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Office of Air Quality Planning and Standards
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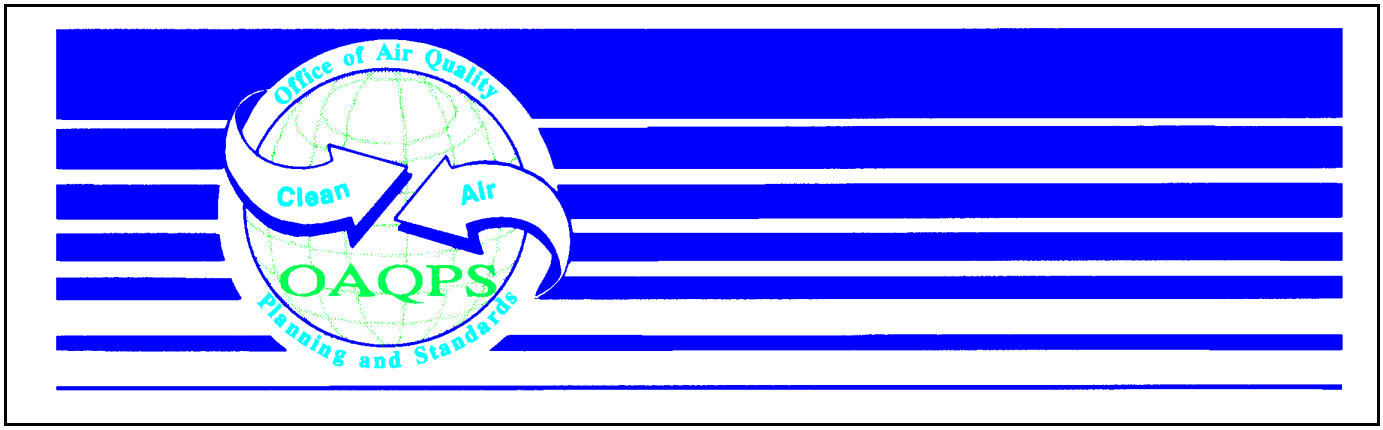
Technical Support Document for the Prevention of Significant Deterioration and Nonattainment Area New Source Review Regulations



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Integrated Implementation Group
Information Transfer and Program Integration Division
Office of Air Quality Planning and Standards
U. S. Environmental Protection Agency
Research Triangle Park, NC 27711

November 2002

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Appendix A: Public Commenters A-1

Acronym List

AQRV	Air Quality Related Value
BACT	Best Available Control Technology
BAT	Best Available Technology
BBS	Bulletin Board System
CAA	Clean Air Act
CAAA	1990 Amendments to the Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CMA	Chemical Manufacturers Association
CMS	Continuous Monitoring System
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
DOI	Department of Interior
EPA	United States Environmental Protection Agency
ERC	Emission Reduction Credit
FACA	Federal Advisory Committee Act
FLM	Federal Land Manager
FR	Federal Register
HAP	Hazardous Air Pollutant
HCFC	Hydrochlorofluorocarbons
LAER	Lowest Achievable Emissions Rate
MACT	Maximum Achievable Control Technology
MRRT	Monitoring, Recordkeeping, Reporting, and Testing
MSWLF	Municipal Solid Waste Landfill
MWC	Municipal Waste Combustor
NAA NSR	Nonattainment Area New Source Review
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NERC	Nuclear Energy Regulatory Commission
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOA	Notice of Availability
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NSPS	New Source Performance Standards
NSR	New Source Review
OAQPS	Office of Air Quality Planning and Standards

ODP	Ozone Depleting Potential
ODS	Ozone Depleting Substance
OSHA	Occupational Safety and Health Administration
OTR	Ozone Transport Region
P2	Pollution Prevention
PAL	Plantwide Applicability Limitation
PC-CMO	Physical Change or Change in Method of Operation
PCP	Pollution Control Project
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in diameter
POTW	Publicly Owned Treatment Works
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
RBLC	RACT/BACT/LAER Clearinghouse
RCRA	Resource Conservation and Recovery Act
RECLAIM	Regional Clean Air Incentives Market
RFA	Regulatory Flexibility Analysis
RFP	Reasonable Further Progress
RIA	Regulatory Impact Analysis
RMRR	Routine Maintenance, Repair, and Replacement
SARA	Superfund Amendments and Reauthorization Act
SCR	Selective Catalytic Reduction
SCAQMD	South Coast Air Quality Management District
SIC	Standard Industrial Classification
SIL	Significant Impact Level
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
STAPPA/ALAPCO	State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials
TPY	tons per year
UT/A	Undemonstrated Technology Application
VOC	Volatile Organic Compound
WEPCO	Wisconsin Electric Power Company

Volume I

Comments Received by the End of the Comment Period

Chapter 1 - Introduction

On July 23, 1996, we proposed to revise regulations for both the approval and promulgation of implementation plans and the requirements for preparation, adoption, and submittal of implementation plans governing the NSR programs mandated by parts C and D of title I of the Clean Air Act (61 FR 38249). The NSR program includes the part C PSD and part D NAA NSR Programs. These regulations are contained in 40 CFR 51.165, 51.166, 52.21, 52.24 and part 51, appendix S. The proposed changes were commonly known as the NSR Reform package. They included baseline emissions, actual-to-future-actual methodology, establishment of PALs, Clean Units, PCPs, PSD applicability for HAPs, State selection of applicability options, and other changes. This FR Notice also included EPA's proposed action on CMA Exhibit B.

The opportunity for written and oral public comment on the regulations was announced with the proposal. (61 FR 38250) A public hearing for oral comment on the proposed changes was held on September 16, 1996, in Research Triangle Park, North Carolina. The period for written public comments on the proposed changes ended October 21, 1996. In response to requests for extension of the public comment period, we subsequently extended the public comment period to December 20, 1996 (61 FR 67274) to allow interested parties to review the corrected and final transcripts of the September 16, 1996 public hearing on the proposed rule and the September 17, 1996 meeting of the NSR Reform Subcommittee of the Clean Air Act Advisory Committee. There were 212 comment letters (see Appendix A) submitted by facility owners and operators, trade associations, State and local air pollution control agencies, and private citizens (IV-D-02 through IV-D-193; IV-G-1 through IV-G-20).

On July 24, 1998, we published a FR NOA soliciting comments on a specific alternatives for determining the applicability of NSR to modifications of major stationary sources. (63 FR 39857) This notice requested additional comment some of the changes presented in the 1996 Reform proposal, including baseline emissions, actual-to-future-actual methodology, and PALs. The period for written public comments on the proposed changes ended August 24, 1998. There were 137 comment letters (see Appendix A) submitted by facility owners and operators, trade associations, State and local air pollution control agencies, and private citizens during the public comment period. (IV-D-194 through IV-D-328; IV-D-392 and 393; IV-G-25).

Volume I of this document summarizes the written and oral comments that were submitted during the public comment period regarding the 1996 and 1998 FR Notices. For the topics that were covered in the 1998 NOA in addition to the 1996 Reform proposal (baseline emissions, actual-to-future-actual methodology, and PALs), there is a separate chapter for comments on each FR Notice. Volume I of this document includes all of the comments directly on the 1998 NOA that were received by the end of the public comment period. It also includes all of the public comments on areas of the 1996 Reform Proposal for which we have taken final action. (That is, baseline emissions, actual-to-future-actual methodology, PALs, Clean Units, PCPs, PSD applicability for HAPs, and State selection of applicability options). It does not include public comments on other aspects of the 1996 Reform Proposal. Volume I of this

document also includes our responses to these comments. This comment summary and our responses provided input for the revisions made to the standards between proposal and promulgation.

Public comments that are related to our promulgation rules, but were received after the end of the comment period, are summarized in Volume II of this document. These comments were not submitted specifically in response to the 1996 and 1998 FR Notices, but address the topics in those proposals on which we have taken final action in our promulgation rules. (That is, baseline emissions, actual-to-future-actual methodology, PALs, Clean Units, PCPs, PSD applicability for HAPs, and State selection of applicability options.)

A complete set of the public comments on the 1996 proposal and 1998 NOA, as well as the comments that were received after the end of the public comment period is available as part of Docket A-90-37. This docket can be accessed at the U.S. EPA Docket Center, 1301 Constitution Avenue, NW, Washington, D.C., 20004 in Room B-108, Waterside Mall (ground floor), 8:30 a.m. through 4:30 p.m., Monday through Friday.

Although the 1996 Reform Proposal and the 1998 NOA did not specifically address or request comment on Routine Maintenance, some public commenters did address this issue in their response to the 1996 and 1998 proposals. The summary of these comments and our responses to these comments will be addressed as part of the rulemaking process for the Routine Maintenance, Repair, and Replacement rule. Public comment letters submitted in response to the 1996 and 1998 actions are cross-referenced in Docket A-2002-04, which is the docket for the Routine Maintenance, Repair, and Replacement rule.

Chapter 2 - Baseline Emissions

2.1 Overview

We received numerous comments on our 1996 proposal to allow sources to base their pre-change actual emissions on any consecutive 12 months of utilization during the 10-year period prior to the proposed change multiplied by the unit's current emission rate. Commenters addressed the length of the emission baseline period and provided other comments on the proposed look back methodology. Commenters also addressed whether the baseline period should differ in nonattainment areas and ozone transport regions, the data required to support a 10-year look back period, interactions with Clean Air Act sections 182(c) and 182(e), the length of the contemporaneous period for netting, and requirements needed to protect short term-increments and the NAAQS. These comments are found in sections 2.2 through 2.7 of this chapter. Comments and responses on baseline determination provisions in the 1998 NOA are found in chapter 3 of this document.

2.2 Extending the Emission Baseline to 10 Years

2.2.1 EPA Should Extend the Time Period

Comment:

Many commenters (IV-D-9, 10, 28, 37, 38, 40, 42, 43, 57, 62, 67, 70, 72, 73, 74, 79, 83, 87, 88, 92, 93, 97, 98, 105, 106, 107, 111, 112, 117, 120, 126, 127, 129, 130, 132, 138, 142, 143, 150, 153, 156, 157, 160, 162, 163, 169, 170, 177, 180, 181, 183, 184, 191; IV-G-2, 3, 4, 9) generally supported the proposed extension of the baseline.

One commenter (IV-D-40) said that a 10-year look back period would greatly simplify the current regulations, which often result in uncertainty concerning the appropriate period used to determine a baseline that is representative of normal source operations. In fact, according to the commenter, EPA should require the States to adopt the 10-year look back as part of their NSR programs. Another commenter (IV-D-107) said the 10-year look back will minimize arbitrary impacts in cases where low utilization rates have persisted at specific power generation facilities for extended periods and it will establish a "bright line" test for determining past actual emissions that will simplify the NSR accounting rules. Another commenter (IV-D-57) agreed with EPA that this provision has been unevenly implemented and creates a source of delay in the permitting process, and said that these problems would be resolved under the proposal. One commenter (IV-D-10) endorsed EPA's decision not to allow any other look back periods prior to the 10-year look back period.

Two commenters (IV-D-92, 180) recognized that the use of a 10-year look back period in addition to the 5-year contemporaneous period would result in establishing the baseline for certain changes of emissions that occurred 15 years ago. However, this is preferable to the

current situation where applicants and permitting authorities waste a lot of resources debating over whether a time period other than 2 years immediately prior to the change is more representative of normal operation. These discussions rarely result in an improvement in air quality.

One commenter (IV-D-162) recommended adopting the proposed extended baseline but noted two concerns: the calculation would be complex and not have a true relationship with actual past emission levels; and the agencies would have to consider old records and determine what surrogate records to rely on in cases where direct utilization records are not available.

One commenter (IV-G-4) said the 10-year look back approach would be acceptable if it would also allow sources to measure the significance of the change over the same representative year of operations. This is because in the electric utility industry a modification can shift operations between units, which is different than changes in demand. Using the same year for both separates the load fluctuation issues from the load attraction issues.

While one commenter (IV-D-143) generally supported the 10-year look back approach, they noted that the problems of the current system could better be resolved by making the current provision that allows for establishment of a "more representative" baseline outside of the 5-year look back period more workable.

Response:

We believe that the new rules allowing a fixed look back period of 10 years will improve in several ways the procedures for establishing a modified emissions unit's baseline emissions rate. The new rules attempt to remedy specific complaints that have arisen that the process of establishing a representative baseline period other than the 2-year period preceding the proposed change can be complex, confusing, and time consuming, and often involves disputed judgment calls. In addition, industry has complained that they are often expected to surrender capacity under the current approach because it is not being utilized in the 2-year period immediately preceding the change. We believe it is reasonable and appropriate to allow sources that are planning to modify one or more emissions units to make a determination of NSR applicability based in part on the use of historical operating levels of the units being changed without having to make a case-by-case demonstration subject to the reviewing authority's approval, as long as the provisions set forth in the new rules are followed. The new rules will help simplify the process of determining the appropriate baseline period, eliminate any ambiguity and delays associated with the previous approach, increase certainty, and provide the source owner or operator with a greater ability to preserve a unit's historical operating levels and associated emissions.

In the 1996 NPRM, we indicated that we were not proposing to extend the 5-year contemporaneous period along with the proposed 10-year look back period associated with the

establishment of baseline actual emissions. The comments provided did not provide any compelling reason to change the existing 5-year contemporaneous period. The two look back periods serve different purposes and need not be the same in order to effectively implement the NSR program objectives. However, under the existing regulations States have always had the flexibility to define a different contemporaneous period under SIP-approved NSR programs, and may use that flexibility to adjust the contemporaneous period if they believe that a different period is more appropriate for their particular purposes under the new applicability requirements. [See, for example, §51.166(b)(3)(ii).] Therefore, under today's new requirements, we have not changed the 5-year contemporaneous period under the Federal PSD program. It should be noted that for purposes of determining the baseline actual emissions of a contemporaneous change in emissions from an emissions unit that was an existing unit at the time of the contemporaneous change, the new requirements authorize a source to use the 10-year look back period. However, we want to emphasize that using the 10-year look back is dependent on having adequate information to calculate an average annual emissions rate, in tons per year, for the specific 24-month period selected to represent the unit's representative operation. See, for example, new § 52.21(b)(48)(ii)(e).

We disagree with the comment that the calculation of a baseline emissions level using the 10-year look back will necessarily be "complex and not have a true relationship with the actual past emissions levels." The calculation must be accomplished with actual operating data for the emissions units that are being changed, including historical utilization rates, fuels or raw materials used, applicable emissions limitations, etc. If such data is not available for a particular period of time, the source cannot rely on that period of time to calculate the annual emissions rate for the affected emissions units. The source must maintain a record of the baseline emissions calculations and will be held accountable for the accuracy of these calculations. The source will also be responsible for making this and other relevant information available for inspection when so requested by the reviewing authority. In addition, the calculation should provide a true relationship with actual past emissions, so long as that emissions rate, based on the level of utilization during the representative period, continues to be achievable under the most current legally enforceable emissions limits and restrictions. If the current limits and restrictions are more stringent than those used in the original emissions calculation, then the current legally enforceable limits and restrictions must be used instead of those in effect during the representative period to adjust downward the original calculations.

The comment regarding modifications in utilities is not relevant to our decision to allow a 10-year look back period for modifications of existing emissions units . We continue to believe that the 5-year look back (with the opportunity to request another period of time) is appropriate for utilities, and have not changed the procedures for calculating the baseline emissions rate for electric utility steam generating units. In each case, however, where more than one unit is being modified under a given construction project the new rules require that th e same 24-month period be used to calculate the baseline actual emissions for the changed units. For utilities, see, for example, new § 52.21(b)(48)(i)(c).

We gave consideration to simply revising the current applicability test, involving the use of the past 2 years of operation unless another period is more representative of normal operations, but rejected that alternative because it would continue rely upon a process of demonstrations and determinations that could lead to inconsistent results and unnecessary time delays in the permitting process. The fixed 10-year approach enables sources to select such 24-month period that they believe is representative of the source's historical operational without a demonstration, providing adequate data is available on record to make the necessary calculations. At the same time, the new procedure provides greater certainty than the existing method by limiting the look back to the 10-year period immediately preceding the change.

2.2.2 EPA Should Not Finalize The Proposed Look Back Period

Comment:

Several commenters (IV-D-20, 113, 152, 172, 192; IV-G-8, 12) said that a 10-year look back period is too long. Commenter IV-D-192 said the proposed baseline creates the opportunity for a source to increase production to the 10-year maximum, and prevents the State and local air regulators from addressing the increase in emissions. Three commenters (IV-D-113; IV-G-8, 12) supported a 5-year look back. One commenter (IV-D-20) said that 5 years is appropriate, and then only if there are adequate records. Commenter IV-D-137 added that EPA may also want to include provisions that prevent a source from applying the new definition of actual emissions (after the fact) , retroactively netting out of PSD/NSR and requesting a revision or modification of their permit that eliminates emission reductions.

One commenter (IV-D-14) was concerned that the proposal would result in relaxed permit actions that will cause significant air quality deterioration, while another (IV-D-172) stated that the extended look back period would make PSD increment tracking more difficult.

One commenter (IV-D-4) stated that the proposed look back period would exacerbate environmental inequities and be inconsistent with EPA's goals. Not only could sources choose a 12-month period of very high production, but current emission factors might correspond to less stringent control standards and higher emissions. The resulting baseline would make the NSR trigger a significant increase of emissions from abnormally high emission levels. There are other problems with the proposal such as the likelihood that sources evading NSR using the new baseline may produce emissions that harm environmental justice communities already beset by pollution, and the rule prevents permitting authorities from exercising discretion to protect vulnerable communities. Also, the rule does not reduce complexity; the administrative cost of establishing fair baselines through case-by-case determinations is worth the environmental benefit.

Several commenters (IV-D-20, 34, 109, 137) stated that the proposed baseline process is inconsistent with fundamental NSR principles since it would allow significant increases in

emissions to escape the technology and ambient impact review requirements of NSR. For example, commenters (IV-D-109, 137) said the proposal to change the determination of actual emissions from an activity level that is representative of normal source operation to the greatest activity level in a consecutive 12-month period within the look back period will result in greater potential for adverse impacts on attainment or maintenance of the NAAQS.

Response:

We disagree that a 10-year look back period for determining a modified emissions unit's baseline emissions rate is too long. In our 1996 proposal, we indicated that it was our intent to allow sources to determine major NSR applicability based on their highest level of utilization (61 FR July 23, 1996 at 38258.) It is known that a source's production activity and associated emissions generally will fluctuate as a result of normal fluctuations in market conditions during a business cycle. Thus, "normal operation" within the context of a typical business cycle recognizes that variability will occur. With that in mind, we do not believe that it is reasonable to require a source to establish its representative baseline emissions rate (in tons per year) based simply on the most recent production level when that level is considerably lower than the levels historically achieved under more favorable market conditions. Instead, we believe that the source should be able to determine the representative production level from levels that have actually occurred to establish a baseline emissions rate. In order to learn more about the kinds of business cycles that different industries experience, we contracted a study of business cycles for various major source categories subject to the Prevention of Significant Deterioration Program. ["Business Cycles in Major Emitting Source Industries," September 25, 1997; Eastern Research Group, Inc.] Based on the study's findings, we concluded that a 10-year look back would assure that the normal business cycle generally would be captured for any industry. A 5-year look back, as recommended by comments, would not offer that same assurance. We believe that the use of a 10-year look back, which enables a source to determine what level of utilization (and emissions) has actually occurred over the course of a normal business cycle, is appropriate. It should be noted that the new rules do not require a source to select the highest level of utilization for calculating the baseline emissions rate, but allow the source to calculate an average annual emissions rate based on any level of utilization actually achieved during the 10-year look back period.

With regard to the concern that industry may try to apply the new requirements retroactively to undo current restrictions on existing sources, we want to emphasize that the new procedures do not apply retroactively to existing NSR permits or major modifications that sources have made in the past. Prior applicability determinations on major modifications and the control requirements that currently apply to sources remain valid and enforceable.

We generally do not believe that the new provisions for a 10-year look back will result in the use of "abnormally high" emissions levels for determining post-change emissions increases, although we cannot rule out the possibility that some sources by comparison will have higher

baseline emissions using the new 10-year look back versus the current approach. The basic intent of the new baseline provisions is to enable sources with existing units undergoing modifications to select a level of operation for the unit, and its associated emissions rate, which will be representative of the unit's operating history. In some cases, for example, a unit's highest levels of operation may have occurred in the 2 years immediately preceding a change, and there would be no advantage to the longer look back period. In addition, the current method, which generally bases a unit's baseline emissions rate on the 2 years of operation immediately preceding a proposed change, also allows another period of time to be used if that alternative period is approved by the reviewing as being more representative of normal source operation. In any event, the new baseline provisions contain two elements which help to ensure that the baseline emissions rate established for any particular existing emissions unit prior to a physical or operational change will not be "abnormally high." First, the new method requires the baseline emissions to be calculated on the basis of source operation during a consecutive 24-month period, instead of the proposed 12-month period. This averaging period (which is consistent with the averaging period in the current method) will help prevent short-term emissions peaks from unduly influencing the average annual emissions rate calculated for the unit's operation during the representative period selected. Second, the new rules also require the source to make a downward adjustment in the baseline emissions calculation to account for any legally enforceable emissions limits and restrictions that have been imposed since the representative baseline period and are more stringent than the original limits and restrictions. (Note that the current rules allow a for the use of a look back period beyond the 2 years immediately preceding a proposed change, but do not require any adjustment of the emissions rate to account for the most current emissions limits and restrictions.) The source must also maintain a record of how the baseline emissions were calculated and make it available for inspection when requested to do so by the reviewing authority. For all of the above reasons, we believe that concerns regarding "abnormally high" emission levels as a result of the new baseline provisions are inappropriate.

We disagree with the commenters who believe that the new baseline requirements will not reduce complexity. Under the existing rules, a source has the option of trying to demonstrate that a period of time other than the 2-year period immediately preceding a proposed physical or operational change is more representative of normal operation. We believe that the use of a fixed 10-year look back period will help provide additional certainty to the process and eliminate any ambiguity and confusion that can occur when an applicant and the reviewing authority would otherwise disagree on what pre-change period should be used to best represent the source's normal operation. Admittedly, sources may not be able to use the full 10-year look back for awhile because adequate records may not be available at this time for the last 10 years. The new rules prohibit sources from calculating their baseline emissions without adequate information. Therefore, they must select a consecutive 24-month period within the past 10 years for which adequate information exists to make the necessary calculations of source utilization and annual emissions. This may limit the use of the 10-year look back for many sources until

they improve their recordkeeping and have the data necessary data in their records for future baseline calculations.

We do not believe that there is clear evidence that the 10-year look back provisions under the new rules will result in greater air quality deterioration in individual circumstances. This requires a knowledge of how a unit's emissions would actually change as a result of a major modification determination under the "actual-to-potential" test versus the new "actual-to-projected -actual" test. Modifications to existing emissions units represent only a portion of the total number of NSR permits issued annually. Moreover, there is also a question of how many existing units that will undergo physical or operational changes under the new rules will have Clean Unit status (not subject to the 10-year look back). However, we do believe that the changes to the rules, when considered collectively, will improve air quality by creating incentives for sources to improve environmental performance through emissions reductions and pollution prevention, and by removing barriers to investments in new technologies that improve energy efficiency. We believe some of these benefits will occur through changes that sources make to existing emissions units under the new rules. With regard to emissions increases that do not go through NSR, States retain the responsibility to evaluate emissions increases regardless of whether or not the increases result directly from modifications to existing sources to determine whether the increases will cause or contribute to violations of any NAAQS or PSD increment. See the related discussion in section 4.4 concerning the "actual-to-projected -actual" applicability test.

