

NSR Reform

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Part III

Environmental Protection Agency

40 CFR Parts 51 and 52
Prevention of Significant Deterioration
(PSD) and Nonattainment New Source
Review (NSR); Final Rule and Proposed
Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51 and 52

[AD-FRL-7414-5]

RIN 2060-AE11

Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Baseline Emissions Determination, Actual-to-Future-Actual Methodology, Plantwide Applicability Limitations, Clean Units, Pollution Control Projects

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is revising regulations governing the New Source Review (NSR) programs mandated by parts C and D of title I of the Clean Air Act (CAA or Act). These revisions include changes in NSR applicability requirements for modifications to allow sources more flexibility to respond to rapidly changing markets and to plan for future investments in pollution control and prevention technologies. Today's changes reflect EPA's consideration of discussions and recommendations of the Clean Air Act Advisory Committee's (CAAAC) Subcommittee on NSR, Permits and Toxics, comments filed by the public, and meetings and discussions with

interested stakeholders. The changes are intended to provide greater regulatory certainty, administrative flexibility, and permit streamlining, while ensuring the current level of environmental protection and benefit derived from the program and, in certain respects, resulting in greater environmental protection.

EFFECTIVE DATE: This final rule is effective on March 3, 2003.

ADDRESSES: Docket. Docket No. A-90-37, containing supporting information used to develop the proposed rule and the final rule, is available for public inspection and copying between 8 a.m. and 4:30 p.m., Monday through Friday (except government holidays) at the Air and Radiation Docket and Information Center (6102T), Room B-108, EPA West Building, 1301 Constitution Avenue, NW., Washington, DC 20460; telephone (202) 566-1742, fax (202) 566-1741. A reasonable fee may be charged for copying docket materials. *Worldwide Web (WWW)*. In addition to being available in the docket, an electronic copy of this final rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of the rule will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules: <http://www.epa.gov/ttn/oarpg>.

FOR FURTHER INFORMATION CONTACT: Ms. Lynn Hutchinson, Information Transfer

and Program Integration Division (C339-03), U.S. EPA Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina 27711, telephone 919-541-5795, or electronic mail at hutchinson.lynn@epa.gov, for general questions on this rule. For questions on baseline emissions determination or the actual-to-projected-actual applicability test, contact Mr. Dan DeRoek, at the same address, telephone 919-541-5593, or electronic mail at deroek.dan@epa.gov. For questions on Plantwide Applicability Limitations (PALs), contact Mr. Raj Rao, at the same address, telephone 919-541-5344, or electronic mail at rao.raj@epa.gov. For questions on Clean Units, contact Mr. Juan Santiago, at the same address, telephone 919-541-1084, or electronic mail at santiago.juan@epa.gov. For questions on Pollution Control Projects (PCPs), contact Mr. Dave Svendsgaard, at the same address, telephone 919-541-2380, or electronic mail at svendsgaard.dave@epa.gov.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially affected by this final action include sources in all industry groups. The majority of sources potentially affected are expected to be in the following groups.

Industry group	SIC ^a	NAICS ^b
Electric Services	491	221111, 221112, 221113, 221119, 221121, 221122
Petroleum Refining	291	32411
Chemical Processes	281	325181, 32512, 325131, 325182, 211112, 325998, 331311, 325188
Natural Gas Transport	492	48621, 22121
Pulp and Paper Mills	261	32211, 322121, 322122, 32213
Paper Mills	262	322121, 322122
Automobile Manufacturing	371	336111, 336112, 336712, 336211, 336992, 336322, 336312, 33633, 33634, 33635, 336399, 336212, 336213
Pharmaceuticals	283	325411, 325412, 325413, 325414

^a Standard Industrial Classification

^b North American Industry Classification System.

Entities potentially affected by this final action also include State, local, and tribal governments that are delegated authority to implement these regulations.

Outline. The information presented in this preamble is organized as follows:

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 - G. Paperwork Reduction Act
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I. Overview of Today's Final Action

A. Background

We¹ proposed revisions to the NSR rules in a notice published in the **Federal Register** on July 23, 1996 (61 FR 38250). On July 24, 1998, we published a notice (63 FR 39857) to solicit further comment on two specific aspects of the proposed revisions. Today's **Federal Register** action announces EPA's final action on the proposed revisions for baseline emissions determinations, the actual-to-future-actual methodology, actuals PALs, Clean Units, and PCPs. We have not made final determinations on any other proposed changes to the regulations.

Today's actions finalize these changes to the regulations for both the approval and promulgation of implementation plans and requirements for preparation, adoption, and submittal of implementation plans governing the NSR programs mandated by parts C and D of title I of the Act. We also proposed conforming changes to 40 CFR (Code of

Federal Regulations) part 51, appendix S, and part 52.24. Today we have not included the final regulatory language for these regulations. It is our intention to include regulatory changes that conform appendix S and 40 CFR 52.24 to today's final rules in any final regulations that set forth an interim implementation strategy for the 8-hour ozone standard. We intend to finalize changes to these sections precisely as we have finalized requirements for other parts of the program. Because these are conforming changes and the public has had an opportunity for review and comment, we will not be soliciting additional comments before we finalize them.

The major NSR program contained in parts C and D of title I of the Act is a preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Act. In areas not meeting health-based National Ambient Air Quality Standards (NAAQS) and in ozone transport regions (OTR), the program is implemented under the requirements of part D of title I of the Act. We call this program the "nonattainment" NSR program. In areas meeting NAAQS ("attainment" areas) or for which there is insufficient information to determine whether they meet the NAAQS ("unclassifiable" areas), the NSR requirements under part C of title I of the Act apply. We call this program the Prevention of Significant Deterioration (PSD) program.

