or NSR because of a post-demonstration emissions increase attributable solely to an increase in the hours of operation or production rate of the unit (subject to the NSPS limitation that the production rate increase must be accomplished without a capital expenditure).

Today's action also proposes to implement an exemption from NSPS and PSD requirements for repowering projects which are awarded funding from the DOE as permanent CCT demonstration projects (or similar projects funded by EPA) so long as potential emissions (see 52.21(b)(4)) from the unit do not increase as a result of the project. § 415(b)(3). However, repowering projects that qualify as pollution control projects will be treated as other pollution control projects for the purposes of the nonattainment provisions of Title I of the Act.

Finally, today's proposal would implement the statutory exemptions in section 415(c). In that section, Congress provided an exemption from NSPS and PSD for the reactivation of "very clean units" otherwise in compliance with the Act that had been shut down for at least the 2 years prior to enactment of the 1990 Amendments and that, prior to the shutdown, had been equipped with pollution controls with a removal efficiency of at least 85 percent for sulfur dioxide and 98 percent for particulates, and had been equipped with low-NOx burners. This exemption appears to have been narrowly tailored and is not expected to have widespread applicability.

Because these proposed rules merely implement straightforward statutory exemptions that were immediately effective upon passage of the 1990 Amendments, EPA intends, as a matter of statutory interpretation, to follow the policies set forth in today's proposal pending final action.

F. Calculation of NSPS Baseline

As discussed in section II of this notice, "any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies" is a modification for NSPS applicability purposes See 40 CFR § 60.14(a). The NSPS regulations implementing this general definition focus on increases in hourly emissions, expressed in kilograms of pollutant discharged per hour. To determine if an increase in hourly emissions has occurred at a unit, a pre-change baseline must be established. Under current regulations, the emissions rate before and after a physical or operational change is evaluated at each unit by comparing the current hourly potential emissions at maximum operating capacity to hourly emissions at maximum capacity after the change. In this calculation, the reviewing authority disregards the unit's maximum design capacity.²¹ The original design capacity of a unit, to the extent it differs from actual maximum capacity at the time that the baseline is established due to physical deterioration of the facility, is immaterial to this calculation.

²¹ See 39 Fed. Reg. 36,948 col. 1 (proposed rule). In WEPCO, the utility contended that baseline capacity for the purpose of determining whether an increase in emission rate occurs for purposes of an NSPS modification is the original design capacity of the facility. However, the court rejected WEPCO's argument that original design capacity or past "representative" capacity, no longer achievable at the plant, had to be used for the baseline emissions rate.

Today EPA is proposing that, for an existing electric utility steam generating unit, the pre-change baseline for NSPS applicability purposes shall be calculated using the highest hourly emissions rate achievable at any time during the 5 years prior to the change. This proposal retains the key concept in existing regulations that the baseline be determined during a period that is roughly contemporaneous with the proposed change at the affected facility. The EPA believes that this proposed revision, while modest, is still necessary to avoid the current regulation's undue emphasis on the physical condition of the affected facility immediately prior to the change. Today's more flexible provision enables units to establish a baseline that is representative of its physical and operational capacity in recent years, while still precluding the use of a baseline tied to original design capacity, which as noted above may bear no relationship to the facility's capacity in recent years.

Without this revision, the NSPS regulations may unduly burden utilities undertaking physical or operational changes in conjunction with the acid rain program. For instance, if a unit has broken down and is in need of repairs, the utility's baseline will be artificially low. The proposed change will allow utilities to demonstrate that an earlier, higher capacity was more representative of the unit's maximum hourly emissions rate.

G. Utility BACT Presumption for NO_x

In today's notice, EPA proposes to adopt a presumption that, in the case of PSD permits issued by EPA under 40 CFR 52.21, best available control technology (BACT) for emissions of nitrogen oxides from existing coal-fired electric utility steam generating units undergoing a modification is the technology required under section 407 of the Clean Air Act. In general, this will call for the use of combustion modification and/or low-NO_x burners or similar, cost-effective technologies by those utilities required to obtain PSD permits for NO_x emissions following final action on today's proposal.

In brief, section 407 requires most utility units subject to phase I and phase II to meet NO_x emission limitations on the same date as the phase I or phase II SO₂ emission limitations become effective. The Administrator must establish annual emission limitations (based on rates listed in the section) for tangentially-fixed boilers and dry bottom wall-fired boilers within 18 months of enactment. These limitations must be achievable with low-NO_x burner technology. CAA § 407(b)(1). The Administrator must promulgate annual emission limitations for all other boilers by January 1, 1997, based on a "best system of continuous emission reduction . . . which is comparable to the cost of" low-NO_x burners. By the same date, the Administrator may make the rates for boiler types identified in section

407(b)(1) more stringent if more effective low-NOx burner technology is available. CAA § 407(b)(2).

Low-NOx burners are commercially available and can be retrofitted on many boiler types, providing a high degree of emissions reduction at relatively low costs. Depending on boiler type, low-NOx burners can reduce emissions of NOx by approximately 20 to 60 percent. Again depending on boiler type and other factors, the cost of replacing conventional burners with these controls is in the range of \$8.00 to \$16.00 per kilowatt.

Other NOx control technologies are being developed for retrofitted use on at least some coal-fired electric utility units, and thus can provide a much greater degree of emissions reductions. These include selective noncatalytic reduction (SNCR or "thermal de-NOx") and selective catalytic reduction (SCR). (In addition, DOE has funded two new technologies under its CCT demonstration program which are designed for the simultaneous removal of SO₂, NOx and particulate matter that may become commercially "available" in the future.)²² However, SNR and SNCR are not in use in this country as retrofit technologies for coal-fired boilers, and the DOE sponsored projects have not yet been demonstrated. Current estimates of control costs for these

²² One technology -- low NOx/SOx Burner Retrofit -- is designed specifically for cyclone boilers which cannot be retrofit with low NOx burners while the other -- the Advanced Slagging Combustor -- is applicable to a number of boiler types.

technologies are much higher than for low-NOx burners, especially when considered in the context of retrofitting existing units.

The EPA has in the past issued guidance documents effectively creating presumptions that certain technologies constituted BACT for certain source categories. See Memorandum, Operation Guidance on Control Technology for New and Modified Municipal Waste Combustors, from Gerald A. Emison, Director, Office of Air Quality Planning and Standards, EPA, June 26, 1987, p. 5. The EPA believes it is appropriate to propose to do so here as well in the case of low-NOx burners for modified coal-fired utility boilers in light of the strong congressional policy judgment favoring use of that technology for acid rain control reflected in section 407.

Section 169(3) of the Act, 42 U.S.C. 7479(3) defines BACT as:

an emissions limitation based on the maximum degree of reduction of each pollutant subject to regulation under the Clean Air Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of "best available control technology" result in emissions of any pollutants which will exceed the emissions allowed by an applicable standard established pursuant to section 7411 or 7412 of this title. Emissions from any source utilizing

clean fuels, or any other means, to comply with this paragraph shall not be allowed to increase above levels that would have been required under this paragraph as it existed prior to enactment of the Clean Air Act Amendments of 1990.

The BACT provision reflects congressional intent both to grant permitting authorities broad discretion to weigh the statutory factors as they see fit in reaching a final substantive determination on BACT and to create a procedural methodology that would provide a mechanism for stimulating the widespread use of effective pollution control technologies.²³

The EPA believes that today's proposed presumption is consistent with BACT requirements because it does not purport to relieve the permitting authority of the obligation to consider a representative set of available technologies and to weigh the statutory factors in reaching BACT determinations. Rather, it reflects an exercise of policy judgment by EPA where it is the permitting authority that in most cases a BACT analysis of currently demonstrated technologies for retrofitting existing utility boilers would lead to the selection of low NOx burners and/or combustion modifications identified in section 407(b)(1).

Although EPA has authority under the present regulations to create this presumption regarding BACT for NOx, EPA is soliciting comment prior to adopting such a presumption in order to obtain

²³ See S. Rep. No. 95-217, 95th Cong., 1st. Sess. 31 (1977); Statement of Senator Muskie, 123 Cong. Rec. 59171 (June 8, 1977).

the views of the public on the policy conclusions discussed above.

This proposed presumption would not apply in States with PSD programs that have been incorporated into state implementation plans under regulations promulgated at 40 CFR 51.166. However, such States are encouraged to adopt this presumption as a matter of state policy.

H. Applicability Determinations

In most instances, source owners or operators are able to readily ascertain whether new source review requirements apply to them. Consequently, in administering these requirements, EPA does not require sources to obtain a formal applicability determination before proceeding with construction. In keeping with that practice, EPA will not require utilities to seek applicability determinations under either the revised regulations proposed today or the interpretations of existing regulations contained in this preamble. Utilities in most cases can readily ascertain how this notice will affect them. The EPA anticipates, however, that questions will arise regarding certain aspects of this proposal. Because some instances involve discrete judgments, utilities may wish to obtain determinations of applicability. The EPA will provide such determinations upon request. Such requests should be submitted together with appropriate documentation to the appropriate permitting authority.

IV. ADMINISTRATIVE REQUIREMENTS

A. Docket

A docket has been established for this action under section 307(d)(1)(I) and (N) of the Clean Air Act, 42 U.S.C.

7607(d)(1)(I) and (N). The docket is an organized and complete file of all information considered in the development of this ruling. The docket is intended to allow the public to identify and locate documents related to this ruling. The docket number for this ruling is A-90-06.

B. Paperwork Reduction Act

No additional public reporting burden will result from this ruling. All information collection requirements of the Federal NSR and NSPS regulations have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501, et. seq., and have been assigned OMB control numbers 2060-0003 for NSR, and 2060-0023, 2060-0026 and 2060-0072 for NSPS. The effect of this rule would be a reduction in paperwork related to complying with NSR and NSPS requirements, since this ruling provides additional clarification as to modifications that may be excluded from these requirements.

C. OMB Review

Under Executive Order 12291 (E.O. 12291), EPA must judge whether a rule is "major" and therefore subject to the requirement of a regulatory impact analysis (RIA). This ruling is a major rule. However, EPA has not prepared an RIA because it

will not result in any significant adverse environmental effects and will reduce the economic costs of meeting the requirements of the CAA. This ruling was submitted to the OMB for review as required by E.O. 12291. Any written comments from OMB to EPA and any EPA response to those comments are included in Docket A-90-06.

D. Effective Date

Section 4(d) of the Administrative Procedures Act (APA), 5 U.S.C. 553(d), requires a 30-day waiting period before making a substantive rule effective. Since the regulatory revisions being proposed today are considered substantive, they are subject to the notice-and-comment requirements of the APA and will become effective only after public comments have been received and considered, and final action has been taken. The portions of this notice that merely confirm EPA policy are effective immediately.

E. Regulatory Flexibility Act

This action is not subject to the certification provisions of section 605(b) of the Regulatory Flexibility Act (RFA) because this rule will result in a reduction of administrative costs and no increase in control costs, therefore having no significant impact on industry.

List of Subjects

40 CFR Part 51

Administrative procedure and practices, intergovernmental relations, air pollution control, NSR, CCT demonstrations, sulfur oxides, nitrogen dioxide, particulate matter, carbon monoxide, hydrocarbons, lead.

40 CFR Part 52

Air pollution control, NSR, CCT demonstrations, sulfur oxides, particulate matter, nitrogen dioxide, carbon monoxide, hydrocarbons, lead.

40 CFR Part 60

Air pollution control, NSPS, CCT demonstrations, sulfur oxides, particulate matter, nitrogen dioxide, carbon monoxide, hydrocarbons, lead.

Dated: June 3, 1991

William K. Reilly,

Administrator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

May 31, 1991

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: WEPCO Legislative Rule

FROM: William F. Tyndall, Attorney *WFT*
Air and Radiation Division, LE-132A

TO: See Below

Enclosed is a copy of the "WEPCO" legislative rule incorporating the changes agreed to yesterday during our meeting. (Please note that the word "Administrator" was replaced with "reviewing authority" in several places in the Part 51 regulations.)

Enclosure

Addressees:

Richard Schmalensee, Council of Economic Advisors
Howard Gruenspecht, Council of Economic Advisors
Teresa Gorman, White House Staff
Art Fraas, Office of Management & Budget
Jeff Holmstead, White House Counsel's Office
Jonathan Wiener, Dept. of Justice
Paul Bailey, Dept. of Energy
David Rivkin, Dept. of Energy

For the reasons set forth in the preamble, Part 51 of Chapter I of Title 40 of the code of Federal Regulations is proposed to be amended as follows:

Part 51 - REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS.

1. The authority citation for Part 51 is amended to read as follows:

(To be added)

2. Section 51.165 is proposed to be amended to read as follows:

51.165 Permit requirements.

- (a) * * *
- (1) * * *
- (v) * * *

(C) A physical change or a change in the method of operation shall not include:

* * * * *

(8) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the reviewing authority determines that such addition, replacement, or use renders the unit less environmentally beneficial, and except:

(i) when the reviewing authority has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and

(ii) the reviewing authority determines that the increase will cause or contribute to a violation of any ambient standard, PSD increment, or visibility limitation.

(9) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(i) the State implementation plan for the State in which the project is located, and

(ii) other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(10) The reactivation of a very clean coal-fired electric utility steam generating unit.

* * * * *

(xii) * * *

(D) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (E) of this subsection) that has not begun normal operations on a particular date, actual emissions shall equal the potential to emit of the unit on that date.

(E) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit.

(xx) "Electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(xxi) "Representative actual annual emissions" means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the permitting authority determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the permitting authority shall:

(A) consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under Title IV of the Clean Air Act; and

(B) exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

(xxii) "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that is operated for a period of five years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(xxiii) "Clean coal technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

(xxiv) "Clean coal technology demonstration project" means a project using funds (1) appropriated under the heading 'Department of Energy-Clean Coal Technology,' up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or (2) similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

(xxv) "Reactivation of a very clean coal-fired electric utility steam generating unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(i) has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

(ii) was equipped prior to shut-down with a continuous system of emissions control that achieves a removal

efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(iii) is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

(iv) is otherwise in compliance with the requirements of the Clean Air Act.

(xxvi) "Pollution control project" means any physical change or change in the method of operation, at an existing electric utility steam generating unit for purposes of reducing emissions from such unit. Such changes are limited to:

(i) the installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen oxides controls and electrostatic precipitators;

(ii) a physical change, or change in the method of operation, to accommodate switching to a fuel which is less polluting than the fuel in use prior to the change including, but not limited to natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling emissions;

(iii) a permanent clean coal technology demonstration project conducted under Title II, section 101(d) of the Further Continuing Appropriations Act of 1985 (section 5903(d) of title 42 of the United States Code), or subsequent appropriations, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency; or

(iv) a permanent clean coal technology demonstration project that constitutes a repowering project.

3. Section 51.166 is proposed to be amended to read as follows:

51.166 Prevention of significant deterioration of air quality.

* * * *

(b) * * *

(2) * * *

(iii) A physical change or change in the method of operation shall not include:

* * * *

(h) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the reviewing authority determines that such addition, replacement, or use renders the unit less environmentally beneficial and except:

(a) when the reviewing authority has reason to believe pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and

(b) the reviewing authority determines that the increase will cause or contribute to a violation of any ambient standard, PSD increment, or visibility limitation.

(i) any physical change or change in the method of operation at an existing electric utility generating unit (other than the addition of a new unit or the replacement of an existing unit) that would not result in a significant net increase in representative actual annual emissions of a regulated pollutant at the unit.

(j) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(i) the State implementation plan for the State in which the project is located; and

(ii) other requirements necessary to attain and maintain the national ambient air quality

standards during the project and after it is terminated.

(k) The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.

(l) The reactivation of a very clean coal-fired electric utility steam generating unit.

* * * * *

(21) * * *

(iv) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (v) of this subsection) that has not begun normal operations on a particular date, actual emissions shall equal the potential to emit of the unit on that date.

(v) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit following the physical or operational change.

(30) "Electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(31) "Pollution control project" means any physical change or change in the method of operation at an existing electric utility steam generating unit for purposes of reducing emissions from such unit. Such changes are limited to:

(i) the installation of conventional or innovative pollution control technology, including but not limited

to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen oxides controls and electrostatic precipitators;

(ii) a physical change, or change in the method of operation, to accommodate switching to a fuel which is less polluting than the fuel in use prior to the change, including but not limited to natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling emissions;

(iii) a permanent clean coal technology demonstration project conducted under Title II, section 101(d) of the Further Continuing Appropriations Act of 1985 (section 5903(d) of title 42 of the United States Code), or subsequent appropriations, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency, or

(iv) a permanent clean coal technology demonstration project that constitutes a repowering project

- (32) "Representative actual annual emissions" means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the reviewing authority determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the reviewing authority shall:

(A) consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under Title IV of the Clean Air Act; and

(B) exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that is attributable to an increase in projected capacity utilization at the unit that is unrelated to the

particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

- (33) "Clean coal technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- (34) "Clean coal technology demonstration project" means a project using funds (1) appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or (2) similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.
- (35) "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that is operated for a period of five years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the nation ambient air quality standards during and after the project is terminated.
- (36) (i) "Repowering" means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.
 - (ii) Repowering shall also include any oil and/or gas-fired unit which as been awarded clean coal technology

demonstration funding as of January 1, 1991, by the Department of Energy.

- (iii) The reviewing authority shall give expedited consideration to permit applications for any source that satisfies the requirements of this subsection and is granted an extension under § 409 of the Clean Air Act.

(37) "Reactivation of a very clean coal-fired electric utility steam generating unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

- (i) has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

- (ii) was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

- (iii) is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

- (iv) is otherwise in compliance with the requirements of the Clean Air Act.

For the reasons set forth in the preamble, Part 52 of Chapter I of Title 40 of the Code of Federal Regulations is proposed to be amended as follows:

Part 52-APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for Part 52 is amended to read as follows:

(TO BE ADDED)

2. Section 52.21 is proposed to be amended to read as follows:

52.21 Prevention of significant deterioration of air quality.

* * * * *

(b) * * *

(2) * * *

(iii) A physical change or a change in the method of operation shall not include:

* * * * *

(h) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines that such addition, replacement, or use renders the unit less environmentally beneficial, and except:

(a) when the Administrator has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and

(b) the Administrator determines that the increase will cause or contribute to a violation of any ambient standard, PSD increment, or visibility limitation.

(i) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(i) the State implementation plan for the State in which the project is located, and

(ii) other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(j) The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.