This leads to the concern expressed by a second set of comments that increment tracking will become more difficult. We acknowledge that increment tracking may become more difficult in a sense because fewer modifications may possibly be required to conduct an increment analysis if they are not considered major modifications under the new applicability test. Instead, under the new rules, it may become necessary for the reviewing authority to take a greater responsibility for conducting periodic increment assessments in the absence of a source-initiated PSD analysis. We believe, however, that this is a necessary outcome of the new procedures which enable a source to calculate emissions increases resulting from a physical or operational change in a different manner. Under the current rules, source emissions may fluctuate from one year to the next due to normal fluctuations in market conditions without a source having to undergo an increment analysis. Only when a major modification occurs is an existing source required to undergo an increment analysis as a prerequisite to the issuance of a PSD permit. The new rules allow a source to distinguish between emissions increases that occur as a result of a physical or operational change versus increases that are not related to the change. While distinctions about the cause of the emissions increase are important for determining whether a modification will occur, the distinctions do not change the fact that both types of emissions increases must be counted toward the consumption of the applicable PSD increment where appropriate.

Finally, we disagree with the comment that the proposed baseline provisions are inconsistent with the fundamental NSR principles. The Act requires that sources which increase their emissions as a result of a physical or operational change should be required to undergo major NSR. At issue is the question of how to best determine whether a source's emissions will actually increase as a result of a physical or operational change. The Act is silent concerning the particular procedures to use in making this determination, although it is reasonable to conclude that the increase of concern should result from the change that is made. We believe that the new approach, which includes, in part, the use of a 10-year look back, as explained above, to establish a baseline emissions rate from which the post-change emissions increase will be determined, is a reasonable interpretation of the statutory definition of "modification" and is, therefore, consistent with the statutory NSR principles.

2.2.3 Prefer To Modify Actual-to-potential Test

Comment:

Two commenters (IV-D-137, 172) believed that instead of extending the period for establishing actual emissions, the actual-to-potential test should be changed. Commenter IV-D-137 said the problem is not that the current system does not go back far enough to set a fair actual emissions baseline, but that the methodology (even the new proposal) does not account for the fact that most emissions units are operating at an activity level much less than the allowed activity level. The commenters believe that many of the real problems with the current NSR programs for modifications would be eliminated if the actual-to-potential procedure were modified in an equitable manner. One commenter (IV-D-137) added that the netting process is inconsistent with STAPPA and ALAPCO's NSR principles because netting allows significant increases in emissions to escape the technology and ambient impact review requirements of NSR. The commenter (IV-D-137) preferred not allowing netting. However, if netting is to be used, the commenters (IV-D-137, 172) prefer a netting methodology like the model that New Jersey is currently using, which is based on a potential-to-potential-less-actual netting methodology. Specifically, the actual-to-potential test should be changed such that when a change involves only one unit, the old PTE should be compared with the future PTE on an annual basis to determine whether there will be a significant net emissions increase. Where the change involves more than one unit, the current system should be retained.

Response:

Our reasons for supplementing the current "actual-to-potential" test with the "actual-to-projected -actual" test are discussed in chapters 4 and 5 of this volume. However, in either test, it is necessary to determine the source's emissions baseline prior to the physical or operational change being made. For the reasons given above, we believe the new fixed 10-year look back offers a fair and reasonable procedure for determining a modified unit's emissions baseline. (It should also be noted that it will not be necessary to use the fixed 10-year look back for existing

units that have Clean Unit status. See chapter 9 (volume 1) and chapter 5 (volume 2) for additional discussion about Clean Units.)

Our regulations have historically contained procedures for netting, which we consider to be a reasonable approach for considering the cumulative effects of emissions increases and decreases at a source. The judicial decision in Alabama Power v. Costle endorsed the use of netting in the PSD program. We do not believe that the comments provide any compelling reason to eliminate the netting provisions, which enable a source to modify an emissions unit without obtaining a permit so long as "actual emissions" do not increase significantly over baseline levels at the plant as a whole.

2.2.4 Discretion To Choose Representative Time Period

Comment:

Commenters (IV-D-40, 50, 62, 97, 105, 142, 143, 160; IV-G-3), some of whom generally accepted the 10-year look back approach (IV-D-40, 105, 143, 160), opposed the proposed elimination of discretion to allow a more representative time period outside the 10-year look back period. One commenter (IV-D-143) stated that the proposal to use the highest 12 months out of 10 years is unacceptable because the reviewing authority should retain the discretion to approve a different period outside of the presumptive look back period if it is more representative. One commenter (IV-D-50) stated that currently it determines the netting baseline on a case-by-case basis using the two previous years of operation that represent the source's normal operation. EPA's proposal relies on a rolling average which is difficult to support with good data and unlikely to represent the source's current emissions. Instead, the determination of the appropriate period should be left to the discretion of the local reviewing authority. One commenter (IV-D-105) requested a case-by-case mechanism to demonstrate more representative periods or industry sector-specific cycles longer than 10 years. Sources should have the option of looking back less than 10 years if appropriate.

Two commenters (IV-D-40, 142) requested a narrow exception to the 10-year look back period for units that have been placed in cold reserve due to reduced demand and that have not been operated in the past 10 years. Such units would have to meet the following criteria.

- The owner/operator has continually maintained a valid operating permit.
- The unit has been maintained in operating condition or included in a reactivation plan filed with the appropriate agency.
- The unit's emissions are included in the reviewing authority's emissions inventory and attainment plan.
- The unit's post-change emissions would not result in a violation of NAAQS or PSD increments.

In addition, the exception could further be limited by an absolute look back cut-off of 20 years.

One commenter (IV-D-152) noted that while industry representatives have stated that EPA should allow use of earlier periods when they are more representative than the presumptive prior 2-year period, this argument is only sensible if the source is required to show that the earlier period is in fact more representative. Such a requirement is missing from the proposal and should be added. Any look back period should be presumptive, and if it is shown that the look back period is not representative of current conditions, then the presumption should not apply.

One commenter (IV-D-154) asked EPA to clarify existing law concerning the emissions baseline. EPA should state that current law does not require the use of the 2 years immediately preceding the proposed change, but allows the use of any 2-year period before the change that is representative of source operation. Alternatively, commenter IV-D-160 suggested that EPA issue immediate guidance clarifying that sources may establish their baseline emissions using emissions during any consecutive 12-month period of their choosing within the 10 years preceding an anticipated physical or operational change. This method of setting the emissions baseline is permitted under the definition of "actual emissions" in the current NSR regulations. This will address problems experienced by sources in cyclical industries.

Response:

We believe that use of a fixed 10-year look back period provides the desired additional clarity and certainty to the process of establishing a source's baseline emissions level. The new rules eliminate the need for a demonstration by the applicant--and a determination by the reviewing authority--of what particular period of time best represents normal source operation. The existing procedures added resource burden and delay in the issuance of a permit determination. We believe that it is reasonable and appropriate to provide a fixed look back period from which all determinations of baseline emissions must be made (except for electric utility steam generating units subject to the 1992 WEPCO rules.) We did not adopt the option of allowing sources/reviewing authorities the possibility of choosing another period of time outside the fixed 10-year look back because we believe that 10 years in itself is an ample period of time from which to select a representative operating level, and without the fixed period the uncertainty and complexity of the original procedure would be retained. We are unaware of any data demonstrating business cycles longer than 10 years. In reality, a normal business cycle for most industries involves recurrent ups and downs in the level of activity or plant utilization, and one year of operation within the cycle is not necessarily more "normal" than another. The new rules, avoid this confusion and enable a source to select a period of maximum actual utilization (or a different period if another period yields a higher level of annual emissions) from which to calculate the average annual emissions of the units that are changed. It should be noted, however, that the calculation of baseline emissions derived from the source's representative operating records may have to be adjusted downward to account for any more stringent emissions factors and restrictions that may have been imposed on the unit since the

representative period. See section 2.2.5.2 for further discussion of the basis for adjusting the baseline emissions calculation. All calculations relevant to the establishment of the baseline emissions rate must be recorded and maintained by the source, and may be requested by the reviewing authority.

With regard to the commenters who recommended an extension to the 10-year look back for emissions units that have been sitting idle for periods exceeding 10 years, we do not believe that such an extension is appropriate, because it adds an unnecessary complication to the process in light of the few emissions units that are likely to have been actually maintained in operating condition during such a long period of time. It is more likely that most units that have not been operated for such lengths of time are in need of extensive repairs and refurbishment in order to become fully operable again. Our view is that these are the types of sources that Congress intended to undergo NSR if they are to be brought back into regular operation. Hence, under the new rules, if an emissions unit was not actually emitting a pollutant during the selected 24-month baseline period, that unit cannot be given credit for emitting for that period of time in order to establish the baseline actual emissions.

2.2.5 Other Comments on the Look Back Methodology

2.2.5.1 Utilization rate calculation

Comment:

One commenter (IV-D-107) endorsed EPA's proposal to allow sources to use their highest capacity level achieved during any 12 consecutive months within the 10 years prior to a proposed physical or operation change. This change provides improved flexibility in establishing a source's annual capacity level that is truly representative of normal operations.

Five commenters (IV-D-22, 83, 98, 111, 160) objected to requiring sources to use the 12 months with the highest utilization. Three commenters (IV-D-83, 98, 111) stated that using the production rate is unworkable in many circumstances. One commenter (IV-D-22) said that there is not always a clear relationship between production rate and emissions, and that reliable records may not be available to determine the highest production rates during the look back period. Another commenter (IV-D-160) stated that reliance on the highest utilization is inappropriate because it assumes that a facility produces only one product and that there is a consistent, linear relationship between utilization and emissions. Applying the emission factor for the new product would be infeasible for facilities that change products between the baseline year and the year of the proposed modification. Instead, the commenter said the final rule should allow sources to establish their emissions baseline using emissions from any 12-month period of their choosing in the preceding 10 years, adjusted to reflect current rules. Two commenters (IV-D-83, 111) suggested allowing the source to use any 12 months of their choice, which is an option presented in the draft rule.

Three commenters (IV-D-137, 140, 172) were concerned about the effect of the utilization rate calculation in a system based on actual-to-potential emissions. One commenter (IV-D-140) stated that the 12-consecutive month criteria creates an artificially low baseline by not adequately accounting for market conditions and the need for operational flexibility. According to the commenters, the definition of "actual emissions" should be based on established maximum emission rates and utilization rates; such an approach would satisfy many of EPA's concerns with the CMA Exhibit B approach. The actual emissions baseline for new or recently modified facilities should be equivalent to allowable emissions due to the extended shakedown periods necessary for such facilities. Commenter IV-D-130 recommended that the reviewing authority be provided with discretion to determine that actual emissions are equal to allowable emissions. According to the commenter, this provision creates the current ability for sources to use plant wide caps and it should not be deleted from the regulations.

Two commenters (IV-D-137, 172) stated that the current system's problem is that it compares past actual emissions to future allowed (potential) emissions. One commenter (IV-D-137) added that even the proposed actual-to-future-actual methodology does not account for the fact that most emissions units are operating at an activity level much less than the allowed activity level.

Another commenter (IV-D-61) suggested that baseline should reflect the best estimate of actual emissions and be based on actual capacity utilization and the average emissions rate during that year. The latter should be based on stack tests, published emission factors or other engineering calculations.

Two commenters (IV-D-130, 153) who supported the look back proposal indicated their confusion with EPA's discussion of the appropriate calculation. EPA's discussion of allowing the use of the highest utilization rather than the emission rate appears to refer to the adjustment for subsequent control requirements; the statements are not intended to limit the relevant factors affecting representative emissions to utilization levels. A number of factors affect a source's emissions, not just utilization levels. They recommended that EPA clarify that the highest actual emission levels with appropriate adjustments for subsequent control requirements may be used in selecting the emissions baseline.

Response:

We agree with the commenters' concerns that sources should not be required to select the period of time that reflects a unit's highest utilization level. The concern was based on the fact that a unit's highest emissions rate may not occur during the period of highest utilization. Our reference in the proposal preamble to selecting the period of highest utilization was based on our general assumption that the period of maximum utilization would also represent the period of highest pollution levels for the unit of concern. The new rules do not require that a source

select the 24-month period when a unit's utilization is the highest. Instead, the new rules allow the source to select any consecutive 24-month period within the 10 year-year period immediately preceding the physical or operational change made to the unit. Thus, a source may choose a 24-month period that enables it to maximize the average annual emissions rather than the average utilization rate. (Nevertheless, the source may be required to adjust downward its baseline emissions calculation to account for any more stringent legally enforceable emissions factors and restrictions that have been imposed on the unit since the representative period selected.)

With regard to the commenter who recommended that the actual emissions baseline for new or recently modified facilities should be equivalent to allowable emissions, we believe it is appropriate to handle the baseline emissions calculation for each emissions unit on the basis of its individual classification, e.g., new or existing unit. We agree with the commenter in the case of a new emissions unit (unit that does not yet have a 2-year operating history) that the baseline emissions rate should be the unit's potential to emit, since a unit with less than 2 years of normal operation at the time of a physical or operational change does not have sufficient operating history to determine its actual emissions. However, for existing units that are going to undergo physical or operational changes, we believe it is more appropriate to use the fixed 10-year look back to calculate the baseline emissions because the units have adequate operating history from which to calculate an emissions rate based on actual utilization of the unit.

We generally disagree with the comments recommending that a modified unit's baseline emissions should be set equal to the unit's maximum emissions rate. Under the new rules, if the existing unit has Clean Unit status, then projects at that unit would not require a major NSR permit if the project does not cause the need for a change in the emission limitations or work practice requirements in the permit for the unit. See chapter 9 of this volume and chapter 5 of volume 2 for further discussion of the new requirements for Clean Units. However, for modifications to existing units that do not have Clean Units status, we believe that it is appropriate to allow a source to identify a representative level of operation (and emissions) that has actually been achieved by the unit during a normal business cycle, and use such representative operating date to calculate a baseline emissions rate. In doing so, the new procedures allow the source to determine the actual emissions increase resulting from a physical or operational change on the basis of a baseline emissions level generally representing maximum actual utilization of the unit, rather than the level of utilization during the two-year period immediately preceding the change. As mentioned above, the new requirements authorize the source to select a single consecutive 24-month period within the 10-year look back period to determine the average annual utilization rate and calculate the baseline actual emissions for each and every emissions units that will undergo physical or operational change(s) as part of a project (or series of related projects). See, for example, new §52.21(b)(48)(ii)(e). It is possible that not all of the emissions units that will undergo change will achieve their highest levels of utilization during the same 24-month period. Nevertheless, a source will have the ability to select the single 24-month period that best represents the collective level of operation (and emissions) for the units that will be changed.

We disagree with the comment that the baseline emissions level should be based on the modified unit's actual utilization and actual emissions rate during that year selected by the source. There are two reasons why we disagree. First, we have concluded that it would be more appropriate for a unit's baseline emissions rate to be based on a average of two years of operation rather than the 12-month period which was originally proposed. By extending the averaging period to two years (a consecutive 24-month period), the effects of a short-term spike in operation (emissions)–not truly representative of "normal" operation–will be reduced. Second, we do not believe it would be appropriate to use a unit's actual emissions during the representative period selected without some form of adjustment in cases when the unit is no longer able to emit the calculated amount of a pollutant at the time of a physical or operational change (due to the imposition of more stringent emissions factors or restrictions since the representative period). Therefore, under the new rules sources are required to adjust downward the average annual emissions rate calculated from the representative period, when more stringent emissions factors or restrictions have been imposed since the representative period. This adjustment procedure is discussed in the next section.

2.2.5.2 Role of emission limits in baseline calculation

Comment:

One commenter (IV-D-143) opposed the proposed requirement for any current Federal, State or voluntary limits to be included in the establishment of the pre-change baseline. The commenter said the provision would penalize sources that complied with title IV or chose to implement pollution prevention programs. The requirement should apply only to those limits set more than 5 years before the change and be consistent with current rules. If the proposal to determine the baseline using current emissions factors were removed, then the 10-year look back provision would represent true reform.

Three commenters (IV-D-57, 60, 107) opposed reducing the baseline for voluntary reductions. Two commenters (IV-D-60, 107) opposed the requirement to base a source's historic baseline on voluntary reductions implemented prior to the change because it is counterproductive and penalizes sources for voluntarily lowering their emissions, whatever the operational reason. One commenter (IV-D-57) stated that in determining the netting baseline, reviewing agencies should provide credit for voluntary reductions that have been taken by a facility. For example, while printing facilities typically must reduce VOCs emissions by 85-90 percent, a facility may use control equipment that achieves a 95-percent reduction. With no accounting for these additional reductions in the netting baseline, the facility is penalized for reducing emissions beyond minimum requirements. Thus, the baseline should be increased by an amount equal to any emission reductions achieved voluntarily during the relevant period.

Other commenters (IV-D-11, 14, 57, 67, 140, 142) generally supported the consideration of current Federal, State or voluntary limits in the establishment of the pre-change baseline. One

commenter (IV-D-67) said current emission factors should be adjusted by all currently applicable Federal and State requirements, not just federally enforceable limitations. Another commenter (IV-D-140) suggested that EPA consider applicable rather than current federally enforceable limitations. For example, unless the wording of the provision is changed it could be misinterpreted to include an NSPS that is not applicable because it was proposed after construction had started. One commenter (IV-D-142) stated that using the unit's current permitted emission rate in determining its baselines would ensure that any recently imposed emission limitations applicable to the source are included in its calculation. This environmental protection is absent from the current rules.

One commenter (IV-D-14) noted that the proposed language only mentions federally enforceable emission limits. If a State-only limit applied, the source could ignore the effect of the State regulation and use uncontrolled emissions. This, according to the commenter, would produce inconsistences between units that have a permit and those that do not, and it would not represent actual emissions. The commenter also asserts that the language in the regulation and the discussion in the preamble are contradictory. The reference in the preamble is to the current federally enforceable emission factor, although the term emission factor is not used in the language of the regulation. If the intent is for the emission factor to be the allowable emission rate, then this may be substantially higher than the actual emission rate. If the intent is for the enforceable limit to be substituted in place of actual emissions, this could involve a fundamental relaxation of the PSD program. Only if the intent is that actual annual emissions are determined recognizing currently imposed restrictions, does the commenter support this requirement.

Commenter IV-D-14 also raised concerns regarding how the "emission factor" would be obtained. The commenter supported an interpretation that the actual annual emission rate (12-month total) which presently occurs under the imposition of the current restrictions would be prorated to any higher utilization under the same configuration as the time of the change, provided this is within the 10-year period.

Conversely, another commenter (IV-D-152) opposed the use of a source's current allowable emission rate as its baseline because current actual emissions may be significantly lower than the current allowables. The commenter asserts that allowable emissions are often set for reasons that are unrelated to the actual emissions pattern of the facility and should not be the determining factor.

Response:

Despite the comments opposing our proposal to require the adjustment of the baseline emissions rate under certain circumstances, we continue to believe that is appropriate for the adjustment to be made. First, with regard to the concern that the adjustment would penalize sources that complied with title IV or chose to implement pollution control programs. Title IV–Acid Rain Program–applies to electric utility plants. We do not intend to extend the fixed 10-

year look back period, or the adjustment provision, to existing electric utility steam generating units. Therefore, the adjustment provision has no impact on electric utilities that complied with title IV.

Second, we believe it is appropriate to require adjustments to the baseline emissions calculations even when the adjustment is based on limitations that the source has taken voluntarily (such as pollution prevention projects) as long as such voluntary reductions result in a legally enforceable limitation being placed on the source. Voluntary reductions, such as netting credits, offsets, and Emissions Reductions Credits, result in legally enforceable restrictions being placed on the source to ensure that such reductions are permanent. The baseline emissions rate is intended to represent the unit's pre-change emissions from which a post-change emissions increase is to be projected. Thus, we believe any current legally enforceable reductions should be considered in establishing a modified unit's baseline emissions if it is to be considered a realistic baseline value. We agree with the comments indicating that the adjustment must be made on the basis of any enforceable limitation, not just federally enforceable ones. The new rules clarify this issue.

With regard to the concerns expressed about the proposal requiring the use of a unit's current allowable emissions as its pre-change baseline emissions rather than current actual emissions, we believe that the commenters misunderstood our intended approach for adjusting the initial baseline emissions calculation. Our description of the adjustment to the initial calculation of a unit's pre-change baseline emissions (based on a source's records of actual operating conditions during the consecutive 24-month period within the past 10 years) was intended to require the source to use the current legally enforceable emissions factors (e.g., pounds per million Btu, percent sulfur in fuel) and restrictions (e.g., hours per day, shifts per day)–not current allowable emissions (tons per year based on full design capacity) unless the current allowable emissions are less than the original baseline emissions calculation. The adjustment would only be required when the current factors and restrictions are more stringent than those in effect during the representative period, and would link the source's representative level of utilization with the current emissions factors and restrictions to ensure that the unit would not base its pre-change baseline emissions rate on an emissions rate (tons per year) that could not currently occur when operating at the "representative" utilization level.

2.2.5.3 Other

Comment:

One commenter (IV-D-150) advocated using allowable emissions rather than emission factors for the baseline because constraints on future emissions should not be based on a company's current performance when performance already exceeds what is required by existing permits. One commenter (IV-D-11) suggested an alternative using the current emissions, which

is determined to be the lower of the emission rate during the highest utilization or the current allowable rate.

Response:

The commenters appear to have misunderstood the purpose of the downward adjustment to the baseline emissions calculation. The objective of the adjustment is to ensure that the units that are changed do not get more credit for their baseline emissions (average annual emissions rate, in tons per year) than they would if those units were operated at the same levels today under current emissions factors and restrictions. Thus, once the average annual utilization rate is calculated for the consecutive 24-month period selected by the source owner or operator, it is presumed that under favorable market conditions the unit could return to that level of operation just prior to the change absent a physical or operational change to the unit. In order to provide a realistic estimate of the emissions that would result from that representative level of operation just prior to the change, it is then necessary to account for any current emissions factors and restrictions that are more stringent than the original ones. The need for the adjustment should not be construed to mean that the unit's emissions absent the adjustment would exceed its maximum allowable emissions rate (although, if that were the case, then the baseline emissions rate would have to be set at the source's current allowable emissions rate). For example, operating at an average annual rate of 70% capacity over the selected 24-month period, a unit's average annual emissions rate was calculated at 145 tons per year of SO2. Today, however, a more stringent sulfur-in-fuel restriction exists and, if it had existed during the selected 24-month period, would lower the unit's emissions (at the same level of operation) to 115 tons per year. By comparison, the unit's maximum allowable emissions rate (at full capacity) under the current restrictions is 165 tons per year. In accordance with the new rules, the adjusted rate of 115 tons per year must be used.

Comment:

One commenter (IV-D-14) raised several other specific questions on how the baseline would actually be calculated, for example, how to calculate maximum emissions and address discontinued units. The commenter would support a baseline calculation that requires all actual emissions must be from equipment currently in use or capable of use without any physical changes to the process to accomplish the use. An emission decrease that occurred outside of the contemporaneous time period would be lost. If the unit operated within the contemporaneous time period, but there was a higher annual emission within the 10-year time period, this would be substituted subject to any limitations on the use of the equipment.