Collectively, we also commonly refer to these programs as the major NSR program. These regulations are contained in 40 CFR 51.165, 51.166, 52.21, 52.24, and part 51, appendix S. The NSR provisions of the Act are a combination of air quality planning and air pollution control technology program requirements for new and modified stationary sources of air pollution. In brief, section 109 of the Act requires us to promulgate primary NAAQS to protect public health and secondary NAAQS to protect public welfare. Once we have set these standards, States must develop, adopt, and submit to us for approval a State Implementation Plan (SIP) that contains emission limitations and other control measures to attain and maintain the NAAQS and to meet the other requirements of section 110(a) of the Act.

Each SIP is required to contain a preconstruction review program for the construction and modification of any stationary source of air pollution to assure that the NAAQS are achieved and maintained; to protect areas of clean air; to protect Air Quality Related

Values (AQRVs) (including visibility) in national parks and other natural areas of special concern; to assure that appropriate emissions controls are applied; to maximize opportunities for economic development consistent with the preservation of clean air resources; and to ensure that any decision to increase air pollution is made only after full public consideration of all the consequences of such a decision.

For newly constructed, "greenfield" sources, the determination of whether an activity is subject to the major NSR program is fairly straightforward. The Act, as implemented by our regulations, sets applicability thresholds for major sources in nonattainment areas [potential to emit (PTE) above 100 tons per year (tpy) of any pollutant subject to regulation under the Act, or smaller amounts, depending on the nonattainment classification] and attainment areas (100 or 250 tpy, depending on the source type). A new source with a PTE at or above the applicable threshold amount "triggers," or is subject to, major NSR.

The determination of what should be classified as a modification subject to major NSR presents more difficult issues. The modification provisions of the NSR program in parts C and D are based on the definition of modification in section 111(a)(4) of the Act: the term "modification" means "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." That definition contemplates that, first, you will determine whether a physical or operational change will occur. If so, then you will proceed to determine whether the physical or operational change will result in an emissions increase over baseline levels.

The expression "any physical change * * * or change in the method of operation" in section 111(a)(4) of the Act is not defined. We have recognized that Congress did not intend to make every activity at a source subject to the major NSR program. As a result, we have previously adopted several exclusions from what may constitute a "physical or operational change." For instance, we have 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

¹ In this preamble the term "we" refers to EPA and the term "you" refers to major stationary sources of air pollution and their owners and operators. All other entities are referred to by their respective names (for example, reviewing authorities.)

operation within the definition of major modification.²

We have likewise addressed the scope of the statutory definition of modification by excluding all changes that do not result in a "significant" emissions increase from a major source.³ This regulatory framework applies the major NSR program at existing sources to only "major modifications" at major stationary sources.

One key attribute of the major NSR program in general is that you may "net" modifications out of review by coupling proposed emissions increases at your source with contemporaneous emissions reductions. Thus, under regulations we promulgated in 1980, you may modify, or even completely replace, or add, emissions units without obtaining a major NSR permit, so long as "actual emissions" do not increase by a significant amount over baseline levels at the plant as a whole.

Applicability of the major NSR program must be determined in advance of construction and is pollutant-specific. In cases involving existing sources, this requires a pollutant-by-pollutant determination of the emissions change, if any, that will result from the physical or operational change. Our 1980 regulations implementing the PSD and nonattainment major NSR programs thus inquire whether the proposed change constitutes a "major modification," that is, a physical change or change in the method of operation "that would result in a significant net emissions increase under the Act." A "net emissions increase" is defined as the increase in "actual emissions" from the particular physical or operational change (taking into account the use of emissions control technology and restrictions on hours of operation or rates of production where such controls and restrictions are enforceable), together with your other contemporaneous increases or decreases in actual emissions.⁴ In order to trigger applicability of the major NSR program, the net emissions increase must be "significant."⁵

Before today's changes, our regulations generally defined actual emissions as "the average rate, in tpy, 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 reviewing authorities will allow use of a different time period "upon a determination that it is more representative of normal source operation." We have historically used the 2 years immediately preceding the proposed change to establish a source's actual emissions. However, in some cases we have allowed use of an earlier period.

With respect to changes at existing sources, a prediction of whether the physical or operational change would result in a significant net increase in your actual emissions following the change was thus necessary. In part, this involved a straightforward and readily predictable engineering judgment—how would the change affect the emission factor or emissions rate of the emissions units that are to be changed.

Before today's changes, the regulations provided that when your emissions unit, other than an electric utility steam generating unit (EUSGU), "has not begun normal operations," actual emissions equal the PTE of the unit. When you have not begun normal operations following a change, you must assume that your source will operate at its full capacity year round, that is, at its full emissions potential. This is referred to as the actual-to-potential test. You may avoid the need for an NSR permit by reducing your source's potential emissions through the use of enforceable restrictions to pre-modification actual emissions levels plus an amount that is less than "significant".

In 1992, we promulgated revisions to our applicability regulations creating special rules for physical and operational changes at EUSGUs. See 57 FR 32314 (July 21, 1992).⁶ In this rule, prompted by litigation involving the Wisconsin Electric Power Company (WEPCO) and commonly referred to as the "WEPCO rule," we adopted an actual-to-future-actual methodology for all changes at EUSGUs except the construction of a new electric generating unit or the replacement of an existing emissions unit. Under this methodology, the actual annual

emissions before the change are compared with the projected actual emissions after the change to determine if a physical or operational change would result in a significant increase in emissions. To ensure that the projection is valid, the rule requires the utility to track its emissions for the next 5 years and provide to the reviewing authority information demonstrating that the physical or operational change did not result in an emissions increase.

In promulgating the WEPCO rule, we also adopted a presumption that utilities may use as baseline emissions the actual annual emissions from any 2 consecutive years within the 5 years immediately preceding the change.