(k) The reactivation of a very clean coal-fired electric utility steam generating unit.

* * * * *

(21) * * *

(iv) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (v) of this subsection) that has not begun normal operations on a particular date, actual emissions shall equal the potential to emit of the unit on that date.

(v) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit.

(31) "Electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(32) "Pollution control project" means any physical change or change in the method of operation, at an existing electric

utility steam generating unit for purposes of reducing emissions from such unit. Such changes are limited to:

(i) the installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen oxides controls and electrostatic precipitators;

(ii) a physical change, or change in the method of operation, to accommodate switching to a fuel which is less polluting than the fuel in use prior to the change including, but not limited to natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling emissions;

(iii) a permanent clean coal technology demonstration project conducted under Title II, section 101(d) of the Further Continuing Appropriations Act of 1985 (section 5903(d) of title 42 of the United States Code), or subsequent appropriations, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency; or

(iv) a permanent clean coal technology demonstration project that constitutes a repowering project.

(33) "Representative actual annual emissions" means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

(i) consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under Title IV of the Clean Air Act; and

(ii) exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric

utility steam generating unit, that portion of the unit's emissions following the change that is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

- (34) "Clean coal technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- (35) "Clean coal technology demonstration project" means a project using funds (1) appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or (2) similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.
- (36) "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that is operated for a period of five years or less, and which complies with the State implementation plans for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (37)(i) "Repowering" means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.

- (ii) Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.
 - (iii) The Administrator shall give expedited consideration to permit applications for any source that satisfies the requirements of this subsection and is granted an extension under §409 of the Clean Air Act.
- (38) "Reactivation of a very clean coal-fired electric utility steam generating unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:
- (i) has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;
 - (ii) was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;
 - (iii) is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and
 - (iv) is otherwise in compliance with the requirements of the Clean Air Act.

3. Section 52.24 is proposed to be amended to read as follows:

52.24 Statutory restriction on new sources.

* * * * *

(f) * * *

(5) * * *

(iii) A physical change or change in the method of operation shall not include:

* * *

(h) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines that such addition, replacement, or use renders the unit less environmentally beneficial, and except:

(1) when the Administrator has reason to believe that the pollution control project would result in an significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and

(2) the Administrator determines that the increase will cause or contribute to a violation of any ambient standard, PSD increment, or visibility limitation.

(i) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(1) the State implementation plan for the State in which the project is located, and

(2) other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(j) The reactivation of a very clean coal-fired electric utility steam generating unit.

* * * * *

(13) * * *

(iv) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (v) of this subsection) that has not begun normal operations on a particular date, actual emissions shall equal the potential to emit of the unit on that date.

(v) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit.

(18) "Electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(19) "Representative actual annual emissions" means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

(i) consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under Title IV of the Clean Air Act; and

(ii) exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due

to the rate of electricity demand growth for the utility system as a whole.

(20) "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that is operated for a period of five years or less, and which complies with the State implementation plans for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(21) "Clean coal technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

(22) "Clean coal technology demonstration project" means a project using funds (1) appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or (2) similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

(23) "Reactivation of a very clean coal-fired electric utility steam generating unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

- (i) has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

- (ii) was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

- (iii) is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

(iv) is otherwise in compliance with the requirements of the Clean Air Act.

(24) "Pollution control project" means any physical change or change in the method of operation, at an existing electric utility steam generating unit for purposes of reducing emissions from such unit. Such changes are limited to:

(i) the installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen oxides controls and electrostatic precipitators;

(ii) a physical change, or change in the method of operation, to accommodate switching to a fuel which is less polluting than the fuel in use prior to the change including, but not limited to natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling emissions;

(iii) a permanent clean coal technology demonstration project conducted under Title II, section 101(d) of the Further Continuing Appropriations Act of 1985 (section 5903(d) of title 42 of the United States Code), or subsequent appropriations, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency; or

(iv) a permanent clean coal technology demonstration project that constitutes a repowering project.

For the reasons set forth in the preamble, Part 60 of Chapter I of Title 40 of the Code of Federal Regulations is proposed to be amended as follows:

PART 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

1. The authority citation for Part 60 is amended to read as follows:

(TO BE ADDED)

2. Section 60.2 is proposed to be amended by adding the following definitions:

"Clean coal technology demonstration project" means a project using funds appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstrations of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency.

"Electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

"Repowering" means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990. Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

"Reactivation of a very clean coal-fired electric utility steam generating unit" means any physical change or change in the method of operation associated with the commencement of

commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(i) has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

(ii) was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(iii) is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

(iv) is otherwise in compliance with the requirements of the Clean Air Act.

3. Section 60.14 is proposed to be amended to read as follows:
60.14 MODIFICATION.

* * * * *

(h) 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 five years prior to the change.

(i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements 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 five years prior to the change.

(j)(1) Repowering projects that qualify for an extension under § 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

(2) This exemption shall not apply to any new unit that:

(a) is designated as a replacement for an existing unit;

(b) qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and

(c) is located at a different site than the existing unit.

(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A "temporary clean coal control technology demonstration project", for the purposes of this section is a clean coal technology demonstration project that is operated for a period of five years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

* * * * *

I of the Act, unless they are excluded as pollution control projects.

The installation, operation, cessation, or removal of a temporary CCT demonstration project that is operated for 5 years or less is exempt from NSPS and both PSD and nonattainment new source requirements. See § 415(b)(2). However, the facility still must comply with the applicable SIP and other requirements necessary to attain and maintain the NAAQS.

Finally, in section 415(c), Congress provided an exemption from NSPS and PSD for the reactivation of "very clean units" otherwise in compliance with the Act that had been shut down for at least the two years prior to enactment of the 1990 Amendments and that, prior to the shutdown, had been equipped with pollution controls with a removal efficiency of at least 85 percent for sulfur dioxide and 98 percent for particulates, and had been equipped with low-NOx burners.

III. DISCUSSION

A. Pollution Control Projects

1. Proposed Regulatory Changes for Pollution Control Projects

EPA proposes to amend its PSD and nonattainment regulations as they pertain to utility ~~changes that constitute~~ pollution control projects by codifying the Agency's current *policy* ~~interpretation that such projects are not subject to NSR when~~ do not render the unit less ~~they are environmentally beneficial. In many instances, it is~~ Generally, ~~clear that~~ pollution control projects at existing stationary

sources are not major modifications subject to new source review requirements for the simple reason that they do not result in an increase in actual emissions. In addition, EPA has always recognized that Congress did not intend that every activity at an existing facility be considered a physical or operational change for purposes of ~~the new source requirements of the PSD program.~~¹¹ Also, as has been discussed, the new acid rain provisions will require most electric utilities to undertake pollution control projects within the next few years and their decisions regarding ^ethe a pollution control strategy for Phase I of the acid rain program will be made within the next year. At the same time, based on the WEPCO decision, utilities are concerned that EPA will subject pollution control projects to ~~an actual-to-potential evaluation.~~¹² In fact, EPA has refrained from ~~applying the actual-to-potential methodology to several recent pollution control projects.~~

¹¹ For instance, EPA has specifically recognized that routine maintenance, repair and replacement, and changes in hours of operation or in the production rate are not considered a physical change or change in the method of operation. See 40 CFR 52.21(b)(2)(iii).

¹² See, e.g., letters from David Kee, Director, Air and Radiation Division, EPA, Region V, to Timothy J. Method, Assistant Commissioner, Indiana Department of Environmental Management (January 30, 1990 and March 8, 1990).

address this concern

To ~~provide utilities with additional certainty~~, EPA is today proposing to adopt revisions to its PSD and nonattainment regulations for the addition, replacement or use at an existing electric utility steam generating unit of any system or device whose primary function is the reduction of air pollutants (including the switching to a less-polluting fuel where the primary purpose of the switch is the reduction of air pollutants). Under today's proposal, a utility pollution control project will not be treated as a ^{physical or operational change} ~~modification~~ so long as the project *does not render the unit to be less* ~~change is~~ environmentally beneficial. (13)

As indicated above, the key to this addition to the list of exclusions from the terms ^{physical or operational change} is EPA's judgment that Congress did not intend that pollution control projects be considered the type of activity that ^{should} ~~could~~ trigger new source review. Rather, the clear focus of the Act's new source requirements are, as they relate to modifications, physical or operational changes to pollution generating equipment.

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any As discussed in greater detail in a subsequent section, ~~EPA's position in this regard~~ is reflected in the existing

13 In general, EPA will consider a pollution control project to be environmentally beneficial so long as, in nonattainment areas, it does not result in a significant net increase in representative actual annual emissions of any criteria pollutant and, in attainment areas, it does not result in an increase in the potential hourly emissions of a regulated pollutant. However, EPA will apply these guidelines with flexibility and will deviate from them where the merits of an individual proposed pollution control project so warrant.

regulatory exclusion for pollution control activities under NSPS regulations, ~~and in several case-specific nonapplicability~~

~~determinations under the new source review programs.~~ However,

despite the Agency's view that, by their ^{very} nature, pollution control projects in general are not within the ambit of new source

requirements, EPA's pronouncements ^{(contains an additional} recognize the need for a

~~safety valve in the form of~~ some consideration of the

environmental impacts of any pollution control ~~exclusion.~~ The

NSPS regulatory exclusion employs an "environmentally beneficial"

test to determine its scope. See 40 CFR 60.15(e)(5). With

respect to new source review, EPA has also considered whether a

pollution control project would be "environmentally beneficial,"

and today's proposal would codify that practice by adopting a

regulatory ^(for pollution control projects) exclusion that tracks the NSPS exclusion, ^{and is based} The ~~major~~ ^{thereon.}

only difference in the NSR exclusion is that it would (consistent with

EPA's practice under NSR) ^{a not less} apply the "environmentally beneficial"

test to the addition, ^{and use} as well as the replacement, of a pollution

control device, ~~because there may be circumstances in which such~~

~~additions are not environmentally beneficial.~~ EPA solicits

~~comment on whether the NSPS exclusion should be amended at the~~

~~time of final action on today's proposal to apply an~~

~~environmentally beneficial test to additions also.~~

For the purposes of this proposal, a pollution control project ^{refers to a project undertaken} is defined as any physical change or change in the method of operation at a utility unit for purposes of reducing emissions

from such unit ~~in order to comply with Title IV of the 1990~~
~~Amendments.~~ ^{projects include} These ~~changes~~ are limited to the installation of
conventional or innovative emissions control equipment,
including, but not limited to, installation of conventional and
advanced flue gas desulfurization, sorbent injection for SO₂ and
NOx controls and electrostatic precipitators. ^{Any activity} ~~Physical changes,~~
^{that is necessary} ~~or changes in the method of operation,~~ to accommodate switching
to fuel with a lower sulfur content, including natural gas or
coal re-burning, co-firing of natural gas and other fuels for the
purpose of controlling SO₂ and NOx emissions shall also
constitute a "pollution control project."

✓ ^{Likewise,} any activity that is necessary to accommodate switching to a
less polluting fuel is considered to be part of the pollution
control project. In some instances, this may involve physical
changes to the pollution generating equipment (e.g., boiler), but
only if the changes are necessary to maintain the normal
operating capability of the unit at the time of the ^{project} ~~modification~~
where the capability would otherwise be impaired as a result of
the fuel switch. For example, an electric utility steam
generating unit that switches from a higher sulfur bituminous
coal to a low-sulfur subbituminous coal may need to make certain
changes to the boiler in order to avoid derating the unit.

Changes that are intended primarily to restore original
capacity or to improve the operational efficiency of the facility
are not considered to be part of a pollution control project for

The Agency believed that, given the nature of the
pollution control exclusion - no less environmentally beneficial
but - this exclusion can be only applied on a
case-by-case basis and is not susceptible
to the promulgation of any generic guidance or
tests.

purposes of this proposal. Such changes are addressed elsewhere in this proposal. Also, the source still must comply with all applicable SIP limits and requirements, permit conditions and applicable NAAQS or PSD increment limits.

As proposed, this pollution control project proposal will not extend to source categories other than electric utility steam generating units. EPA has so limited this provision ~~for several~~ *because,* ~~reasons.~~ First, in contrast with a general lack of experience with other industries, EPA has extensive experience in addressing new source applicability issues regarding pollution control projects in the utility industry. That experience has led EPA to conclude ~~in numerous individual cases~~ that pollution control projects in the utility industry are generally environmentally beneficial. ~~In addition, the acid rain provisions of Title IV of the Clean Air Act Amendments of 1990 place a unique burden upon the utility industry to undertake pollution control projects in the near future.~~

2. Additional Modeling Requirements

A proposed pollution control project or physical or operational change cannot result in an emissions increase that will cause or contribute to a violation of a national ambient air quality standard, PSD increment, or visibility limitation. See CAA §§ 110(a)(2)(c), 165, 169A(b), 173. Nothing in today's notice is intended to authorize any significant net increase in emissions that would have this proscribed impact. It is possible

N/A

that a pollution control project, while not causing any increase in maximum hourly emissions, will cause a significant net increase in actual emissions, which in turn could threaten a NAAQS, increment or visibility limitation. For this reason, under today's proposal, the reviewing authority may require a source to perform an air quality impact analysis (modeling) whenever it appears that a proposed change will result in a significant net increase in actual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis. If this modeling indicates that this increase in emissions will cause or contribute to a violation of any ambient standard, PSD increment or visibility violation, the pollution control exclusion does not apply.

3. EPA's Existing Interpretation Regarding Pollution Control Projects

As noted above, ~~it is often clear that~~ ^{generally} pollution control projects at existing stationary sources are not major modifications subject to new source review because they do not ^{usually} result in an increase in actual emissions. In addition, EPA believes that, in general, pollution control projects were not intended by Congress to be considered physical or operational changes for purposes of the new source ^{review.} ~~requirements of the PSD program.~~ ^{With respect to pollution control projects, EPA has in the NSR provisions of the Clean Air Act, Congress intended recent years issued numerous nonapplicability determinations and that the NSPS exclusions contained in EPA's rules apply "no action" letters to utility sources based on a finding that to the NSR rules.*} ^{In that regard,} ~~environmentally beneficial pollution control projects are not the~~ EPA believes

* 43 Fed. Reg. 26396, col. 3 (June 19, 1978).

~~type of physical or operational change intended to be covered by the statute or EPA's regulations.~~¹⁴ However,

to provide utilities with a greater degree of certainty pending adoption of today's

proposed regulations, EPA ^{generally is} today formally ~~announcing a~~ ^{reaffirming} ~~its policy to exclude pollution control projects for the purposes of~~ regulatory interpretation that is consistent with these views ^{PSD}

individual letters as well as the provisions of the New Source

Performance Standards (NSPS) regulations. This ~~interpretation~~ ^{replacement} policy

provides that the addition, ^{replacement} or use of any system or device whose

primary function is the reduction of air pollutants will not

constitute a physical or operational change ~~that could be deemed~~

a major modification and trigger new source review, unless the Administrator determines that the project ^{involved} ~~will render the unit less~~ environmentally beneficial.

In effect, EPA ^{is} ~~has~~ merely ^{applying} ~~interpreted~~ its PSD regulations in harmony with its NSPS regulations, which do not extend to most pollution control activities. See 40 CFR 60.14(e)(5). ^{significantly,} ~~during~~ the first years of the PSD program, EPA ^{correctly} ~~interpreted~~ its PSD regulations to simply include this NSPS provision.¹⁵ This was

¹⁴ See, e.g., Letter, William G. Rosenberg, Assistant Administrator, EPA, to Andrew Aitken, Vice President, New England Power Service Co., March 26, 1991; Letter, Rosenberg to Patrick M. McCarter, Senior Vice President, Public Service Co. of Colorado, July 23, 1990; Letters, David Kee, Director, Air and Radiation Division, EPA Region V, to Timothy J. Method, Assistant Commissioner, Indiana Dept. of Environmental Management, January 30, 1990 and March 8, 1990.

¹⁵ Memorandum from Edward Reich, Director, Stationary Source Compliance Division and William F. Pedersen, Acting Associate General Counsel, Air, Noise, and Radiation Division to Allyn M. Davis, Region IV (April 21, 1983).

Because the NSR provisions of the statute incorporate the NSPS modification definition, EPA initially interpreted its PSD regulations to include the NSPS provision.

~~in part~~ based on the fact that the PSD definition of modification simply adopts the NSPS definition in section 111(a)(4). In addition, the legislative history reflects that, as a general matter, Congress intended to conform the meaning of

✓ "modification" for PSD purposes to ^{" "}usage under the NSPS program.

(See 123 Cong. Rec. H11957 (November 1, 1977).) ^{Subsequently, the} EPA has since ¹⁶ Director of OAQPS issued an applicability determination which voiced concern with its initial view that the NSPS pollution rejected this initial interpretation of EPA's NSR regulations. control language may be incorporated wholesale in the new source Subsequent determinations have relied on this determination. review context, largely because of the ambient air quality EPA is today announcing that it is returning to its component of new source review that is absent from the NSPS initial interpretation of the NSR regulations w/ respect to PCPS. program.¹⁶ However, as noted above, many of the recent EPA

~~determinations assessing pollution control projects have been~~

~~based on a finding that the proposed project would be~~

~~environmentally beneficial.¹⁷ [In light of the Title IV~~

requirements and other provisions of the Clean Air Act Amendments of 1990, EPA is ~~today~~ formally adopting the ^{not less} "environmentally beneficial" test for new source review applicability to pollution control projects on an interim basis pending final action on the proposed regulatory exclusion for pollution control projects. ^{stet}

Today's ^{not less} "environmentally beneficial" approach ~~addresses the~~ concerns expressed in the 1986 Emison Memorandum. First, EPA is ~~not simply reading in to the new source review regulations the~~

¹⁶ See, e.g., Memorandum from Gerald A. Emison, Director, OAQPS, to Regional Division Directors (July 7, 1986) ("Emison Memorandum").

¹⁷ See ~~supra~~ note 14.