Response:

The 10-year look back period is used to determine the pre-change baseline emissions (average annual emissions rate) for each emissions unit that is changed–not the entire source, as

suggested by the commenter. Therefore, only the emissions units that are changed will be considered in the 10-year look back. In particular, previously discontinued units are not involved in the look back because they are not subject to being changed. For existing emissions units being changed, the source must calculate an average annual emissions level, in tons per year, based on the units' actual operating parameters (e.g., level of utilization, fuels and raw materials, relevant emissions factors, etc.) during a consecutive 24-month period within the 10-year look back. (If any changed emissions unit was not in existence or operation during the selected 24-month period, then no baseline emissions can be credited to that unit.) In the event that any emissions factor or operational restriction has been replaced with a more stringent one, then the more stringent factor or restriction must be substituted in the calculation of the average annual emissions using the utilization rate from the selected 24-month period. Under the new rules, the source is also required to document and maintain a record of the baseline emissions calculations along with other calculations pertaining to the determination of any emissions increase associated with the physical or operational change.

Comment:

One commenter (IV-D-14) raised several concerns and questions regarding how the 10-year look back would translate in a baseline emission calculation and the relationship between the contemporaneous time period, the 10-year actual emissions baseline, and the netting procedure. The commenter anticipates numerous minor NSR permit actions to un-do or change past minor permit actions in order to recover past utilization restrictions and emissions that were imposed under the current PSD regulations if this proposal is finalized. This will make minor NSR more burdensome and complicated. It will also result in relaxed permit actions that will cause significant air quality deterioration. The commenter said the rule needs to prevent turning back the clock on previous (minor and PSD) NSR permit actions. Instead, the rule must only apply from the date of promulgation forward in time and must not be used to invalidate previous permit actions which were taken to avoid PSD under the current rules.

Response:

We agree with the commenter that it generally would be detrimental to allow sources to undo existing permit requirements by attempting to apply the new requirement retroactively. We have not added any new language to the rules that would cause a source to conclude that its existing permit is no longer valid, nor can we see that there is any incentive for a sources to want to invalidate a previously-issued permit. However, sources that may have submitted permit applications under the current rules for which a permit has not yet been issued may wish to re-evaluate their applicability under the new rules and submit a new permit application. Prior applicability determinations on major modifications and the control requirements that currently apply to sources remain valid and enforceable.

Comment:

One commenter (IV-D-156), who generally supported the extended baseline, said that it would be impractical and unrepresentative for facility operations to apply an actual or allowable baseline approach to landfill gas emissions. EPA should consider a specific exemption or approach for landfills in order to address the unique emissions profiles associated with such facilities.

Response:

We recognize that there are some unique differences between annual emissions profiles at landfills and other source categories. In particular, landfills do not go through the types of business cycles that other industries do, and their emissions do not fluctuate in a similar way. We do not believe, however, that an exemption is needed to address this difference because we do not intend to preclude a landfills from continuing to calculate their emissions changes associated with modifications in the same way that they are presently making that calculation. If, following the adoption and implementation of the new rules, we determine that additional guidance is necessary, such guidance will be provided for addressing landfill emissions changes from modified sources.

Comment:

One commenter (IV-D-142) said the 10-year look back period should be based on the date a complete permit application is filed. The commenter said basing the look back period on the date of commencement of construction, as proposed, would cause confusion in the permitting process, allow the reviewing authority and third parties to inappropriately manipulate the baseline, and shorten the look back period. This is because the NSR rules define "commence" as the date that the source has all permits and has begun a program of continuous construction (or entered into a binding agreement to undertake a program of actual construction) rather than in terms of actual construction or other tangible steps under the control of the source. The look back period should be based on the date that a complete permit application is filed, or if no permit is required, on the date the source "begins actual construction" as defined in section 52.21(b)(11).

Response:

We agree with the commenter that in some cases the 10-year look back should begin from the complete permit application date ; however in certain cases, we believe that it is appropriate for the look back to begin on the date that the source begins actual construction because the source will not be required to submit a permit application. Thus, the new rules reflect determination of the applicable date as follows: If a source believe that it will need either a major or minor NSR permit to proceed with a proposed physical or operational change, then the

source may use the 10-year period immediately preceding the date on which it submits a complete permit application. If, however, the source believes that the physical or operation change(s) it plans to make will not result in either a significant emissions increase from the project or a significant net emissions increase at the major stationary source (that is, the project will not be a major modification), and the source is not otherwise required to submit a permit application to obtain a minor NSR permit before making such change, then it must use the 10-year period that immediately precedes the date on which actual construction of the physical or operational change will begin. See, e.g., 51.165(a)(1)(xxxv)(B)(2).

Comment:

One commenter (IV-D-154) noted that permit applications may contain very conservative estimates on emission rates, but that after the facility becomes operational the owner/operator should be able to demonstrate actual emissions and request a reduction of the emission limits by an administrative change. Any excess Emission Reduction Credits that were used for the netting or offsetting of the proposed emissions should be returned to the applicant.

Response:

This commenter does not appear to be addressing an issue that was raised in developing this rulemaking. It is not relevant to the new applicability requirements that have been promulgated.

2.3 Baseline Period in Nonattainment Areas and Ozone Transport Regions

Comment:

2.3.1 Support Different Baseline Period

Two commenters (IV-D-137; IV-G-12) supported a November 15, 1990 cutoff for the baseline determination in nonattainment areas. One commenter (IV-D-137) commended EPA for not extending the look back period in ozone nonattainment areas, where the baseline for attainment plans is the 1990 actual emissions inventory. One commenter (IV-G-12) supported the November 15, 1990 cut-off for the look back period in nonattainment areas and the ozone transport regions (OTRs) as an alternative to reducing the overall baseline look back to 5 years.

2.3.2 Oppose Different Baseline Period

Several commenters (IV-D-9, 10, 28, 40, 42, 43, 72, 105, 107, 108, 112, 126, 139, 142, 143, 150, 157, 163, 184; IV-G-9) opposed the November 15, 1990 cut-off for baseline emissions in nonattainment areas and the OTR. One commenter (IV-D-142) stated that EPA's concern

over establishing a baseline consistent with the emissions inventories and attainment plan requirements for these areas should not warrant the imposition of a cut-off date. The commenter suggested allowing an earlier period if a source's calculated actual emissions baseline does not exceed its emissions in the area's current emissions inventory and attainment plan. One commenter (IV-D-143) stated that EPA apparently did not think these restrictions were needed in the WEPCO rule and has not explained why they are needed now. Another commenter (IV-D-40) stated that the cut-off is inappropriate for underutilized sources or those placed in reserve during November, 1990 due to economic downturns. The cut-off date would deny these sources the opportunity to establish representative baselines. One commenter (IV-D-9) stated that the cut-off unfairly penalizes facilities that voluntarily took part in EPA's Industrial Toxics Program (33/50 Program). Another commenter (IV-D-157) added that if the 1990 emissions inventory reveals a need to regulate an existing source more tightly, then the relevant SIP provisions should be changed.

One commenter (IV-D-126) stated that OTR attainment will be met via allowance cap-and-trade rules currently being adopted by OTR States pursuant to a memorandum of understanding. New sources that meet the applicability criteria in the memorandum of understanding must obtain NO_x allowances in addition to the offset requirements, and EPA's limiting the look back period to November 15, 1990 in the OTR is an unnecessarily restrictive policy.

Two commenters (IV-D-42, 108) stated that strict SCAQMD requirements for recordkeeping, reporting and inventory were in place before November 15, 1990, and there is no reason to limit the look back to eliminate years before that date. In southern California, the prescribed look back years would preclude sources from using the last years of the region's pre-recession production levels and this method therefore would use unrepresentative, higher recessionary production levels that would limit recovery from the recession. The proposal would require facilities that modify their equipment to provide offsets simply to return to previous production levels. This is an unfair economic penalty that Congress did not intend.

Response:

Sufficient time has elapsed since the time of the proposal to render the November 15, 1990 limit moot for projects planned at major stationary sources. However, it is still possible for the cut-off date to affect the look back period for changes that occur contemporaneously with such projects. For contemporaneous changes that include a 10-year look back to establish a unit's baseline emissions rate, we believe that it is still appropriate to retain the restriction prohibiting sources from using any period of time earlier than November 15, 1990 in nonattainment areas and ozone transport regions. The 1990 Amendments included a number of changes in the tracking of emissions and how emissions are to be inventoried, particularly in nonattainment areas and ozone transport regions. The changes strengthen reasonable further progress tracking requirements, offset limitations, and RACT requirements for nonattainment

areas. They also establish enhancement emission inventory requirements for all areas. Because we do not anticipate many contemporaneous changes to have occurred before 1990, we do not view this requirement as unnecessarily burdensome. In addition, by the time most State plans are revised to incorporate the new requirements, we do not believe that the November 15, 1990 cutoff date should not factor into many contemporaneous circumstances.

2.4 Data Required to Support a 10-year Baseline

2.4.1 Length of Look Back Period and Data Acceptability

Comment:

Several commenters (IV-D-14, 42, 72, 93, 142; IV-G-12) generally supported limiting the extended look back period to situations in which adequate emissions and/or capacity utilization data are available. One commenter (IV-D-142) stated that although the lack of adequate data may be of concern for the next few years for certain source categories, concerns will be eliminated over time as more sources begin to retain utilization data in anticipation of future projects. If a 10-year look back is adopted, the commenter added that sufficiently accurate data records must exist such that actual emissions (or utilization) can be quantified. If the data do not exist, then progressively more recent years should be reviewed and over time the records will become available.

One commenter (IV-D-137) opposed EPA's proposal to predicate the use of a longer look back period on the accuracy and completeness of available data and establishment of specific criteria using older data. This approach could raise the possibility that netting decisions would be based on questionable data and would add uncertainty to the process.

One commenter (IV-D-156) suggested for sources that lack the historical data necessary to establish a baseline that EPA allow an opportunity to document their actual and allowable emission rates and utilization levels using other facility records. Landfills, for example, are unlikely to have the necessary data since landfill gas emissions have not typically been regulated to the degree that other facilities have.

Response:

We recognize that in many cases, sources presently maintain records on emissions and operations for only 3 to 5 years. Thus such sources may have only limited use of the full 10-year look back period at the start of the implementation period for the new rules. However, this limitation should be remedied over time as sources begin to maintain records for longer periods in order for them to use the 10-year look back opportunity. The comments received provide no compelling reasons why it is not sound policy to require the availability of adequate data in order for a source to be able to use the full 10-year look back for establishing baseline emissions

rates for modified emissions units. In conjunction with this policy we do not believe that sources should be allowed to use information derived from the records of other facilities. There are generally sufficient differences between the way individual facilities operate, even when they are similar source types with similar operating characteristics. The baseline emissions are an important component of the calculation of a modified unit's emissions increase and should, therefore, be based on accurate information reflecting the source's operation and emissions during the representative period selected by the owner or operator of the source. This applies to the calculation of emissions changes associated with the netting calculations. Consequently, the new rules follow the proposal in requiring that full use of the new 10-year look back period be conditioned on the accuracy and completeness of source records of emissions and capacity utilization for any emissions unit that undergoes a physical or operational change. [See, for example, new §52.21(b)(48)(f)].

2.4.2 EPA vs. State Agency Role

Comment:

Several commenters (IV-D-10, 20, 61, 62, 73, 74, 88, 92, 137, 180) agreed that it would be appropriate for EPA to allow the reviewing authority to determine the accuracy and completeness of emissions data. One commenter (IV-D-20) said EPA should provide minimum requirements for the adequacy of records. This will help reviewing authorities avoid lengthy, subjective arguments with industry on what constitutes sufficient records for a baseline determination. Four commenters (IV-D-10, 61, 88, 137) said that case-by-case decision-making by State and local reviewing authorities would be preferable to EPA establishing specific criteria. Commenter IV-D-137 said State and local reviewing authorities are in better positions to judge the quality and acceptability of data used for establishing past emissions inventories and activity levels. A national one-size-fits-all approach is not likely to be as workable.

One commenter (IV-G-7) suggested a phased approach in which the State reviewing authority determines the number of years in the look back period.

Two commenters (IV-D-172; IV-G-8) said that extending the look back would require agencies to accept questionable data. Case-by-case determinations would lead to inconsistent implementation at the national level because most sources do not keep good records for 10 years; EPA should issue regulations that would reduce the number of case-by-case determinations.

Response:

Under the new rules, sources are not required to submit their baseline emissions calculations, or any information associated with a finding that a project is not a major modification, to the reviewing authority for review and validation under the major NSR permit program. (Note that utilities must send an advance notice prior to construction). We believe

that such submittals by all modified emissions units would have resulted in a large burden on reviewing authorities to review information, which in most cases it would not represent major modifications. We do believe, however, that States will require some of these sources to apply for permits under their minor NSR permit program, where they will have the opportunity to review the submitted information. Nevertheless, the sources are responsible for the adequacy of the source information which they use to determine a unit's applicability to the major NSR rules, and may be required to provide such information to the reviewing authority upon request. Moreover, States may adopt more stringent provisions in their NSR rules to establish greater accountability on the part of the source if they believe it is appropriate to do so. At this time, we do not intend to provide specific guidance on the types of information that would be considered adequate or inadequate. The type of data necessary to determine emissions will vary drastically from source category to source category and from process to process within a source category. If, however, we determine at a later date that particular guidance is necessary, we will consider the development of such guidance at that time.

2.5 Interaction with CAA Section 182(c) and 182(e)

Comment:

Three commenters (IV-D-42, 72, 108) stated that the proposed extension of the look back period fits within the design and intent of sections 182(c) and (e). One commenter (IV-D-42) noted that EPA has approved the California SIP containing the RECLAIM program, which uses a baseline process similar to the EPA proposal. According to the commenters, baseline calculation will ensure that air quality is protected in the long run if it meets the following conditions.

- It takes into account prior emission reductions that presumably would have undergone NSR.
- It nets those reductions with the operational change at issue.
- It requires that in order to avoid further major NSR the net be less than zero.

Thus, the commenter concludes that, because the proposal meets these conditions, it will fit with section 182(e).

Conversely, another commenter (IV-D-137) suggested that there is a significant conflict between changing the emissions baseline for netting and the ozone nonattainment provisions of sections 182(c) and (e). According to the commenter, this conflict can be resolved by deferring to the section 182 offset NSR requirements for serious ozone nonattainment areas. The commenter further observed that, while NSR programs are tools to attain and maintain compliance with the NAAQS, the programs should not be available to undermine specific statutory and SIP requirements designed to resolve nonattainment problems.

Response:

We disagree with the commenter's alarm that the use of a 10-year look back period to implement sections 182(c) and (e) of the Act for purposes of establishing a modified unit's baseline emissions will undermine any statutory and SIP requirements designed to address nonattainment problems. The two sections establish special procedures for determining whether a proposed modification to a major stationary source of ozone in a serious, severe or extreme ozone nonattainment area will be subject to major NSR under part D of the Act. The Act is silent on the issue of how one is to determine whether a physical or operational change increases the amount of a pollutant for a changed emissions unit. We believe, therefore, that we have the authority to establish a regulatory procedure for making the required determinations concerning emissions increases resulting from physical or operational changes. Furthermore, the look back period does not negate the offset requirements of sections 182(c) and (e).

In light of the fact that the 10-year look back period may be used for some existing emissions units (other than electric utility steam generating units) that are involved in contemporaneous emissions changes (for netting purposes), it should be noted that the new requirements prohibit the use of the look back period earlier than November 15, 1990. Consequently, for emissions units whose contemporaneous emissions changes occurred before November 15, 2000, the consecutive 24-month period selected for calculating the baseline actual emissions relevant to the contemporaneous emissions change cannot include a date prior to November 15, 1990. It should also be pointed out that for modifications involving emissions of VOC in areas classified as "extreme" the statutory language is clear that the increase in emissions resulting from the change is not required to be a significant increase, rather "any increase" that is projected using the new "actual-to-projected -actual" will trigger the applicable NSR requirements.

2.6 Length of Contemporaneous Period

2.6.1 Support for 5-Year Contemporaneous Period

Comment:

Some commenters (IV-D-10, 14, 126, 138, 160, 191) generally supported keeping the contemporaneous period at 5 years. One commenter (IV-D-126) stated that there is no legal or policy impediment to using different look back periods for NSR applicability purposes and for determining contemporaneous emission increases or decreases in a netting context. Another commenter (IV-D-14) stated that the 5-year contemporaneous period should be retained because if it were altered to a longer period, recent permit actions might be invalidated. Also, under the present rules when a PSD permit is issued, all netting increases and decreases are wiped out and the process starts again. EPA's proposal leaves this practice unchanged.

2.6.2 Support Alternatives to the 5-Year Contemporaneous Period

One commenter (IV-D-157) said EPA should adopt a 10-year contemporaneous period because inconsistencies between the two periods leads to inconsistent and counterproductive results. The same arguments that support a longer baseline for measuring the initial increase support using a longer baseline for computing netting credits. Using a 5-year baseline to measure netting credits means that the netting period will often omit periods of peak production because it is too short to cover a full business cycle. In that case "past actual" emissions will be unrepresentatively low, and so will the amount of the "netting credits" created by reducing the applicable emissions limits at these units.

Commenter IV-D-157 added that emission increases due to modifications made in the last 5 years would still be accumulated under the 10-year look back approach. All of those increases could still be offset with every qualified decrease during that period. The baseline would simply specify how those increases and decreases were to be measured (which is a topic not mentioned by the proposal) and would do so by applying the same 10-year accounting period used more generally for measuring emissions increases.

An industry coalition (IV-D-153) stated that a source should have the option of selecting either a 10- or 5-year contemporaneous period for netting purposes. This would more closely reflect the circumstances surrounding the particular 12-month period chosen, and the netting calculation would more accurately reflect the increases or decreases associated with the source's actual emissions during the 10-year look back. One commenter (IV-D-62) recommended decreasing the contemporaneous period to 1 year to reduce confusion about appropriate netting determinations and simplify the number of projects that must be included in the netting calculation. The current 5-year period is difficult to administer given the recordkeeping demands for de minimis changes. Another commenter (IV-D-21) proposed a 5-year representative operating period, not just 5 consecutive years. The latter might include extended periods of non-representative data.

2.6.3 Other Comments on the 5-Year Contemporaneous Period

Several commenters (IV-D-137; IV-G-8, 12) expressed reservations about different baseline and contemporaneous periods, but did not directly support changes to the 5-year contemporaneous periods. These commenters said different periods could lead to inconsistencies in the regulation of a source as a whole.

Three commenters (IV-D-92, 137, 172) requested clarification on whether the proposal would allow using data generated 15 years before construction of the specific change undergoing review. One commenter (IV-D-137) said that it is unclear if EPA's proposal provides for establishing the netting baseline with an activity level that could have occurred up to 15 years before construction of the specific facility change undergoing review. Other commenters (IV-D-

92, 180) said that the proposal would result in establishing the baseline for certain changes on emission activity levels that occurred 15 years ago, and that this would be preferable to the current situation where applicants and reviewing authorities waste resources debating about the most representative time periods.

Response:

Some commenters did not understand how the proposed 10-year look back period would affect contemporaneous changes. We indicated in our 1996 NPRM 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. We do not believe that any of the comments provided a compelling reason to change the existing 5-year contemporaneous period. The look back periods serve different purposes and need not be the same in order to effectively implement the NSR program objectives. States retain the flexibility to define a different contemporaneous period under SIP-approved NSR programs, and may use that flexibility to adjust the contemporaneous period if they believe that a different period is more appropriate for their purposes under the new applicability requirements. [See, for example, §51.166(b)(3)(ii). Therefore, under today's new requirements, we have not changed the 5-year contemporaneous period under the Federal PSD program.] It should be noted that for purposes of determining the baseline actual emissions of a contemporaneous change in emissions from an emissions unit that was an existing unit at the time of the contemporaneous change, the new requirements authorize a source to use the 10-year look back period.

With regard to the comment that the representative operating period be based on a 5-year period, we believe that such a lengthy period is unnecessary for establishing a unit's baseline emissions. Historically, we have relied on a 2-year average to establish an actual emissions rate, and believe that a 2-year average is sufficient for the present purpose as well.

2.7 Protection of Short-Term Increments and NAAQS

Comment:

Several commenters (IV-D-72, 92, 138, 180) agreed with EPA that the addition of a short-term test to the netting calculation is unnecessary. However, commenters (IV-D-92, 180) said the proposal seems to require the applicant to prove that there will be no violation of any NAAQS or PSD increment, or any impact on AQRVs of Class I areas. These commenters recommended that EPA confirm that the current policy outlined in the draft NSR Workshop Manual will remain, at least until guidance on when and how to demonstrate equivalent qualitative significance is promulgated. Commenters (IV-D-92, 121, 180) opposed requiring sources to prove that the netting calculation would not increase short-term emissions and cause a violation of any NAAQS or PSD increment or adversely impact AQRVs in Class I areas.

Commenters (IV-D-92, 180) objected to the burdens of such a standard and urged EPA to continue the current policy.

One commenter (IV-D-173) recommended that EPA define the standards States will use to analyze whether there is a change to qualitative significance for public health, and requested an explanation for expanding the definition to include "any applicable maximum allowable increase over baseline concentrations or having an adverse impact on AQRVs in Class I areas."

One commenter (IV-D-121) objected to the proposal to ensure that the change in the netting baseline does not adversely impact short- (or long-) term ambient standards by requiring that, to be creditable for netting purposes, an emission reduction must be sufficient to prevent the proposed increase from causing or contributing to a violation of any NAAQS or PSD increment and most not have an adverse impact on AQRV (including visibility) of Class I areas. The commenter said this is inconsistent with prior Agency pronouncements on the health and welfare equivalency demonstration. According to the commenter, EPA lacks the authority to require a qualitative health and welfare equivalency demonstration for purposes of making the threshold NSR applicability determination and cannot import an impact analysis for Class I AQRVs into such a demonstration requirement. The commenter recommended that EPA remove the existing health and welfare equivalency provisions entirely.

Response:

As we stated in the proposal preamble (61 FR 38259-60), we believe that a test that relies on a unit's highest short-term actual emissions would be too easy to circumvent. For a short time, sources can run the affected unit at maximum capacity so that the baseline short-term emissions would likely be nothing less than the unit's maximum potential emissions. Moreover, we are not sure that limiting the source to it highest past short-term emissions level will necessarily provide any additional protection to the NAAQS, increments, or Class I AQRV. Therefore, we did not add a short-term emissions applicability test.

Although we did propose language regarding an air quality test to determine whether a contemporaneous emission reduction is creditable for netting purposes, we are not taking final action on that change at this time. The proposed air quality test required that an emissions reduction must be sufficient to prevent the proposed increase from causing or contributing to a violation of any NAAQS or PSD increment, and must not have an adverse impact on AQRV of a Class I area. EPA's current definition of "net emissions increase," restricts the creditability of some emissions decreases where the overall netting transaction could jeopardize air quality. In particular, a provision in the definition of "net emissions increase" allows credit for a reduction only to the extent that it has approximately the same qualitative significance for public health and welfare as the increases from the proposed change. See e.g., § 51.165(a)(1)(vi)(E)(4). In a June 28, 1989 rulemaking (54 FR 27286) we clarified that aspect of the regulations to require that, despite the absence of a significant net increase in emissions, an applicant proposing to net

out of review must demonstrate that the proposed netting transaction will not cause or contribute to an air quality violation before the emissions reduction may be credited.