In attainment areas, once major NSR is triggered, you must, among other things, install best available control technology (BACT) and conduct modeling and monitoring as necessary. If your source is located in a nonattainment area, you must install technology that meets the lowest achievable emissions rate (LAER), secure emissions reductions to offset any increases above baseline emission levels, and perform other analyses.

B. Introduction

Today's final regulations were proposed as part of a larger regulatory package on July 23, 1996 (61 FR 38250). That package proposed a number of changes to our existing major NSR requirements. (Please refer to the outline of that proposed rulemaking for a complete list of changes that were proposed to our existing regulations.) On July 24, 1998, we published a **Federal Register** Notice of Availability (NOA) that requested additional comment on three of the proposed changes: determining baseline emissions, actual-to-future-actual methodology, and PALs. Following the 1996 proposals, we held two public hearings and more than 50 stakeholder meetings. Environmental groups, industry, and State, local, and Federal agency representatives participated in these many discussions.

In May 2001, President Bush's National Energy Policy Development Group issued findings and key recommendations for a National Energy Policy. This document included numerous recommendations for action, including a recommendation that the EPA Administrator, in consultation with the Secretary of Energy and other relevant agencies, review NSR regulations, including administrative interpretation and implementation. The recommendation requested that we issue a report to the President on the impact of the regulations on investment

² See 40 CFR 52.21(b)(2).

³ See 40 CFR 52.21(b)(23).

⁴ In approximate terms, "contemporaneous" emissions increases or decreases are those that have occurred between the date 5 years immediately preceding the proposed physical or operational change and the date that the increase from the change occurs. See, for example, § 52.21(b)(3)(ii).

⁵ 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. See, for example, § 52.21(j)(3) (BACT) and § 52.21(m)(1)(b) (air quality analysis).

⁶ The 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 megawatts (MW) of electrical output to any utility power distribution system for sale. See, for example, § 51.166(b)(30).

in new utility and refinery generation capacity, energy efficiency, and environmental protection.

In response, in June 2001, we issued a background paper giving an overview of the NSR program. This paper is available on the Internet at <http://www.epa.gov/air/nsr-review/background.html>. We solicited public comments on the background paper and other information relevant to the New Source Review 90-day Review and Report to the President. During our review of the NSR program, we met with more than 100 groups, held four public meetings around the country, and received more than 130,000 written comments. Our report to the President and our recommendations in response to the energy policy were issued on June 13, 2002. A copy of this information is available at <http://www.epa.gov/air/nsr-review/>. We expect that our recommendations in response to the energy policy will be reflected in the future in various programs and regulatory actions. Today's actions implement several of those recommendations.

Today, we are finalizing five actions that we previously proposed in 1996 (three of which were re-noticed in the 1998 NOA). We are not taking final action on any of the remaining issues in the 1996 proposal at this time. We have not decided what final action we will take on those issues.

C. Overview of Final Actions

Today we are taking final action on five changes to the NSR program that will reduce burden, maximize operating flexibility, improve environmental quality, provide additional certainty, and promote administrative efficiency. These elements include baseline actual emissions, actual-to-projected-actual emissions methodology, PALs, Clean Units, and PCPs. We are also codifying our longstanding policy regarding the calculation of baseline emissions for EUSGUs. In addition, we are responding to comments we received on a proposal to adopt a methodology, developed by the American Chemistry Council (formerly known as the Chemical Manufacturers Association (CMA)) and other industry petitioners, to determine whether a source has undertaken a modification based on its potential emissions. We are including a new section in today's final rules that outlines how a major modification is determined under the various major NSR applicability options and clarifies where you will find the provisions in our revised rules. Finally, we have codified a new definition of "regulated NSR pollutant" that clarifies which

pollutants are regulated under the Act for purposes of major NSR.

This section briefly introduces each improvement. Detailed discussions of the improvements are found in sections II through VII of this preamble.

1. Determining Whether a Proposed Modification Results in a Significant Emissions Increase

Today we are finalizing two changes to our existing major NSR regulations that will affect how you calculate emissions increases to determine whether physical changes or changes in the method of operation trigger the major NSR requirements. First, we have a new procedure for determining "baseline actual emissions." That is, the relevant terminology for calculating pre-change emissions for most applications is now "baseline actual emissions" rather than "actual emissions." You may use any consecutive 24-month period in the past 10 years to determine your baseline actual emissions. Second, we are supplementing the existing actual-to-potential applicability test with an actual-to-projected-actual applicability test for determining if a physical or operational change at an existing emissions unit will result in an emissions increase. Notwithstanding the new test, you will still have the ability to conduct an actual-to-potential type test within the new actual-to-projected-actual applicability test. In this case, you will not be subject to recordkeeping requirements that are being established and would otherwise apply as part of the new actual-to-projected actual applicability test.

For EUSGUs, we are making several changes to the existing procedures and are codifying our current policy for calculating the baseline actual emissions. That is, the baseline actual emissions for EUSGUs is the average rate, in tpy, at which that unit actually emitted the pollutant during a 2-year (consecutive 24-month) period within the 5-year period immediately preceding when the owner or operator begins actual construction. We are also retaining the option that allows the use of a different time period if the reviewing authority determines it is more representative of normal source operation.

2. CMA Exhibit B

As described in section I.C.1 above, we have decided to adopt an actual-to-projected-actual methodology, combined with a revised process to determine baseline emissions, to use in determining when sources are considered to have made a modification and are thereby subject to NSR. We are

not adopting the methodology based on potential emissions as discussed in the CMA Exhibit B proposal. See section III of this preamble for a discussion of the comments we received on this proposal and our responses.

3. Plantwide Applicability Limitations

A PAL is a voluntary option that will provide you with the ability to manage facility-wide emissions without triggering major NSR review. We believe that the added flexibility provided under a PAL will facilitate your ability to respond rapidly to changing market conditions while enhancing the environmental protection afforded under the program.