~~NSPS exclusion in 40 CFR § 60.14(e)(5). For the reasons stated~~
~~in the Emison Memorandum, that would constitute a regulatory~~
~~change requiring notice and comment rulemaking. Second, by~~
focusing^{es} on whether a pollution control project is a physical or
operational change within the meaning of the new source review
regulations, ~~today's ruling~~^{thus} ~~avoids~~^{ing} the need to undertake a
quantitative emissions increase calculation in every case, as
would be necessary if such projects were deemed to be physical or
operational changes. Especially in light of the provisions of
this interpretation regarding the calculation of actual emissions
baselines and projections of future actual emissions, EPA expects
that most, if not all, pollution control projects will reduce *net*
actual emissions. Nevertheless, the Administrator's authority to
consider individual pollution control projects provides an
adequate opportunity to determine that a pollution control
project would somehow result in an adverse environmental impact
and thus conclude that the project ^{renders the unit less} ~~is not~~ environmentally
beneficial, ^{and is therefore not excluded from a physical or} ~~but is instead a major modification that should be~~
^{operational change.} ~~subject to new source review.~~

For the purposes of this interpretation, a pollution control
project refers to the addition^{, use,} or replacement at a source of an
emissions control system or device primarily designed to ~~improve~~
~~the control or prevention of~~ air pollution emissions. Fuel
switching where the project is designed primarily to reduce air
pollution (as described in the prior section) also constitutes a

pollution control project. As with the proposed rule, changes that are intended primarily to restore original capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for purposes of this ^{announcement} ~~ruling~~.

B. Representative Actual Annual Emissions

In the WEPCO decision, the court found that the units in question had begun normal operations, and thus, rejected EPA's actual to potential methodology which the court found impermissibly ignored the utility's past utilization of the units. Since the proposed work consisted of the replacement of existing components with "like-kind" equipment -- which the court apparently believed would not in and of itself lead the utility to change its pattern of utilization of the unit -- the court found the methodology arbitrary as applied in that case. As a result, EPA developed a new methodology on remand -- the so-called actual to future actual emissions test. Today EPA proposes modifying its regulations to codify this methodology, and apply it to all physical or operational changes at an existing electric utility steam generating unit other than the addition of a new unit or the replacement of an existing unit. Under today's action, EPA proposes to consider a unit to be replaced if it would constitute a reconstructed unit within the meaning of 40 CFR 60.15. EPA believes that for such "replaced" units, as well as wholly new units, it is not possible for the

WEPCO LEGISLATIVE RULE DRAFT
MAY 28, 1991

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 52, and 60

[FRL -----]

Requirements for Preparation, Adoption,
and Submittal of Implementation Plans;
Approval and Promulgation of
Implementation Plans; Standards of
Performance for New Stationary Sources.

AGENCY: Environmental Protection Agency.

ACTION: Notice of Proposed Rule

SUMMARY: The applicability of the new source requirements of Title I of the Clean Air Act to physical or operational changes at electric utility generating units is an issue of considerable concern and controversy at this time. The utility industry, because it is a primary source of sulfur dioxide emissions, must carry the full economic burden of reducing emissions linked to acid rain. Many utilities will be undertaking major pollution control projects at their units in the next few years. At the same time, the applicability of existing new source regulations to modifications has been the source of two recent federal appellate decisions, Wisconsin Electric Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990), and Puerto Rican Cement Co. v. EPA, 889 F.2d 292 (1st Cir. 1989). As a result, EPA is today proposing clarifying amendments to these regulations and confirming its current interpretations of some of these provisions as they apply to utility projects pending adoption of the proposed amendments.

EPA today proposes to adopt a broad new source review ("NSR") exclusion for utility modifications that constitute pollution control projects and, until these proposed regulations are adopted in final form, to adhere to its interpretation that its existing new source regulations already exclude coverage of most pollution control projects at existing electric utilities. Similarly, EPA today proposes to adopt an "actual to future actual" methodology for determining whether all other physical or operational changes at utilities (other than the replacement of a unit or addition of a new unit) are subject to new source review under either PSD or nonattainment provisions and to maintain in the interim its interpretation that this methodology can be applied where the unit has "begun normal operations." For those utility projects which undergo PSD new source review, today's notice proposes a presumption that for EPA-issued permits, "low-NOx burners" can satisfy the best available control technology (BACT) requirements.

In addition, EPA also proposes to modify its regulations implementing the modification provisions of the Title I new source performance standards (NSPS) program to provide that a utility may use for its pre-change baseline the highest hourly emissions rate achievable at any time during the five years prior to the modification. EPA also proposes to modify its regulations to reflect changes made by Congress in the 1990 Amendments to the

applicability of new source requirements to Clean Coal Technology (CCT) and repowering projects, and to "very clean" units.

DATES: Comments. Comments on the revisions proposed today must be received on or before _____ (60 days after publication in the Federal Register).

Public Hearing. A public hearing is scheduled for 10:00 a.m., July __, 1991, at the U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. The hearing may be canceled if no speakers have requested time to present their comments 15 days prior to the scheduled hearing date. Written comments in lieu of testimony are encouraged.

ADDRESSES: Supporting information used in developing this proposed rule is contained in docket A-90-06. This docket is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., weekdays at EPA's Air Docket (LE-131), Room M-1500, 401 M Street S.W., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Chebryll Edwards, New Source Review Section (MD-15), Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, (919) 541-2343.

SUPPLEMENTARY INFORMATION:

I. INTRODUCTION

EPA today proposes to amend its regulations implementing the various Title I new source requirements and also announces certain interim interpretations of these provisions as applied to

modifications at electric utility generating units. Specifically, these proposed changes and interpretations are being issued to clarify the coverage of the NSPS, PSD and nonattainment preconstruction review requirements of Title I of the Clean Air Act to projects undertaken at electric steam utility generating units.¹

EPA proposes to amend the definition of "major modification" in 40 CFR Parts 51 and 52 to set forth the conditions under which the addition, replacement or use at existing electric utility generating units of any system or device whose primary function is the reduction of air pollutants (including the switching to a less polluting fuel where the primary purpose of the switch is the reduction of air pollutants) will or will not subject the source to preconstruction review. Specifically, EPA proposes in PSD and nonattainment areas to adopt a regulatory exclusion explicitly codifying its interpretation under existing regulations that pollution control projects which are environmentally beneficial are not "physical or operational changes," and hence, not "major modifications" for NSR purposes.

EPA is today also proposing to amend its PSD and nonattainment new source review regulations (40 CFR Parts 51 and

¹ The proposed regulations define electric utility steam generating units as any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW of electrical output to any utility power distribution system for sale. See, e.g., proposed 40 CFR 51.165(xx).

52)² as they apply to utilities to (1) clarify the NSR baseline for determining whether a proposed physical or operational change will subject a utility to the preconstruction review requirements of these provisions; (2) codify an actual to future actual methodology for determining whether a physical or operational change is subject to NSR; (3) provide further clarification of the existing regulatory requirement that only those increases in emissions that actually result from the physical change or change in the method of operation can be considered in determining whether the proposed change subjects the utility to NSR requirements; and (4) implement sections 409 and 415 of Title IV of the Clean Air Act Amendments of 1990 which create special NSPS treatment for certain repowering projects and limited NSR exemptions for temporary and permanent CCT projects, and for certain "very clean" units. Finally, EPA is also proposing to amend its NSPS regulations (40 CFR Part 60) to allow a utility to use as its pre-change baseline its highest hourly emissions rate achievable during the five years prior to the modification. To the extent the proposed amendments codify existing EPA interpretations, EPA will continue to administer its regulations in a manner consistent with these interpretations pending adoption of the regulations proposed today.

² For the purposes of this notice, references to "new source review" (or "NSR") refer to the preconstruction review requirements of both Part C (PSD) and Part D (nonattainment) of the Clean Air Act, unless otherwise indicated.

As a general matter, today's proposal is intended to conform to the Administration's legislative proposal on WEPCO.³ EPA had previously indicated that it would both issue an interpretative ruling and conduct legislative rulemaking through the notice-and-comment process to address the WEPCO matter. The passage of time has largely vitiated the usefulness of a separate interpretative ruling. Accordingly, EPA is proceeding with today's proposed regulatory revisions without issuing a prior interpretative ruling. However, portions of the preamble of today's proposal set forth EPA's present interpretation of the current regulations, and may be relied on as such pending final action on today's proposal.

The interpretations of current regulations set out in this notice are intended solely as guidance, do not represent final agency action, and are not ripe for judicial review. They are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. EPA officials may decide to follow these interpretations, or to act at variance with them, based on an analysis of specific

³ See letters dated July 23 and September 11, 1990 from Dr. Richard Schmalensee, Member, Council of Economic Advisors, to Senator Wendell H. Ford, Chairman, Subcommittee on Energy Research and Development, Committee on Energy and Natural Resources, and in testimony presented by Dr. Schmalensee to the Committee on May 8, 1990 and March 18, 1991.

circumstances. The Agency also may change these interpretations at any time without public notice.

EPA believes that each of the interpretations in questions represents a reasonable construction of existing regulations, for which no prior notice and opportunity for comment is required by law. See Clean Air Act section 307(d)(1), 42 U.S.C. 7607(d)(1) (Clean Air Act rulemaking procedure requirements incorporate the exemption from notice-and-comment requirements for interpretative rulings set forth in section 553(b)(A) of the Administrative Procedure Act, 5 U.S.C. 553(b)(A)). However, the Agency retains an open mind on these issues. Accordingly, EPA will pay close attention to the comments received in response to today's notice and may, upon further consideration, decide not to make the changes proposed, but instead retain the current regulations or adopt other changes emerging from the public comments or further consideration of the issues by EPA. This process may also result in revisions to the interpretations set forth in the preamble portion of this notice.

II. BACKGROUND

A. The New Source Performance Standards, Prevention of Significant Deterioration and Nonattainment Programs of Title I

Title I of the Clean Air Act has three programs specifically designed to ensure that no new air pollution -- whether from new sources or from modifications to existing sources -- can be emitted unless the source complies with new source requirements.

The 1970 Clean Air Act required EPA to promulgate technology-based new source performance standards applicable to the construction or modification of stationary sources that cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. Clean Air Act ("CAA") § 111(b)(1)(A), 42 U.S.C. 7411(b)(1)(A). The NSPS provisions were "designed to prevent new air pollution problems" by regulating newly-constructed sources and changes occurring at existing sources that result in emissions increases. See National Asphalt Pavement Assoc. v. Train, 539 F.2d 775, 783 (D.C. Cir. 1976); see also H.R. Rep. No. 1146, 91st Cong., 2d Sess. 3, reprinted in 1970 U.S. Code Cong. & Admin. News 5356, 5358. Congress defined 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." See CAA § 111(a)(4), 42 U.S.C. 7411(a)(4).

In 1977, Congress adopted additional amendments to the Clean Air Act. These changes included preconstruction permitting requirements for major new and modified sources under two programs, prevention of significant deterioration (PSD) and nonattainment new source review (respectively, Parts C and D of the Clean Air Act). Congress intended these programs to apply

where "industrial changes might increase pollution in an area." Alabama Power Co. v. Costle, 636 F.2d 323, 400 (D.C. Cir. 1979).

The NSR program for PSD (CAA §§ 160-169) applies in attainment areas, i.e., those areas which have attained the national ambient air quality standards (NAAQS). To receive a PSD permit, a prospective major new source or major modification must (among other things) show that (1) it will not cause or contribute to a violation of the available air quality "increment" (designed to prevent ambient air quality from deteriorating by more than certain specified levels), (2) it will not cause or contribute to a violation of a NAAQS, and (3) it will use the best available control technology, which must be at least as stringent as any applicable NSPS or hazardous pollutant standard under section 112 of the Act.

Part D of the 1977 Amendments applies to nonattainment areas, i.e., those areas which have not met the NAAQS under section 109. To receive a permit in such areas, major new and modified sources must (among other things) (1) obtain emissions offsets, thereby assuring that reasonable progress toward attainment of the NAAQS will occur, and (2) comply with the "lowest achievable emission rate (LAER)." See CAA § 171-173.⁴

⁴ The 1970 Clean Air Act also included a rudimentary new source review program applicable to construction or modification of any stationary source. This provision is presently set forth in section 110(a)(2)(C). Briefly, it requires any new or modified source to demonstrate that it will not violate any NAAQS. See 40 CFR 51.160-164. Today's notice does not propose
(continued...)

B. The Two-Step Test for Modifications

The modification provisions of the NSPS and NSR programs are based on the broad NSPS definition of "modification" in section 111(a)(4) of the Act. That section contemplates a two-step test for determining whether activities at an existing facility constitute a modification subject to new source requirements. In the first step, which is largely the same for NSPS and NSR, the reviewing authority determines whether a physical or operational change will occur. If so, the reviewing authority proceeds in the second step to determine whether the physical or operational change will result in an emissions increase over baseline levels. In this second step, the applicable rules branch apart, reflecting the fundamental distinctions between the technology-based provisions of NSPS and the air quality-based provisions of NSR.

Briefly, the NSPS program examines maximum hourly emissions rates, expressed in kilograms per hour.⁵ Emissions increases

⁴(...continued)
to change the scope of those regulations, which will apply to utility changes excluded from the major modification provisions of Parts C and D pursuant to today's proposal and the interpretations discussed herein.

⁵ An hourly emissions rate may be determined by a stack test or calculated from the product of the instantaneous emissions rate, i.e., the amount of pollution emitted by a source, after control, per unit of fuel combusted or material processed (such as pounds of sulfur dioxide emitted per ton of coal burned) times the production rate (such as tons of coal burned per hour). See section 60.14.

for NSPS purposes are determined by changes in the hourly emissions rates at maximum physical capacity. On the other hand, the NSR regulations examine total actual emissions to the atmosphere. For applicability determination purposes, emissions increases under NSR are determined by changes in annual emissions as expressed in tons per year (tpy).⁶

C. Step One: Physical or Operational Change

EPA has always recognized that the definition of physical or operational change in section 111(a)(4) could, standing alone, encompass the most mundane activities at an industrial facility (even the repair or replacement of a single leaky pipe, or a change in the way that pipe is utilized). However, EPA has always recognized that Congress obviously did not intend to make every activity at a source subject to new source requirements.

As a result, EPA has defined "modification" in the NSPS and NSR regulations to include common-sense exclusions from the "physical or operational change" component of the definition. For example, both sets of regulations contain similar exclusions for routine maintenance, repair, and replacement; for increases in the hours of operation or in the production rate; and for

⁶ Annual emissions may be calculated as the product of the hourly emissions rate times the utilization rate, expressed as hours of operation per year, or as the product of an emissions factor (e.g., from Compilation of Air Pollutant Emission Factors, AP-42, 4th Ed. and subsequent supplements) in units of mass emitted per unit of process throughput times the annual throughput. See 40 CFR 52.21(b)(21).

certain types of fuel switches. See e.g., 52.21(b)(2)(iii) and 60.14(e). In addition, with respect to pollution control equipment, the NSPS regulations contain an exclusion for:

The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emissions control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

40 CFR 60.14(e)(5). As will be discussed, EPA has, through individual applicability determinations, followed a similar "environmentally beneficial" test in determining NSR applicability to pollution control projects.

D. Step Two: Emissions Increases for NSPS Applicability

EPA's NSPS regulations define the term "modification" as any "physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies." See 40 CFR 60.2 and 60.14. Under current NSPS regulations, emissions increases, for applicability purposes, are calculated by comparing the hourly emission rate, at maximum physical capacity, before and after the physical or operational change. That is, to determine whether a change to an existing facility will increase the emissions rate, the existing NSPS regulations authorize the use of an "emissions factor analysis," or a materials balance, continuous monitoring, or manual emissions test to evaluate emissions before and after the change. 40 CFR 60.14(b)(2).

Absent the exclusions from modifications specified at 40 CFR 60.14(e), any increase in emissions to the atmosphere over the previous emissions rate will subject the modification to NSPS. See 40 CFR 60.14(a) and (b). In addition, under the "reconstruction rules," physical or operational changes which would cost 50 percent or more of the total cost of a comparable new facility are classified as reconstructions (see 40 CFR 60.15) and are subject to NSPS as a new source, even if there is no emissions increase.

E. Step Two: Emissions Increases Under NSR Requirements

1. Existing Regulations

EPA's regulations implementing the PSD and nonattainment programs require preconstruction review for sources undertaking a "major modification," i.e., a physical change or change in the method of operations "that would result in a significant net emissions increase of any pollutant subject to regulation under the Act." 40 CFR 52.21(b)(2)(i) and (3)(i); 52.24(f)(5).⁷ A "net emissions increase" is defined as the

⁷ The current PSD program is set forth in two sets of regulations. One of the regulations cited (40 CFR 52.21) is part of the federal PSD permit program which applies as part of a Federal implementation plan for States that have not submitted a PSD program meeting the regulatory requirements of 40 CFR 51.166 (standards for PSD provisions in State implementation plans). In most States where the federal requirements apply, EPA has delegated the authority to implement the PSD program back to the State. Roughly two-thirds of the States are implementing their own PSD program pursuant to an EPA-approved state implementation plan. Sections 52.21 and 51.166 have identical modification provisions.

(continued...)

increase in "actual emissions" from the particular physical or operational change together with any other "contemporaneous" increases or decreases in actual emissions. 40 CFR 52.21(b)(3)(i).⁸

Applicability of the Act's new source review provisions must be determined in advance of construction and is pollutant specific. In cases involving existing sources, this requires a pollutant-by-pollutant projection of the emissions increases, if any, that will result from the physical or operational change. Specifically, to determine whether a proposed physical or operational change will result in an emissions increase, the source must first determine a baseline level of actual emissions. The regulations define actual emissions on a particular date as "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

⁷(...continued)

EPA's regulations for nonattainment areas are set forth at 40 CFR § 51.165, 52.24 and in Part 51, Appendix S. These sections contain applicability provisions regarding modification that are largely identical to those in the PSD provisions.

⁸ Roughly speaking, "contemporaneous" emissions increases or decreases are those which have occurred between the date five years preceding the proposed physical or operational change and the date that the increase from the change occurs. 40 CFR 52.21(b)(3)(ii). Once a modification is determined to be major, the PSD requirements apply only to those specific pollutants for which there would be a significant net emissions increase. E.g., 40 CFR 52.21(j)(3) (best available control technology); 40 CFR 52.21(m)(1)(b) (air quality analysis).

operation." The Administrator "shall" allow use of a different time period "upon a determination that it is more representative of normal source operation." Id. EPA has typically used the two years immediately preceding the physical or operational change to establish the baseline. See 45 Fed. Reg. 52676, 52705, 52718 (1980). However, it can allow the use of an earlier two-year period that is more representative of normal source operations. For example, in WEPCO, EPA found the fourth and fifth years prior to the modification more representative of WEPCO's normal operations.