Chapter 3 - Baseline Emissions, 1998 NOA

3.1 Method for Determining Baseline

Comment:

3.1.1 Support for 10-year Baseline

Four industry commenters (IV-D-210, 219, 221, 311) and two utility industry commenters (IV-D-252, 261) supported the baseline provisions in the NOA. One regulatory agency (IV-D-262) supported the 10-year baseline period, as long as the 10-year limit was permanent. One industry commenter (IV-D-220) supported the proposed 10-year time frame and suggested that this time frame be extended to all areas, not just attainment. One industry commenter (IV-D-221) supported the 10-year baseline period, but also requested the flexibility to choose a 5-year period. One commenter (IV-D-210) maintained that 10 years was sufficient to demonstrate to the reviewing authority that the physical or operational change did not result in a significant emissions increase.[1] One utility industry commenter (IV-D-261) explained that capacity utilization of non-nuclear units varies substantially depending on the availability of nuclear units, and that therefore a long look back period was desirable. Another utility commenter (IV-D-252) explained that the 10-year period more closely represented a fossil-generating unit's normal operating cycle. An industry commenter (IV-D-219) supported the 10-year baseline because it better reflects actual emissions at normal operations. The commenter (IV-D-219) maintained that emissions often decrease at the end of the useful life of equipment, and that the decrease frequently occurs after 5 years.

Response:

As previously stated in chapter 2, we are adopting a new procedure, relying upon a fixed 10-year look back period, for establishing the baseline annual emissions for non-utility existing emissions units that are being modified. Electric utility steam generating units are not eligible to use this new look back. We believe the new fixed 10-year look back offers a reasonable approach to determining a source's representative operations and the emissions associated with that level of operation. Our complete rationale for adopting the new procedure is provided in chapter 2. The new procedure will apply in all areas (attainment, unclassifiable, and nonattainment areas) and the relevant major NSR regulations are being amended accordingly. It should be noted, however, that in nonattainment areas the look back period shall not include any time before November 15, 1990 for contemporaneous emissions changes (see section 2.3.2)

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[1] These are the commenter's direct comments regarding the 10-year baseline as found on page 4. The comment does not appear relevant to this issue, but to the 10-year future actual methodology, which is discussed in Chapter 5.

We do not believe that there is a compelling reason to change the existing 5-year contemporaneous period. However, the 10-year look back is also used to determine the baseline emissions rate for a unit whose emissions increased or decreased contemporaneously with the current change. This is also discussed in our response to comments in chapter 2.

We continue to believe that a 5-year look back is generally appropriate for electric utility steam generating units and have not changed the procedures for calculating the emissions baseline for such units. However, it should be noted that the new rules codify the 2-years-in-5 look back period that had been established as a presumptive procedure in the 1992 WEPCO rules. Utilities are not necessarily precluded from using a longer look back period; as part of the newly-codified provision, utilities may request that another period of time beyond the 5 years preceding the change be approved by the reviewing authority.

Comment:

3.1.2 Oppose 10-year Baseline

Three industry commenters (IV-D-283, 299, 312), ten utility industry commenters (IV-D-257, 268, 269, 278, 280, 281, 282, 295, 300, 323), nine regulatory agency commenters (IV-D-216, 222, 246, 253, 255, 262, 287, 311, 317), STAPPA/ALAPCO (IV-D-259), three environmental group commenters (IV-D-291, 303, 327), and one individual commenter (IV-D-218) opposed the 10-year baseline provisions for the various reasons indicated below.

3.1.2.1 Oppose 10-year baseline because it is too restrictive

One industry commenter (IV-D-283) and eight utility industry commenters (IV-D-257, 276, 278, 280, 281, 295, 300, 323) viewed the 10-year baseline as more restrictive than the current rules. These commenters argued that the existing rules allow selection of any representative 2-year period as the baseline, regardless of whether it occurred within the last 10 years. The commenters also objected to the use of the current emission factor, which was also more restrictive than existing regulations.

Seven utility industry commenters (IV-D-257, 278, 280, 281, 295, 300, 323) opposed the use of current emission factors because these factors included newly applicable RACT, MACT, NESHAP, BACT, LAER, and NSPS requirements that would not have been part of the baseline emission level. Such an approach would make the baseline more stringent than it would be under the current rules, especially in nonattainment areas. Another utility industry commenter (IV-D-269) opposed the use of current emission factors because these factors would penalize sources for making significant emission reductions made in response to other regulatory requirements.

3.1.2.2 Oppose 10-year baseline because it is not environmentally protective enough

One regulatory agency commenter (IV-D-222) and two environmental commenters (IV-D-291, 303) opposed the use of a 10-year baseline period on the grounds that it would allow use of historic emission levels that were higher than current levels to establish baseline emissions. One environmental commenter (IV-D-303) further suggested that the only appropriate baseline period for electric utilities was a declining baseline, as operations and emissions decline over time absent capital improvements. The regulatory agency commenter argued that the highest emissions in any 12-month period over the last 10 years could merely be a spike. In order to avoid spikes and dips, and to be more acceptable to the reviewing authorities and the public, the regulatory agency commenter suggested taking the average of the highest 3 years out of the last 10 years as the baseline. As an alternative, the regulatory agency commenter suggested linking the baseline to the term of the title V permit, that is, taking the average of the highest 3 years out of the 5-year term of the title V permit.

One regulatory agency (IV-D-246), STAPPA/ALAPCO (IV-D-259) and one individual (IV-D-218) commented that the proposed baseline would not be protective of the NAAQS in Class I and attainment areas.

3.1.2.3 Oppose 10-year baseline because it is contrary to the CAA

On environmental commenter (IV-D-291) and one individual (IV-D-218) considered the baseline provisions contrary to the CAA, as Congress did not intend for the NSR program to grandfather older, more polluting emission units indefinitely.

3.1.2.4 Retain 2-year baseline

One regulatory agency commenter (IV-D-246) and one environmental commenter (IV-D-291) preferred that the 2-year baseline period be retained.

Response:

We believe that the use of a fixed 10-year look back period provides clear advantages over the current approach. The current approach focuses primarily on the 2-year period immediately preceding the proposed physical or operational change to an emissions unit. The approach allows flexibility in that another 2-year period may be used (without any stated limited to the magnitude of the look back period); however the selection of another period involves a demonstration by the applicant and its approval by the reviewing authority. Many stakeholders have claimed that this process tends to be confusing, contentious and time consuming. Furthermore, even when the 2-year period immediately preceding a change is not most

representative of normal operation, it is often difficult to reach agreement on a more representative period. The benefits of the new 10-year look back are also discussed in chapter 2.

We do not believe that this approach grandfathers older, more polluting emissions units indefinitely, as one commenter has claimed. Instead, the new approach is designed to provide sources with a fair and reasonable approach for calculating a baseline emissions rate that can be considered representative of the source's normal operation. The Act is silent as to how the emissions increase following a change is to be calculated, including the calculation of the pre-change baseline emissions level. The new approach affords the source flexibility in determining a representative level of utilization (a level actually achieved by the unit) during a normal business cycle. We also believe that our selection of a 10-year look back is reasonable and supported by a study performed to examine the typical length of business cycles for various type of major stationary sources. Also, see response to comments at section 2.2.2.

We agree with the comment claiming that the use of a 12-month period to calculate the baseline annual emissions may be susceptible to short-term emissions spikes. Thus, we have changed the proposed procedure to require that the baseline emissions rate be based on a consecutive 24-month period (rather than the proposed 12-month period) during the past 10 years. This longer averaging period will help lessen the effect of short-term peaks on the average annual emissions rate. The use of a 24-month averaging period is also discussed in the response to comments in chapter 2.

We also believe that it is appropriate to adjust an emissions unit's baseline emissions to reflect the most current legally enforceable emissions factors and operating restrictions. The baseline emissions rate serves as the modified unit's pre-change emissions rate from which emissions increases resulting from the physical or operational change are to be calculated. Consequently, the baseline emissions rate should reflect what the unit could emit under the representative operating levels just prior to the proposed change. Also see response to comments at section 2.2.5.2.

We also do not agree with the comments that the baseline provisions will not adequately protect the environment when compared to the current approach for setting the baseline emissions rate. In sections 2.2.2 and 4.4 of this chapter, we provide our reasons why we do not believe that either the new approach for determining a unit's baseline emissions rate or the "actual-to-projected-actual" test will result in adverse environmental impacts. The baseline provisions should provide a fair and reasonable approach for selecting a modified emissions unit's pre-change emissions rate, that is representative of the unit's normal operation, from which it will be determined whether a physical or operational change will result in a significant emissions increase.

As mentioned above in the response following section 3.1, we continue to believe that a 5-year look back period is generally appropriate for establishing baseline actual emissions for

electric utility steam generating units. However, unlike the 10-year look back for other existing emissions units, utilities may request that another period of time beyond the 5 years preceding the change be considered by the reviewing authority.

3.2. Other Comments on Baseline Emissions

3.2.1 Prefer Other Baseline Periods

Comment:

Several commenters (IV-D-218, 222, 250, 259, 273, 299, 311) preferred baseline periods other than 10 years.

One regulatory agency commenter (IV-D-222), STAPPA/ALAPCO (IV-D-259) and two industry commenters (IV-D-250, 299) advocated using a 5-year baseline period. The industry commenters (IV-D-250, 299) further suggested that if the applicant determined that the 5-year baseline did not represent normal operations, then the use of the 12-month period in the previous 10 years should be allowed. One individual commenter (IV-D-218) recommended adoption of a baseline period no more than 5 years from the date a complete application was submitted.

One regulatory agency commenter (IV-D-222) suggested using the average of the highest 3 years out of the 5-year term of the title V permit. STAPPA/ALAPCO (IV-D-259) recommended using a look back period of 5 calendar years, with the highest calendar year of utilization as the baseline. A 5-year period would be consistent with title V compliance certification requirements, ensuring a higher level of accountability and more accurate baseline emission estimates. Any period longer than 5 years would be problematic, because most State and local agencies only require retention of data for 2 to 5 years. STAPPA/ALAPCO (IV-D-259) strongly advocated the use of the calendar year, as emission inventories and other historical records were typically kept on a calendar year basis. STAPPA/ALAPCO (IV-D-259) further indicated that if the EPA did not use a calendar year baseline, it should be very specific regarding the baseline period requirements.

One industry commenter (IV-D-273) suggested allowing sources to calculate their baseline emissions using the highest actual emissions during any 3-month period over the last 10 years. The commenter explained that production levels can be influenced by economic cycles and the seasonal needs of customers. These variations would be more accurately reflected by the use of a 3-month period.

An industry commenter (IV-D-311) suggested that the 10-year period should be longer than any prolonged economic recession.

Response:

We continue to believe that a 10-year look back is reasonable for enabling a source to identify its representative operation from which to calculate a baseline emissions rate. The current baseline provisions, as contained in the definition of "actual emissions," do not preclude the use of a 10-year (or longer) look back. A 10-year look back should ensure that sources have a sufficient period of time within which to identify a representative operating scenario. As stated earlier, we also believe that the fixed nature of the new 10-year look back will bring more certainty to the procedure for determining baseline emissions. In addition, the decision to use a 24-month averaging period, rather than the proposed 12-month period, The use of the longer averaging period will help prevent skewing of the annual emissions that could result from a short-term emissions peak. We see no compelling reasons to use a different baseline period than the proposed 10-year period, and we continue to believe that the limited resources of reviewing agencies are better spent on issues other than debating what is the most representative baseline period.

We disagree with the commenters who believed that the 10-year baseline should not be used due to potential data problems over that length of time. While we agree that accurate data is critical, we believe it makes more sense to limit use of the 10-year period when data is not available than to categorically disallow a 10-year baseline period. The rule amendments condition the full use of the new 10-year look back period on the accuracy and completeness of a source's records of emissions and capacity utilization for any emissions unit that undergoes a physical or operational change, or is affected by such change. [See, for example, new §52.21(b)(48)(f)]. As with all emissions calculations, accuracy and completeness are central elements for applicability determinations. In many cases, sources presently maintain accurate records on emissions and operations for only 3 to 5 years. Thus, we think it is appropriate to limit use of the full 10-year look back period when a source does not have data for this time period. However, this limitation should be alleviated over time as sources begin to maintain records for longer periods to accommodate the 10-year look back opportunity.

We do not agree with the commenter who stated that the 10-year baseline should be extended in the case of a prolonged economic recession. We believe 10 years is the appropriate time to account for a normal business cycle. Allowing for extensions of the 10-year look back would retain the element of uncertainty that was criticized under the original approach. Also, see response to comments in chapter 2, section 2.2.4.

3.2.2 Comments on Procedures for Baseline Determination

Comment:

Several commenters (IV-D-259, 271, 275, 276, 278, 282, 317, 320, 322) had questions on the procedures for determining baseline emissions, especially regarding utilization rates and emission factors.

One commenter (IV-D-262) stated that even if the EPA were to promulgate a 10-year baseline period, baseline emissions should be calculated using 2 consecutive years rather than the year with the highest capacity utilization. This commenter further advised that the same time period be used for all emission units involved in source shutdowns. Otherwise, if the source could select different periods for different emission units, the combined baseline could exceed the actual source emissions in any given year.

Four utility commenters (IV-D-271, 275, 276, 322) interpreted the NOA as requiring sources to calculate their baseline by using the unit's current emissions factor in combination with the utilization level from that 12-month period, rather than on the basis of the unit's highest emissions rate during a selected 12-month period. One of these utility commenters (IV-D-271) explained that this methodology was deemed illegal in the WEPCO rule. Three of the commenters (IV-D-271, 276, 322) explained that the "past-actual-to-enforceable-future-actual" methodology is the same as the past-actual-to-future-potential" methodology.

One utility industry commenter (IV-D-282) found the baseline determination provisions confusing, as it was unclear how the baseline past actual emissions would be determined. This commenter wanted to know whether the period of highest emissions would correlate with the period of highest utilization and then be reduced by any voluntary measures or if it would be based on gross annual emissions and then reduced to reflect any currently enforceable emission limits?

One regulatory agency commenter (IV-D-320) and STAPPA/ALAPCO (IV-D-259) also requested that the EPA clarify "whether the phrase 'current emission factors' includes the results of the most recent stack and performance tests (for example, coating applicator transfer efficiency and control equipment capture and destruction efficiency, as well as current material specifications (for example, coating VOC content)." If that was the EPA's intent, then the commenters suggested the phrase "highest emissions" should be replaced with "highest capacity utilization."

Another utility industry commenter (IV-D-278) supported the baseline provisions only if the current emission factor requirement was deleted. Then the baseline provisions would be beneficial, as these provisions would not penalize utilities for regional economic cycles which could affect generation and were clearly unrelated to activities at utilities.

Another regulatory agency commenter (IV-D-216) suggested that the baseline period provisions should be like those in many trading programs, in which the lower of the actual or allowable emission rate was applied to the highest level during the baseline period.

One regulatory agency commenter (IV-D-320) and STAPPA/ALAPCO (IV-D-259) requested that the EPA clarify the phrase "highest emissions in the past ten years" by specifying whether EPA is referring to one calendar year, any consecutive 12-month period during the last 10 years, an average of more than one calendar year, or some other time period.

Response:

We agree with the commenter that the source should be able to choose any period of operation rather than simply the period of highest capacity utilization. We are not requiring that source owner/operators select the baseline using the priod with the highest utilization. Instead, we are requiring the use of any consecutive 24-month period within the 10-year look back to calculate the baseline actual emissions for any emissions unit that undergoes a physical or operational change, or is affected by such change. The longer 24-month period allows the source to reference any particular level of utilization that has been achieved in the past 10 years, but also eliminates the potential problem associated with short-term peaks that do not truly represent the unit's normal annual operation. Our reference in the 1996 NPRM to selecting the period of highest utilization was based on our general assumption that the period of maximum utilization also represents the period of highest pollution levels for the unit of concern. However, sources are not required to select the period of highest utilization, particularly if another period yields a higher emissions rate. This approach also eliminates concerns about artificially low baselines.

Several commenters requested clarification of what we meant by "current emission factor." Under the final rules sources are required to adjust the baseline emissions rate (avergage annual emissions rate) derived directly from the selected 24-month period under certain circumstances. Specifically, a source must adjust downward this baseline rate if any new legally enforceable emissions factors have been imposed on the unit since the representative period. Such factors may include any State or Federal requirements such as RACT, MACT, BACT, LAER, NSPS, and NESHAP; fuel restrictions; operational restrictions, or other factors that are legally enforceable. For example, assume that during the selected consecutive 24-month period an emissions unit burned fuel oil and was subjected to a sulfur limit of 2 percent sulfur (by weight). Today, the unit is only allowed to burn fuel oil with a sulfur content of 0.5 percent or less. Consequently, the source would be required to adjust its preliminary calculation of baseline actual emissions for SO_2 (that is, substitute the lower sulfur limit into the emissions calculation yielding a 75 percent reduction in the emissions rate as initially calculated) to reflect the current restriction allowing only 0.5 percent sulfur in fuel oil. The original utilization rates would not be adjusted if more stringent operational limitations have not been imposed to further restrict that average annual utilization rate.

Sources must also adjust for any voluntary emission limitations as long as the limitations are legally enforceable, such as limits that may have been taken for netting credits, emissions offsets, or the creation of Emission Reduction Credits. Also, sources must adjust their emissions from the 24-month period if a raw material they used during the baseline period is now prohibited. For example, a source may have used a paint with a high solvent concentration during a portion of the consecutive 24-month period. Today, the source is prohibited from using that particular paint. The source must then adjust its emissions rate to reflect the emission factor for the paint that it is now allowed or required to use.

We agree with the commenter who thought the same 24-month period should be used for all emissions units involved in the modification. The final rules require that a source select a single consecutive 24-month period within the 10-year look back period to calculate the baseline actual emissions for each and every emissions units that will undergo physical or operational change(s), or will be affected by the change(s), as part of a project (or series of related projects). See, for example, new §52.21(b)(48)(ii)(e). It follows that the baseline actual emissions for each affected pollutant also must be based on the same consecutive 24-month period as well.

We agree with the commenter that the exact time period for the baseline determination should be clear. Our final rules specify that the baseline period is any consecutive 24-month period in the past 10 years. The new rules provide no alternative period of time for the 10-year look back period applicable to existing emissions units.

3.2.3 Other Comments on Baseline Emissions

Comment:

One environmental commenter (IV-D-303) suggested an alternative baseline determination option, which would be declining actual emissions. The commenter stated that the EPA "should adopt an applicability test that recognizes that absent investment at a facility, its rate of operation and its annual emissions will inevitably decline over time." For electric generating units, the EPA should presume a decline of 3 to 5 percent per year, absent investments that improve productivity. To avoid NSR applicability, the facility would commit to an enforceable limit that maintained the emissions below the declining path that would be presumed to occur in the absence of the investment. That is, the declining baseline actual emissions would become an enforceable limit.

Another environmental commenter (IV-D-291) stated that the baseline period should be made permanently enforceable. The declining actual emissions baseline would be related to the expected declining efficiency of units that could be expected over time absent significant financial investment.

Response:

We have chosen new procedures which do not include either of the commenters' recommendations described in this subsection. We do not believe that it is necessary to require sources to agree to declining cap on baseline emissions. The baseline emissions rate is not intended to represent the source's maximum allowable emissions prior to the proposed change, but the average annual emissions rate associated with the representative average annual operation of the affected emissions unit selected from a consecutive 24-month period during the 10 years prior to the physical or operational change. It should be recognized that the source is not prohibited from increasing its production rate or increasing its hours of operation alone, as long as such increase and does not violate current legally enforceable conditions placed on the source. Instead, the baseline emissions merely serve as a yardstick for measuring emissions increases that may occur as a result of any physical or operational change that is made to an emissions unit.

Comment:

Another regulatory agency commenter (IV-D-287) questioned whether the EPA was proposing that the baseline period be 10 calendar years of data or 10 years from the date of the application submittal. This commenter (IV-D-287) also recommended that the accuracy and correctness of the actual emissions be re-examined prior to establishing the baseline. The commenter (IV-D-287) also questioned whether the regulatory agency or the source would have the final say in establishing the accuracy of the baseline. Another commenter (IV-D-253) emphasized that the 10-year baseline period should not predate the permit application, so that the source would not be able to request revisions to previous determinations and permits.

Response:

Concerning the comment as to when the 10-year period begins, a source may use the 10-year period immediately preceding the date on which a source submits a complete permit application. If, however, the source believes that the physical or operation change(s) being planned will not result in either a significant emissions increase from the project or a significant net emissions increase at the major stationary source (that is, the project will not be a major modification), and the source is not otherwise required to obtain a minor NSR permit before making such change, then the source must use the 10-year period that immediately precedes the date on which it begins actual construction of the physical or operational change. Under the final rules, neither the source nor the reviewing authority will have the authority to select another period of time from which to calculate baseline actual emissions for the emissions units undergoing change.

Comment:

Another regulatory agency commenter (IV-D-262) said that a 10-year baseline was not appropriate for calculating emission reduction credits (ERCs), especially for shutdowns. The commenter (IV-D-262) believed that data from at least an average of 2 consecutive years that were representative of normal operations during the 5-year period preceding the shutdown should be used to calculate the baseline for Emission Reduction Credits (ERCs).

Response:

The 10-year look back applies only to existing emissions units (other than EUSGU), for applicability purposes, when the units undergo a physical change or a change in their method of operation. In such cases, the 10-year look back is used to determine the baseline emissions from which the emissions increase resulting from the change will be calculated. Separate EPA policy governs the procedures for determining emissions reduction credits from emissions units that have been or will be shut down. However, the 10-year look back can be used to determine the amount of a contemporaneous emissions decrease for netting purposes as part of a modified unit's applicability determination.

Comment:

A regulatory agency commenter (IV-D-216) suggested that the baseline period provisions should be like those in many trading programs, in which the lower of the actual or allowable emission rate was applied to the highest level during the baseline period. An industry commenter (IV-D-212) maintained that, for sources with allowable emission limits set in previous NSR applicability determinations, the baseline should be the allowable emission limit. Another industry commenter (IV-D-220) recommended using allowable emission levels to establish the baseline rather than emission factors.

Response:

We do not believe allowable emissions (assuming maximum capacity utilization) are appropriate in general for determining pre-change baseline emissions. The baseline emissions for an existing emissions unit represent the average annual emissions associated with the level of utilization actually achieved by that unit during the previous 10 years. It was not our intent to allow a source to represent its baseline emissions with an emissions rate that is higher than it actually achieved in the past. Moreover, our baseline calculation procedures do require a source to adjust downward an emissions unit's average annual emission rate if any legally enforceable emissions limitations (including but not limited to any State or Federal requirements such as RACT, MACT, BACT, LAER, NSPS, and NESHAP) have been imposed on the unit's ability to emit a particular regulated NSR pollutant or to operate at levels that existed during the selected 24-month period from which a source calculated the average annual emissions rate.