Today we are promulgating a PAL based on plantwide actual emissions. If you keep the emissions from your facility below a plantwide actual emissions cap (that is, an actuals PAL), then these regulations will allow you to avoid the major NSR permitting process when you make alterations to the facility or individual emissions units. In return for this flexibility, you must monitor emissions from all of your emissions units under the PAL. The benefit to you is that you can alter your facility without first obtaining a Federal NSR permit or going through a netting review. A PAL will allow you to make changes quickly at your facility. If you are willing to undertake the necessary recordkeeping, monitoring, and reporting, a PAL offers you flexibility and regulatory certainty.

4. Clean Units

We are promulgating a new type of applicability test for emissions units that are designated as Clean Units. The new applicability test recognizes that when you go through major NSR review and install BACT or LAER, you may make any changes to the Clean Unit without triggering an additional major NSR review, if the project at a Clean Unit does not cause the need for a change in the emission limitations or work practice requirements in the permit for the unit that were adopted in conjunction with BACT or LAER and the project would not alter any physical or operational characteristics that formed the basis for the BACT or LAER determination. If the project causes the need for a change in the emission limitations or work practice requirements in the permit for the unit adopted in conjunction with BACT or LAER or would alter any physical or operational characteristics that formed the basis for the BACT or LAER determination, you lose Clean Unit status. You may still proceed with the project without triggering major NSR

review, if the increase is not a significant net emissions increase. Emissions units that have not been through major NSR may still qualify for Clean Unit status if they demonstrate that the emissions control level is comparable to BACT or LAER. Clean Unit status will be valid for up to a 10-year period. The new applicability test does not exclude consideration of physical changes or changes in the method of operation of Clean Units from major NSR, but rather changes the way emissions increases are calculated for these changes. This new applicability test therefore protects air quality, creates incentives for sources to install state-of-the-art controls, provides flexibility for sources, and promotes administrative efficiency.

5. Pollution Control Projects

Today's rule contains a new list of environmentally beneficial technologies that qualify as PCPs for all types of sources. Installation of a PCP is not subject to the major modification provisions. An owner or operator installing a listed PCP automatically qualifies for the exclusion if there is no adverse air quality impact—that is, if it will not cause or contribute to a violation of NAAQS or PSD increment, or adversely impact an AQRV (such as visibility) that has been identified for a Federal Class I area by a Federal Land Manager (FLM) and for which information is available to the general public. The PCPs that are not listed in today's rules may also qualify for the PCP Exclusion if the reviewing authority determines on a case-specific basis that a non-listed PCP is environmentally beneficial when used for a particular application. Also, in the future, we may add to the listed PCPs through a rulemaking that provides for public notice and opportunity for comment. The PCP Exclusion allows sources to install emissions controls that are known to be environmentally beneficial. These provisions thus offer flexibility while improving air quality.

6. Major NSR Applicability

We have briefly described the new provisions for baseline actual emissions, actual-to-projected-actual methodology, PALs, and Clean Units. Sections II, IV, and V describe the new provisions in detail. These provisions offer major new changes to NSR applicability, especially regarding how a major modification is determined. The major NSR applicability provisions have developed over time and therefore have been added to the NSR rules in a piecemeal fashion. In today's final rules we are including a new section that outlines how a major modification is determined

under the various major NSR applicability options and clarifies where you will find the provisions in our revised rules. For each applicability option, we describe how a major modification is determined in detail. You'll find this new applicability "roadmap" in §§ 51.165(a)(2), 51.166(a)(7), and 52.21(a)(2). To summarize, the various provisions for major modifications are now as follows.

- Actual-to-projected-actual applicability test for all existing emissions units. (Including an actual-to-potential option)
- Actual-to-potential test for any new unit, including EUSGUs.
- The Clean Unit Test for existing emissions units with Clean Unit status.
- The hybrid test for modifications with multiple types of emissions units. (Used when a physical or operational change affects a combination of more than one type of unit.)

We describe actuals PALs, which are an alternative way of complying with major NSR, in section IV of this preamble. If you have a PAL, as long as you are complying with the PAL requirements, any physical or operational changes are not major modifications.

We have revised the definition of major modification to clarify what has always been our policy—that determining whether a major modification has occurred is a two-step process. The new definition of major modification is "any physical change in or change in the method of operation of a major stationary source that would result in: (1) A significant emissions increase of a regulated NSR pollutant; and (2) a significant net emissions increase of that pollutant from the major stationary source." We have also revised the definitions of actual emissions, emissions unit, net emissions increase, and construction. We have deleted the word "actual" as related to emissions from the definition of "construction." This change was necessary because of how the definition of "actual emissions" is used in the final rule, but the deletion is not intended to change any meaning in the term "construction." We have added new definitions for baseline actual emissions, projected actual emissions, project, and significant emissions increase. These revisions and additions implement our new provisions for major modifications under the actual-to-projected-actual applicability test, actual-to-potential test, Clean Unit Test, and hybrid test. You will find a complete discussion of the Clean Unit Test, including how modifications to Clean Units are treated, in section V of this preamble. The other tests are discussed in section II.

"Actual emissions," as the term has been historically applied, will still be used to determine air quality impacts (for example, compliance with NAAQS, PSD increments, and AQRVs) and to compute the required amount of emissions offsets.

To further clarify major NSR applicability in one location, we have moved § 51.166(i)(1) through (3) and § 52.21(i)(1) through (3) into the new applicability sections at § 51.166(a)(7) and § 52.21(a)(2). These provisions clarify that you must obtain a permit before you begin construction (including for major modifications), that the provisions apply for each regulated NSR pollutant that your source emits, and that the provisions apply to any source located in the area designated as attainment or unclassifiable (for §§ 51.166 and 52.21).