Because the applicability determination must be made in advance of construction, EPA's NSR regulations provide that when an emissions unit "has not begun normal operations," actual emissions equal the "potential to emit of the unit." 40 CFR 52.21(b)(21)(iv). This approach is referred to as the actual to potential methodology. This regulatory provision may be overcome -- and new source review will not apply -- if the source owner agrees, in a federally enforceable instrument -- not to increase its actual emissions above baseline levels. See e.g., 40 CFR 52.21(b)(4).

2. The WEPCO and Puerto Rican Cement Decisions

EPA's modification provisions have been the subject of two recent federal appellate decisions. Both decisions involved physical changes at existing units and addressed whether EPA's actual to potential methodology applied. In Puerto Rican Cement

v. EPA, 889 F.2d 292 (1st Cir. 1989), the First Circuit found that where normal operations at a unit have not begun, it is permissible to use the actual to potential methodology. In the case, the owner of a cement plant sought to convert a "wet" cement kiln to a "dry" kiln and to combine that kiln with another kiln. 889 F.2d at 293. The modernized production facilities would be more efficient and thus would provide an economic incentive to increase utilization -- and actual emissions -- above baseline levels. See id. at 297. Since the company would not agree to limit its actual post-modification emissions to baseline levels, EPA argued that the kiln as modified had not begun normal operations and the Agency was required, pursuant to section 52.21(b)(21)(iv), to measure the plant's post-modification emissions by the plant's potential to emit. The petitioner argued that this reading of EPA's regulations was improper, arbitrary and contradicted by earlier EPA decisions. The court rejected all attacks and upheld EPA's methodology, pointing out, among other things, that in the preamble to its regulations, EPA had stated that the actual to potential methodology generally would apply to a "new or modified unit." Id. at 297 (citing 45 Fed. Reg. 52677).

In Wisconsin Elec. Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990), the court reviewed EPA's determination that "life-extension" renovations planned for several older (35 to 50 years) electric utility boilers (specifically, repair and

replacement of turbine-generators, steam drums and other major components) brought the units within the PSD new source review provisions. As in Puerto Rican Cement, EPA contended that the units as modified had not begun "normal operations" and were thus subject to the actual to potential test. Since the company would not agree to limit its post-modification actual emissions to baseline levels, EPA found the plant subject to PSD. See WEPCO, 893 F.2d at 906.

The Seventh Circuit found that where normal operations at a unit have begun, it is impermissible to use the actual to potential methodology. The court then rejected EPA's use of the actual to potential test under the circumstances of that case. The court found instead that EPA's existing regulations do not support "EPA's decision [to] wholly disregard past operating conditions at the plant," in that case involving "like-kind replacement." Id. at 917, 918. On remand, EPA determined PSD applicability by comparing WEPCO's representative actual emissions for the baseline period to estimated future actual emissions based on all the available facts in the record.⁹ EPA continues to apply this approach to "like-kind" changes.

Today's proposed regulations would make this actual to future actual methodology available to all utilities undertaking

⁹ See letter from William G. Rosenberg, Assistant Administrator, EPA, to John Boston, President, WEPCO (June 18, 1990).

physical or operational changes other than the addition of a new unit or the replacement of an existing unit.

F. The Clean Air Act Amendments of 1990

1. New Source Review and the Acid Rain Provisions

The Clean Air Act Amendments of 1990 made numerous changes in the nonattainment provisions of the Clean Air Act and added a new title to address the problem of acid rain. The amendments attack nonattainment problems with a broad array of new requirements all designed to bring all areas of the country into attainment with the national ambient air quality standards for all pollutants. These requirements include traffic reduction strategies, use of alternative clean fuels, increased offset requirements for stationary sources, and changes in the threshold size of stationary sources subject to new source review. A principal theme of the legislation is the establishment of categories of nonattainment areas based on the severity of the pollution problem. The more severe the area, the more controls Congress required be imposed.

The Amendments also establish, in Title IV, a new control scheme for addressing the acid rain problem. The exclusive focus of this program is on utility power plant emissions of sulfur dioxide and nitrogen oxides. The 1990 Amendments require sulfur dioxide emissions from utilities to be reduced by approximately 10 million tons annually in two phases -- the first to take effect in 1995, the second in 2000. A total of 111 specific

plants are targeted in Phase I, and will be required to reduce their SO₂ emissions to a specified emissions rate. In Phase II, these plants and almost all others must reduce their SO₂ emissions to an even lower emissions rate. This reduction program is to be implemented through a new market-based system under which power plants are to be allocated SO₂ "emissions allowances" that will require plants to reduce their emissions or acquire allowances from others to achieve compliance.

Because of these requirements, many of the plants subject to Phase I controls must make compliance decisions within the next year in order to assure that the complicated control equipment that may be necessary to meet Phase I standards is in place by the 1995 deadline. While Congress did not suspend any Title I requirements for this work, the massive industry-wide undertakings of pollution control projects warrants a clarification of the new source review requirements of Title I. In particular, NSR provisions should not inadvertently bias a utility towards or against any means of complying with the acid rain provisions. EPA believes the amendments proposed today and the clarification of its current interpretations of its present NSR regulations provide adequate assurances that utilities can undertake Title IV pollution control projects without uncertainty as to the applicability of the various Title I new source requirements.

Finally, aside from provisions addressing utility repowering and CCT projects, the 1990 Amendments made no significant changes in the new source review and NSPS modification provisions. While Congress considered several amendments which would have addressed industry concerns relating to the WEPCO and Puerto Rican Cement cases, only the CCT and repowering proposals were included in the final version of the Act. Instead, the Conference Committee provided the following guidance to EPA in its Joint Explanatory Statement:

"[T]he deletion of most provisions relating to the WEPCO decision is not intended to affect or prejudice in any way the issues or resolution of the WEPCO matter. At the same time, the conferees urge a quick resolution of the WEPCO matter by EPA as appropriate."

Conference Comm., Joint Explanatory Statement of the Committee of the Conference to Accompany S. 1630, Rep. 101-952, 101st. Cong., 2nd Sess. (1990) pp. 344-45.

2. Repowering and CCT Projects

In Title IV of the 1990 Amendments, which creates the acid rain program, Congress did make changes in the applicability of new source requirements to changes involving repowering and CCT projects.

Section 409 grants an extension of the acid rain controls deadline to sources that seek to comply with the acid rain reductions by repowering a unit with qualifying clean coal technology. Section 402(12) defines repowering as:

[The] replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of the date of enactment of the Clean Air Act Amendments of 1990. Notwithstanding the provisions of §409(a), for the purpose of this title, the term 'repowering' shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

See CAA, §§ 402(12) and 409(a).

Congress provided that repowering projects that qualify for a Phase II compliance extension would also be exempt from NSPS requirements, so long as the repowering "does not increase actual hourly emissions for any pollutant regulated under the Act." See CAA, § 409(d). An operator can qualify for the 3-year extension of the Phase II emissions limitation by demonstrating (by December 31, 1997) to the permitting authority that one or more units will be repowered with a qualifying clean coal technology to meet the Title IV restrictions. The operator must provide, no later than January 1, 2000, additional documentation of the repowering project including a preliminary design and engineering

effort for the project and a binding contract for the majority of the equipment needed, as well as any additional information the reviewing authority requires.

Today's proposal also implements an exemption from new source requirements for CCT demonstration projects created by Congress in section 415 of Title IV of the 1990 Amendments. In these provisions, CCT is defined as any technology not in widespread use on the date of enactment that achieves significant reductions in SO₂ or nitrogen oxides (NO_x) emissions associated with burning coal in the generation of electricity, process steam, or industrial products. See § 415(a). A CCT "demonstration project" is a project funded under DOE's CCT program or a similar project funded by EPA.¹⁰

Repowering projects that are awarded funding from the Department of Energy (DOE) as permanent CCT demonstration projects (or similar projects funded by EPA) are exempt from NSPS and PSD requirements so long as potential emissions (see 52.21(b)(4)) from the unit do not increase as a result of the project. Id. § 415(b). These funded projects may still be required to comply with the nonattainment NSR provisions of Title

¹⁰ Section 415(b)(1) defines a CCT project as a project "using funds appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the EPA."

I of the Act, unless they are excluded as pollution control projects.

The installation, operation, cessation, or removal of a temporary CCT demonstration project that is operated for 5 years or less is exempt from NSPS and both PSD and nonattainment new source requirements. See § 415(b)(2). However, the facility still must comply with the applicable SIP and other requirements necessary to attain and maintain the NAAQS.

Finally, in section 415(c), Congress provided an exemption from NSPS and PSD for the reactivation of "very clean units" otherwise in compliance with the Act that had been shut down for at least the two years prior to enactment of the 1990 Amendments and that, prior to the shutdown, had been equipped with pollution controls with a removal efficiency of at least 85 percent for sulfur dioxide and 98 percent for particulates, and had been equipped with low-NOx burners.

III. DISCUSSION

A. Pollution Control Projects

1. Proposed Regulatory Changes for Pollution Control Projects

EPA proposes to amend its PSD and nonattainment regulations as they pertain to utility changes that constitute pollution control projects by codifying the Agency's current interpretation that such projects are not subject to NSR when they are environmentally beneficial. In many instances, it is clear that pollution control projects at existing stationary

sources are not major modifications subject to new source review requirements for the simple reason that they do not result in an increase in actual emissions. In addition, EPA has always recognized that Congress did not intend that every activity at an existing facility be considered a physical or operational change for purposes of the new source requirements of the PSD program.¹¹ Also, as has been discussed, the new acid rain provisions will require most electric utilities to undertake pollution control projects within the next few years and their decisions regarding the a pollution control strategy for Phase I of the acid rain program will be made within the next year. At the same time, based on the WEPCO decision, utilities are concerned that EPA will subject pollution control projects to an actual-to-potential evaluation. In fact, EPA has refrained from applying the actual-to-potential methodology to several recent pollution control projects.¹²

¹¹ For instance, EPA has specifically recognized that routine maintenance, repair and replacement, and changes in hours of operation or in the production rate are not considered a physical change or change in the method of operation. See 40 CFR 52.21(b)(2)(iii).

¹² See, e.g., letters from David Kee, Director, Air and Radiation Division, EPA, Region V, to Timothy J. Method, Assistant Commissioner, Indiana Department of Environmental Management (January 30, 1990 and March 8, 1990).

To provide utilities with additional certainty, EPA is today proposing to adopt revisions to its PSD and nonattainment regulations for the addition, replacement or use at an existing electric utility steam generating unit of any system or device whose primary function is the reduction of air pollutants (including the switching to a less-polluting fuel where the primary purpose of the switch is the reduction of air pollutants). Under today's proposal, a utility pollution control project will not be treated as a modification so long as the change is environmentally beneficial.¹³

As indicated above, the key to this addition to the list of exclusions from the terms physical or operational change is EPA's judgment that Congress did not intend that pollution control projects be considered the type of activity that could trigger new source review. Rather, the clear focus of the Act's new source requirements are, as they relate to modifications, physical or operational changes to pollution generating equipment.

As discussed in greater detail in a subsequent section, EPA's position in this regard is reflected in the existing

¹³ In general, EPA will consider a pollution control project to be environmentally beneficial so long as, in nonattainment areas, it does not result in a significant net increase in representative actual annual emissions of any criteria pollutant and, in attainment areas, it does not result in an increase in the potential hourly emissions of a regulated pollutant. However, EPA will apply these guidelines with flexibility and will deviate from them where the merits of an individual proposed pollution control project so warrant.

regulatory exclusion for pollution control activities under NSPS regulations, and in several case-specific nonapplicability determinations under the new source review programs. However, despite the Agency's view that by their nature pollution control projects in general are not within the ambit of new source requirements, EPA's pronouncements recognize the need for a safety valve in the form of some consideration of the environmental impacts of any pollution control exclusion. The NSPS regulatory exclusion employs an "environmentally beneficial" test to determine its scope. See 40 CFR 60.15(e)(5). With respect to new source review, EPA has also considered whether a pollution control project would be "environmentally beneficial," and today's proposal would codify that practice by adopting a regulatory exclusion that tracks the NSPS exclusion. The major difference in the NSR exclusion is that it would (consistent with EPA's practice under NSR) apply the environmentally beneficial test to the addition, as well as the replacement, of a pollution control device, because there may be circumstances in which such additions are not environmentally beneficial. EPA solicits comment on whether the NSPS exclusion should be amended at the time of final action on today's proposal to apply an environmentally beneficial test to additions also.

For the purposes of this proposal, a pollution control project is defined as any physical change or change in the method of operation at a utility unit for purposes of reducing emissions

from such unit in order to comply with Title IV of the 1990 Amendments. These changes are limited to the installation of conventional or innovative emissions control equipment, including, but not limited to, installation of conventional and advanced flue gas desulfurization, sorbent injection for SO₂ and NOx controls and electrostatic precipitators. Physical changes, or changes in the method of operation, to accommodate switching to fuel with a lower sulfur content, including natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling SO₂ and NOx emissions shall also constitute a "pollution control project."

Any activity that is necessary to accommodate switching to a less polluting fuel is considered to be part of the pollution control project. In some instances, this may involve physical changes to the pollution generating equipment (e.g., boiler), but only if the changes are necessary to maintain the normal operating capability of the unit at the time of the modification where the capability would otherwise be impaired as a result of the fuel switch. For example, an electric utility steam generating unit that switches from a higher sulfur bituminous coal to a low-sulfur subbituminous coal may need to make certain changes to the boiler in order to avoid derating the unit.

Changes that are intended primarily to restore original capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for

purposes of this proposal. Such changes are addressed elsewhere in this proposal. Also, the source still must comply with all applicable SIP limits and requirements, permit conditions and applicable NAAQS or PSD increment limits.

As proposed, this pollution control project proposal will not extend to source categories other than electric utility steam generating units. EPA has so limited this provision for several reasons. First, in contrast with a general lack of experience with other industries, EPA has extensive experience in addressing new source applicability issues regarding pollution control projects in the utility industry. That experience has led EPA to conclude in numerous individual cases that pollution control projects in the utility industry are generally environmentally beneficial. In addition, the acid rain provisions of Title IV of the Clean Air Act Amendments of 1990 place a unique burden upon the utility industry to undertake pollution control projects in the near future.

2. Additional Modeling Requirements

A proposed pollution control project or physical or operational change cannot result in an emissions increase that will cause or contribute to a violation of a national ambient air quality standard, PSD increment, or visibility limitation. See CAA §§ 110(a)(2)(c), 165, 169A(b), 173. Nothing in today's notice is intended to authorize any significant net increase in emissions that would have this proscribed impact. It is possible

that a pollution control project, while not causing any increase in maximum hourly emissions, will cause a significant net increase in actual emissions, which in turn could threaten a NAAQS, increment or visibility limitation. For this reason, under today's proposal, the reviewing authority may require a source to perform an air quality impact analysis (modeling) whenever it appears that a proposed change will result in a significant net increase in actual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis. If this modeling indicates that this increase in emissions will cause or contribute to a violation of any ambient standard, PSD increment or visibility violation, the pollution control exclusion does not apply.

3. EPA's Existing Interpretation Regarding Pollution Control Projects

As noted above, it is often clear that pollution control projects at existing stationary sources are not major modifications subject to new source review because they do not result in an increase in actual emissions. In addition, EPA believes that, in general, pollution control projects were not intended by Congress to be considered physical or operational changes for purposes of the new source requirements of the PSD program. With respect to pollution control projects, EPA has in recent years issued numerous nonapplicability determinations and "no action" letters to utility sources based on a finding that environmentally beneficial pollution control projects are not the

type of physical or operational change intended to be covered by the statute or EPA's regulations.¹⁴ To provide utilities with a greater degree of certainty pending adoption of today's proposed regulations, EPA is today formally announcing a regulatory interpretation that is consistent with these individual letters as well as the provisions of the New Source Performance Standards (NSPS) regulations. This interpretation provides that the addition, or use of any system or device whose primary function is the reduction of air pollutants will not constitute a physical or operational change that could be deemed a major modification and trigger new source review, unless the Administrator determines that the project would not be environmentally beneficial.

In effect, EPA has merely interpreted its PSD regulations in harmony with its NSPS regulations, which do not extend to most pollution control activities. See 40 CFR 60.14(e)(5). During the first years of the PSD program, EPA interpreted its PSD regulations to simply include this NSPS provision.¹⁵ This was

¹⁴ See, e.g., Letter, William G. Rosenberg, Assistant Administrator, EPA, to Andrew Aitken, Vice President, New England Power Service Co., March 26, 1991; Letter, Rosenberg to Patrick M. McCarter, Senior Vice President, Public Service Co. of Colorado, July 23, 1990; Letters, David Kee, Director, Air and Radiation Division, EPA Region V, to Timothy J. Method, Assistant Commissioner, Indiana Dept. of Environmental Management, January 30, 1990 and March 8, 1990.

¹⁵ Memorandum from Edward Reich, Director, Stationary Source Compliance Division and William F. Pedersen, Acting Associate General Counsel, Air, Noise, and Radiation Division to Allyn M. Davis, Region IV (April 21, 1983).

in part based on the fact that the PSD definition of modification simply adopts the NSPS definition in section 111(a)(4). In addition, the legislative history reflects that, as a general matter, Congress intended to conform the meaning of "modification" for PSD purposes to usage under the NSPS program. (See 123 Cong. Rec. H11957 (November 1, 1977).) EPA has since voiced concern with its initial view that the NSPS pollution control language may be incorporated wholesale in the new source review context, largely because of the ambient air quality component of new source review that is absent from the NSPS program.¹⁶ However, as noted above, many of the recent EPA determinations assessing pollution control projects have been based on a finding that the proposed project would be environmentally beneficial.¹⁷ In light of the Title IV requirements and other provisions of the Clean Air Act Amendments of 1990, EPA is today formally adopting the "environmentally beneficial" test for new source review applicability to pollution control projects on an interim basis pending final action on the proposed regulatory exclusion for pollution control projects.

Today's "environmentally beneficial" approach addresses the concerns expressed in the 1986 Emison Memorandum. First, EPA is not simply reading in to the new source review regulations the

¹⁶ See, e.g., Memorandum from Gerald A. Emison, Director, OAQPS, to Regional Division Directors (July 7, 1986) ("Emison Memorandum").

¹⁷ See supra note 14.