Therefore, we disagree with these commenters regarding use of an emissions unit's maximum allowable emissions for establishing the baseline emissions.

Comment:

Another regulatory commenter (IV-D-253) agreed with the 10-year baseline period, as long as it was phased in and did not apply retroactively. The 10-year baseline also should not extend beyond the previous contemporaneous period, the commenter cautioned.

Response:

With regard to the concern that industry may try to apply the new requirements retroactively to undo current restrictions on existing sources, we want to reiterate that sources should not assume that the new procedures apply retroactively to existing NSR permits or changes that sources have made in the past. Prior applicability determinations on major modifications and the control requirements that currently apply to sources remain valid and enforceable.

We do not believe that there is a compelling reason to "line up" the baseline and contemporaneous periods. The look back periods serve different purposes and need not be the same in order to effectively implement the NSR program objectives. States retain the flexibility in defining a different contemporaneous period under SIP-approved NSR programs, and may use that flexibility to adjust the contemporaneous period if they believe that a different period is more appropriate for their purposes under the new applicability requirements. See, for example, §51.166(b)(3)(ii). It should be noted that for purposes of determining the baseline actual emissions of a contemporaneous change in emissions from an emissions unit that was an existing unit at the time of the contemporaneous change, the new requirements authorize a source to use the 10-year look back period.

Comment:

Two industry commenters (IV-D-221, 250) advocated that the baseline actual emissions be augmented by an additional cushion to cover operational flexibility.

Response:

We do not agree with the commenters' suggestion. We believe the 24-consecutive months in 10-year baseline period addresses the commenters' concern regarding operational flexibility. This period allows a source to select the most appropriate level of utilization that actually occurred over the course of a normal business cycle with which to calculate the unit's baseline emissions rate.

Chapter 4 - Actual-to-future-actual Methodology

4.1 Overview

We received numerous comments on our 1996 proposal to retain the current actual-to-potential test, or to adopt the actual-to-actual test for all sources categories. Some commenters expressed support for alternative applicability options. Commenters also provided comments on the extension of the demand growth exclusion to non-utilities, how we should address utilization increases, and whether 5-year tracking of actual emissions in needed or beneficial. These comments are summarized in sections 4.2 through 4.14 of this chapter.

4.2 Should EPA retain the actual-to-potential test?

Comment:

4.2.1 EPA Should Retain the Actual-to-potential Test

Several commenters (IV-D- 20, 33, 47, 52; IV-G-11, 13) supported continued use of the actual-to-potential test. One commenter (IV-D-47) stated that the actual-to-potential test should be retained for all sources, including utility units. Another commenter (IV-D-52) stated that this existing methodology, however flawed, remains superior to the proposed alternatives. These flaws can be better addressed by plantwide applicability limits and the pollution prevention exclusion. Another commenter (IV-D-33) stated that the actual-to-potential test is a more streamlined process without the additional burden of recordkeeping inherent than the actual-to-future-actual methodology.

One commenter (IV-G-13) supported the actual-to-potential test over the actual-to-future-actual test due to the inherent problems arising from the sufficient records demonstration. Stack testing does not always reflect daily facility operations. Professional engineers and scientists are not always available to ensure accuracy. Moreover, test conditions and parameters do not always reflect daily levels because stack testing is generally not a good indicator of daily emissions.

One commenter (IV-D-50) believed the actual-to-potential test should be used to determine applicability for any source that has never gone through major NSR. For modifications, the potential-to-potential test should apply.

4.2.2 EPA Should Extend the Actual-to-potential Test to Utilities

One commenter (IV-D-47) believed the actual-to-potential tests should apply to public utilities. The commenter suggested that the basis for the original WEPCO rulemaking has been significantly altered as a result of new "open access" rules at the State and Federal level to promote wholesale competition in the public utility industry. One of the major predicates for the WEPCO rule was the involvement of State public utility commissions in the regulation of

electric power. Subsequent to the WEPCO rule, the Federal Energy Regulatory Commission (FERC) has significantly modified the role of State public utility commissions through promulgation of the regulations related to "Promoting Wholesale Competition through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities." The Open Access Rule allows utilities to compete for services in much the same way as manufacturing operations. These changes will result in increased competition, decreased regulation, and undermine the predicate for the original WEPCO rulemaking (that is, the involvement of State public utility commissions in the regulation of electric power). For this reason, the actual-to-potential test rather than the actual-to-future-actual methodology should be applied to public utilities.

4.2.3 EPA Should Not Retain the Actual-to-potential Test

Many commenters (IV-D-9, 33, 38, 42, 43, 46, 58, 61, 65, 67, 70, 72, 81, 105, 106, 117, 126, 131, 134, 140, 143, 146, 147, 149, 153, 154, 157, 160, 162, 163, 169, 186, 188, 190, 191; IV-G-4) opposed the existing actual-to-potential methodology.

Go to section 4.5 to see related comments that specifically recommended extending the actual-to-future-actual test to non-utilities.

4.2.3.1 Applies too broadly

Many commenters (IV-D-33, 38, 42, 46, 65, 67, 72, 105, 106, 131, 134, 149, 153, 157, 169, 191) opposed the existing actual-to-potential test because it overestimates emissions, and draws sources that have no actual emission increases, or actual emission decreases, into review. Two commenters (IV-D-67, 131) maintained that the actual-to-potential test has also often resulted in inflated estimates of potential future emissions that are not in keeping with the reality of production or utilization. According to the commenters, in almost every case, the actual-to-potential test will trigger the need for NSR. One commenter (IV-D-157) opposed the actual-to-potential methodology, noting that it illegally extends the reach of NSR to many changes that will never cause a significant emissions increase.

One commenter (IV-D-134) stated that the actual-to-potential test unreasonably and unfairly overstates the difference in emissions between the before- and after-modification scenario and subjects many projects to onerous offset requirements even where emissions will actually be less after the modification. This has resulted in many environmentally sound and beneficial projects not being pursued. One commenter (IV-D-131) stated that the current regulations and policies typically inflate the magnitude of actual emission increases and tend to diminish the magnitude of actual emission decreases. According to the commenter, this is evident when the actual-to-potential test is applied to first an emission increase and then to an equal emission decrease. The commenter suggests that, instead of resulting in no net change of emissions, EPA's procedures will always result in an apparent increase of emissions. In fact,

according to the comment, EPA's procedures result in an apparent increase of emissions in all cases except where the final potential emissions are lower than the prior actual emissions. The comment asserts that, more important, perhaps, is the fact that actual emissions (as currently defined) are abnormally low during economic recessions. This is suggested to result in an artificially high value in the apparent emissions increase (i.e., the difference between the prior actual emissions and the new potential emissions) for a new project.

Several commenters (IV-D-38, 42, 43, 61, 65, 105, 140) noted that the actual-to-potential test is inequitable for sources that have low actual emissions or reduce emissions. One commenter (IV-D-65) stated that the actual-to-potential test penalizes those sources that voluntarily reduce their emissions because doing so increases the possibility that the next modification will trigger major NSR. Two commenters (IV-D-65, 140) stated that a source with actual emissions below its PTE is more likely to trigger major NSR than is an otherwise identical source with a history of high emissions. According to the commenter, that phenomenon produces other unfair and illogical results, in that it creates what the commenter views as an unjust enforcement trap for the source that innocently makes changes that, from a common sense point of view, do not increase emissions but nonetheless have a significant difference between actual and potential emission. The actual-to-potential test also undermines the policy that the best time to install new controls is when large changes are being made to the emitting equipment because the actual-to-potential test can be triggered (and a "significant net emissions increase" artificially created) by very minor physical or operational changes. According to the commenter, while there are various exemptions (e.g., changes in raw materials that could have been used before the PSD program was created, increases in hours of operation, and environmentally beneficial projects) built into the policy that would mitigate some of these adverse effects, they greatly complicate the major NSR rules.

According to one commenter (IV-D-105), sources are penalized for past operation at less than 8,760 hours per year. Time spent for shutdowns, maintenance, lack of demand, etc., all reduce actual emissions and consequently broaden the difference between the past actual and future potential. The commenter further noted that pollution control projects in particular should not be subject to actual-to-potential accounting, and gave an example of a source that had already met MACT using a pollution control project, but then was required to undergo BACT.

One commenter (IV-D-61) believed the actual-to-potential test unfairly penalizes sources that are environmentally conscientious by minimizing actual emissions. According to the commenter, the actual-to-future potential test encourages sources to emit as much as possible now, in order to avoid NSR in the future. Another commenter (IV-D-46) noted that NSR requires review of every physical change in, or change in the method of operation of a major stationary source, except for a limited number of changes that are specifically excluded from the program. As a result, the comment continues, source owners and implementing agencies must expend limited resources on changes that are not likely to negatively impact the environment.

4.2.3.2 Does not allow utilization increases

Several commenters (IV-D-38, 140, 143, 146, 160) opposed the actual-to-potential test because it does not exempt emission increases due to demand growth or increased utilization, which they viewed as unfair and contrary to the statute and case law. One commenter (IV-D-146) stated that EPA's analysis of the current requirements is inconsistent with both the current regulatory language, and prior court decisions. According to the commenter, the overly broad applicability described in the preamble would allow for confiscation of existing production capacity without any increase in the rate of total amount of allowable emissions, merely because a source has experienced a decline in its productivity or hours of operation due to accident, aging and/or deterioration of its production equipment. In the view of the commenter, the Agency's proposal to further limit the long-standing exclusion for such activities is unjustified and unreasonable, and provides none of the relief sought by State program officials and industry representatives from this reform effort.

One commenter (IV-D-160) stated that in many cases, the application of the actual-to-potential test is inconsistent with the CAA, as well as the existing NSR regulations. The statute requires that a source be subject to NSR if a particular PC-CMO results in an increase in actual emissions. See CAA 169(2)(C) (cross-referencing the definition of "modification" in CAA III (a)(4)). According to the commenter, by following this approach, EPA has captured within the NSR system changes that cannot reasonably be expected to cause an increase in actual emission. Another commenter (IV-D-143) stated that Congress never envisioned an NSR program that would hamper the ability of a source to increase utilization up to its original design capacity in order to take advantage of fluctuating market conditions or impose an impediment to those sources wishing to undertake non-routine physical or operational changes to enhance efficiency.

One commenter (IV-D-42) stated that the current methodology presents the risk that even physical or operational changes that reduce a unit's emissions could trigger a net emission increase if the unit was not previously used at full capacity and if post-modification emissions are calculated at full utilization (i.e. "potential") rates. The commenter notes that the end result has been that many environmentally sound and beneficial projects did not happen.

One commenter (IV-D-38) stated that the current approach needlessly penalizes sources that do not utilize their full PTE all the time. A source currently can voluntarily forfeit this "excess" PTE to EPA in many ways. EPA recognizes that a source reduces its PTE via a federally enforceable SIP, permit limit or even by generating emission reduction credits. A source should retain its options on its full PTE regardless of actual operations even when adding or modifying emission units.

4.2.3.3 Reduces operational flexibility

Several commenters (IV-D-42, 67, 70, 81) opposed the actual-to-potential test because it reduces operational flexibility. One commenter (IV-D-81) stated that the actual-to-potential test reduces the operational flexibility of a plant, restricting the ability to implement minor changes. According to the commenter, these effects oppose the operational flexibility concepts of the 1990 CAAA.

Five commenters (IV-D-42, 65, 67, 70, 81) stated that the actual-to-potential test encourages sources to operate their equipment as close to the allowable limits as possible, and this method discourages modernization.

4.2.3.4 Burdensome

Several commenters (IV-D-9, 65, 67, 147, 154, 190) believed the actual-to-potential test was confusing and cumbersome for industry and reviewing authorities. Another commenter (IV-D-190) stated that the current policy and regulatory structure has led to a confusing array of regulatory requirements. One commenter (IV-D-154) stated that the "actual-to-future-actual" test is accompanied by permitting, recordkeeping, and other procedural burdens that prior to this proposal did not exist under the program. One commenter (IV-D-147) noted that State regulators offer compelling reasons why the actual-to-potential system is confusing, requires additional exclusions, and produces only marginal environmental benefit.

Three commenters (IV-D-46, 67, 131) noted the existing burden posed by an NSR program that is cumbersome, has discouraged facility changes, has discouraged production, growth, and innovation, and requires spending limited resources on changes that are not likely to negatively impact the environment. Two commenters (IV-D-46, 186) stated that the proposed reforms do not improve the focus of the NSR program and may increase the overall complexity of NSR applicability determinations. Another commenter (IV-D-65) stated that the present test discourages meaningful reform and simplification of major NSR.

4.2.4 Other Comments on Actual-to-potential Methodology

One commenter (IV-D-137) preferred a revised actual-to-potential test. The commenter suggested that the simplest solution to the actual-to-potential problem is for the utility to accept federally enforceable limits on its PTE so that there would not be a significant net emissions increase. However, according to the commenter, State and local agencies' resources are better spent on other issues, based on the assumption that the demand-growth test and the 5-year reporting provisions are adequate to ensure that the WEPCO provision is not a sham that allows physical or operational changes to result in unregulated significant increases in emissions. The commenter recommends that consideration be given to differentiating between PSD and NSR in attainment areas, where the goal has already been achieved, and offsets in nonattainment areas,

where further reductions are needed to attain compliance with the NAAQS. Therefore, as described in section 6.4.1, the commenter offered qualified support for the actual-to-future-actual test.

One commenter (IV-D-9) stated that EPA made an incorrect statement in the preamble's Footnote 9 regarding the pharmaceutical industry. The current actual-to-potential threshold determination should not be applied to the pharmaceutical industry, since pharmaceutical equipment is not "design-inhibited" on a feedstock basis and calculating PTE on a per-feedstock and hourly basis is not representative of the industry.

One commenter (IV-D-42) expressed concern that EPA apparently is continuing to require "Federal enforceability" of permit limitations when taking into account those permit limitations in the NSR applicability determination. According to the comment, two recent D.C. Circuit court decisions (National Mining Association V. EPA and Chemical Manufacturers Association V. EPA) disposed of this issue, making it clear that EPA overstepped its bounds in requiring Federal enforceability for this and other purposes. Moreover, the commenter suggested that requiring Federal enforceability when State and local permit limitations are just as enforceable makes little sense and only complicates the NSR process. According to the comment, transaction costs, which are very high for major NSR to begin with, are increased by EPA's insistence on Federal enforceability with no commensurate benefit to air quality. The commenter suggest that EPA repeal its requirement that a source that wishes to limit its PTE must obtain a federally enforceable limit.

One commenter (IV-D-76) stated that the central NSR applicability issue for Municipal Solid Waste Landfills (MSWLFs) is defining fugitive emissions versus non-fugitive emissions so that an MSWLF's PTE can be determined. Unless the Agency promulgates a rule specific to a non-categorical source under section 302(j) of the CAA, fugitive emissions cannot be counted toward a source's PTE. The commenter suggests that EPA should use the proposed rule as an opportunity to clarify the applicability of major NSR for MSWLFs by incorporating the October 21, 1994 memorandum, authored by John S. Seitz Director, Office of Air Quality Planning and Standards, regarding the classification of emissions from landfills for NSR applicability purposes into the preamble discussion of the final rule. This memorandum provides guidance for determining which emissions from an MSWLF could reasonably pass through a stack or equivalent opening (and thus would be non-fugitive), and which could not (and thus should be excluded from the major source threshold calculation as fugitive emissions).

The commenter (IV-D-76) added that EPA should also clarify the application of NSR rules as far as they apply to the various stages in the development of MSWLFs. According to the commenter, MSWLFs are unique from other sources in that they are best characterized as ongoing construction projects whose emissions gradually build up and then fall off over time. The commenter suggests the most efficacious manner in which to deal with MSWLF air emissions is to permit an initial phase of the landfill and then deal with modifications that

account for the changes in emission levels over time. According to the comment, This kind of approach will assure that the landfill gas system is efficiently designed and operated according to the level of control necessary for the amount of emissions.

Response:

While some commenters presented arguments in support of retaining the current "actual-to-potential" test, we have concluded, for the reasons given below, that the proposed "actual-to-future-actual" test (now promulgated as the "actual-to-projected-actual" test), with some revisions, is a fair and reasonable method for implementing the statutory definition of "modification," and should be made more broadly available than it has been to the present time.

Under both the "actual-to-potential" test and the "actual-to-projected-actual" test, once it is determined that a non-routine change will occur, past actual emissions generally can't be relied upon in determining the emissions after the change; rather, a projection of post-change emissions is needed. Under the "actual-to-potential" test, there is an initial presumption that the source will operate at is full potential to emit following the change. When the source believes that actual emissions won't significantly increase, it is free to project the actual emissions increase, but it must set this level out in an enforceable permit cap. This cap is often set forth in a minor NSR permit or other enforceable mechanism, and must be accomplished before construction may begin. Moreover, the cap may restrict the ability of a source to increase its emissions in association with an increase in production or hours of operation, which when done alone are not normally considered as physical or operational changes. As stated above, the "actual-to-projected-actual" test also relies on the premise that a projection of a project's post-change emissions is needed. In contrast to the "actual-to-potential" test, however, we believe that under the "actual-to-projected-actual" test , a projection of post-change actual emissions accompanied by recordkeeping, and in some instances reporting, is sufficient. We generally agree with commenters who have argued that existing emissions units in general (including replacement and reconstructed units) have ample track record such that the projection of post-change emissions alone is sufficiently reliable and enforceable and thus the burdens of up-front permit caps on emissions are unnecessary. Thus, the new rules reflect this change in the applicability test for all existing emissions units. For new units, however, we believe that the "actual-to-potential" test continues to be the most appropriate applicability test. In addition, the new rules contain special applicability tests for certain units, including Clean Units, as well as those involved in PALs and pollution control projects.

We disagree with the commenters who thought that the "actual-to-potential" test should be retained because, among other things, the recordkeeping requirements associated with the "actual-to-projected-actual" test would be burdensome. We believe that the new method warrants the requirement for retaining operational records of the unit's emissions following the change when there is a reasonable possibility that the project may result in a significant emissions increase. The records are needed to enable the source and reviewing authority to

ensure that the physical or operational changes that are made do not actually result in a major modification. Moreover, many, if not most, of the sources in question are already required to maintain records of emissions for 5 years because they are major sources under Title V of the Act. See 40 CFR 70.6(a)(3)(ii)(B). Likewise, many minor NSR programs or other SIP provisions require tracking and retention of emissions data. In addition, for most sources, the burden of recordkeeping is substantially less than the present burden of obtaining a permit containing an up-front cap on actual emissions. We believe the benefits to source owners and operators of the new method outweigh any residual burden placed on them to maintain the necessary post-change records. The new recordkeeping requirements will mean that a source must (1) maintain a record of its pre-change projection of post-change actual emissions and (2) track its post-change annual emissions, retaining these records on site for 5 years from the date the modified unit returns to regular operation. This recordkeeping requirement will involve a 10-year tracking and data retention period if the physical or operational change will increase the changed unit's design capacity or its potential to emit a regulated NSR pollutant. It should be noted, however, that we have retained a form of the "actual-to-potential" method in that if a source can use an emissions unit's potential emissions in lieu of a projection of post-change actual emissions to show that the physical or operational change will not result in a significant emissions increase, then it can avoid the recordkeeping requirements associated with the projections otherwise required.

We also disagree with the commenter who stated that the actual-to-potential test should be reinstated for EUSGUs due to the increased level of competition in the electric utility industry. The commenter believes that the increased competition and deregulation in the industry would lead to less accurate estimates of post-change utilization and demand growth. We have no evidence at this time that deregulation will affect the ability of utilities to make accurate calculations of their post-change emissions. However, in any particular case when the projection of post-change emissions underestimates the actual emissions increase, then the source would ultimately be subjected to the NSR requirements if post-change records show that a major modification actually occurred. EUSGUs 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, unless the reviewing authority specifies a longer reporting period up to 10 years.

With regard to the commenter's concerns about emissions from municipal solid waste landfills, we recognize that there are some unique differences between annual emissions profiles at landfills and other source categories. In particular, landfills do not go through the types of business cycles that other industries do, and their emissions do not fluctuate in a similar way. We do not believe, however, that an exemption is needed to address this difference because we do not intend to preclude a landfills from continuing to calculate their emissions changes associated with modifications in the same way that they are presently making that calculation. If, following the adoption and implementation of the new rules, we determine that additional

guidance is necessary, such guidance will be provided for addressing landfill emissions changes from modified sources.

4.3 Actual-to-potential Test Is Contrary to Statute and Case Law

Comment:

Several commenters (IV-D-117, 143, 147, 153, 154, 157, 160) opposed the actual-to-potential test because they viewed EPA as unfairly applying it to all physical changes and changes to the method of operation. The commenters believed that EPA had incorrectly interpreted the statute and the case law to require that all units are subject to the actual-to-potential test. Instead, the actual-to-potential test should only apply to units that have not "begun normal operations," that is, according to the commenter, only newly constructed units that have never been in operation. These commenters maintained that the court's interpretation in the WEPCO ruling, and EPA's discussion of the WEPCO ruling in the preamble to the 1992 regulations incorporating those changes, correctly indicate the use of the actual-to-future-actual methodology for determining whether an emission increase has occurred. Commenters (IV-D-117, 143, 154, 157, 160) believed instead that non-utility sources (that is, sources other than electric utility steam generating units), are allowed under current regulations to apply the actual-to-actual test to determine emission increases.

Commenter IV-D-153 said that the proposal preamble overstates the extent to which relevant case law supports the actual-to-potential approach as interpreted by EPA. The commenter said the preamble to the final rule should address the problems associated with requiring the use of the actual-to-potential test under current law. The commenter also believed that the court would not uphold EPA's promulgation of its interpretation of the current PSD regulatory scheme as it has been applied to existing sources. According to the commenter, the actual-to-potential approach cannot withstand scrutiny as a basis for evaluating whether a significant net increase in actual emissions will result.

One commenter (IV-D-143) said while EPA "declines to create a presumption that every emissions increase that follows a change in efficiency is inextricably linked to the efficiency change," (57 FR 32327), the Agency erroneously asserts that its decision to not adopt such a presumption is limited to "change[s] in efficiency (at an electric utility generating unit)." The comment suggests that the WEPCO preamble's discussion of this issue makes it clear that the rationale underlying EPA's position applies equally to all sources.

Several commenters (IV-D-117, 143, 153, 154, 160) believed EPA's interpretation of the phrase "begun normal operations" was rejected by the Seventh Circuit in the WEPCO case. Commenter IV-D-117 noted that while EPA never defined "normal operations" in its regulations, the D.C. Circuit Court has held that any unit already in operation has "begun normal operations."

Two commenters (IV-D-143, 154) characterized EPA's interpretation as contrary to Congressional intent. According to one commenter (IV-D-154), by adhering to its interpretation of the phrase "begun normal operations," and applying the actual-to-potential approach to virtually all PC-CMOs, the Agency ignores Congress' intent to capture under major NSR only those changes causing significant actual increases in emissions from major sources.

Two commenters (IV-D-143, 160) stated that EPA's current interpretation contradicts the explanation of the phrase "begun normal operations" in the preamble to the WEPCO Rule. [57 FR 32312 (July 21, 1992)] In that rulemaking, the Agency specified that "[U]nder 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.' The commenter suggests that, at least for changes that are 'like-kind replacements,' 'normal operations' have begun, and the actual-to-potential test is impermissible."