We have also added a new definition for reviewing authority that clarifies who has authority to implement major NSR programs. Reviewing authority means the State air pollution control agency, local agency, other State agency, Indian tribe, or other agency authorized by the Administrator to carry out a permit program under §§ 51.165 and 51.166, or the Administrator in the case of EPA-implemented permit programs under § 52.21.

7. Enforcement

As noted above, today we are taking final action on five changes to the NSR program that create alternative means of determining NSR applicability for projects that begin actual construction after these provisions become effective in your jurisdiction. If you are subsequently determined not to have met any of the obligations of these new alternatives (for example, failure to meet emissions or applicability limits, properly project emissions, and/or properly implement the PCP Exclusion or Clean Unit Test), you will be subject to any applicable enforcement provisions (including the possibility of citizens' suits) under the applicable sections of the Act. Sanctions for violations of these provisions may include monetary penalties of up to \$27,500 per day of violation, as well as the possibility of injunctive relief, which may include the requirement to install air pollution controls.

8. Enforceability

This rule uses several terms related to enforceability of particular provisions. A requirement is "legally enforceable" if some authority has the right to enforce the restriction. Practical enforceability for a source-specific permit will be

achieved if the permit's provisions specify: (1) A technically-accurate limitation and the portions of the source subject to the limitation; (2) the time period for the limitation (hourly, daily, monthly, and annual limits such as rolling annual limits); and (3) the method to determine compliance, including appropriate monitoring, recordkeeping, and reporting. For rules and general permits that apply to categories of sources, practicable enforceability additionally requires that the provisions: (1) Identify the types or categories of sources that are covered by the rule; (2) where coverage is optional, provide for notice to the permitting authority of the source's election to be covered by the rule; and (3) specify the enforcement consequences relevant to the rule.^{7, 8} "Enforceable as a practical matter" will be achieved if a requirement is both legally and practically enforceable.

Note that we continue to require offsets to be federally enforceable. "Federal enforceability" means that not only is a requirement practically enforceable, as described above, but in addition, "EPA must have a direct right to enforce restrictions and limitations imposed on a source to limit its exposure to Act programs."⁹ Also note that, for computing baseline actual emissions for use in determining major NSR applicability or for establishing a PAL, you must consider "legally enforceable" requirements. A requirement will be legally enforceable if the Administrator, State, local or tribal air pollution control agency has the authority to enforce the requirement irrespective of its practical enforceability.

In our existing regulations that are unamended by today's action, the term "federally enforceability" still appears. In 1995, the court in *Chemical Manufacturers Ass'n v. EPA* remanded the definition of PTE in the major NSR program to EPA. No. 89-1514 (D.C. Cir. Sept. 150 1995). Because the court vacated the requirements in the nationwide rules, the term federal

enforceability as it relates to PTE is not in effect (pending final rule making by the Agency) in the Federal rules. The decision, however, did not address the term "federally enforceable" as used in SIPs, because that issue was not before the court.

II. Revisions to the Method for Determining Whether a Proposed Modification Results in a Significant Emissions Increase

A. Introduction

Today we are finalizing two sets of amendments to our existing major NSR regulations that provide another way in which you may calculate emissions increases to determine whether certain types of physical changes or changes in the method of operation (physical or operational changes) of an existing emissions unit trigger the major NSR requirements.¹⁰ The first set of amendments relates to the way in which you will determine your baseline actual emissions for such emissions units in accordance with a new definition of "baseline actual emissions." See, for example, new § 52.21(b)(48). We will be allowing you to use any consecutive 24-month period during the 10-year period prior to the change to determine your baseline actual emissions for existing emissions units (other than EUSGUs). The second set of amendments replaces the existing actual-to-potential and actual-to-representative-actual-annual emissions applicability tests for existing emissions units (including EUSGUs) with an actual-to-projected-actual applicability test for determining if a physical or operational change will result in an emissions increase at such units. (Notwithstanding this new test, the actual-to-potential methodology is still available at your option under the new applicability tests.) The new procedure for determining your pre-change baseline actual emissions will not apply to EUSGUs.¹¹ Instead, for

EUSGUs we are retaining the existing procedures for determining the baseline actual emissions.¹² See, for example, existing § 52.21(b)(33). We are also affirming our current method used for calculating the baseline actual emissions for EUSGUs (allowing any consecutive 2 years in the past 5 years, or another more representative period) by codifying it in the NSR regulations. See, for example, new § 52.21(b)(48).

For existing emissions units other than EUSGUs, the changes we are making to the method for calculating a unit's baseline actual emissions will apply only for the following three purposes.

- For modifications, to determine a modified unit's pre-change baseline actual emissions as part of the new actual-to-projected-actual applicability test.
- For netting, to determine the pre-change baseline actual emissions of an emissions unit that underwent a physical or operational change within the contemporaneous period.
- For PALs, to establish the PAL emissions cap.

Today's new procedures for calculating baseline actual emissions and for the actual-to-projected-actual applicability test should not be used when determining a source's actual emissions on a particular date as may be used for other NSR-related requirements. Such requirements include, but are not limited to, air quality impacts analyses (for example, compliance with NAAQS, PSD increments, and AQRVs) and computing the required amount of emissions offsets. For each of these requirements, the existing definition of "actual emissions" continues to apply. This is discussed in greater detail in section II.D.9.

We believe that these changes will greatly improve the major NSR program by responding to industry concerns with our existing methodology without compromising air quality. One common complaint about the current emissions baseline process is that you have a limited ability to consider the operational fluctuations associated with normal business cycles when establishing baseline actual emissions unless your reviewing authority agrees that another period is "more representative of normal source

utility units is meant to include all emissions units covered by this definition.