NSPS exclusion in 40 CFR § 60.14(e)(5). For the reasons stated in the Emison Memorandum, that would constitute a regulatory change requiring notice and comment rulemaking. Second, by focusing on whether a pollution control project is a physical or operational change within the meaning of the new source review regulations, today's ruling avoids the need to undertake a quantitative emissions increase calculation in every case, as would be necessary if such projects were deemed to be physical or operational changes. Especially in light of the provisions of this interpretation regarding the calculation of actual emissions baselines and projections of future actual emissions, EPA expects that most, if not all, pollution control projects will reduce actual emissions. Nevertheless, the Administrator's authority to consider individual pollution control projects provides an adequate opportunity to determine that a pollution control project would somehow result in an adverse environmental impact and thus conclude that the project is not environmentally beneficial, but is instead a major modification that should be subject to new source review.

For the purposes of this interpretation, a pollution control project refers to the addition or replacement at a source of an emissions control system or device primarily designed to improve the control or prevention of air pollution emissions. Fuel switching where the project is designed primarily to reduce air pollution (as described in the prior section) also constitutes a

pollution control project. As with the proposed rule, changes that are intended primarily to restore original capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for purposes of this ruling.

B. Representative Actual Annual Emissions

In the WEPCO decision, the court found that the units in question had begun normal operations, and thus, rejected EPA's actual to potential methodology which the court found impermissibly ignored the utility's past utilization of the units. Since the proposed work consisted of the replacement of existing components with "like-kind" equipment -- which the court apparently believed would not in and of itself lead the utility to change its pattern of utilization of the unit -- the court found the methodology arbitrary as applied in that case. As a result, EPA developed a new methodology on remand -- the so-called actual to future actual emissions test. Today EPA proposes modifying its regulations to codify this methodology, and apply it to all physical or operational changes at an existing electric utility steam generating unit other than the addition of a new unit or the replacement of an existing unit. Under today's action, EPA proposes to consider a unit to be replaced if it would constitute a reconstructed unit within the meaning of 40 CFR 60.15. EPA believes that for such "replaced" units, as well as wholly new units, it is not possible for the

Agency to reasonably project the units' post-change level of utilization, and hence, their future level of "representative annual actual emissions."

As proposed today, the "representative actual annual emissions" methodology requires the utility to compare its baseline emissions with its future actual emissions to determine if the modification will increase actual emissions. EPA's existing regulations define baseline emissions as "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, e.g., 40 CFR 52.21. The Administrator "shall" allow use of a different time period "upon a determination that it is more representative of normal source operation." Id. Although not required by the regulations, EPA has historically used the two years immediately preceding the modification to establish the baseline. (See 45 Fed. Reg. 52676, 52705, 52718 (1980).) However, in some cases it has allowed the use of earlier periods. For example, in WEPCO, EPA found the fourth and fifth years prior to the modification more representative of WEPCO's normal operations since the source's capacity was reduced due to physical problems. EPA proposes today to retain this regulatory language, but to adopt a new presumption regarding its implementation.

Under today's action, the Administrator will presume that any two years within the five years prior to the proposed change is representative of normal source operations for a utility. This presumption is consistent with the five-year period for "contemporaneous" emissions increases and decreases in 40 CFR 52.21(b)(3)(i)(b).¹⁸ Source owners or operators desiring to use other than a two-year period or a baseline period prior to the last five years may seek the Administrator's specific determination that such period is more representative of normal operations.

Prior to final action on today's proposal, source owners desiring to use a baseline period prior to the two years preceding the modification should continue to seek the reviewing authority's specific determination that such period is more representative of normal operations. The EPA will apply this standard liberally and encourages States to do likewise.¹⁹

¹⁸ This presumption does not apply to past modifications at an emissions unit for the purpose of determining contemporaneous emission changes at a source and cannot be used to extend the five year period specified in that provision. See 40 CFR 52.21(b)(3)(i)(b).

¹⁹ Whether on a case-by-case basis, or after the proposed language is adopted, the level of baseline emissions selected must be consistent with current assumptions regarding the source's emissions that are used under the state implementation plans (SIP) for planning or permitting purposes. Thus, the source may not select a level of baseline emissions higher than that used by the permitting authority in issuing a PSD or other construction permit to a source in the area, if such higher level would result in a NAAQS or increment violation, or violate a visibility limitation.

The future actual projection is the product of: (1) the hourly emissions rate, which is based on the unit's physical and operational capabilities following the modification and federally-enforceable operational restrictions that would affect the hourly emissions rate following the renovation; and (2) projected capacity utilization, which is based on (a) the unit's historical annual utilization, and (b) all available information regarding the unit's likely post-renovation capacity utilization.²⁰ The projection of post-modification capacity utilization for applicability purposes should be based on a projection of utilization for a period after the physical or operational change. Specifically, EPA today proposes to allow sources to base the projection of utilization on the two years after the modification, or a different consecutive two-year period within the ten years after the modification, where the Administrator determines that such period is more representative of normal source operations.

The principal effect of using an actual to future actual methodology rather than an actual to potential methodology is to shift, from the source owner to EPA, the burden of accurately projecting a source's post-change capacity utilization. As

²⁰ In projecting future utilization and emissions factors, the permitting authority may consider the company's historical operational data, its own representations, filings with Federal, State or local regulatory authorities, and compliance plans developed under Title IV of the 1990 Amendments.

discussed above, under the actual to potential methodology, the source can avoid new source review by physically or legally limiting any increase in actual emissions. However, this approach may restrict utility flexibility to expand operations at a later date, because it may require the utility to agree to a federally enforceable emissions cap. Historically, source owners have frequently accepted such caps to avoid new source review. However, if the source's projection that it will not significantly increase actual emissions above baseline levels turns out to be wrong, the source must undergo new source review to increase its emissions. See, e.g., 40 CFR 52.21(r)(4). In contrast, under the actual to future actual methodology, if the source's projected level of post-change capacity utilization would not result in an increase in actual emissions above baseline levels, it would not need to accept an annual emissions cap or restrictions on hours of operation in order to avoid new source review (unless the reviewing authority affirmatively rejected the source owner's projection).²¹ Thus, although

²¹ The source may, however, be required to obtain a federally enforceable permit or other instrument that limits its hourly emissions rate to levels that will not, when multiplied by the projected capacity utilization, result in a significant increase in actual emissions. This was done, for instance, in EPA's decision on remand in the WEPCO case. The company's projection of future actual emissions was based in part on its assumptions regarding the sulfur content of the coal it intended to burn and control technology performance levels. Since those assumptions were more stringent than the applicable legal restraints on the source's operations under the state implementation plan, EPA determined that they must be made
(continued...)

unanticipated increases in utilization above the level projected by the source may still occur, and may result in an increase in actual emissions above the pre-modification baseline level, NSR would not apply. EPA does not expect that unanticipated utilization increases will be a major problem, because future utilization projections are common and subject to public scrutiny in the utility industry. Such is not the case in other industries, however. For this reason, EPA does not at this time propose to extend use of the actual to actual methodology to other industries.

Pending adoption of this proposal, EPA will continue to follow WEPCO and apply the actual to future actual methodology to "like-kind" utility modifications. EPA views a "like-kind" replacement²¹ as the non-routine replacement²² of a component of an electric utility emissions unit with a functionally equivalent component. A replacement component does not have to be identical or of the same design as the component it replaces, but it must be functionally equivalent in the sense that it serves the same

²¹(...continued)
federally enforceable (in that case, through a state-issued minor source construction permit under 40 CFR 51.160-164) to be considered for NSR applicability purposes. Today's proposal and interpretation retains this approach.

²² "Routine maintenance, repair and replacement" is already excluded from the modification test. See 40 CFR 52.21(b)(2)iii)(a). EPA plans to provide additional guidance on this exclusion by November 1992.

purpose. In addition, a "like-kind" replacement cannot alter the original design capacity, increase potential emissions or fundamentally alter the method of operation of the source. The change also cannot consist of a replacement or reconstruction of the emissions unit in its entirety.

C. The Causation Requirement

The NSR regulatory provisions require that the physical or operational change "result in" an increase in actual emissions in order to consider that change to be a modification. See e.g. 40 CFR 52.21(2)(i). In other words, NSR will not apply unless EPA finds that there is a causal link between the proposed change and any post-change increase in emissions. EPA today proposes to amend its rules to clarify this longstanding interpretation in the context of modifications at electric utility steam generating units.

Under these proposed regulations, any emissions increase attributable to a physical or operational change must continue to be included in the post-change emissions calculation. Conversely, today's proposal codifies EPA's interpretation of the current regulations which provides that where increased operations are in response to independent factors, such as system-wide demand growth, which would have occurred and impacted on the unit's operations even in the absence of the physical or operational change, such increases do not result from the change and shall be excluded from the projection of future actual

emissions. Thus, in assessing whether the proposed change will result in an increase in actual emissions, utilities need not include in their projection of post-change utilization that portion of the increased rate of utilization, if any, due to factors unrelated to the physical or operation change, such as an increase in projected capacity utilization attributable to the rate of electricity demand growth for the utility system (of which that source is a member) as a whole.

Under this proposal, during a representative baseline period (see supra), the plant must have been able to accommodate the projected demand growth physically and legally even absent the particular change. Increased operations that ~~could not~~^{could} physically and legally be accommodated ~~but for~~^{without} the proposed physical or operational change ~~should~~^{would} be considered causally linked to the projected increase in actual emissions.

In addition, the utility generally must still take into account physical or operational changes which significantly alter the efficiency of the plant. See Puerto Rican Cement, 889 F.2d at 297-8. Specifically, if the change results in (a) removing bottlenecks, an outright increase in capacity or reliability, or (b) less expensive power production, which leads to greater dispatching, then the portion of capacity utilization attributable to these results from the change should be included in calculation of emissions increases.

D. Repowering

As previously mentioned, Title IV of the 1990 Amendments grants special treatment to utilities that seek to comply with the mandated acid rain reductions by repowering a unit with qualifying clean coal technology. 1990 Amendments §§ 402(12), 409(a). Specifically, repowering projects that qualify for a Phase II compliance extension will also be exempt from NSPS requirements, so long as the repowering "does not increase actual hourly emissions for any pollutant regulated under the Act." § 409(d). The EPA interprets the requirement that the repowering not lead to an increase in "actual hourly emissions" as an expression of Congressional intent that with respect to repowering projects, EPA should use the same general approach to determining applicability as it has for other physical or operational changes, discussed above. Accordingly, EPA today proposes rules that provide that a repowering project which results in an increase over baseline in a unit's post-modification hourly emissions will not be eligible for this limited NSPS exemption.

The proposed NSPS exemption applies to repowering of existing units at existing sources, so long as the project qualifies for the Phase II extension and satisfies the "actual hourly emissions" increase test. Because of this provision, the reconstruction limitations specified in 40 CFR 60.15 are not applicable to qualifying repowering projects. However, no special treatment can be afforded to a new unit which is located

at a different site than the existing unit it replaces. See CAA § 409(d).

Pursuant to section 409(e), EPA will provide expedited NSR processing for repowering projects and will encourage State permitting authorities to do the same.

E. Clean Coal Technology Demonstration Projects

Today's notice also proposes rules implementing the new CCT exemption created by the 1990 Amendments. For the purposes of this proposal, temporary CCT demonstration projects are defined as those CCT demonstration projects lasting five years or less. Title IV gives these projects an exemption from NSPS, PSD and nonattainment requirements. Id., § 415(b)(2). However, the facility would still be subject to any applicable SIP and must comply with any other requirements necessary to attain and maintain NAAQS. This ruling proposes to implement this provision and clarifies that EPA considers the five year period as starting on the date of startup (as defined in 40 CFR 60.2). A temporary demonstration project may be converted to a permanent status at any time, provided it meets all the requirements that apply to a permanent CCT project criteria at the time of conversion.

Further, EPA proposes that at the end of a temporary project, the facility must be returned to pre-demonstration conditions and hourly emission rates (or lower). The return of the facility to its pre-demonstration physical and operational condition would not result in the loss of the actual emissions

margin between pre-demonstration actual emissions rate and SIP-allowable emissions rates for that facility. Rather, the facility would be treated as if the temporary demonstration project had never occurred.²³

This proposal does not extend to emissions increases that are unrelated to the conduct of temporary demonstration projects. EPA considers emissions increases (above the pre-demonstration levels) that are attributable to physical or operational changes, other than those necessary to restore that unit to its pre-demonstration condition, to be beyond the scope of the Congressional exemption.

Today's action also proposes to implement an exemption from NSPS and PSD requirements for repowering projects which are awarded funding from the DOE as permanent CCT demonstration projects (or similar projects funded by EPA) so long as potential emissions (see 52.21(b)(4)) from the unit do not increase as a result of the project. § 415(b)(3). However, these projects must still comply with the nonattainment provisions of Title I of the Act.

²³ This would be the case even if there were small differences in the post-demonstration physical and operational conditions due to a technical inability to restore the unit to its precise pre-demonstration condition, or due to normal variability in the coal used. Thus, EPA would not seek to apply NSPS or NSR because of a post-demonstration emissions increase attributable solely to an increase in the hours of operation or production rate of the unit (subject to the NSPS limitation that the production rate increase must be accomplished without a capital expenditure).

Finally, today's proposal would implement the statutory exemptions in section 415(c). In that section, Congress provided an exemption from NSPS and PSD for the reactivation of "very clean units" otherwise in compliance with the Act that had been shut down for at least the two years prior to enactment of the 1990 Amendments and that, prior to the shutdown, had been equipped with pollution controls with a removal efficiency of at least 85 percent for sulfur dioxide and 98 percent for particulates, and had been equipped with low-NOx burners. This exemption appears to have been tailored to a specific plant, and is not expected to have widespread applicability.

Because these proposed rules merely implement straightforward statutory exemptions that were immediately effective upon passage of the 1990 Amendments, EPA intends, as a matter of statutory interpretation, to follow the policies set forth in today's proposal pending final action.

F. Calculation of NSPS Baseline

As discussed in section II of this notice, "any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies" is a modification for NSPS applicability purposes See 40 CFR § 60.14(a). The NSPS regulations implementing this general definition focus on increases in hourly emissions, expressed in kilograms of pollutant discharged per hour. To determine if an increase in hourly emissions has occurred at a unit, a pre-change baseline must be established. Under current regulations, the emissions rate before and after a physical or operational change is evaluated at each unit by comparing the current hourly potential emissions at maximum operating capacity to hourly emissions at maximum capacity after the change. In this calculation, the reviewing authority disregards the unit's maximum design capacity.²⁴ The original design capacity of a unit, to the extent it differs from actual maximum capacity at the time that the baseline is established due to physical deterioration of the facility, is immaterial to this calculation.

²⁴ See 39 Fed. Reg. 36,948 col. 1 (proposed rule). In WEPCO, the utility contended that baseline capacity for the purpose of determining whether an increase in emission rate occurs for purposes of an NSPS modification is the original design capacity of the facility. However, the court rejected WEPCO's argument that original design capacity or past "representative" capacity, no longer achievable at the plant, could be used for the baseline emissions rate.

Today EPA is proposing that, for an existing electric utility steam generating unit, the pre-change baseline for NSPS applicability purposes shall be calculated using the highest hourly emissions rate achievable at any time during the 5 years prior to the change. This proposal retains the key concept in existing regulations that the baseline be determined during a period that is roughly contemporaneous with the proposed change at the affected facility. EPA believes that this proposed revision, while modest, is still necessary to avoid the current regulation's undue emphasis on the physical condition of the affected facility immediately prior to the change. Today's more flexible provision enables units to establish a baseline that is representative of its physical and operational capacity in recent years, while still precluding the use of a baseline tied to original design capacity, which as noted above may bear no relationship to the facility's capacity in recent years.

Without this revision, the NSPS regulations may unduly burden utilities undertaking physical or operational changes in conjunction with the acid rain program. For instance, if a unit has broken down and is in need of repairs, the utility's baseline will be artificially low. The proposed change will allow utilities to demonstrate that an earlier, higher capacity was more representative of the unit's maximum hourly emissions rate.

G. Utility BACT Presumption for NO_x

In today's notice, EPA proposes to adopt a presumption that, in the case of PSD permits issued by EPA under 40 CFR 52.21, best available control technology (BACT) for emissions of nitrogen oxides from existing coal-fired electric utility steam generating units undergoing a modification is the technology required under section 407 of the Clean Air Act. In general, this will call for the use of combustion modification and/or low-NO_x burners or similar, cost-effective technologies by those utilities required to obtain PSD permits for NO_x emissions following final action on today's proposal.

In brief, section 407 requires most utility units subject to phase I and phase II to meet NO_x emission limitations on the same date as the phase I or phase II SO₂ emission limitations become effective. The Administrator must establish annual emission limitations (based on rates listed in the section) for tangentially-fixed boilers and dry bottom wall-fired boilers within 18 months of enactment. These limitations must be achievable with low-NO_x burner technology. CAA § 407(b)(1). The Administrator must promulgate annual emission limitations for all other boilers by January 1, 1997, based on a "best system of continuous emission reduction . . . which is comparable to the cost of" low-NO_x burners. By the same date, the Administrator may make the rates for boiler types identified in section

407(b)(1) more stringent if more effective low-NOx burner technology is available. CAA § 407(b)(2).

Low-NOx burners are commercially available and can be retrofitted on many boiler types, providing a high degree of emissions reduction at relatively low costs. Depending on boiler type, low-NOx burners can reduce emissions of NOx by approximately 20 to 60 percent. Again depending on boiler type and other factors, the cost of replacing conventional burners with these controls is in the range of \$8.00 to \$16.00 per kilowatt hour.

Other NOx control technologies that are available and can be retrofitted for use on coal-fired electric utility units can provide a much greater degree of emissions reductions. These include selective noncatalytic reduction (SNCR or "thermal de-NOx") and selective catalytic reduction (SCR). (In addition, DOE has funded two new technologies under its CCT demonstration program which are designed for the simultaneous removal of SO₂, NOx and particulate matter that may become commercially "available" in the future.)²⁵ However, SNR and SNCR are not in widespread use in this country as retrofit technologies for coal-fired boilers, and the DOE sponsored projects have not yet been demonstrated. Although the cost of these alternative

²⁵ One technology -- low NOx/SOx Burner Retrofit -- is designed specifically for cyclone boilers which cannot be retrofit with low NOx burners while the other -- the Advanced Slagging Combustor -- is applicable to a number of boiler types.

technologies is not unreasonable per se, their cost-effectiveness is much less than that obtainable using low-NOx burners, especially when considered in the context of retrofitting existing units.