One commenter (IV-D-154) stated EPA's presumption that most non-utility sources undergoing physical or operational changes have not "begun normal operations" has led to the inappropriate application of the actual-to-potential approach in virtually every case. The commenter noted that the preamble emphasized that "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." Moreover, EPA acknowledged that "[b]ecause 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" (57 FR 32317). The commenter recommends that the preamble to the final rule discuss these types of problems with requiring use of the actual-to-potential approach under current law. The commenter maintained that many States do not interpret the regulation in the unsupportable manner that EPA appears to and do not require all existing units to base post-change emissions on the unit's PTE after the change. The commenter therefore believed that the Agency should clarify that sources that have relied upon and complied with the explicit requirements of the NSR regulations will not be subject to liability for violating the Agency's inconsistent interpretation of those regulations.

Two commenters (IV-D-105, 143) believed the actual-to-potential test should not apply to like-kind replacements. One commenter (IV-D-143) specifically indicated that the WEPCO court ruling regarding like-kind replacements should apply to non-utilities. The commenter stated that the WEPCO preamble's discussion of this issue makes it clear that the rationale underlying EPA's position applies equally to all sources. In describing the court's ruling in WEPCO, EPA appears to suggest that a "like-kind replacement" consists of the replacement of particular pieces of a facility's equipment with "new components of identical design and function." (61 FR 38255). By this the Agency is apparently attempting to place a restrictive gloss on the meaning of "like-kind replacement." The commenter believes that such a restriction is not warranted. This is so because the court in WEPCO did not define "like-kind replacement" as requiring that any replacement components be of "identical design and function." Rather, the

commenter asserts that the origin of the term was WEPCO's own briefs, which described "like-kind replacement" as meaning the substitution of new parts that perform the same-function as worn or deteriorated parts at a facility without changing the type or character of the pollutants emitted." (Petitioner's Initial Brief at 3 n.2) Citing the WEPCO decision, according to the commenter, EPA has itself defined a "like-kind replacement" generally as one that "does not change or alter" the design or nature of a facility."

Another commenter (IV-D-105) did not cite WEPCO, but agreed that the actual-to-potential test should never apply to like-kind replacements. The commenter (IV-D-105) stated that the current actual-to-potential approach unfairly causes some like-kind replacements to trigger NSR. In the case of a like-kind replacement, the emission factors and the PTE are the same, so a replaced unit should not be subject to an actual-to-potential test.

Response:

We disagree with the commenters who claim that statute case law, and current regulations do not adequately support the "actual-to-potential" test. We have set forth our legal rationale for the existing regulations in various preambles and policy memoranda. The purpose of our proposed rules was not to seek alteration of these interpretations, but to request comment on how our approach for determining emissions increases might be improved. Therefore, we consider comments addressing the "actual-to-potential" test to be outside the scope of this rulemaking.

We do agree with some of the commenters that there are acceptable alternatives to the "actual-to-potential" approach for certain units beyond just existing electric steam generating units (EUSGUs). The CAA itself is silent on whether increases in emissions, for purposes of determining whether a physical change or a change in the method of operation at an emissions unit constitutes a modification, must be measured in terms of actual emissions, potential emissions, or some other currency. Therefore, we have some discretion to determine the appropriate test for determining whether a modification has occurred. In the NSPS program, we determine whether there has been an "increase in any air pollutant emitted" by the source by comparing hourly emission and the maximum-hourly-achievable emissions. EPA and the courts have recognized, however, that the NSR programs and the NSPS programs have different goals, and thus, we have utilized different emissions tests in the NSR programs. After considering the recommendations of various commenters, and the desirability of adopting alternative methodologies for other source categories, we have now established an applicability test based on an "actual-to-projected-actual" applicability test for existing emissions units in general (including replacement units and reconstructed units), and a different test for those existing units Clean Unit status. For the construction of new emissions units, we continue to believe that the test most appropriately applied to these units is the "actual-to-potential" test. See section 4.2.4 of this chapter for further discussion on our decision to shift from the "actual-to-potential" test

to the "actual-to-projected-actual" test for all existing emissions units. Also, see chapter 9 of this volume and chapter 5 of volume 2 for additional information about the new Clean Unit test.

4.4 Actual-to-future-actual Test - General Comments

Comment:

4.4.1 Support Actual-to-future-actual Test

Numerous commenters (IV-D-9, 16, 28, 36, 39, 42, 45, 53, 56, 57, 62, 70, 72, 77, 79, 93, 97, 98, 108, 110, 112, 113, 117, 120, 121, 126, 127, 130, 136, 138, 139, 145, 146, 149, 150, 153, 163, 169, 170, 176; IV-G-2, 3, 4) generally supported use of the actual-to-future-actual test. Many other commenters (IV-D-11, 14, 106, 123, 137, 142, 157, 160) offered qualified support, however. Finally most of the commenters (IV-D-9, 28, 39, 42, 45, 53, 56, 57, 62, 70, 72, 77, 79, 98, 106, 108, 112, 117, 120, 121, 126, 127, 137, 138, 139, 142, 146, 149, 150, 153, 154, 157, 169, 170, 176; IV-G-3) specifically stated that the actual-to-future-actual methodology should be extended to non-utilities.

One commenter (IV-D-137) offered qualified support for the actual-to-future-actual methodology. The commenter was concerned that the methodology would permit significant increases in allowed emissions that are not subject to the technology review and ambient impact review requirements of NSR. The commenter stated that State and local agencies will need to invest much more resources to understand the likely future activity level for a non-utility stationary source. The commenter concluded, however, that in the absence of a good argument to do away with the actual-to-future-actual methodology, there is not a compelling reason to limit its use to the utility industry. While there will be less assurance of the accuracy of the results of future activity reviews, this, in and of itself, is not a good reason to preclude other industries from using this provision.

Some commenters (IV-D-137, 142, 153, 157) said they could not support the actual-to-future-actual methodology unless the demand growth exclusion was included for all sources. Some commenters (IV-D-137, 157) also said that 5-year tracking requirements were essential. Commenter IV-D-137 observed that if an emissions unit were determined to be ineligible for the NSR exemption during the 5-year period (for example, increases in actual annual emissions were caused by factors that did not meet the criteria of the demand growth review), the owner or operator of the emissions unit would likely find that the cost of retrofit would be significantly higher several years after the physical or operational change was made. The commenter mentioned this as a key concern with providing an actual-to-future-actual methodology and one of the reasons why the commenter gave only qualified support for the actual-to-future-actual methodology.

One commenter (IV-D-123) said that for electric utilities they supported the actual-to-future-actual test as described in the WEPCO rule.

One commenter (IV-D-11) suggested using the actual-to-future-actual test except where the SIP is based on allowable emissions. The commenter believed that this would preclude sources from trading emission reductions that were in the SIP.

One commenter (IV-D-106) offered qualified support for an actual-to-future-actual test. The commenter would support an actual-to-future-actual test only if accompanied by a weighted 12-month average of hours of operation of 50 percent or greater operating capacity as a baseline. The commenter explained why including hours of operating with production capacity below 50 percent would result in an unreasonably low actual emissions baseline and unfairly restrict operations. The commenter requested that EPA propose their baseline methodology for comment along with the actual-to-future-actual test.

One commenter (IV-D-14) supported using the actual-to-future-actual test only for utilities, recognizing that utilities had the authority to use the test. Another commenter (IV-D-142) said even if EPA concludes that the actual-to-future actual test is inappropriate for all source categories, it should be retained for the electric utility industry. This methodology is particularly appropriate for electric utility units, which are required to retain accurate records of emission and utilization pursuant to other programs and other authorities. One commenter (IV-D-123) preferred that EPA retain the current regulations for utilities.

The commenters who supported the actual-to-future-actual methodology gave various reasons for their support.

Several commenters (IV-D-9, 93, 97, 112) stated that this methodology is more accurate and realistic than the existing actual-to-potential method. One commenter (IV-D-97) pointed out that the test appropriately focuses limited facility and State resources on changes that are likely to have a significant impact on the environment, and where NSR permitting can result in an environmental benefit.

One commenters (IV-D-149) stated that the actual-to-future-actual test is a rational accounting method because it uses the same basis for baseline emissions and post-change emissions. Three commenters (IV-D-33, 87, 160), who preferred a potential-to-potential test but would support the actual-to-future-actual as a second option, agreed. One commenter (IV-D-28) characterized it as an entirely reasonable means of determining the effects of a major modification. According to this commenter, it appropriately allows for environmental control and other modifications, pollution control, and pollution prevention projects.

One commenter (IV-D-108) supported the actual-to-future-actual test because without it, even physical changes that reduce a unit's emissions rate could trigger a net emissions increase if

the unit was not previously used at full capacity, and if post-change emissions are calculated at full utilization rates.

One commenter (IV-D-170) clarified that allowables are poor indicators of actual emissions. At most compressor stations, engines or turbines sufficient to meet peak day demand for transmission and storage are installed. That is, sufficient horsepower is installed to handle the coldest day during the winter heating season and storage requirements during the summer months. Consequently, this equipment is underutilized most of the year. Another commenter (IV-D-16) stated that using PTE rather than actual emissions to determine increases in emissions would be unreasonable for the reasons shared by EPA at 61 FR 38268. According to this commenter, reliance on paper emissions in determining whether sources have undertaken major modifications could result in grievous emission increases. The commenter commended EPA "for its emphasis on the real world."

One commenter (IV-D-57) noted that the actual-to-future-actual test would accommodate the printing industry. This commenter suggests that , unlike many industries where there is a simple relationship between operational practices and air emissions (such that the PTE can be estimated in a straight-forward manner), in the printing industry potential emissions are difficult to determine because the theoretical boundaries on emissions have no relationship to realistic practices. According to the comments, the current use of PTE estimates is more difficult for the printing industry than the actual-to-future-actual methodology would be. The commenter recommends that EPA allow application of the actual-to-future-actual methodology to the addition or replacement of a printing press or other equipment at a printing facility such as an automatic blanket washer.

One commenter (IV-D-139) stated that the actual-to-future-actual test is more appropriate to research facilities where PTE is especially difficult to predict because research is a highly changeable activity. Should the actual-to-future-actual methodology not be adopted universally, the commenter requested that it be made specifically applicable to research facilities.

4.4.2 Oppose Actual-to-future-actual Test

Many commenters (IV-D-14, 20, 47, 51, 52, 61, 81, 105, 109, 115, 152, 172, 191; IV-G-13) opposed using the actual-to-future-actual test.

Two commenters (IV-D-109, 152) opposed the actual-to-future-actual test because it would allow emission increases that would not be allowed under the actual-to-potential test. One commenter (IV-D-152) stated that EPA should require sources that do not operate 8,760 hours a year at 100 percent capacity to commit to that lower level as an enforceable limit on emissions. According to this commenter, to simply allow an exemption based on a claim that a source's future emissions will not increase above some level, and to provide no mechanism for holding the source to that claim, is little more than a fraud on the public. The commenter stated that the

significant negative impacts of the future-actual to past-actual comparison would outweigh some of the modest benefits that it provides. Another commenter (IV-D-109) stated that the test would permit significant increases in allowed emissions that are not subject to the technology review and ambient impact review requirements of NSR.

Several commenters (IV-D-14, 20, 52) objected to any provisions that would allow retrospective determination of NSR applicability, such as might occur if tracking shows that post-change emissions later increase. One commenter (IV-D-20) stated that neither agency reviewers nor the applicants have the authority for activities that are not included in the application, or for a scope of operation exceeding the permitted levels. The commenter suggested that an applicant whose plans change should expect additional agency review before permission is granted. According to the commenter, the fact that demand grows beyond projections should not eliminate the need for impacts analysis and compliance review. The commenter recommends that, if an operator substantially changes the process, the operator must recognize that the reviewing authority is obligated to review the compliance status of the new activity.

One commenter (IV-D-52) stated that if the actual-to-future-actual methodology were implemented, the Agency would need to make a difficult decision about whether an exceedance was due to a modification. According to the commenter, typically, this decision is hampered by economic and political implications, which may outweigh the environmental factors. The commenter also opposed the actual-to-future-actual methodology because it is wasteful to apply the proper controls after the initial modification. The commenter suggests the total amount of permitting time needed (combined permitting time for the original permitting and the backwards-looking analysis) will exceed that needed for a normal NSR permit; the cost to retrofit a technology will exceed the cost of installing the controls at the time of modification or installation; and during the period in which controls were not applied, additional pollution occurs.

One commenter (IV-D-172) noted that if a facility can project future-actual emissions to show that they will not exceed significant levels, and the facility is willing to submit 5 to 10 years of future operational records to verify their projections, why aren't they willing to incorporate those projections into the permit to begin with, thus removing the need for a demand growth exemption? According to the commenter, the only foreseeable benefit to the new methodology seems to be that it allows facilities to factor out actual emission increases attributable to demand growth, which is not allowed under current provisions. The commenter suggests that the cost of this flexibility is: (1) to force State agencies into the unpopular position of taking enforcement action, after retrospectively evaluating permit actions; and (2) to require costly air pollution control retrofits.

One commenter (IV-D-14) opposed the actual-to-future-actual methodology for several reasons. First, it is impossible to predict future emissions. Even for a simple process, future

emissions are difficult to predict and are influenced by natural variations and process upsets. Future emissions must also consider future utilization. The commenter, a State agency, noted that they have often been told that sources cannot make any estimate of projected capacity utilization. Furthermore, according to the agency, even if future emissions are predictable, it would be impossible to determine whether an emission increase was caused by the modification or by something else.

Several commenters (IV-D-20, 47, 52, 105, 109, 172, 191) objected to the actual-to-future-actual methodology because they viewed it as needlessly complex and likely to create burdens on the reviewing authority. One commenter (IV-D-47) said under the proposed actual-to-future-actual methodology, a source planning a modification would have to predict its future capacity and actual emissions resulting from the modification. This, according to the commenter, would be difficult for many source categories and result in the generation and analysis of extensive information unrelated to air quality protection. Another commenter (IV-D-52) stated that a future-actual to past-actual comparison would require difficult retrospective judgments and be too hard to implement. One commenter (IV-D-105) conceded that although an actual-to-future-actual approach has merit, it does not reduce the complexity and recordkeeping burdens on the regulated community. In addition, it is often difficult to calculate past actual emissions, particularly when equipment is operating at different loads throughout the year. The commenter suggests that emissions of CO are especially susceptible to load variation, and calculation of CO emissions would entail an analysis of time spent at various operating loads. Additionally, emission factors can vary by machine type and size, and relying on AP-42 factors is not an accurate way of calculating actual emissions. The commenter also questioned how emissions would be tracked under an actual-to-future-actual accounting. One commenter (IV-D-191) stated that EPA needs to provide clear guidance on a methodology for projecting future-actual emissions.

One commenter (IV-D-81) stated that the actual-to-future-actual test tends to penalize sources for operating existing equipment in the best manner to control emissions, and encourages sources to operate their equipment as close to the allowable limits as possible. According to the commenter, this method discourages modernization of equipment and encourages the use of antiquated equipment with lower productivity and less efficiency per unit of emissions. It also reduces the operational flexibility of a plant, restricting the ability to implement minor changes. The commenter believes that these effects oppose the operational flexibility concepts of the CAAA.

One commenter (IV-D-47) observed that because the actual-to-future-actual test does not apply to replacements or new source construction, its potential use is very limited. The commenter also believed that PALs offered a more viable solution than the actual-to-future-actual methodology for streamlining the process for modifications. The commenter stated that the potential benefit to the regulatory community of the actual-to-future-actual methodology can be accomplished more efficiently and effectively within the context of a PAL.

Response:

Some of the comments in this section have already been addressed in the responses to comments on retaining the actual-to-potential test in Section 4.2, above. Comments involving the calculation of baseline emissions have been addressed in Chapters 2 and 3. The responses below address those comments not already specifically discussed.

We disagree with those commenters who asserted that some modification projects that would have triggered major NSR as major modifications under the "actual-to-potential" test will not trigger review under the new "actual-to-projected-actual" test. As explained previously in section 4.2, the essential difference between the two methods is that under the "actual-to-potential" approach, the projection of actual emissions may be set forth in a minor NSR permit or other enforceable emissions-capping mechanism before construction, whereas the "actual-to-projected-actual" approach relies on emissions tracking and recordkeeping to insure that projected actual emissions are not exceeded (unless the company obtains a major NSR permit). The end result is that State and local reviewing authorities now have the option of focusing their limited resources on those types of changes that are going to result in significant increases in actual emissions to the environment. Use of the new test will also remove the perceived disincentive claimed by many industry commenters for sources to make the types of changes that improve operating efficiency, implement pollution prevention projects, and result in other environmentally beneficial changes.

We also note that the current rules do not require every emissions increase to undergo major NSR as some commenters seem to assume. For example, under the definition of "modification," emissions increases resulting from increases in production and increases in the hours of operation at an emissions unit do not constitute modifications that are subject to review (other than increases associated with construction-related activities at the unit). The new rules likewise allow sources to exclude these types of emissions increases when calculating the emissions increase resulting from a physical or operational change from an existing emissions unit as long as those increases are not related to the physical or operational change.

We disagree that the actual-to-projected-actual test will make it more difficult to accurately identify those changes at a unit that will result in actual emissions increases. The requirement that a physical or operational change cause an emissions increase in order to constitute a modification is implicit in the CAA itself, has always been an explicit requirement of EPA regulations, and is not being changed in the new rules. In addition, as explained previously, the 5-year tracking provision in the final rule will assure that any subsequent emissions increase that exceeds the projected level (insofar as it represents a significant emissions increase) must be reported to the reviewing agency and then appropriate review will take place. Likewise, the commenter's statement that the actual-to-projected-actual test will allow emissions increases to escape ambient impact review where they would not under existing rules is not correct, because the new test does not change the basic calculus for determining

major NSR applicability, but only how that calculus is enforced. In addition, physical or operational changes that do not, under either the existing rules or the new rules, undergo major NSR are often subject to minor NSR requirements. (Examples include upgrades to a power boiler at an industrial plant where the owner projects that there will be less than a significant increase in emissions.) EPA's minor source regulations require State minor NSR programs to insure that air quality analyses are conducted regarding changes at existing sources as may be necessary to insure that they do not interfere with attainment or maintenance of the NAAQS Also, emissions increases at existing sources remain subject to review by the reviewing authority under a periodic assessment of the PSD increments or in response to information that an applicable increment is being violated. See 40 CFR 51.166(a)(4). For such analyses, the new rules provide that the current procedures for measuring the effects of actual emissions increases (using the current definition of "actual emissions) would continue to apply. The new rules provide that the new "actual-to-projected-actual" test be used only for applicability purposes to determine whether a project involving one or more existing emissions units at a major stationary source will result in a significant emissions increase

We agree with the commenters who believe retrospective NSR applicability determinations would be problematic. It is our intent under the new rules that the need for such retroactive determinations would be minimal. The main purpose of the annual tracking requirements is to maintain adequate information to ascertain whether the source's initial estimate of post-change actual emissions is accurate, but such a tracking requirement should also promote careful and accurate projections so that sources will not have to face the risk of retroactive NSR applicability and possible enforcement actions. The new rules also contain procedures enabling the reviewing authority to review a source's post-change operating records and institute further action as necessary if either the resulting post-change annual emissions increase or the emissions projection is significant.

We disagree that the level of emissions used to determine an emissions unit's post-change actual emissions should automatically be an enforceable permit condition. The purpose of the "actual-to-projected-actual" applicability test is to determine whether a physical or operational change at an existing emissions unit will result in a major modification of the source without requiring up-front limitations on post-change emissions. Such limitations would become an administrative burden on the reviewing authorities responsible for their issuance and would also limit the ability of the source to respond to economic conditions by making the types of production changes that are not considered to be physical or operational changes. Thus, it would defeat the central purpose of the new test to require the projection of the unit's post-change actual emissions rate that is part of this test to represent a new allowable emissions rate for the source.

We agree with the commenters who requested inclusion of the demand growth exclusion for non-utility sources. This exclusion has been retained in the final rule. We have concluded that this provision is consistent with both the statute and the existing regulations, which require

a causal link between the proposed change and any post-change increase in emissions, that is, "...any physical change or change in the method of operation that would result in a significant net emissions increase..." [emphasis added]. See, for example, existing §52.21(b)(2)(i). While in a very few cases it may be difficult to determine whether a particular emissions increase is directly attributable to a physical or operational change that is made to an emissions unit, it would be inappropriate to eliminate the availability of the exclusion to everyone in order to address this concern. Consequently, the final rule follows the 1996 NPRM in that when a projected increase in equipment utilization is in response to a factor such as growth in market demand, a source may subtract the emissions increases from the unit's post-change actual emissions if the source can show that the unit could have achieved the necessary level of utilization during the consecutive 24-month period it selected to establish the baseline actual emissions, and the increase is unrelated to the physical or operational change(s) made to the unit. See, for example, new §52.21(b)(41)(ii)(c). We emphasize that demand growth can only be excluded to the extent that the associated emissions increase is not related to the physical or operational change. Thus, even if the operation of an emissions unit to meet a particular level of demand could have been accomplished during the representative baseline period, but it can be shown that the increase is related to the changes made to the unit, then the emissions increases resulting from the increased operation must be attributed to the modification project, and cannot be subtracted from the projection of post-change actual emissions.

With regard to the commenter who claimed that the actual-to-projected-actual test would encourage sources to operate as close as possible to their emission limits. We believe there is no more incentive under the "actual-to-projected-actual" test than there is under the "actual-to-potential" test to operate at a higher emission rate.

Concerning the comment on data availability for the 10-year look back period, the new rules limit the full use of the 10-year look back period based on the accuracy and completeness of a source's records of emissions and capacity utilization for any emissions unit that undergoes a physical or operational change. See, for example, new §52.21(b)(48)(f). As with all emissions calculations, accuracy and completeness are central elements for applicability determinations. In many cases, sources presently maintain accurate records on emissions and operations for only 5 years. Thus we think it is appropriate to limit use of the full 10-year look back period when a source does not have data for this time period. However, this limitation should be alleviated over time as sources begin to maintain records for longer periods to accommodate the 10-year look back opportunity. The subject of data quality and availability for the 10-year look back period is addressed more fully in Chapter 2.

4.5 Actual-to-future-actual Test - Extend to Non-utilities

Comment:

4.5.1 Support extending to non-utilities

Many commenters (IV-D-9, 28, 39, 42, 45, 53, 56, 57, 62, 70, 72, 77, 79, 93, 98, 106, 108, 112, 117, 119, 120, 121, 123, 126, 127, 136, 138, 139, 140, 142, 143, 146, 147, 149, 150, 153, 154, 157, 160, 169, 170, 176; IV-G-3) urged EPA to extend the use of the actual-to-actual-future methodology to all source categories.

Several commenters (IV-D-77, 106, 117, 119, 123, 136, 142, 143, 147, 157, 160, 169) argued that the WEPCO rule already allows any unit that has begun normal operations (that is, any existing emission unit) to use the actual-to-future-actual methodology. These commenters maintained that the regulations and the applicable case law require use of an actual-to-future-actual approach when the source has "begun normal operations." Another commenter (IV-D-117) stated that EPA should emphasize in the preamble to its final rulemaking the actual-to-future-actual methodology revision does not represent an entirely new rule of law. Rather, according to the commenter, the revision simply codifies the court's interpretation of existing law in the WEPCO opinion. Two of the commenters (IV-D-147, 160) noted the preamble to the 1992 WEPCO rule (57 FR 32317) and recent EPA policy memos as supporting the application of actual-to-future-actual test to all types of sources.