¹² We promulgated special applicability rules for physical and operational changes at EUSGUs in 1992. See 57 FR 32314 (July 21, 1992).

¹⁰ By definition, the modification of an existing source is potentially subject to major NSR only if that existing source is "major." In addition, when an existing "minor" source makes a physical or operational change that by itself is major, that change constitutes a major stationary source that is subject to major NSR. See, for example, § 52.21(b)(1)(c).

¹¹ For NSR purposes, the definition of "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. See, for example, § 52.21(b)(31). Reference in this notice to

⁷ See memorandum, "Release of Interim Policy on Federal Enforceability of Limitations on Potential to Emit," signed by John Seitz and Robert Van Heuvelen, Jan. 22, 1996 at 5-6 and Attachment 4, available on the Web as <http://www.epa.gov/rgytgrn/programs/artd/air/title5/t5memos/pottoemi.pdf>. More detailed guidance on practical enforceability is contained in the memorandum.

⁸ The Agency has frequently used the term "practically enforceable" and "practical enforceability," interchangeably. There is no difference in the meaning of these terms.

⁹ See generally memorandum, "Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act," signed by John Seitz and Robert Van Heuvelen, Jan. 25, 1995, at 2-3.

operation.”¹³ By extending the time period from which you may establish your baseline actual emissions, the new procedures should reflect the emissions levels that occur during a normal business cycle, without requiring you to demonstrate to your reviewing authority that another period is “more representative of normal source operations.”

Commenters also believe that the current methodology requires many changes made to existing equipment to go through major NSR, without taking into account operating history, even when such changes will not result in increased pollution to the environment. Our new applicability requirements address these commenters’ concerns and will focus limited resources more effectively.

We are also modifying the way you may determine whether emissions at existing units (including EUSGUs) will increase, by allowing you to use projected actual emissions for purposes of this determination. Under this approach, in circumstances where there is a reasonable possibility that a project that is not part of a major modification may result in a significant increase of a regulated NSR pollutant, before beginning actual construction, you may choose to make and record a projection of post-change emissions of that pollutant from changed units.¹⁴

To make this projection, you must use the maximum annual rate at which the changed units are projected to emit the pollutant in any of the 5 calendar years following the time the unit resumes regular operations after the project (or 10 years if the project increases the unit’s design capacity or potential to emit the regulated NSR pollutant). You then use these projections to calculate whether the project will result in a significant emissions increase. In making this calculation, you could exclude any emissions that the unit could have accommodated before the change and that are unrelated to the

project. You could also exclude emissions resulting from increased utilization due to demand growth that the unit could have accommodated before the change.

With respect to the covered changes, if you use this procedure, you are required to track post-change annual emissions of the units in tpy for the next 5 years (or 10 years if the project increases the unit’s design capacity or potential to emit the regulated NSR pollutant). At the end of each year, if post-change annual emissions exceed the baseline actual emissions by a significant amount, and differ from your projections, you must submit a report to the reviewing authority with that information within 60 days after the end of the year.

Instead of relying on projected actual emissions, you may instead elect to use the unit’s PTE, in tpy. In that case, you need not track or report post-change emissions.

We are also revising the procedures for projecting future emissions for EUSGUs to conform with these new procedures and consolidate the EUSGU and non-EUSGU procedures into a single set of provisions. As a result of our 1992 rulemaking, EUSGUs have available to them a similar set of procedures. We believe the procedures we are implementing for other units represent a sensible refinement of the rules we promulgated in 1992 and that we should make these procedures available to all existing units. We do, however, impose two requirements on EUSGUs beyond those we impose on other units. First, with respect to covered projects, EUSGUs that project post-change emissions will have to submit a copy of their projections to their reviewing authority before beginning actual construction. You will not be required to obtain any kind of determination from the reviewing authority before proceeding with construction. Second, we are requiring that if you project post-change emissions for your EUSGUs, you must send a copy of your tracked emissions to your reviewing authority, without regard to whether these emissions have increased by a significant amount or exceed your projections. The effect of this consolidation is that we make minor changes to the existing procedures for EUSGUs. For example, you must project emissions for EUSGUs on a 12-month basis, rather than the current approach of projecting average annual emissions for the 2 years immediately following the change. Also, you need only make and report a projection for EUSGUs when there is a reasonable possibility that the given

project may result in a significant emissions increase.

By allowing you to use today’s new version of the actual-to-projected-actual applicability test to evaluate modified existing emissions units, we expect that fewer projects will trigger the major NSR permitting requirements. Nonetheless, we believe that the environment will not be adversely affected by these changes and in some respects will benefit from these changes. The new test will remove disincentives that discourage sources from making the types of changes that improve operating efficiency, implement pollution prevention projects, and result in other environmentally beneficial changes. Moreover, the end result is that State and local reviewing authorities can appropriately focus their limited resources on those activities that could cause real and significant increases in pollution.

In addition, today’s changes provide benefits to the public and the environment through the improved recordkeeping and reporting requirements as discussed above. We believe that these added recordkeeping and reporting measures will provide the information necessary for reviewing authorities to assure that such changes are made consistent with the CAA requirements. The new rule also does not affect the way in which a source’s ambient air quality impacts are evaluated. Altogether, we believe that today’s regulatory amendments focus on the types of changes occurring at existing emissions units that are more likely to result in significant contributions to air pollution.