EPA has in the past issued guidance documents effectively creating presumptions that certain technologies constituted BACT for certain source categories. See Memorandum, Operation Guidance on Control Technology for New and Modified Municipal Waste Combustors, from Gerald A. Emison, Director, Office of Air Quality Planning and Standards, EPA, June 26, 1987, p. 5. EPA believes it is appropriate to propose to do so here as well in the case of low-NOx burners for modified coal-fired utility boilers in light of the strong congressional policy judgment favoring use of that technology for acid rain control reflected in section 407.

Section 169(3) of the Act, 42 U.S.C. 7479(3) defines BACT as:

an emissions limitation based on the maximum degree of reduction of each pollutant subject to regulation under the Clean Air Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of "best available control technology" result in emissions of any

pollutants which will exceed the emissions allowed by an applicable standard established pursuant to section 7411 or 7412 of this title. Emissions from any source utilizing clean fuels, or any other means, to comply with this paragraph shall not be allowed to increase above levels that would have been required under this paragraph as it existed prior to enactment of the Clean Air Act Amendments of 1990.

The BACT provision reflects congressional intent both to create a procedural methodology that would provide a mechanism for stimulating the widespread use of effective pollution control technologies, and to grant permitting authorities broad discretion to weigh the statutory factors as they see fit in reaching a final substantive determination on BACT.²⁶

EPA believes that today's proposed presumption is consistent with this Congressional intent because it does not purport to relieve the permitting authority of the obligation to consider available technologies that would provide a greater degree of control of NOx emissions than can be obtained using low-NOx burners. Rather, it reflects an exercise of policy judgment by EPA where it is the permitting authority that in most cases a BACT analysis of currently demonstrated technologies for retrofitting existing utility boilers would lead to the selection of low NOx burners and/or combustion modifications identified in section 407(b)(1).

²⁶ See S. Rep. No. 95-217, 95th Cong., 1st. Sess. 31 (1977); Statement of Senator Muskie, 123 Cong. Rec. 59171 (June 8, 1977).

Although EPA has authority under the present regulations to create this presumption regarding BACT for NOx, EPA is soliciting comment prior to adopting such a presumption in order to obtain the views of the public on the policy conclusions discussed above.

This proposed presumption would not apply in States with PSD programs that have been incorporated into state implementation plans under regulations promulgated at 40 CFR 51.166. However, such States are encouraged to adopt this presumption as a matter of state policy.

H. Applicability Determinations

In most instances, source owners or operators are able to readily ascertain whether new source review requirements apply to them. Consequently, in administering these requirements, EPA does not require sources to obtain a formal applicability determination before proceeding with construction. In keeping with that practice, EPA will not require utilities to seek applicability determinations under either the revised regulations proposed today or the interpretations of existing regulations contained in this preamble. Utilities in most cases can readily ascertain how this notice will affect them. EPA anticipates, however, that questions will arise regarding certain aspects of this proposal. Because some instances involve discrete judgments, utilities may wish to obtain determinations of applicability. EPA will provide such determinations upon

request. Such requests should be submitted together with appropriate documentation to the appropriate permitting authority.

IV. ADMINISTRATIVE REQUIREMENTS

A. Docket

A docket has been established for this action under section 307(d)(1)(I) and (N) of the Clean Air Act, 42 U.S.C. 7607(d)(1)(I) and (N). The docket is an organized and complete file of all information considered in the development of this ruling. The docket is intended to allow the public to identify and locate documents related to this ruling. The docket number for this ruling is A-90-06.

B. Paperwork Reduction Act

No additional public reporting burden will result from this ruling. All information collection requirements of the Federal NSR and NSPS regulations have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501, et. seq., and have been assigned OMB control numbers 2060-0003 for NSR, and 2060-0023, 2060-0026 and 2060-0072 for NSPS. The effect of this rule would be a reduction in paperwork related to complying with NSR and NSPS requirements, since this ruling provides additional clarification as to modifications that may be excluded from these requirements.

C. OMB Review

Under Executive Order 12291 (E.O. 12291), EPA must judge whether a rule is "major" and therefore subject to the requirement of a regulatory impact analysis. This ruling is not a major rule, because it will not result in an adverse economic effect set forth in section 1 of E.O. 12291 as grounds for finding an action to be major. This ruling was submitted to the OMB for review as required by E.O. 12291. Any written comments from OMB to EPA and any EPA response to those comments are included in Docket A-90-06.

D. Effective Date

Section 4(d) of the Administrative Procedures Act (APA), 5 U.S.C. 553(d), requires a 30-day waiting period before making a substantive rule effective. Since the regulatory revisions being proposed today are considered substantive, they are subject to the notice-and-comment requirements of the APA and will become effective only after public comments have been received and considered, and final action has been taken. The portions of this notice that merely interpret existing regulations are effective immediately.

E. Regulatory Flexibility Act

This action is not subject to the certification provisions of section 605(b) of the Regulatory Flexibility Act (RFA) because this rule will result in a reduction of administrative costs and no increase in control costs, therefore having no significant impact on industry.

List of Subjects

40 CFR Part 51

Administrative procedure and practices, intergovernmental relations, air pollution control, NSR, CCT demonstrations, sulfur oxides, nitrogen dioxide, particulate matter, carbon monoxide, hydrocarbons, lead.

40 CFR Part 52

Air pollution control, NSR, CCT demonstrations, sulfur oxides, particulate matter, nitrogen dioxide, carbon monoxide, hydrocarbons, lead.

40 CFR Part 60

Air pollution control, NSPS, CCT demonstrations, sulfur oxides, particulate matter, nitrogen dioxide, carbon monoxide, hydrocarbons, lead.

Dated: June 3, 1991

William K. Reilly,

Administrator

X

WEPCO LEGISLATIVE RULE DRAFT
MAY 28, 1991

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 52, and 60

[FRL -----]

Requirements for Preparation, Adoption,
and Submittal of Implementation Plans;
Approval and Promulgation of
Implementation Plans; Standards of
Performance for New Stationary Sources.

AGENCY: Environmental Protection Agency.

ACTION: Notice of Proposed Rule

SUMMARY: The applicability of the new source requirements of Title I of the Clean Air Act to physical or operational changes at electric utility generating units is an issue of considerable concern and controversy at this time. The utility industry, because it is a primary source of sulfur dioxide emissions, must carry the full economic burden of reducing emissions linked to acid rain. Many utilities will be undertaking major pollution control projects at their units in the next few years. At the same time, the applicability of existing new source regulations to modifications has been the source of two recent federal appellate decisions, Wisconsin Electric Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990), and Puerto Rican Cement Co. v. EPA, 889 F.2d 292 (1st Cir. 1989). As a result, EPA is today proposing clarifying amendments to these regulations and confirming its current interpretations of some of these provisions as they apply to utility projects pending adoption of the proposed amendments.

EPA today proposes to adopt a broad new source review ("NSR") exclusion for utility ~~modifications that constitute~~ pollution control projects and, until these proposed regulations are adopted in final form, to adhere to its interpretation that its existing new source regulations already exclude coverage of most pollution control projects at existing electric utilities. Similarly, EPA today proposes to adopt an "actual, to future actual" methodology for determining whether all other physical or operational changes at utilities (other than the replacement of a unit or addition of a new unit) are subject to new source review under either PSD or nonattainment provisions and to maintain in the interim its interpretation that this methodology can be applied where the unit has "begun normal operations." For those utility projects which undergo PSD new source review, today's notice proposes a presumption that for EPA-issued permits, "low-NOx burners" can satisfy the best available control technology (BACT) requirements.

In addition, EPA also proposes to modify its regulations implementing the modification provisions of the Title I new source performance standards (NSPS) program to provide that a utility may use for its pre-change baseline the highest hourly emissions rate achievable at any time during the five years prior to the modification. EPA also proposes to modify its regulations to reflect changes made by Congress in the 1990 Amendments to the

change.

applicability of new source requirements to Clean Coal Technology (CCT) and repowering projects, and to "very clean" units.

DATES: Comments. Comments on the revisions proposed today must be received on or before _____ (60 days after publication in the Federal Register).

Public Hearing. A public hearing is scheduled for 10:00 a.m., July __, 1991, at the U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. The hearing may be canceled if no speakers have requested time to present their comments 15 days prior to the scheduled hearing date. Written comments in lieu of testimony are encouraged.

ADDRESSES: Supporting information used in developing this proposed rule is contained in docket A-90-06. This docket is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., weekdays at EPA's Air Docket (LE-131), Room M-1500, 401 M Street S.W., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Chebryll Edwards, New Source Review Section (MD-15), Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, (919) 541-2343.

SUPPLEMENTARY INFORMATION:

I. INTRODUCTION

EPA today proposes to amend its regulations implementing the various Title I new source requirements and also announces certain interim interpretations of these provisions as applied to

EPA proposes to amend the definition of "major modification" in 40 CFR Parts 51 and 52 to set forth the conditions under which the addition, replacement or use at existing electric utility generating units of any system or device whose primary function is the reduction of air pollutants (including the switching to a less polluting fuel where the primary purpose of the switch is the reduction of air pollutants) will or will not subject the source to preconstruction review. Specifically, EPA proposes in PSD and nonattainment areas to adopt a regulatory exclusion explicitly codifying its interpretation under existing regulations that pollution control projects ~~which are not~~ *environmentally beneficial* are not "physical or operational changes," and hence, not "major modifications" for NSR purposes.

1 The proposed regulations define electric utility steam generating units as any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW of electrical output to any utility power distribution system for sale. See, e.g., proposed 40 CFR 51.165(xx).

unless, in the case where controls are removed or replaced the new controls are

than the
old
controls.

10. Members 11

52)² as they apply to utilities to (1) clarify the NSR baseline for determining whether a proposed physical or operational change will subject a utility to the preconstruction review requirements of these provisions; (2) codify an actual to future actual methodology for determining whether a physical or operational change is subject to NSR; (3) provide further clarification of the existing regulatory requirement that only those increases in emissions that actually result from the physical change or change in the method of operation can be considered in determining whether the proposed change subjects the utility to NSR requirements; and (4) implement sections 409 and 415 of Title IV of the Clean Air Act Amendments of 1990 which create special NSPS treatment for certain repowering projects and limited NSR exemptions for temporary and permanent CCT projects, and for certain "very clean" units. Finally, EPA is also proposing to amend its NSPS regulations (40 CFR Part 60) to allow a utility to use as its pre-change baseline its highest hourly emissions rate achievable during the five years prior to the modification. To the extent the proposed amendments codify existing EPA interpretations, EPA will continue to administer its regulations in a manner consistent with these interpretations pending adoption of the regulations proposed today.

² For the purposes of this notice, references to "new source review" (or "NSR") refer to the preconstruction review requirements of both Part C (PSD) and Part D (nonattainment) of the Clean Air Act, unless otherwise indicated.

As a general matter, today's proposal is intended to conform to the Administration's legislative proposal on WEPCO.³ EPA had previously indicated that it would both issue an interpretative ruling and conduct legislative rulemaking through the notice-and-comment process to address the WEPCO matter. The passage of time has largely vitiated the usefulness of a separate interpretative ruling. Accordingly, EPA is proceeding with today's proposed regulatory revisions without issuing a prior interpretative ruling. However, portions of the preamble of today's proposal set forth EPA's present interpretation of the current regulations, and may be relied on as such pending final action on today's proposal.

The interpretations of current regulations set out in this notice are intended solely as guidance, do not represent final agency action, and are not ripe for judicial review. They are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. EPA officials may decide to follow these interpretations, or to act at variance with them, based on an analysis of specific

³ See letters dated July 23 and September 11, 1990 from Dr. Richard Schmalensee, Member, Council of Economic Advisors, to Senator Wendell H. Ford, Chairman, Subcommittee on Energy Research and Development, Committee on Energy and Natural Resources, and in testimony presented by Dr. Schmalensee to the Committee on May 8, 1990 and March 18, 1991.

circumstances. The Agency also may change these interpretations at any time without public notice.

EPA believes that each of the interpretations in questions represents a reasonable construction of existing regulations, for which no prior notice and opportunity for comment is required by law. See Clean Air Act section 307(d)(1), 42 U.S.C. 7607(d)(1) (Clean Air Act rulemaking procedure requirements incorporate the exemption from notice-and-comment requirements for interpretative rulings set forth in section 553(b)(A) of the Administrative Procedure Act, 5 U.S.C. 553(b)(A)). However, the Agency retains an open mind on these issues. Accordingly, EPA will pay close attention to the comments received in response to today's notice and may, upon further consideration, decide not to make the changes proposed, but instead retain the current regulations or adopt other changes emerging from the public comments or further consideration of the issues by EPA. This process may also result in revisions to the interpretations set forth in the preamble portion of this notice.

II. BACKGROUND

A. The New Source Performance Standards, Prevention of Significant Deterioration and Nonattainment Programs of Title I

Title I of the Clean Air Act has three programs specifically designed to ensure that no new air pollution -- whether from new sources or from modifications to existing sources -- can be emitted unless the source complies with new source requirements.

The 1970 Clean Air Act required EPA to promulgate technology-based new source performance standards applicable to the construction or modification of stationary sources that cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. Clean Air Act ("CAA") § 111(b)(1)(A), 42 U.S.C. 7411(b)(1)(A). The NSPS provisions were "designed to prevent new air pollution problems" by regulating newly-constructed sources and changes occurring at existing sources that result in emissions increases. See National Asphalt Pavement Assoc. v. Train, 539 F.2d 775, 783 (D.C. Cir. 1976); see also H.R. Rep. No. 1146, 91st Cong., 2d Sess. 3, reprinted in 1970 U.S. Code Cong. & Admin. News 5356, 5358. Congress defined 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." See CAA § 111(a)(4), 42 U.S.C. 7411(a)(4).

In 1977, Congress adopted additional amendments to the Clean Air Act. These changes included preconstruction permitting requirements for major new and modified sources under two programs, prevention of significant deterioration (PSD) and nonattainment new source review (respectively, Parts C and D of the Clean Air Act). Congress intended these programs to apply

~~where "industrial changes might increase pollution in an area."~~

~~Alabama Power Co. v. Costle, 636 F.2d 323, 400 (D.C. Cir. 1979).~~

The NSR program for PSD (CAA §§ 160-169) applies in attainment areas, i.e., those areas which have attained the national ambient air quality standards (NAAQS). To receive a PSD permit, a prospective major new source or major modification must (among other things) show that (1) it will not cause or contribute to a violation of the available air quality "increment" (designed to prevent ambient air quality from deteriorating by more than certain specified levels), (2) it will not cause or contribute to a violation of a NAAQS, and (3) it will use the best available control technology, which must be at least as stringent as any applicable NSPS or hazardous pollutant standard under section 112 of the Act.

Part D of the 1977 Amendments applies to nonattainment areas, i.e., those areas which have not met the NAAQS under section 109. To receive a permit in such areas, major new and modified sources must (among other things) (1) obtain emissions offsets, thereby assuring that reasonable progress toward attainment of the NAAQS will occur, and (2) comply with the "lowest achievable emission rate (LAER)." See CAA § 171-173.⁴

⁴ The 1970 Clean Air Act also included a rudimentary new source review program applicable to construction or modification of any stationary source. This provision is presently set forth in section 110(a)(2)(C). Briefly, it requires any new or modified source to demonstrate that it will not violate any NAAQS. See 40 CFR 51.160-164. Today's notice does not propose (continued...)

this is very imp.

B. The Two-Step Test for Modifications

The modification provisions of the NSPS and NSR programs are based on the ~~broad~~ NSPS definition of "modification" in section 111(a)(4) of the Act. That section contemplates a two-step test for determining whether activities at an existing facility constitute a modification subject to new source requirements. In the first step, which is largely the same for NSPS and NSR, the reviewing authority determines whether a physical or operational change will occur. If so, the reviewing authority proceeds in the second step to determine whether the physical or operational change will result in an emissions increase over baseline levels. In this second step, the applicable rules branch apart,

reflecting the fundamental distinctions between the ~~technology-based~~ ^{hourly emission} provisions of NSPS and the ~~air quality-based~~ ^{annual emission rate} provisions of NSR. _{rate focus} _{of CUS}

Briefly, the NSPS program examines maximum hourly emissions rates, expressed in kilograms per hour.⁵ Emissions increases

⁴ (...continued)
to change the scope of those regulations, which will apply to utility changes excluded from the major modification provisions of Parts C and D pursuant to today's proposal and the interpretations discussed herein.

⁵ An hourly emissions rate may be determined by a stack test or calculated from the product of the instantaneous emissions rate, i.e., the amount of pollution emitted by a source, after control, per unit of fuel combusted or material processed (such as pounds of sulfur dioxide emitted per ton of coal burned) times the production rate (such as tons of coal burned per hour). See section 60.14.

for NSPS purposes are determined by changes in the hourly emissions rates at maximum physical capacity. On the other hand, the NSR regulations examine total ^{annual} ~~actual~~ emissions. ~~to the~~

~~Atmosphere~~ For applicability determination purposes, emissions increases under NSR are determined by changes in annual emissions as expressed in tons per year (tpy).⁶

C. Step One: Physical or Operational Change

EPA has always recognized that the definition of physical or operational change in section 111(a)(4) could, standing alone, encompass the most mundane activities at an industrial facility (even the repair or replacement of a single leaky pipe, or a change in the way that pipe is utilized). However, EPA has always recognized that Congress obviously did not intend to make every activity at a source subject to new source requirements.

As a result, EPA has defined "modification" in the NSPS and NSR regulations to include common-sense exclusions from the "physical or operational change" component of the definition. ^{*} For example, both sets of regulations contain similar exclusions for routine maintenance, repair, and replacement; for increases in the hours of operation or in the production rate; and for

⁶ Annual emissions may be calculated as the product of the hourly emissions rate times the utilization rate, expressed as hours of operation per year, or as the product of an emissions factor (e.g., from Compilation of Air Pollutant Emission Factors, AP-42, 4th Ed. and subsequent supplements) in units of mass emitted per unit of process throughput times the annual throughput. See 40 CFR 52.21(b)(21).

* Insert SN on p. 13 of earlier draft.

certain types of fuel switches. See e.g., 52.21(b)(2)(iii) and 60.14(e). In addition, with respect to pollution control equipment, the NSPS regulations contain an exclusion for:

The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emissions control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

40 CFR 60.14(e)(5). As will be discussed, EPA has, through individual applicability determinations, followed a similar "environmentally beneficial" test in determining NSR applicability to pollution control projects.