One commenter (IV-D-142) stated that EPA must always use the actual-to-future-actual test for both electric utility sources and non-electric utility sources that have begun normal operations. The commenter suggests that, in the case of electric utility sources the determination of whether normal operations have begun is relatively straightforward: the "past-actual/future-actual" methodology applies to all physical or operational changes, except those that constitute an addition of a new unit or constitute a replacement of an existing unit. The commenter recommends that, in the case of non-electric utility sources, the determination of when normal operations have begun is a case-by-case one, although for those changes that involve like-kind replacements, the actual-to-actual approach applies. One commenter (IV-D-119) noted that the actual-to-future-actual test should only applied to like-kind replacements.

One commenter (IV-D-42) stated that gas utilities should be able to use the WEPCO rule because they are generally similar to coal-fired utilities. In areas where emission data are plentiful, accurate, and readily available, post-modification tracking of emissions for the requisite 5 years after the modification would be an easy task. In the preamble to the NSR reform proposal, EPA recognizes that utilities are subject to control by Public Utility Commissions but makes no distinction between gas and electric utilities. The gas utility business also has no control over demand growth in its service territories and should be allowed to benefit from application of the WEPCO rule.

Three commenters (IV-D-72, 93, 140) stated that it is not equitable to have one applicability test for utilities and another applicability test for other industries. One commenter (IV-D-140) suggested that this is particularly true in industries where debottlenecking projects often trigger major NSR due to increased power demands. Another commenter (IV-D-72) noted that the factors EPA cites for possibly confining the methodology to electric utilities are irrelevant.

Two commenters (IV-D-137; IV-G-2) gave qualified support to extending the actual-to-future-actual methodology to non-utility sources but also recognized that because non-utility sources are not subject to the level of oversight experienced by utilities, State and local agencies will need to invest more resources to understand the future activity level for a source that uses this approach. The commenter notes that there will be less certainty in the results of this review; however, this is not a sufficient reason to preclude other industries from using the methodology. Commenter IV-D-137 added that in the absence of a good argument to eliminate the actual-to-future-actual methodology, there is no a compelling reason to limit its use to the utility industry.

4.5.2 Opposed extending to non-utilities

Some commenters (IV-D-109, 125, 393; IV-G-07) opposed extending the actual-to-future-actual test to non-utilities. They expressed concern that non-utility sources may fail to properly and safely use the actual-to-projected-actual test. One commenter (IV-D-125) stated that electric utilities are unique because their production and emissions may reliably be forecast. Commenters (IV-D-109, 125; IV-G-07) agreed that few sources share this characteristic and the use of the WEPCO precedent should be applied only to electric utilities. Commenter IV-D-109 added that the proposal, whereby historical actual emissions are compared to projected actual emissions, would permit significant increases in allowed emissions which are not subject to NSR. According to this commenter, the entire proposed methodology is needlessly complex and should be eliminated.

Response:

As explained above in the response to comments in Section 4.2, we have always maintained that the decision in the WEPCO case requiring an actual-to-future-actual applicability test (now the actual-to-projected-actual test) for modifications to existing EUSGUs could be extended to non-utility sources. We did propose such an extension in the 1996 NPRM (61 FR 38250) and requested further comments in the 1998 NOA (63 FR 39857). Most of the comments listed here have already been addressed in our response to comments in sections 4.2 – 4.4, and the reader is referred to those sections for more detailed responses.

With regard to the commenter's claim that the new "actual-to-projected-actual" method is needlessly complex, we would note that the existing "actual-to-potential" method also allows an applicant alternatives that are similar to the ones under the new method for determining

baseline emissions and the post-change actual emissions. Under the existing method, sources may seek to use an historical operating rate other than the 2 years immediately preceding the change to establish baseline emissions. This method has been widely criticized as being complex, burdensome and time consuming. The new method would eliminate most of the problems associated with the existing approach. In addition, the new method requires the baseline emissions to be adjusted for current emissions limitations, whereby the existing method does not. With respect to post-change emissions, the existing method allows a source to predict the post-change actual emissions increase in lieu of accepting the increase at allowable levels. However, the existing method requires the source to accept an emissions cap at the predicted actual level of increase, thereby prohibiting the source from making other subsequent production changes at the source that would otherwise be allowed in the absence of a major NSR permit. Moreover, if the source determines, during the 5 or 10 years of required recordkeeping, that the changes made to a unit result in greater emissions increases than originally calculated, and such increase results in a significant emissions increase, the source should submit a report to the reviewing authority to explain the discrepancy. We believe the new method will eliminate the confusion and burdens associated with the existing method and will provide sources with greater flexibility to make changes that will improve efficiency without resulting in significant emissions increases. If, however, individual source owners prefer to instead obtain an enforceable cap on potential emissions following the change, as under the existing regulations, this remains an option.

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 Clean Air Act requirements. 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. The amendments will also require greater accountability on the source's part to retain information from which the reviewing authority can determine the nature of any changes that are made at the facility as well as the actual emissions increases that are associated with those changes.

4.6 Eliminate Actual-to-future-actual for Utilities

Comment:

Several commenters (IV-D-28, 123, 128, 143, 145, 169; IV-G-3) opposed eliminating the actual-to-future-actual approach for electric utility sources. Six commenters (IV-D-28, 123, 128, 143, 145; IV-G-3) stated that there is no basis for eliminating the actual-to-future-actual approach for electric utility sources. According to these commenters, to do so would signify a retreat from the WEPCO ruling and a significant limitation on rules that have been in place since the NSR program was first promulgated. One commenter (IV-D-145) stated that if EPA is proposing to eliminate the actual-to-actual methodology, then it is proposing a fundamental and unprecedented

change in the way the modification rules are applied, a change that can only be accomplished through rulemaking that includes public notice and opportunity for comment.

One commenter (IV-D-137) offered qualified support for retaining the actual-to-actual test for utilities. The commenter (IV-D-137) endorsed retaining the actual-to-future-actual test for utility units based on the observation that a utility unit (which makes a physical or operational change that does not increase its hourly emission rate and would not wish to be restricted to the actual past operating schedule) should not be required to meet the control technology requirements of NSR. According to the commenter, current Federal regulations do not generally require the application of NSR to existing emissions units that increase their activity level. The commenter suggests that the demand-growth provision requirements and 5- to10-year reporting put a practical limitation on the use of this provision. Notwithstanding a future increase in activity level due to demand growth and an increase in annual emissions, the emissions unit must be able to demonstrate that: (1) the existing unit would have had an increase in activity level anyway; and (2) the existing unit could have operated at the increased activity level anyway.

One commenter (IV-D-47) believed the actual-to-future-actual methodology should be eliminated for utilities. The commenter believed that the factual basis and safeguards in the WEPCO rule for utilities had been significantly altered as a result of new rules at the State and federal levels promoting wholesale competition in the public utility industry through open access. Subsequent to the WEPCO rule, the Federal Energy Regulatory Commission (FERC) has significantly modified the role of State public utility commissions through promulgation of the regulations related to "Promoting Wholesale Competition through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities." The commenter noted that the Pennsylvania Public Utility Commission and the Pennsylvania legislature are evaluating the promotion of wholesale competition through open access at the State level. These changes will increase competition, decrease regulation, and undermine the predicate for the original WEPCO rulemaking,

Response:

In the 1996 NPRM, we specifically requested comment on whether the actual-to-future-actual test should be eliminated completely, including the current provisions for EUSGUs (see 61 FR 38267). After careful consideration of all the comments received, we decided to retain the test for EUSGUs essentially as provided in the WEPCO rules, except that EUSGUs will now use the same "actual-to-projected-actual" test that all other existing emissions units will use. Moreover, we believe that EUSGUs will continue to have adequate emission projection and tracking capabilities, regardless of deregulation of some aspects of public utilities. EUSGUs are still required to meet rigorous monitoring requirements under title IV as well.

4.7 Enforcing Actual-to-future-actual Methodology

Comment:

Several commenters (IV-D-46, 72, 73, 74, 88, 147, 160; IV-G-7) were concerned that it would be difficult to make compliance determinations, control technology determinations, and enforce NSR 5 years out if the 5-year tracking showed the future-actual emissions were exceeded.

Seven commenters (IV-D- 46, 72, 73, 74, 88, 147, 160) requested that EPA describe in more detail how NSR would be applied to a source that exceeds its future-actual emission levels during the required 5-year tracking period. The commenter recommends that the final rule clarify the enforcement ramifications associated with an inaccurate projection of future-actuals. In particular, the commenter suggests that the final rule provide that a source that is in error in predicting its future-actual emissions but acts in good faith will not incur civil or criminal penalties for unanticipated emission increases.

One commenter (IV-D-160) stated that the final rule should specify that if a significant emission increase unrelated to demand growth occurs, a source may install what the relevant BACT/LAER would have been at the time the physical change or change in method of operation occurred. One commenter (IV-D-46) believed that if the future actual emissions level was exceeded, the source should have an opportunity to mitigate the increase without penalty by installing control technology or offsetting emissions. According to the commenter, the reviewing authority is the one who establishes the projected representative actual emissions, so the source should not be subject to enforcement action for exceeding the future actual emissions if they have been working in good faith with the agency. Another commenter (IV-D-72) also believed that if the future actual emissions level was exceeded, the source should not be subject to enforcement action. Instead, it should have a 6-month period to lower emissions.

Another commenter (IV-D-62) believed a source should not be unfairly penalized because it underestimated its future-actual emissions; it should still be entitled to increase its emissions within the NSR significance levels without triggering retroactive NSR. According to this commenter, State permit compliance issues may develop independently of the NSR issue if actual emissions exceed permitted levels. Four commenters (IV-D-39, 73, 74, 88) urged EPA to clarify that reviewing authorities should not require that the estimated future-actual emissions become the *de facto* or normal permitted limits.

On the other hand, several commenters (IV-D-14, 47, 82, 137, 152) stated that if the actual-to-future-actual methodology was adopted, there should be an enforceable limitation on the future emissions. These commenters generally believed that if a source maintains that its actual emissions in the future will not exceed some level, then the source should be willing to commit to that level as an enforceable limit on its emissions. One commenter (IV-D-152) stated

that it would be worth exploring ways to introduce flexibility to account for industrial and company production and market cycles in establishing an actual-to-enforceable-future-actuals test. Two commenters (IV-D-82, 137) stated that the NSR program should require new or modified sources to have legally enforceable limits on their future emissions that are compatible with applicable SIPs and are analyzed at their future allowable rate. Another commenter (IV-D-14) suggested that instead of finding that the applicability call for PSD was incorrect, the actual emissions should be set as an enforceable limit, or that the PTE should be used as the enforceable limit. The tests should involve future PTE, not future-actual emissions.

One commenter (IV-G-13) opposed the actual-to-future-actual methodology because it did not protect against emission increases. If there was an emission increase at the end of 5 years the environmental damage would already have been done. The commenter asked how the applicable agency would go back and remove from nearby residents, wildlife, and the environment those pollutants that would not have been released if the applicable agency had originally applied PSD, NSR, and BACT? The commenter believed EPA is de-emphasizing the cost to human health and the environment. The commenter was also concerned that the emission records were only one piece of information needed to determine compliance. The commenter asked what would happen if the facility has sufficient records showing non-compliance or if continuous monitors show non-compliance, but a stack test shows compliance? The commenter also suggested that if EPA allows the WEPCO regulations to apply to all industries, EPA should require that facilities submit all records, not just those showing compliance. The commenter was further concerned that there is no opportunity for public comment if a company fails to provide sufficient records or demonstrate compliance under the actual-to-future-actual methodology.

Response:

We believe that the final rules adequately describes how NSR would be applied to a source that exceeds its post-change actual emissions level during the 5- (or 10-) year tracking period. If the post-change annual emissions rate of a pollutant from the emissions unit(s) that is modified results in a significant emissions increase at the emissions unit(s), and the emissions rate is inconsistent with the pre-change projection, then the source should report this to the reviewing authority. If this increase is related to the physical or operational change, then the source is required to comply with the major NSR requirements, including an evaluation of BACT, and an analysis of air quality impacts to ensure that the major modification does not cause or contribute to a violation of any NAAQS or PSD increments. Moreover, the source may be subject to an enforcement action for being in violation of the major NSR requirements.

When, according to the source's best calculations, the physical or operational changes that are being planned to one or more existing emissions units at a major stationary source will not constitute a major modification, and there is a reasonable possibility that the project may result in a significant emissions increase, the source must document its findings (including a description of the project, an identification of emissions units whose emissions could increase as

a result of the project, the baseline actual emissions for each emissions unit, the projection of post-change actual emissions before adjustments, the adjusted post-change emissions (future actual emissions or potential emissions) and the reason for the adjustment (for example, increase in product demand unrelated to the change), and, if the projected emissions increase is significant, the netting calculations using offsetting emission reductions elsewhere at the major stationary source to avoid being a major modification).

In addition, the final rules require a source to maintain post-change emissions data for all existing emissions units that are changed when there is a reasonable possibility that the project may result in a significant emissions increase. The source must maintain this information and compare it to the baseline actual emissions for at least 5 years. If the project will increase the design capacity or potential to emit of any existing emissions unit, the source must maintain and compare these data for that emissions unit to its baseline actual emissions for 10 years. The information that must be maintained may include continuous emissions monitoring data, operational levels, fuel usage data, source test results, or any other readily available information of sufficient accuracy for the purpose of determining an emissions unit's post-change emissions.

As mentioned above, a source must report to the reviewing authority any increase in its post-change emissions rate when that rate exceeds the baseline actual emissions by a significant amount and is inconsistent with the original projections. See, for example, new §52.21(r)(6)(iii).

In addition to the reporting requirements discussed above, a source is also obligated to ensure that the necessary emissions information is available for examination upon request by the reviewing authority. A source must also be prepared to make this information available to the general public upon their request pursuant to existing State procedures meeting the requirements of §70.4(b)(3)(viii) of the title V permit program, which requires that the reviewing authority has legal authority to "make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to section 503(e) of the Act, except for information entitled to confidential treatment pursuant to section 114(c) of the Act."

There are no provisions in the final rules to protect from civil or criminal penalties the owner or operator of a source that constructs a "major modification" without obtaining a major NSR permit, nor is there a provision to allow a certain amount of time to come into compliance as suggested by some commenters. We believe the post-change actual emission projection must be validated at all times to adequately protect and safeguard the environment and human health. In response to the commenter who was concerned about a significant emissions increase after the 5-year period, we re-emphasize that even when a source's projections of post-change emissions indicate that there will not be a major modification, when there is a reasonable possibility that the project may result in a significant emissions increase, the source must maintain annual records of actual emissions and report to the State when the post-change

annual emissions rate (1) exceed the baseline emissions by a significant amount, and (2) is inconsistent with the original projections. We believe this procedure sufficiently minimizes any potential harm from excess emissions without overburdening the reviewing authority or the source with excessive recordkeeping and reporting.

We do not agree with the commenters who suggested that the actual-to-projected-actual methodology must be accompanied by an enforceable limitation on post-change emissions. Although we proposed this in our 1998 NOA, we have decided not to adopt it for the reasons we describe in Chapter 5.

4.8 Other Comments on Actual-to-future-actual Methodology

Comment:

Several commenters (IV-D-46, 62, 67, 72, 106, 123, 136, 153, 160, IV-G-4) believed that the actual-to-future-actual methodology should only apply if the emission increase is significant and that this should be clarified in the final rule. Commenter IV-D-106 requested that the words "significant net" should be inserted before the phrase "emissions increase" in 40 CFR sections 51.165(a)(1)(xii)(F), 51.166(b)(21)(vi), 52.21(b)(21)(vi), and 52.24(f) to clarify that the significance thresholds are to be used with the actual-to-future-actual methodology. One commenter (IV-D-160) stated that by using the phrase "emissions increase" rather than "significant net emissions increase," the proposed regulatory language implementing the future-actual test inappropriately suggests that a source could be subject to NSR if any increase in actual emissions occurs in the 5 years after a PC-CMO, regardless of whether the increase exceeds the significance threshold, or whether there are contemporaneous decreases to net-out increases. According to the commenter, this approach would contradict established policy as well as the existing regulations, which define a "major modification" as any PC-CMO that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. The commenter recommends that EPA revise the proposed rule to clarify that under the actual-to-future-actual test a particular PC-CMO will not be subject to NSR requirements, so long as the source maintains records during the 5-year tracking period demonstrating that the PC-CMO did not result in a significant net emissions increase. One commenter (IV-D-62) suggested that only changes that cause future-actual emissions to exceed permitted emissions by more than the applicable significance level should be subject to NSR.

Several commenters (IV-D-73, 74, 88, 97, 146, 157) urged EPA to extend the actual-to-future-actual methodology to new sources, replacements, and/or reconstructions. Two commenters (IV-D-97, 157) disagreed with EPA's decision to allow only modifying facilities, rather than constructing facilities, to take advantage of many of the changes in the proposed rule that provide additional flexibility including calculating the baseline based on an actual-to-actual comparison. These commenters believe that new sources should also be given the opportunity to project their future-actual emissions. They recommended that if EPA continues to treat

construction differently than modification, it should clarify in the final rule the difference between the modification and construction of a new unit at an existing source.

Four commenters (IV-D-73, 74, 88, 146) stated that the proposed actual-to-future-actual test should apply to units that qualify as major modifications because of replacement or reconstruction. EPA should clarify that replacement or reconstruction of an emissions unit with a similar unit that does not result in a significant net emissions increase (that is, a replacement-in-kind) is not a major modification and therefore not subject to NSR. Another commenter (IV-D-146) agreed that EPA should extend the use of the actual-to-future-actual comparison to replacement or reconstruction since there is no practical difference between this situation and one in which a unit is merely modified. In both cases an adequate operating history exists and the unit that is reconstructed or replaced has "begun normal operations" to the same extent that a modified unit has.

Two commenters (IV-D-106, 143) stated that the Agency should reiterate that for electric utility sources, the actual-to-future-actual methodology is the proper approach to use for sources that have begun normal operations, and that (apart from the construction of a new unit or the replacement of an existing unit) there is no physical or operational change that will transform an existing unit into a unit that has not begun normal operations.

Response:

In response to the commenters who found our proposed descriptions of the actual-to-future-actual methodology (now called the "actual-to-projected-actual") confusing regarding how a significant net emissions increase is determined, we have made clarifying changes to our regulations. In the 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 to find the provisions in our revised rules. For each applicability option, we have described in our new rules how a major modification is determined in detail. You will find this new applicability "roadmap" in §51.165(a)(2), §51.166(a)(7), and §52.21(a)(2).

We have revised the definition of "major modification" to clarify what has been our policy for over two decades -- that determining whether a significant net emissions increase has occurred is a two-step process. The new definition of major modification basically includes 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 from a combination of one or more emissions units following the physical or operational change; and (2) a significant net emissions increase of that pollutant from the major stationary source over the contemporaneous period.

We understand the commenters' concerns about proposed rule language suggesting that any post-change emissions increase, rather than a significant emissions increase, at a modified

emissions unit would trigger NSR. The final rules make it clear that a modification project is subject to NSR only when the post-change actual emissions increase results in a significant emissions increase from the project and a significant net emissions increase at the source. In addition, the new rules require a source to report its post-change annual emissions rate to the reviewing authority only if the rate represents a significant emissions increase and the rate differs from the projected post-change emissions rate. See, e.g., new § 52.21(a)(2)(ii)(a), and (r)(6)(v), respectively. It should, be noted however, that utilities must report their post-change annual emissions to the reviewing authority even when they do not represent a significant emissions increase. See, e.g., new § 52.21(r)(6)(iv).

Regarding the comments recommending that like-kind replacements be allowed to use the new "actual-to-projected-actual" applicability test, we have decided to change the requirement that replacement units and reconstructed units be evaluated as new emissions using the "actual-to-potential" test. We now believe that such units possess ample track records to provide sufficient reason to believe that a projection of post-change actual emissions can be sufficiently reliable, and an up-front enforceable emissions cap is unnecessary. Instead, under the new rules, replacement and reconstructed units may, like modified existing units, compare their baseline emissions to their projection of post-change actual emissions to determine whether the replacement or reconstruction results in a significant emissions increase. In addition, we plan to reconsider the issue of how to treat like-kind replacement units in an upcoming rulemaking addressing the concept of routine maintenance, repair and replacement.

4.9 Support Other Applicability Options

Comment:

4.9.1 Support PTE-to-PTE Test

Many commenters (IV-D-46, 74, 87, 88, 94, 134, 140, 145, 147, 154, 157, 160, 191; IV-G-4) endorsed the actual-to-future-actual methodology only as an alternative to the potential-to-potential test. Several of these commenters (IV-D-73, 74, 88, 160) preferred a potential-to-potential applicability test, but supported the actual-to-future-actual test with a demand growth exclusion for all source categories as a second option. One commenter would only support an actual test if the "before" and "after" emissions are evaluated over the same representative year of operation. See Chapter 7 for more detailed comments on the 10-year look back proposal. One commenter (IV-D-191) stated that the actual-to-future-actual test is too cumbersome and does not facilitate the goal of NSR simplification. However, the commenter would support the actual-to-future-actual test as a second option to the potential-to-potential test.

One commenter (IV-D-106) supported a potential-to-potential test unless EPA allowed a weighted twelve month average of hours of operation of 50 percent or greater operating capacity as a baseline with the actual-to-future-actual test. The commenter explained that a potential-to-

potential test removes from NSR small changes that do not result in an increase of actual emissions and enables sources to make use of previously permitted capacity without being subject to NSR.

4.9.2 Support an Allowable-to-allowable Test

Two commenters (IV-D-105, 157) supported an allowable-to-allowable test because it is simple, protects air quality, and allows source flexibility. One of these commenters (IV-D-157) interpreted the regulations as supporting an allowable-to-allowable test, citing §52.21(b)(21)(iii), which states that the reviewing authority may presume that the "source-specific allowable emissions for any unit are equivalent to the actual emissions of the unit." One commenter (IV-D-36) preferred an allowable-to-allowable applicability determination, but would support an actual-to-future-actual determination as a second option.

4.9.3 Other Applicability Options

Several commenters (IV-D-67,110, 127, 130, 153) supported either actual-to-actual or potential-to-potential applicability options. Some commenters (IV-D-127, 130, 153) believed sources should have a choice of using either an actual-to-future-actual test or a potential-to-potential test such as CMA Exhibit B. One commenter (IV-D-108) supported the actual-to-future-actual test, but also supported a potential-to-potential methodology in the South Coast (Los Angeles area) and other regions in the country, provided a cap is imposed on all or part of a facility. The cap would be based on peak actual emissions during the previous 10 years. The cap would be supplemented, as appropriate, with full permitted emissions for any units that have previously undergone NSR, and thus fully offset, or with other increases due to collateral or cross-media impacts of excluded projects or to ozone depleting substances (ODS) substitution.