B. What We Proposed and How Today’s Action Compares

1. July 23, 1996 Notice of Proposed Rulemaking (NPRM)

In 1996, we proposed to amend the NSR rules to allow States to use, among other things, a new test as an alternative to the actual-to-potential test for determining the applicability of the NSR requirements when you wish to make modifications at an existing major stationary source. The proposed test was intended to apply exclusively to modifications of existing emissions units at major stationary sources—not to new emissions units. As described more completely below, the proposed test involved changes to the procedures for calculating an emissions unit’s pre-change (baseline) actual emissions and post-change (future) actual emissions. The method would have also required you to monitor and report future emissions from certain modified

¹³ The definition of “actual emissions” requires that a unit’s actual emissions be based on a consecutive 24-month period immediately preceding the particular change. Also, however, it directs the reviewing authority to allow the use of another time period upon a determination that it is more representative. This procedure continues to be appropriate under the pre-existing regulation and for other NSR purposes, such as determining a source’s ambient impact against the PSD increments, and we continue to require its use for such purposes.

¹⁴ Note that we plan, in the near future, to issue a Notice of Proposed Rulemaking that will address the issue of “debottlenecking.” In today’s rulemaking, we do not intend to change current requirements related to “debottlenecking.” Use of the term “changed unit” should not be interpreted as a change to those requirements.

emissions units, based on the monitoring and reporting requirements adopted under the WEPCO amendments.

Baseline actual emissions. In our 1996 NPRM, we proposed to change the definition of baseline emissions from the average annual rate of actual emissions during the 2-year period preceding the date of the modification to the annual rate associated with the highest level of utilization from any consecutive 12-month period during the 10-year period preceding the date of the modification, adjusted for any more stringent limits that may have been imposed since the end of the 12-month period selected. The proposed method was intended to be used for calculating baseline actual emissions for any existing emissions unit, including EUSGUs, by replacing both the original method (that was part of the actual-to-potential test) and the 2-in-5-years method (as adopted under the WEPCO for modified EUSGUs).

As indicated above, the proposed procedure also would have required you to take into account any legally enforceable constraints imposed on the facility since the selected 12-month time frame, and currently in effect. Thus, you would generally have been required to calculate the modified emissions unit's baseline actual emissions by using the appropriate utilization level from the selected 12-month period, in combination with the emissions unit's current enforceable emission factors. Such enforceable emission factors would have included current Federal and State limits, such as RACT (Reasonably Available Control Technology), MACT (Maximum Achievable Control Technology), BACT, LAER, and New Source Performance Standards (NSPS), as well as enforceable limits resulting from any voluntary reductions you may have taken (for example, for netting, offsets, or Emission Reduction Credits (ERCs)). Also, you would have had to consider any operational constraints that are enforceable, such as production limits, fuel use limits, or limits to the number of hours per day or days per year at which the unit modified, or affected by such modification, could operate.

Finally, we indicated that it was not our intent to extend the 5-year contemporaneous period (for considering creditable emissions increases and decreases as part of the netting calculus), even if we established a 10-year baseline look back period.

Post-change actual emissions. In the 1996 proposal, we proposed to extend the availability of the actual-to-future-actual emissions method, established

under the WEPCO amendments exclusively for EUSGUs, to predict the future actual emissions from any emissions unit undergoing a physical or operational change. Thus, we proposed extending availability of the definition of "representative actual annual emissions" to all emissions units undergoing a physical or operational change. This definition would have provided the basis for you to project an emissions unit's future actual emissions, excluding any emissions increases caused by demand growth or other independent factors, when determining whether the change at issue will increase emissions over the baseline levels.¹⁵

The proposal also retained the WEPCO provision requiring that, for any modified emissions unit using the actual-to-future-actual test, you must submit annually for 5 years after the change sufficient records to demonstrate that the change has not resulted in a significant emissions increase over the baseline levels. As a safeguard, the WEPCO rule also provides that this tracking period could be extended to 10 years when the reviewing authority is concerned that the first 5 years will not be representative of normal source operation. We sought comments on numerous issues, including whether any changes should be made to the 5-year tracking requirement or to the demand growth exclusion in the event that we decided to broaden use of the actual-to-future-actual test for modifications to any existing emissions unit.

2. July 24, 1998 Notice of Availability

In 1998, we announced that comments received on the 1996 proposal and changed circumstances had caused us to ask whether we should reconsider some of the aspects of the proposed changes to the "major modification" applicability test. The 1998 NOA set forth for public comment an additional applicability test. In brief, the alternative presented for additional comment would have: (1) Retained the actual-to-future-actual test for EUSGUs and applied it to all source categories; (2) made binding for a 10-year period the emissions levels used in projecting future actual emissions following the modification for all source categories; and (3) eliminated the demand growth exclusion for calculating a modified emissions unit's future actual emissions. Consistent with the 1996 NPRM, this alternative methodology would have

¹⁵ This method, as well as the WEPCO amendments as a whole, was limited to modifications of existing EUSGUs and did not apply to the addition of a new emissions unit or the replacement of an existing unit.

applied to any existing emissions unit at a major stationary source for which you might plan a non-routine physical or operational change. The methodology would have required you first to determine which emissions units were being changed, or were affected by the change, then to calculate those units' baseline actual emissions based on the highest consecutive 12 months of source operation during the past 10 years, adjusted to reflect current emission factors.

The second step involved the forecast of future emissions resulting from the physical or operational change. Under this calculation of future actual emissions, one would not have been allowed to exclude predicted capacity utilization increases that were due to demand growth. If the difference between the pre-change and post-change actual emissions equaled or exceeded the significant emissions rate defined for a particular pollutant, major NSR would have been triggered (unless you took enforceable limits to keep the increase below significant levels or were otherwise able to net out of review using creditable, contemporaneous emissions increases and decreases occurring at your facility). If the difference between baseline and future actual emissions did not exceed the applicable significant emissions rate, your facility would not be subject to major NSR, but you would have been required to accept a temporary emissions cap based on the predicted future actual emissions for each affected pollutant at the emissions units being modified or affected by the modification.