D. Step Two: Emissions Increases for NSPS Applicability

EPA's NSPS regulations define the term "modification" as any "physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies." See 40 CFR 60.2 and 60.14. Under current NSPS regulations, emissions increases, for applicability purposes, are calculated by comparing the hourly emission rate, at maximum physical capacity, before and after the physical or operational change. That is, to determine whether a change to an existing facility will increase the emissions rate, the existing NSPS regulations authorize the use of an "emissions factor analysis," or a materials balance, continuous monitoring, or manual emissions test to evaluate emissions before and after the change. 40 CFR 60.14(b)(2).

Absent the exclusions from modifications specified at 40 CFR 60.14(e), any increase in emissions to the atmosphere over the previous emissions rate will subject the modification to NSPS. See 40 CFR 60.14(a) and (b). In addition, under the "reconstruction rules," physical or operational changes which would cost 50 percent or more of the total cost of a comparable new facility ^{may be} ~~are~~ classified as reconstructions (see 40 CFR 60.15) ^{that} ~~and~~ are subject to NSPS as a new source, even if there is no emissions increase.

E. Step Two: Emissions Increases Under NSR Requirements

1. Existing Regulations

EPA's regulations implementing the PSD and nonattainment programs require preconstruction review for sources undertaking a "major modification," i.e., a physical change or change in the method of operations "that would result in a significant net emissions increase of any pollutant subject to regulation under the Act." 40 CFR 52.21(b)(2)(i) and (3)(i); 52.24(f)(5).⁷ A "net emissions increase" is defined as the

⁷ The current PSD program is set forth in two sets of regulations. One of the regulations cited (40 CFR 52.21) is part of the federal PSD permit program which applies as part of a Federal implementation plan for States that have not submitted a PSD program meeting the regulatory requirements of 40 CFR 51.166 (standards for PSD provisions in State implementation plans). In most States where the federal requirements apply, EPA has delegated the authority to implement the PSD program back to the State. Roughly two-thirds of the States are implementing their own PSD program pursuant to an EPA-approved state implementation plan. Sections 52.21 and 51.166 have identical modification provisions.

(continued...)

increase in "actual emissions" from the particular physical or operational change together with any other "contemporaneous" increases or decreases in actual emissions. 40 CFR

52.21(b)(3)(i).⁸

Applicability of the Act's new source review provisions must be determined in advance of construction and is pollutant specific. In cases involving existing sources, this requires a pollutant-by-pollutant projection of the emissions increases, if any, that will result from the physical or operational change. Specifically, to determine whether a proposed physical or operational change will result in an emissions increase, the source must first determine a baseline level of actual emissions. The regulations define actual emissions on a particular date as "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

⁷(...continued)

EPA's regulations for nonattainment areas are set forth at 40 CFR § 51.165, 52.24 and in Part 51, Appendix S. These sections contain applicability provisions regarding modification that are largely identical to those in the PSD provisions.

⁸ Roughly speaking, "contemporaneous" emissions increases or decreases are those which have occurred between the date five years preceding the proposed physical or operational change and the date that the increase from the change occurs. 40 CFR 52.21(b)(3)(ii). Once a modification is determined to be major, the PSD requirements apply only to those specific pollutants for which there would be a significant net emissions increase. E.g., 40 CFR 52.21(j)(3) (best available control technology); 40 CFR 52.21(m)(1)(b) (air quality analysis).

operation." The Administrator "shall" allow use of a different time period "upon a determination that it is more representative of normal source operation." Id. EPA has typically used the two years immediately preceding the physical or operational change to establish the baseline. See 45 Fed. Reg. 52676, 52705, 52718 (1980). However, it can allow the use of an earlier two-year period that is more representative of normal source operations. For example, in WEPCO, EPA found the fourth and fifth years prior to the modification more representative of WEPCO's normal operations.

Because the applicability determination must be made in advance of construction, EPA's NSR regulations provide that when an emissions unit "has not begun normal operations," actual emissions equal the "potential to emit of the unit." 40 CFR 52.21(b)(21)(iv). This approach is referred to as the actual to potential methodology. This regulatory provision may be overcome -- and new source review will not apply -- if the source owner agrees, in a federally enforceable instrument -- not to increase its actual emissions above baseline levels. See e.g., 40 CFR 52.21(b)(4).

2. The WEPCO and Puerto Rican Cement Decisions

EPA's modification provisions have been the subject of two recent federal appellate decisions. Both decisions involved physical changes at existing units and addressed whether EPA's actual to potential methodology applied. In Puerto Rican Cement

Revise as on p. 17-18
(except drop last sentence
on p 18 -- the sentence beginning
"EPA interprets . . .")

from capacity increase

v. EPA, 889 F.2d 292 (1st Cir. 1989), the First Circuit found that where normal operations at a unit have not begun, it is permissible to use the actual to potential methodology. In the case, the owner of a cement plant sought to convert a "wet" cement kiln to a "dry" kiln and to combine that kiln with another kiln. 889 F.2d at 293. The modernized production facilities would be more efficient and thus would provide an economic incentive to increase utilization -- and actual emissions -- above baseline levels. See id. at 297. Since the company would not agree to limit its actual post-modification emissions to baseline levels, EPA argued that the kiln as modified had not begun normal operations and the Agency was required, pursuant to section 52.21(b)(21)(iv), to measure the plant's post-modification emissions by the plant's potential to emit. The petitioner argued that this reading of EPA's regulations was improper, arbitrary and contradicted by earlier EPA decisions. The court rejected all attacks and upheld EPA's methodology, pointing out, among other things, that in the preamble to its regulations, EPA had stated that the actual to potential methodology generally would apply to a "new or modified unit." Id. at 297 (citing 45 Fed. Reg. 52677).

In Wisconsin Elec. Power Co. v. Reilly, 893 F.2d 901 (7th Cir. 1990), the court reviewed EPA's determination that "life-extension" renovations planned for several older (35 to 50 years) electric utility boilers (specifically, repair and

replacement of turbine-generators, steam drums and other major components) brought the units within the PSD new source review provisions. As in Puerto Rican Cement, EPA contended that the units as modified had not begun "normal operations" and were thus subject to the actual to potential test. Since the company would not agree to limit its post-modification actual emissions to baseline levels, EPA found the plant subject to PSD. See WEPCO, 893 F.2d at 906.

The Seventh Circuit found that where normal operations at a unit have begun, it is impermissible to use the actual to potential methodology. The court then rejected EPA's use of the actual to potential test under the circumstances of that case. The court found instead that EPA's existing regulations do not support "EPA's decision [to] wholly disregard past operating conditions at the plant," in that case involving "like-kind replacement." Id. at 917, 918. On remand, EPA determined PSD applicability by comparing WEPCO's representative actual emissions for the baseline period to estimated future actual emissions based on all the available facts in the record.⁹ EPA continues to apply this approach to "like-kind" changes.

Today's proposed regulations would make this actual to future actual methodology available to all utilities undertaking

⁹ See letter from William G. Rosenberg, Assistant Administrator, EPA, to John Boston, President, WEPCO (June 18, 1990).

physical or operational changes other than the addition of a new unit or the replacement of an existing unit.

F. The Clean Air Act Amendments of 1990

1. New Source Review and the Acid Rain Provisions

The Clean Air Act Amendments of 1990 made numerous changes in the nonattainment provisions of the Clean Air Act and added a new title to address the problem of acid rain. The amendments attack nonattainment problems with a broad array of new requirements all designed to bring all areas of the country into attainment with the national ambient air quality standards for all pollutants. These requirements include traffic reduction strategies, use of alternative clean fuels, increased offset requirements for stationary sources, and changes in the threshold size of stationary sources subject to new source review. A principal theme of the legislation is the establishment of categories of nonattainment areas based on the severity of the pollution problem. The more severe the area, the more controls Congress required be imposed.

The Amendments also establish, in Title IV, a new control scheme for addressing the acid rain problem. The exclusive focus of this program is on utility power plant emissions of sulfur dioxide and nitrogen oxides. The 1990 Amendments require sulfur dioxide emissions from utilities to be reduced by approximately 10 million tons annually in two phases -- the first to take effect in 1995, the second in 2000. A total of 111 specific

plants are targeted in Phase I, and will be required to reduce their SO₂ emissions to a specified emissions rate. In Phase II, these plants and almost all others must reduce their SO₂ emissions to an even lower emissions rate. This reduction program is to be implemented through a new market-based system under which power plants are to be allocated SO₂ "emissions allowances" that will require plants to reduce their emissions or acquire allowances from others to achieve compliance.

Because of these requirements, many of the plants subject to Phase I controls must make compliance decisions within the next year in order to assure that the complicated control equipment that may be necessary to meet Phase I standards is in place by the 1995 deadline. While Congress did not suspend any Title I requirements for this work, the massive industry-wide undertakings of pollution control projects warrants a clarification of the new source review requirements of Title I. In particular, NSR provisions should not inadvertently bias a utility towards or against any means of complying with the acid rain provisions. EPA believes the amendments proposed today and the clarification of its current interpretations of its present NSR regulations provide adequate assurances that utilities can undertake Title IV pollution control projects without uncertainty as to the applicability of the various Title I new source requirements.

Finally, aside from provisions addressing utility repowering and CCT projects, the 1990 Amendments made no significant changes in the new source review and NSPS modification provisions. While Congress considered several amendments which would have addressed industry concerns relating to the WEPCO and Puerto Rican Cement cases, only the CCT and repowering proposals were included in the final version of the Act. Instead, the Conference Committee provided the following guidance to EPA in its Joint Explanatory Statement:

"[T]he deletion of most provisions relating to the WEPCO decision is not intended to affect or prejudice in any way the issues or resolution of the WEPCO matter. At the same time, the conferees urge a quick resolution of the WEPCO matter by EPA as appropriate."

Conference Comm., Joint Explanatory Statement of the Committee of the Conference to Accompany S. 1630, Rep. 101-952, 101st. Cong., 2nd Sess. (1990) pp. 344-45.

2. Repowering and CCT Projects

In Title IV of the 1990 Amendments, which creates the acid rain program, Congress did make changes in the applicability of new source requirements to changes involving repowering and CCT projects.

Section 409 grants an extension of the acid rain controls deadline to sources that seek to comply with the acid rain reductions by repowering a unit with qualifying clean coal technology. Section 402(12) defines repowering as:

[The] replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of the date of enactment of the Clean Air Act Amendments of 1990. Notwithstanding the provisions of §409(a), for the purpose of this title, the term 'repowering' shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

See CAA, §§ 402(12) and 409(a).

Congress provided that repowering projects that qualify for a Phase II compliance extension would also be exempt from NSPS requirements, so long as the repowering "does not increase actual hourly emissions for any pollutant regulated under the Act." See CAA, § 409(d). An operator can qualify for the 3-year extension of the Phase II emissions limitation by demonstrating (by December 31, 1997) to the permitting authority that one or more units will be repowered with a qualifying clean coal technology to meet the Title IV restrictions. The operator must provide, no later than January 1, 2000, additional documentation of the repowering project including a preliminary design and engineering

effort for the project and a binding contract for the majority of the equipment needed, as well as any additional information the reviewing authority requires.

Today's proposal also implements an exemption from new source requirements for CCT demonstration projects created by Congress in section 415 of Title IV of the 1990 Amendments. In these provisions, CCT is defined as any technology not in widespread use on the date of enactment that achieves significant reductions in SO₂ or nitrogen oxides (NO_x) emissions associated with burning coal in the generation of electricity, process steam, or industrial products. See § 415(a). A CCT "demonstration project" is a project funded under DOE's CCT program or a similar project funded by EPA.¹⁰

Repowering projects that are awarded funding from the Department of Energy (DOE) as permanent CCT demonstration projects (or similar projects funded by EPA) are exempt from NSPS and PSD requirements so long as potential emissions (see 52.21(b)(4)) from the unit do not increase as a result of the project. Id. § 415(b). These funded projects may still be required to comply with the nonattainment NSR provisions of Title

¹⁰ Section 415(b)(1) defines a CCT project as a project "using funds appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the EPA."

I of the Act, unless they are excluded as pollution control projects.

The installation, operation, cessation, or removal of a temporary CCT demonstration project that is operated for 5 years or less is exempt from NSPS and both PSD and nonattainment new source requirements. See § 415(b)(2). However, the facility still must comply with the applicable SIP and other requirements necessary to attain and maintain the NAAQS.

Finally, in section 415(c), Congress provided an exemption from NSPS and PSD for the reactivation of "very clean units" otherwise in compliance with the Act that had been shut down for at least the two years prior to enactment of the 1990 Amendments and that, prior to the shutdown, had been equipped with pollution controls with a removal efficiency of at least 85 percent for sulfur dioxide and 98 percent for particulates, and had been equipped with low-NOx burners.

III. DISCUSSION

A. Pollution Control Projects

1. Proposed Regulatory Changes for Pollution Control Projects

EPA proposes to amend its PSD and nonattainment regulations as they pertain to utility changes that constitute pollution control projects by codifying the Agency's current interpretation that such projects are not subject to NSR when they are ^{not less} environmentally beneficial ^{than the control system}. In many instances, it is clear that pollution control projects at existing stationary

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sources are not major modifications subject to new source review requirements for the simple reason that they do not result in an increase in actual emissions. In addition, EPA has always recognized that Congress did not intend that every activity at an existing facility be considered a physical or operational change for purposes of the new source requirements of the PSD program.¹¹ Also, as has been discussed, the new acid rain provisions will require most electric utilities to undertake pollution control projects within the next few years and their decisions regarding the a pollution control strategy for Phase I of the acid rain program will be made within the next year. At the same time, based on the WEPCO decision, utilities are concerned that EPA will subject pollution control projects to an N.S.R. ~~actual-to-potential evaluation. In fact, EPA has refrained from applying the actual-to-potential methodology to several recent pollution control projects.~~¹²

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¹¹ For instance, EPA has specifically recognized that routine maintenance, repair and replacement, and changes in hours of operation or in the production rate are not considered a physical change or change in the method of operation. See 40 CFR 52.21(b)(2)(iii).

¹² See, e.g., letters from David Kee, Director, Air and Radiation Division, EPA, Region V, to Timothy J. Method, Assistant Commissioner, Indiana Department of Environmental Management (January 30, 1990 and March 8, 1990).

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To provide utilities with additional certainty, EPA is today proposing to adopt revisions to its PSD and nonattainment regulations for the addition, replacement or use at an existing electric utility steam generating unit of any system or device whose primary function is the reduction of air pollutants (including the switching to a less-polluting fuel where the primary purpose of the switch is the reduction of air pollutants). Under today's proposal, a utility pollution control project will not be treated as a modification so long as the change is ^{not less} environmentally beneficial ^{than the system} ¹³

As indicated above, the key to this addition to the list of exclusions from the terms physical or operational change is EPA's judgment that Congress did not intend that pollution control projects be considered the type of activity that could trigger new source review. Rather, the clear focus of the Act's new source requirements are, as they relate to modifications, physical or operational changes to pollution generating equipment.

As discussed in greater detail in a subsequent section, EPA's position in this regard is reflected in the existing

¹³ In general, EPA will consider a pollution control project to be environmentally beneficial so long as, in nonattainment areas, it does not result in a significant net increase in representative actual annual emissions of any criteria pollutant and, in attainment areas, it does not result in an increase in the potential hourly emissions of a regulated pollutant. However, EPA will apply these guidelines with flexibility and will deviate from them where the merits of an individual proposed pollution control project so warrant.

~~includes a safety valve~~ ^{applies} ~~where~~ ^{is} ~~a new system~~ ^{less}

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regulatory exclusion for pollution control activities under NSPS regulations, and in several case-specific nonapplicability determinations under the new source review programs. However, despite the Agency's view that by their nature pollution control projects in general are not within the ambit of new source requirements, EPA's pronouncements recognize the need for a safety valve in the form of some consideration of the environmental impacts of any pollution control exclusion. The

NSPS regulatory exclusion ~~employs an environmentally beneficial~~ ^{than the one it replaces} test to determine its scope. See 40 CFR 60.15(e)(5). With

respect to new source review, EPA has also considered whether a pollution control project would be ^{less} "environmentally beneficial,"

and today's proposal would codify that practice by adopting a regulatory exclusion that tracks the NSPS exclusion. ~~The major~~

~~difference in the NSR exclusion is that it would (consistent with EPA's practice under NSR) apply the environmentally beneficial~~

~~test to the addition, as well as the replacement, of a pollution control device, because there may be circumstances in which such~~

~~additions are not environmentally beneficial.~~ ^{less} EPA solicits

~~comment on whether the NSPS exclusion should be amended at the time of final action on today's proposal to apply an environmentally beneficial test to additions also.~~

For the purposes of this proposal, a pollution control project ^{refers to a project undertaken} is defined as any physical change or change in the method of operation at a utility unit for purposes of reducing emissions

^{then excludes from def. of "physical change"}

as a "physical change"

NSPS doesn't use to implement

change

from such unit in order to comply with Title IV of the 1990 Amendments. These ~~changes~~ ^{projects ~~also~~ involve} are limited to the installation of conventional or innovative emissions control equipment, including, but not limited to, installation of conventional and advanced flue gas desulfurization, sorbent injection for SO₂ and NOx controls and electrostatic precipitators. ~~Physical changes~~ ^{Any} activity that is necessary ~~for changes in the method of operation,~~ to accommodate switching to fuel with a lower sulfur content, including natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling SO₂ and NOx emissions shall also constitute a "pollution control project."

Any activity that is necessary to accommodate switching to a less polluting fuel is considered to be part of the pollution control project. In some instances, this may involve physical changes to the pollution generating equipment (e.g., boiler), but only if the changes are necessary to maintain the normal operating capability of the unit at the time of the ~~modification~~ ^{project} where the capability would otherwise be impaired as a result of the fuel switch. For example, an electric utility steam generating unit that switches from a higher sulfur bituminous coal to a low-sulfur subbituminous coal may need to make certain changes to the boiler in order to avoid derating the unit.

Changes that are intended primarily to restore original capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for

purposes of this proposal. Such changes are addressed elsewhere in this proposal. Also, the source still must comply with all applicable SIP limits and requirements, permit conditions and applicable NAAQS or PSD increment limits.