The temporary cap would have become an enforceable condition of a preconstruction permit. Also, the sole purpose of the temporary cap would have been to make sure that the physical or operational change did not result in a significant emissions increase, and the cap would have applied to those emissions units for at least 10 years after the changes were completed. You would also have been required to supply information annually to demonstrate that the future actual emissions did not exceed the applicable emissions caps during the 10-year period following the modification.

3. Summary of Major Changes in the Final Rule

Today's action amends the existing NSR regulations to provide you with a common applicability test for all existing emissions units—the actual-to-projected-actual applicability test. This test has changed in some ways from both the 1996 NPRM and the 1998 NOA. As described in greater detail in sections

II.C and II.D below, the key features of the methodology are as follows.

- If you are an existing emissions unit (other than an EUSGU), you will determine the pre-change (baseline) actual emissions by calculating an average annual emissions rate, in tpy, using any consecutive 24 months during the 10-year period immediately preceding the change. This rate must be adjusted downward to reflect any legally enforceable emission limitations imposed after the selected baseline period.
- We are codifying the "2-in-5-years" presumption for calculating the baseline actual emissions for EUSGUs.
- If you are an existing emissions unit (including EUSGUs), you will estimate post-change emissions (projected actual emissions), in tpy, to reflect any increase in annual emissions that may result from the proposed change. You should exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the baseline period and that is also unrelated to the particular project, including any increased utilization due to product demand growth. You must make the projection before you begin actual construction. When using this method, you must record the projection and certain other information in circumstances where there is a reasonable possibility that a change may result in a significant emissions increase. In addition, EUSGUs must send a copy of the projections and other information to your reviewing authority before beginning actual construction.
- If, for a project at an existing emissions unit (other than an EUSGU) at a major stationary source, you elect to project your post-change emissions, we are also requiring you to maintain information on these emissions, for 5 years following a physical or operational change, or in some cases for 10 years depending on the nature of the change. If your annual emissions exceed the baseline actual emissions by a significant amount and also exceed your projection, you must report this information to your reviewing authority within 60 days after the end of the year.
- If you project post-change emissions for EUSGUs, you must report these emissions to your reviewing authority within 60 days after the end of the year without regard to whether such emissions exceed the baseline actual emissions or projected actual emissions for a period of 5 years (or in some cases 10 years, depending on the nature of the change).

- Instead of projecting your post-change emissions, for all existing emissions units you may instead project post-change emissions on the basis of each unit's post-change PTE. If you use this method, you need not record your projections or track or report post-change emissions.

As discussed earlier, our prior regulations provide that when your emissions unit, other than an EUSGU, "has not begun normal operations," "actual emissions equal the PTE of the unit. There have been considerable number issues raised with this approach. For example, using PTE as a measure of post-change emissions automatically attributes all possible emissions increases to the change. There are many cases, however, where this simply is not true. Moreover, when the actual-to-potential test is applied, it is automatically assumed that the emissions unit has not begun normal operations after the change period. In many such cases, however, the changed unit as a practical matter will function essentially as it did before the change. We are, therefore, allowing all existing emissions units to use an actual-to-projected-actual applicability test. Accordingly, we are generally eliminating the term "begun normal operations" from the determination of whether a change results in a significant emissions increase.¹⁶

For essentially the same reasons, while our 1992 rules did not authorize use of projections in evaluating whether replacement of an existing emissions unit (which we understood to require application of the NSPS 50 percent cost threshold) constitutes a major modification, upon reflection we have decided this exception to the availability of the actual-to-projected-actual applicability test is also unnecessary. In our 1980 rulemaking, we decided against applying PSD to "reconstruction," even of entire sources, on the grounds that, as to existing sources that would not otherwise be subjected to PSD review as a major modification (*i.e.*, such source would not cause a significant net emissions increase), changes that had no emission

¹⁶ We do make use of the term "resumes regular operations" (as opposed to "normal operations") in the final rule, but that term has a very different meaning and we are using it for an entirely different purpose. Specifically, we are not using the term for purposes of determining whether a change results in a significant emissions increase. Rather, we use it only to identify the date on which the owner or operator must begin tracking emissions of changed units when using the actual-to-projected-actual method.

consequences should not be subject to PSD regardless of their magnitude.¹⁷

In addition, we now believe that, as with modified units, the fact that replacement units are replacing similar units with a record of historical operational data provides sufficient reasons to believe that a projection of future actual emissions can be sufficiently reliable that an up-front emissions cap based on PTE is unnecessary. In other words, a source replacing a unit should be able to adequately project and track emissions for the replacement unit based, in part, on the operating history of the replaced unit. In contrast, sources adding "new" units that do not qualify as replacement units must project that the future emissions of the new unit equal its PTE, effectively applying the "actual-to-potential" test because there is no relevant historical data that could be used to establish an actual emissions baseline or projection of future actual emissions for such new units.

For these reasons, we have eliminated the requirement that replaced or reconstructed units be evaluated as to whether they constitute major modifications on an actual-to-potential basis. Instead, you may compare an emission unit's baseline actual emissions with your projected actual emission in measuring whether the replacement or reconstruction has resulted in a significant emissions increase. You must treat these emissions units as modifications only if the replacement or reconstruction of the unit results in a significant increase so measured.¹⁸

¹⁷ The 1980 rulemaking also discussed that "reconstruction" would have only been applied on a plantwide basis and EPA believed that there would be few instances of plantwide reconstructions.

¹⁸ For simplicity, we state this rule without addressing whether the replacement or reconstruction has resulted in a significant net emissions increase, but under our two-step approach for evaluating whether a change constitutes a major modification, a significant net emissions increase would of course also be required. We have also retained the term "representative of normal operations" in the context of an EUSGU's option to seek use of a different baseline period, but there the question whether to seek such use is at the source's option, obviating many of the difficulties with it in other contexts.