As proposed, this pollution control project proposal will not extend to source categories other than electric utility steam generating units. EPA has so limited this provision for several reasons. First, in contrast with a general lack of experience with other industries, EPA has extensive experience in addressing new source applicability issues regarding pollution control projects in the utility industry. That experience has led EPA to conclude in numerous individual cases that pollution control projects in the utility industry are generally environmentally beneficial. In addition, the acid rain provisions of Title IV of the Clean Air Act Amendments of 1990 place a unique burden upon the utility industry to undertake pollution control projects in the near future.

2. Additional Modeling Requirements

A proposed pollution control project ~~or physical or~~ ~~operational~~ change cannot result in an emissions increase that will cause or contribute to a violation of a national ambient air quality standard, PSD increment, or visibility limitation. See CAA §§ 110(a)(2)(c), 165, 169A(b), 173. Nothing in today's notice is intended to authorize any significant net increase in emissions that would have this proscribed impact. It is possible

that a pollution control project, while not causing any increase in maximum hourly emissions, will cause a significant net increase in actual emissions, which in turn could threaten a NAAQS, increment or visibility limitation. For this reason, under today's proposal, the reviewing authority may require a source to perform an air quality impact analysis (modeling) whenever it appears that a proposed change will result in a significant net increase in actual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis. If this modeling indicates that this increase in emissions will cause or contribute to a violation of any ambient standard, PSD increment or visibility violation, the pollution control exclusion does not apply.

3. EPA's Existing Interpretation Regarding Pollution Control Projects

As noted above, it is often clear that pollution control projects at existing stationary sources are not major modifications subject to new source review because they do not result in an increase in actual emissions. In addition, EPA believes that, in general, pollution control projects were not intended by Congress to be considered physical or operational changes for purposes of the new source requirements of the PSD program.

Finally, EPA believes that, ~~as stated~~ in reference to the section 111 definition of recent years issued numerous nonapplicability determinations and ~~modification intended that~~ "no action" letters to utility sources based on a finding that the NSPS exclusions contained in EPA's environmentally beneficial pollution control projects are not the

NSPS rules ~~were to be included~~

~~to~~ apply to the NSR rules. 43 Fed. Reg. 26396 col. 3 (June 19, 1978).

Reg. 26396 col. 3 (June 19, 1978).

in the NSR provisions of the Act, Congress

Finally, EPA's interpretation of ~~the~~ NSR modification requirements

in part based on the fact that the PSD definition of modification simply adopts the NSPS definition in section 111(a)(4). In addition, the legislative history reflects that, as a general matter, Congress intended to conform the meaning of

"modification" for PSD purposes to usage under the NSPS program.

(See 123 Cong. Rec. H11957 (November 1, 1977).)

~~the Director of OAQPS issued an applicability determination which reflected that the NSPS pollution control language may be incorporated wholesale in the new source review context, largely because of the ambient air quality determinations have relied on component of new source review that is absent from the NSPS program.~~ ^{Subsequently, EPA has since} ~~However, as noted above, many of the recent EPA announcements assessing pollution control projects have been based on a finding that the proposed project would be environmentally beneficial.~~ ^{the NSPS} ~~In light of the Title IV requirements and other provisions of the Clean Air Act Amendments of 1990, EPA is today formally adopting the "environmentally exclusion for~~ ^{NSPS} ~~beneficial" test for new source review applicability to pollution~~

control projects on an interim basis pending final action on the proposed regulatory exclusion for pollution control projects.

Today's "environmentally beneficial" approach addresses the concerns expressed in the 1986 Emison Memorandum. First, EPA is not simply reading in to the new source review regulations the

¹⁶ See, e.g., Memorandum from Gerald A. Emison, Director, OAQPS, to Regional Division Directors (July 7, 1986) ("Emison Memorandum").

¹⁷ See supra note 14.

noting that NSPS exclusions applied to the NSR program.

~~NSPS exclusion in 40 CFR § 60.14(e)(5). For the reasons stated in the Emison Memorandum, that would constitute a regulatory change requiring notice and comment rulemaking. Second, by focusing on whether a pollution control project is a physical or operational change within the meaning of the new source review regulations, today's ruling avoids the need to undertake a quantitative emissions increase calculation in every case, as would be necessary if such projects were deemed to be physical or operational changes. Especially in light of the provisions of this interpretation regarding the calculation of actual emissions baselines and projections of future actual emissions, EPA expects that most, if not all, pollution control projects will reduce actual emissions. Nevertheless, the Administrator's authority to consider individual pollution control projects provides an adequate opportunity to determine that a pollution control project would somehow result in an adverse environmental impact and thus conclude that the project is not environmentally beneficial, but is instead a major modification that should be subject to new source review.~~

For the purposes of this interpretation, a pollution control project refers to the addition or replacement at a source of an emissions control system or device primarily designed to improve the control or prevention of air pollution emissions. Fuel switching where the project is designed primarily to reduce air pollution (as described in the prior section) also constitutes a

pollution control project. As with the proposed rule, changes that are intended primarily to restore original capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for purposes of this ruling.

B. Representative Actual Annual Emissions

In the WEPCO decision, the court found that the units in question had begun normal operations, and thus, rejected EPA's actual to potential methodology, which the court found

~~impermissibly ignored the utility's past utilization of the~~

~~units. Since the proposed work consisted of the replacement of components with "like-kind" equipment -- which the court~~
~~the design capacity of the units, apparently believed would not in and of itself lead the utility~~

~~to change its pattern of utilization of the unit -- the court~~
~~found the methodology arbitrary as applied in that case. As a~~
~~result, EPA developed a new methodology on remand~~

~~the so-called actual to future actual emissions test. Today EPA proposes modifying its regulations to codify this methodology, and apply it to all physical or operational changes at an existing electric utility steam generating unit other than the addition of a new unit or the replacement of an existing unit. Under today's action, EPA proposes to consider a unit to be replaced if it would constitute a reconstructed unit within the meaning of 40 CFR 60.15. EPA believes that for such "replaced" units, as well as wholly new units, it is not possible for the~~

Ignore

operation

Agency to reasonably project the units' post-change level of utilization, and hence, their future level of "representative annual actual emissions."

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As proposed today, the "representative actual annual emissions" methodology requires the utility to compare its baseline emissions with its future actual emissions to determine if the modification will increase actual emissions. EPA's existing regulations define baseline emissions as "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, e.g., 40 CFR 52.21. The Administrator "shall" allow use of a different time period "upon a determination that it is more representative of normal source operation." *Id.* Although not required by the regulations, EPA has historically used the two years immediately preceding the modification to establish the baseline. (See 45 Fed. Reg. 52676, 52705, 52718 (1980).) However, in some cases it has allowed the use of earlier periods. For example, in WEPCO, EPA found the fourth and fifth years prior to the modification more representative of WEPCO's normal operations since the source's capacity was reduced due to physical problems. EPA proposes today to retain this regulatory language, but to adopt a new presumption regarding its implementation.

Under today's action, the Administrator will presume that any two years within the five years prior to the proposed change is representative of normal source operations for a utility. This presumption is consistent with the five-year period for "contemporaneous" emissions increases and decreases in 40 CFR 52.21(b)(3)(i)(b).¹⁸ Source owners or operators desiring to use other than a two-year period or a baseline period prior to the last five years may seek the Administrator's specific determination that such period is more representative of normal operations.

Prior to final action on today's proposal, source owners desiring to use a baseline period prior to the two years preceding the modification should continue to seek the reviewing authority's specific determination that such period is more representative of normal operations. The EPA will apply this standard liberally and encourages States to do likewise.¹⁹

¹⁸ This presumption does not apply to past modifications at an emissions unit for the purpose of determining contemporaneous emission changes at a source and cannot be used to extend the five year period specified in that provision. See 40 CFR 52.21(b)(3)(i)(b).

¹⁹ Whether on a case-by-case basis, or after the proposed language is adopted, the level of baseline emissions selected must be consistent with current assumptions regarding the source's emissions that are used under the state implementation plans (SIP) for planning or permitting purposes. Thus, the source may not select a level of baseline emissions higher than that used by the permitting authority in issuing a PSD or other construction permit to a source in the area, if such higher level would result in a NAAQS or increment violation, or violate a visibility limitation.

The future actual projection is the product of: (1) the hourly emissions rate, which is based on the unit's physical and operational capabilities following the modification and federally-enforceable operational restrictions that would affect the hourly emissions rate following the renovation; and (2) projected capacity utilization, which is based on (a) the unit's historical annual utilization, and (b) all available information regarding the unit's likely post-renovation capacity utilization.²⁰ The projection of post-modification capacity utilization for applicability purposes should be based on a projection of utilization for a period after the physical or operational change. Specifically, EPA today proposes to allow sources to base the projection of utilization on the two years after the modification, or a different consecutive two-year period within the ten years after the modification, where the Administrator determines that such period is more representative of normal source operations.

The principal effect of using an actual to future actual methodology rather than an actual to potential methodology is to shift, from the source owner to EPA, the burden of accurately projecting a source's post-change capacity utilization. As

²⁰ In projecting future utilization and emissions factors, the permitting authority may consider the company's historical operational data, its own representations, filings with Federal, State or local regulatory authorities, and compliance plans developed under Title IV of the 1990 Amendments.

discussed above, under the actual to potential methodology, the source can avoid new source review by physically or legally limiting any increase in actual emissions. However, this approach may restrict utility flexibility to expand operations at a later date, because it may require the utility to agree to a federally enforceable emissions cap. Historically, source owners have frequently accepted such caps to avoid new source review. However, if the source's projection that it will not significantly increase actual emissions above baseline levels turns out to be wrong, the source must undergo new source review to increase its emissions. See, e.g., 40 CFR 52.21(r)(4). In contrast, under the actual to future actual methodology, if the source's projected level of post-change capacity utilization would not result in an increase in actual emissions above baseline levels, it would not need to accept an annual emissions cap or restrictions on hours of operation in order to avoid new source review (unless the reviewing authority affirmatively rejected the source owner's projection).²¹ Thus, although

²¹ The source may, however, be required to obtain a federally enforceable permit or other instrument that limits its hourly emissions rate to levels that will not, when multiplied by the projected capacity utilization, result in a significant increase in actual emissions. This was done, for instance, in EPA's decision on remand in the WEPCO case. The company's projection of future actual emissions was based in part on its assumptions regarding the sulfur content of the coal it intended to burn and control technology performance levels. Since those assumptions were more stringent than the applicable legal restraints on the source's operations under the state implementation plan, EPA determined that they must be made
(continued...)

unanticipated increases in utilization above the level projected by the source may still occur, and may result in an increase in actual emissions above the pre-modification baseline level, NSR would not apply. EPA does not expect that unanticipated utilization increases will be a major problem, because future utilization projections are common and subject to public scrutiny in the utility industry. Such is not the case in other industries, however. For this reason, EPA does not at this time propose to extend use of the actual to actual methodology to other industries.

Pending adoption of this proposal, EPA will continue to follow WEPCO and apply the actual to future actual methodology to ~~projects that do not increase the~~ ~~"like-kind" utility modifications.~~ EPA views a "like-kind" ~~replacement as the non-routine replacement²² of a component of~~ ~~an electric utility emissions unit with a functionally equivalent component.~~ ~~A replacement component does not have to be identical or of the same design as the component it replaces, but it must~~ ~~be functionally equivalent in the sense that it serves the same~~

design
change
project

²¹(...continued)
federally enforceable (in that case, through a state-issued minor source construction permit under 40 CFR 51.160-164) to be considered for NSR applicability purposes. Today's proposal and interpretation retains this approach.

²² "Routine maintenance, repair and replacement" is already excluded from the modification test. See 40 CFR 52.21(b)(2)(iii)(a). EPA plans to provide additional guidance on this exclusion by November 1992.

~~purpose. In addition, a "like-kind" replacement cannot alter the original design capacity, increase potential emissions or fundamentally alter the method of operation of the source. The project provided that they do not involve change also cannot consist of a replacement or reconstruction of the emissions unit in its entirety.~~

C. The Causation Requirement

The NSR regulatory provisions require that the physical or operational change "result in" an increase in actual emissions in order to consider that change to be a modification. See e.g. 40 CFR 52.21(2)(i). In other words, NSR will not apply unless EPA finds that there is a causal link between the proposed change and any post-change increase in emissions. EPA today proposes to amend its rules to clarify this longstanding interpretation in the context of modifications at electric utility steam generating units.

Under these proposed regulations, any emissions increase attributable to a physical or operational change must continue to be included in the post-change emissions calculation. Conversely, today's proposal codifies EPA's interpretation of the current regulations which provides that where increased operations are in response to independent factors, such as system-wide demand growth, which would have occurred and impacted on the unit's operations even in the absence of the physical or operational change, such increases do not result from the change and shall be excluded from the projection of future actual

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emissions. Thus, in assessing whether the proposed change will result in an increase in actual emissions, utilities need not include in their projection of post-change utilization that portion of the increased rate of utilization, if any, due to factors unrelated to the physical or operation change, such as an increase in projected capacity utilization attributable to the rate of electricity demand growth for the utility system (of which that source is a member) as a whole.

Under this proposal, during a representative baseline period (see supra), the plant must have been able to accommodate the projected demand growth physically and legally even absent the particular change. Increased operations that could not physically and legally be accommodated but for the proposed physical or operational change should be considered causally linked to the projected increase in actual emissions.

In addition, the utility generally must still take into account physical or operational changes which significantly alter the efficiency of the plant. See Puerto Rican Cement, 889 F.2d at 297-8. Specifically, if the change results in (a) removing bottlenecks, an outright increase in capacity or reliability, or (b) less expensive power production, which leads to greater dispatching, then the portion of capacity utilization attributable to these results from the change should be included in calculation of emissions increases.

D. Repowering

That's all folks. —
ran out of time.

For the reasons set forth in the preamble, Part 51 of Chapter I of Title 40 of the code of Federal Regulations is proposed to be amended as follows:

Part 51 - REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS.

1. The authority citation for Part 51 is amended to read as follows:

(To be added)

2. Section 51.165 is proposed to be amended to read as follows:

51.165 Permit requirements.

- (a) * * *
- (1) * * *
- (v) * * *

(C) A physical change or a change in the method of operation shall not include:

* * * *

(8) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines that such addition, replacement, or use is not environmentally beneficial, and except:

(i) when the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and

(ii) the Administrator determines that the pollution control project will cause or contribute to a violation of any ambient standard, PSD increment, or visibility violation.

(9) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(i) the State implementation plan for the State in which the project is located, and

(ii) other requirements necessary to attain and maintain the national ambient air quality standards

during the project and after it is terminated.

(10) The reactivation of a very clean coal-fired electric utility steam generating unit.

* * * * *

(xii) * * *

(D) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (E) of this subsection) that has not begun normal operations on a particular date, actual emissions shall equal the potential to emit of the unit on that date unless the source owner or operator agrees to federally enforceable limitations that restrict the allowable emissions of the source to a rate that is not significantly greater than the source's baseline level of actual emissions.

(E) For an electric utility steam generating unit (other than a unit that constitutes the addition of a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit.

(xx) "Electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(xxi) "Representative actual annual emissions" means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

(A) consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans

under Title IV of the Clean Air Act; and

(B) exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

(xxii) "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that is operated for a period of five years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(xxiii) "Clean coal technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

(xxiv) "Clean coal technology demonstration project" means a project using funds (1) appropriated under the heading 'Department of Energy-Clean Coal Technology,' up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or (2) similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

(xxv) "Reactivation of a very clean coal-fired electric utility steam generating unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(i) has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

(ii) was equipped prior to shut-down with a continuous system of emissions control that achieves a removal

efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(iii) is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

(iv) is otherwise in compliance with the requirements of the Clean Air Act.

3. Section 51.166 is proposed to be amended to read as follows:

51.166 Prevention of significant deterioration of air quality.

* * * *

(b) * * *

(2) * * *

(iii) A physical change or change in the method of operation shall not include:

* * *

(h) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines that such addition, replacement, or use is not environmentally beneficial, and except:

(a) when the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and

(b) the Administrator determines that the pollution control project will cause or contribute to a violation of any ambient standard, PSD increment, or visibility violation.

(i) any physical change or change in the method of operation at an existing electric utility generating unit (other than the addition of a new unit or the replacement of an existing unit) that would not result in a significant net increase in representative actual annual emissions of a regulated pollutant at the unit.

(j) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(i) the State implementation plan for the State in which the project is located; and

(ii) other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(k) The installation or operation of a permanent clean coal technology demonstration

project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.

(1) The reactivation of a very clean coal-fired electric utility steam generating unit.

* * * * *

(21) * * *

(iv) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (v) of this subsection) that has not begun normal operations on a particular date, actual emissions shall equal the potential to emit of the unit on that date unless the source owner or operator agrees to federally enforceable limitations that restrict the allowable emissions of the source to a rate that is not significantly greater than the source's baseline level of actual emissions.

(v) For an electric utility steam generating unit (other than a unit that constitutes the addition of a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit following the physical or operational change.

(30) "Electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(31) "Pollution control project" means any physical change or change in the method of operation at an existing electric utility steam generating unit for purposes of reducing emissions from such unit in order to comply with Title IV. Such changes are limited to:

(i) the installation of conventional or innovative pollution control technology, including but not limited

to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen oxides controls and electrostatic precipitators;

(ii) a physical change, or change in the method of operation, to accommodate switching to fuel which is lower in sulfur content than the fuel use prior to the change, including natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling sulfur dioxide and nitrogen oxide emissions;

(iii) a permanent clean coal technology demonstration project conducted under Title II, section 101(d) of the further Continuing Appropriations Act of 1985 (section 5903(d) of title 42 of the United States code), or subsequent appropriations, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency, or

(iv) a permanent clean coal technology demonstration project that constitutes a repowering project

- (32) "Representative actual annual emissions" means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

(A) consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under Title IV of the Clean Air Act; and

(B) exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization

due to the rate of electricity demand growth for the utility system as a whole.

- (33) "Clean coal technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- (34) "Clean coal technology demonstration project" means a project using funds (1) appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or (2) similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.
- (35) "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that is operated for a period of five years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the nation ambient air quality standards during and after the project is terminated.
- (36) (i) "Repowering" means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.
- (ii) Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.
- (iii) The reviewing authority shall give expedited

consideration to permit applications for any source that satisfies the requirements of this subsection and is granted an extension under § 409 of the Clean Air Act.

(37) "Reactivation of a very clean coal-fired electric utility steam generating unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(i) has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

(ii) was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(iii) is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

(iv) is otherwise in compliance with the requirements of the Clean Air Act.