Two commenters (IV-D-46, 140) stated that in the absence of the potential-to-potential test, EPA should provide both the actual-to-potential test and the actual-to-future-actual tests. Exclusive use of the actual-to-future-actual test would result in higher permitting review burdens because a major stationary source would be subject to an applicable requirement for every triggering change, regardless of the change or size of the expected increase. The actual-to-potential test can result in less administrative and permitting burdens for small changes than the actual-to-future-actual test. Under the actual-to-potential test, changes with an uncontrolled or non-capped increase in PTE less than the significance threshold are not subject to a separate applicable requirement for demonstrating major NSR non-applicability.

One commenter (IV-D-157) preferred the actual-to-future-actual approach as a second option if EPA does not adopt an allowable-to-allowable test. The commenter stated that although an actual-to-future-actual approach would not simplify the NSR system nearly as much as an allowable-to-allowable approach, it would reduce some of the over-coverage of the actual-to-potential test. Yet, according to the commenter, as with the allowable-to-allowable

discussion, EPA has failed to set the future-actuals discussion in the legal context and therefore restricted the proposed reforms.

One commenter (IV-D-67) advocated allowing each State to chose any one of the following applicability options: potential-to-potential, allowable to allowable, and actual-to-future-actual that allows capacity utilization increases.

One commenter (IV-G-07) recommended that States should be allowed to retain the actual-to-potential methodology and add the actual-to-future-actual methodology. Sources should have the opportunity to choose either the actual-to-potential or actual-to-future-actual test. Commenter IV-D-153 disagreed and said the States should not be allowed to use the actual-to-potential test as an option. Instead, the options should include the actual-to-future-actual test and a potential-to-potential test.

One commenter (IV-D-154) said EPA should significantly simplify applicability determinations within the major NSR program to more fully satisfy NSR reform. The commenter added that Alabama Power provides that EPA does not have to regulate sources or modifications if trivial or no environmental gains would result. EPA has relied on this decision to support the "de minimis" test. According to the commenter, Alabama Power may also be relied on to more clearly define and limit the types of physical changes or changes in the method of operation that will be subject to major NSR. The commenter further notes that a simple, straightforward process for determining applicability may be more successful in achieving CAA goals for the major NSR programs with less burden on the regulated community and State implementing agencies.

Response:

The potential-to-potential test supported by these commenters is similar in most respects to the CMA Exhibit B methodology that we presented in the 1996 NPRM. We received many comments in response to the 1996 proposal regarding CMA Exhibit B. Although some commenters believed the potential-to-potential test appropriately focuses on the significant emission changes that could produce an adverse environmental impact, several commenters believed that a potential-to-potential test would be environmentally detrimental. These commenters believed that CMA Exhibit B represents a substantial weakening of the PSD program with large increases in actual emissions, which in itself could lead to a significant deterioration of air quality. They also agreed with our concerns regarding the creation of paper credits and other impacts on the broader air quality planning process. One commenter stated that the potential-to-potential test would conflict with SIPs that are based on actual emissions, threaten a State's efforts to make reasonable further progress demonstrations, and interfere with emission credits relied on by SIPs.

We agree with these commenters that a potential-to-potential test for major NSR applicability could lead to unreviewed increases in emissions that would be detrimental to air quality. We also agree with the commenters that the potential-to-potential test could make it difficult to implement the statutory requirements for state-of-the-art controls.

Our own concerns, coupled with the concerns expressed by some commenters, have caused us to reject the use of the Exhibit B regulatory changes for general purposes of determining whether a proposed physical or operational change would result in a major modification. For the reasons stated above, we do not believe that a potential-to-potential approach is acceptable for major NSR applicability as a general matter. However, we agree with the commenters in part--some of the benefits of a potential-to-potential approach are desirable. We believe that in more limited circumstances a potential-to-potential like approach would be acceptable. Therefore, we are promulgating two new applicability provisions that capture the benefits of a potential-to-potential approach but still have the necessary safeguards to ensure environmental protection-- PALs (see chapters 7 and 8) and Clean Units (see chapter 9). We believe that these applicability provisions address the concerns of the commenters supporting a potential-to-potential applicability test.

We also fully considered the comments recommending other applicability tests such as the allowable-to-allowable test. While each of these tests has its merits, we believe that they are inappropriate for the general purpose of determining whether a proposed physical or operational change would result in a major modification. However, the new applicability tests and options that we have included in the final rule provide broad flexibility to allow sources to respond to rapidly changing markets and plan for future investments in pollution control and prevention technologies.

4.10 Demand Growth

Comment:

4.10.1 Support Extending Demand Growth Exclusion

Numerous commenters (IV-D-9, 28, 33, 42, 46, 62, 68, 72, 73, 74, 88, 97, 98, 108, 119, 123, 128, 129, 132, 136, 137, 138, 140, 142, 143, 146, 147, 149, 153, 154, 157, 160, 169) supported extending the use of the demand growth exclusion to all sources.

Many of the commenters (IV-D-62, 74, 88, 142, 143, 149, 153) believed that the currently promulgated regulations already provide a demand growth exclusion for non-utilities. One commenter (IV-D-153) explained that as the preamble to the WEPCO rule makes clear, when projected increased operations are in response to an independent factor such as demand growth, the increased operations cannot be said to result from the change and therefore may be excluded

from the projection of the unit's post-change actual emissions. Such increases, according to the commenter, should not be included in post-change emissions even in the absence of a demand growth exclusion, as they are not the result of the changes under consideration. The commenter suggests that the proposed demand growth exclusion simply makes that principle explicit and eliminates confusion as to how emissions should be calculated. Another commenter (IV-D-143) stated that under current law the causal link requirement underpins the modification rule and provides an implicit demand growth exclusion for non-electric utility sources. The commenter recommends that EPA must, at a minimum, explicitly indicate that it is changing current regulations to eliminate these elements of current law and explain its authority to make such a fundamental change.

One commenter (IV-D-46) stated that if EPA does not provide industry with the same flexibility shown utilities to accommodate demand growth increases that would have occurred absent a modification, the actual-to-future-actual test will provide little more than an actual-to-future-allowable test with a prescribed 5-to-10-year limit on these allowables. According to the commenter, it is critical for industry to have the ability to increase production rates and operating hours to respond to increased market demand.

Several commenters (IV-D-123, 128, 143, 154, 160) stated that emission increases resulting from demand growth must be excluded from the calculation of future-actual emissions for all source categories. This is because any contrary interpretation would violate the causation requirement set forth in both the statutory definition of the term "modification" as well as the regulatory definition of the term "major modification." One commenter (IV-D-123) stated that any proposal that does not allow for growth in the public's use of electricity restricts the current law. According to the commenter, EPA discourages any efforts to reduce costs by stating that any increase in utilization following a change will be attributed to that change. The commenter asserts that EPA appears to be motivated by the notion that all increases in demand will have to be supplied by new plants, and that such new, NSPS plants are preferred over increasing the efficiency of existing sources. According to this commenter, it is by no means clear that increased demand cannot be met by older existing sources that are currently operating well below capacity. Another commenter (IV-D-128) noted that prior to EPA's adoption of the WEPCO rule, the exclusion of emission increases attributable to increased operation in response to demand growth was already directed by the NSR rules. This commenter recommends that EPA affirm that the modification rule provides an implicit demand growth exclusion for non-utility sources by making the demand growth exclusion available to all sources,.

Several commenters (IV-D- 62, 68, 140, 146, 154, 160) stated that the utility industry is not unique in having demand growth that increases emissions that are not related to a PC-CMO. Other industries should not be penalized for product demand growth increases in emissions that would have been allowed under their previous permit limits, and that are not related to the PC-CMO, just because a PC-CMO has occurred. One commenter (IV-D-146) pointed out that, like electric steam generating units, production equipment frequently operates at less than full

capacity for reasons beyond the control of the owners and operators. Projections of market demand in the utility industry are no more reliable than similar information generated for many other sectors of the economy, but they are submitted to and reviewed by other regulatory agencies due to their importance. Moreover, the commenter notes that the source of the projections of demand growth in the utility industry are the utilities themselves, and other industry groups can provide similar information if necessary to support the exclusion contemplated by the proposal. Another commenter (IV-D-62) stated that while all sources may not be subject to the demand growth and utilization scrutiny that utilities face, changes in demand and related production level adjustments are routinely monitored and documented by all industries. The commenter observes that the mining industry is subject to periodic fluctuations in demand and price that dictate changes in production levels entirely independent of facility changes. According to the comment, emissions resulting from these independent factors should not be included in an NSR calculation for other industries any more than they are for utilities.

Two commenters (IV-D-128, 136) stated that EPA provides no rationale for eliminating the utility demand growth exclusion. They assert that it is inappropriate to subject a plant to NSR simply because it fulfills its legitimate, planned and permitted objective, which is to serve growth in demand.

One commenter (IV-D-142) observed that independent factors should not trigger the application of BACT/LAER. It claims that to do otherwise would prohibit facilities that make a minor physical or operational change from ever increasing their emissions in the future in response to unrelated factors. In the commenter's view it would be inappropriate and outside of the scope of the NSR program to consider demand growth or other independent factors in calculating post-change representative actual emissions.

One commenter (IV-D-157) stated that EPA should retain the demand-growth exclusion in the current WEPCO rule since source emissions may go up for many reasons completely unrelated to a physical or operational change. Conversely, PC-CMOs that increase efficiency often do not cause an emissions increase. According to the commenter, an actual-to-future-actual accounting system that does not recognize these factors would not differ meaningfully from an actual-to-potential approach. In the commenter's view, this was the message of the WEPCO case: the court found that the operating history of the entire plant was the proper guide to estimating the future emissions of the reconstructed unit.

One commenter (IV-D-31) recommended that the demand growth exclusion be extended to essential public service facilities, as long as their capacity remains in conformity with population growth in their service areas. Essential public service facilities such as publicly owned treatment works (POTWs), landfills, and water utilities must continuously increase, modify and modernize their facilities/activities at a pace consistent with population growth demands. This commenter asserts that most of the emission increases from these facilities are associated with demand growth, and that demand growth projections for essential public services

in general are generated by the metropolitan planning organization and have many levels of input and approval.

One commenter (IV-D-137) offered qualified support for the extension of the demand growth exclusion, in the absence of a preferred system based on a revised actual-to-potential methodology.

4.10.2 Oppose Extending Demand Growth Exclusion

Several commenters (IV-D-14, 47, 125, 152, 393; IV-G-13) opposed the use of a demand growth exclusion.

One commenter (IV-D-152) stated that the provision would be subject to abuse and might provide an opportunity for creative accounting as sources expand their operations to meet growth in demand. The commenter stated, "What else are sources going to be expanding their operation for if not to meet growth in demand?" Another commenter (IV-D-125) suggested that the demand growth exclusion provides a disincentive for emissions reduction because of the difficulty in enforcement of compliance with the limits of the exclusion. According to the commenter, the reduction of costs due to higher efficiency may lead to higher product demands and thus to increased emissions. The commenter believes that if emission limitations under the exclusion guidelines cannot be punitively enforced, sources will have no incentive to comply.

Another commenter (IV-D-47) stated that the demand growth exclusion provisions of the WEPCO rule would require projections, estimates and post-modification evaluations of increased emissions to determine whether they were a result of increased demand; a costly and time-consuming process has little to do with air quality control. The commenter stated that if the current actual-to-potential methodology is continued, there is no need for a demand growth exclusion. This is because a source that establishes enforceable emission levels as part of the NSR process is not precluded from increasing demand so long as its post-modification emissions rate does not change. According to the commenter, the only reporting necessary under such an approach is the compliance reporting presently in place for sources

One commenter (IV-G-13) stated that the current demand growth exclusion fails to take into account situations where costs are reduced by using waste products such as tires and hazardous waste as fuels. This cost reduction may, in turn, increase demand. According to the commenter, this is another large oversight in light of the many facilities turning to waste fuels as a means to reduce their costs.

One commenter (IV-D-14) suggested that if EPA adopts the actual-to-future-actual test, then the demand growth exclusion should be eliminated for non-utility industries. The commenter asserts that most agencies do not have the specific process engineering background

that companies do, and they are generally unable to evaluate the veracity of the claim that a change affects capacity, nor do they possess any basis to evaluate projections of capacity.

4.10.3 Other Comments on the Demand Growth Exclusion

Two commenters (IV-D-126, 169) requested that if EPA finds the demand growth exclusion provision inappropriate for all other sources, it should at least retain it for electric utilities. They believe that the demand growth exclusion works well for utility units where demand and facility utilization data are typically assessed by an independent regulatory agency (for example, State public utility commissions) and made available to the public. This kind of information may not be readily available for other source categories. They further argue that an electric utility has much less influence over demand growth than an unregulated company in the private sector. Another commenter (IV-G-4) said utilities have an obligation to serve and are expected to maintain adequate capacity to respond to surges in demand and a margin to meet gradual growth in demand. This commenter asserts that the need for such reserve margins equates to greater differential between "actual" and "potential" emissions with the utility industries than typically occurs in most other industries.

Two commenters (IV-D-143, 145) stated that EPA would have to undertake a further round of notice-and-comment rulemaking specifically on this issue before the Agency could eliminate the demand growth exclusion for utilities. One commenter (IV-D-143) stated that if EPA eliminated the demand growth exclusion for utilities without first taking public comment, it would foreclose the commenter's right under §307(d) of the Clean Air Act to review and comment meaningfully.

Two commenters (IV-D-129, 132) stated that the approved options for developing demand growth exclusion levels for chemical and manufacturing plants should include: (1) projecting the growth rate (sales or production) for the entire industry applied as a blanket demand growth exclusion; (2) basing the demand growth exclusion on the projected sales growth rate for the company, plant site, or production unit; and (3) basing the demand growth exclusion on the projected sales growth of the chemical or plastic being produced.

One commenter (IV-D-157) suggested two "decision rules" for States to use in making a broad actual-to-future-actual test workable. First, all changes at a plant that do not significantly affect its overall production cost or product quality should be exempted from NSR. New or modified units without major impact on overall plant costs should be presumed not to cause any increase in overall plant activity levels. Second, even if a change at a source reduces costs or improves quality to a significant degree, regulators should not presume that it causes a later increase in source activity levels. According to the commenter, there is no logic to EPA's blanket presumption that any change at a plant that markedly increases efficiency or product attractiveness must always be evaluated under the actual-to-potential test. The commenter recommends that the actual-to-future-actual test and the demand growth exclusion still be

available for changes that significantly improve efficiency or product quality, as long as the source shows that the change did not cause an emissions increase.

Response:

Under the final rules, sources will be allowed to apply the causation provision as originally contained in the WEPCO amendments. We have concluded that this provision is appropriate and consistent with both the statute and implementing regulations, which suggest that there should be a causal link between the proposed change and any post-change increase in emissions, that is, "...any physical change or change in the method of operation that would result in a significant net emissions increase..." [emphasis added]. See, for example, existing §52.21(b)(2)(i). While in a very few cases it may be difficult to determine whether a particular emissions increase is related to a physical or operational change that is made to an emissions unit, it would be inappropriate to completely eliminate the availability of the exclusion to everyone. Consequently, the final rules follow the 1996 NPRM in that when a projected increase in equipment utilization is in response to a factor such as growth in market demand, the emissions increases from the unit's post-change actual emissions may be subtracted if it can be shown that the unit could have achieved the necessary level of utilization during the consecutive 24-month period that was selected to establish the baseline actual emissions, and the increase is unrelated to the physical or operational change(s) made to the unit. See for example, new §52.21(b)(41)(ii)(c).

On the other hand, demand growth can only be excluded to the extent that the physical or operational change is not related to the emissions increase. Thus, even if the operation of an emissions unit to meet a particular level of demand could have been accomplished during the representative baseline period, but it can be shown that the increase is related to the changes made to the unit, then the emissions increases resulting from the increased operation must be attributed to the modification project, and cannot be subtracted from the projection of post-change actual emissions.

4.11 Utilization Increases

Comment:

Several commenters (IV-D-28, 46, 62, 67, 72, 114, 119, 121, 123, 136, 143, 145, 157, 172) argued that emission increases due to increased utilization should not be considered major modifications.

Some of these commenters (IV-D-121, 136, 143) insisted that EPA policy and rules had always allowed increases in capacity utilization without triggering a modification. The commenters cited the rules at 40 CFR 52.21(b)(2)(iii)(f) and Congressional intent as allowing increases in hours of operation or in production rate without triggering a modification.

Expanding NSR jurisdiction to utilization increases would penalize American industry for periodic underutilization of existing equipment, the commenters maintained. Two commenters (IV-D-121, 143) opposed what they termed as EPA's proposal to subject increases in a source's production rate or hours to major NSR because it codifies an interpretation of the exclusion that is contrary to the meaning and the regulatory history of the rule. They argue that the provision of the CAA that codifies the NSPS definition of modification for purposes of the NSR program precludes EPA from making this change, or any other change that would significantly limit this NSPS-based exclusion. They claim that the seminal statutory provision, section 111(a)(4), 42 U.S.C. 7401(a)(4), provides no warrant for such a test. In their view, EPA should rely in the case of all kinds of units solely on a good faith, reasonable, pre-construction estimate of future-actuals. One commenter (IV-D-143) stated that the claim by EPA of historical consistency in applying the hours of operation exclusion in the manner it now advances is incorrect. The commenter claims that, prior to the WEPCO/Port Washington determinations, 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 non-routine physical changes at the facility.

Several commenters (IV-D-42, 108, 140, 160) urged EPA to clarify that emission increases due to increased utilization would be excluded from NSR applicability if the source was able to accommodate the capacity increase before the physical change or change in method of operation. However, emission increases due to a debottlenecking project that extends a source's capacity and PTE would not be excluded from NSR applicability. Another commenter (IV-D-160) raised concerns that EPA's interpretation of the demand growth exclusion is excessively narrow. In the commenter's view, EPA should clarify that the only circumstance in a which a product demand increase would not be excluded from NSR would be a case where a corresponding PC-CMO increases the source's PTE, thus enabling the source to accommodate demand it was previously unable to accommodate.

One commenter (IV-D-123) stated that not allowing utilization increases will limit new capacity to new units instead of promoting increased efficiency at existing units. One commenter (IV-D-72) stated that it is not sensible to include increases in utilization unrelated to the facility change in the post-modification emissions estimate. According to the commenter, even in cases where future demand growth may be more difficult to predict than in the electric utility industry, it would be absurd to count emissions that are related to an increase in demand for tires or automotive belts.

One commenter (IV-D-157) stated that there is no logic to EPA's blanket presumption that any change at a plant that markedly increases efficiency or product attractiveness must always be evaluated under the actual-to-potential test. The commenter advocates that the actual-to-future-actual test should still be available for changes that significantly improve efficiency or product quality, as long as the source shows that the change did not cause an emissions increase.

One commenter (IV-D-28) noted that demand growth is one of several possible independent factors that may result in a source increasing emissions quite independently of the permitted modification the exclusion projects. The commenter suggests that the fundamental basis of the attacks on the exclusion is obstructionism proceeding from an anti-growth attitude - not environmental protection. According to the comment, the exclusion recognizes, and does not exclude, emission increases due to increased efficiencies at a unit, and otherwise recognizes that only increases in emissions attributable to the modification itself should in fact be attributed to the modification.

One commenter (IV-D-67) explained that plants are often built with excess capacity that may not be used in the future, depending on the demand for products. The commenter has many plants that have much higher potential emissions than actual emissions. The commenter believes that these plants should be allowed to increase emissions without triggering NSR because increases are associated with increased demand rather than any physical or operational change. The commenter believes that this scenario is very similar to the utilities' circumstance, and recommends that for plants with excess capacity, a version of the actual-to-future-actual test is the best measurement of when NSR should be triggered because it allows consideration of capacity utilization.

One commenter (IV-D-114) stated that the way modifications are currently evaluated for potential emissions is subjective primarily because of the utilization multiplier that is used in conjunction with an hourly emission rate. The utilization factor is dependent upon numerous conditions. According to the commenter, while EPA considers unit reliability and efficiency to be primary in determining utilization rate, in the natural gas transportation industry, demand is almost exclusively the determining variable. The commenter therefore maintained that utilization increases are generally due to demand growth. The commenter preferred that a potential-to-potential accounting methodology be used to avoid subjective decisions regarding whether emission increases were attributable to utilization increases or demand growth.

One commenter (IV-D-125) stated that explicit guidelines for emission increases due to utilization increases need to be adopted and enforced. This commenter believes that making determinations on a case-by-case basis is dangerously vague and could potentially be detrimental to the goals of the NSR.

Response:

We agree with the commenters that an increase in utilization should not automatically trigger the major NSR requirements. As explained in previous comment responses, the Clean Air Act only applies the major NSR requirements to emission increases that are the result of a physical or operational change. Thus, we do not believe that the major NSR requirements should apply to a utilization increase unless it is related to the modification. Under the final rules, sources may exclude emissions related to an increase in utilization if they were able to

accommodate the increase in utilization during the 24-month period that was selected to establish baseline actual emissions and the increased utilization is not related to the change. We believe this provision addresses the commenters' concerns regarding guidelines for emission increases due to utilization increases.

In addition, we believe the calculation of the pre-change baseline emissions in the final rule (the average annual emissions rate, in tons per year, using any consecutive 24-months during the 10-year period immediately preceding the change, adjusted to reflect current emission factors) allows sources to preserve utilization levels that were actually achieved during a normal business cycle. In most circumstances, sources will be able to preserve the utilization levels achieved during the 24-month period that they selected, unless a restriction, such as a limit on the hours of operation, has since been imposed. We believe that the 10-year look back period prevents the perceived confiscation of underused capacity at sources who have had low utilization rates for an extended period. This 10-year look back period is more likely to afford a source a baseline actual emissions calculation that best reflects representative source operating conditions.

4.12 5-year Tracking - General Comments

Comment:

Some commenters (IV-D-14, 39, 72, 79, 97, 120, 137, 170) generally supported EPA's tracking proposal. One commenter (IV-D-14) said 5-year tracking should be required so that there is a factual finding as to whether emissions increased.

Other commenters (IV-D-33, 46, 53, 94, 97, 123, 129, 132, 138, 147, 149, 153, 154, 191) opposed the proposed tracking requirements. Several commenters (IV-D-123, 153, 154) viewed the 5-year tracking requirement as burdensome. Two commenters (IV-D-123, 154) stated that the proposed tracking system would place an enormous reporting burden on industry without additional environmental benefit. One commenter (IV-D-153) characterized the recordkeeping proposal as inconsistent with the goal of streamlining the NSR process. According to this commenter, the focus of the reporting should be whether a significant net emissions increase has occurred, not whether the projected actual emissions level proved entirely accurate.

Response:

We agree with those commenters who recommend that sources should be required to track emissions for a period of time following a modification to assure that the modification does not result in a major modification. Accordingly, the new rules require a source to monitor and record its emissions when there is "a reasonable possibility that a project that is not part of a major modification may result in a significant emissions increase." We have limited the scope of the recordkeeping requirement so that they will not be interpreted so stringently as to require

recordkeeping for any physical or operational change regardless of its potential effect on emissions. Thus, we have retained our proposed requirement for sources to maintain operating data and to document their annual emissions information (along with other information associated with the calculations for determining a significant emissions increase) for a period of 5 years following the change. We expanded this requirement to 10 years for changes that result in an increase in an emissions unit's capacity or its potential to emit a regulated NSR pollutant.

We disagree that these recordkeeping requirements would be overly burdensome. Many existing SIP programs (for example, minor NSR programs) already require such emissions tracking, so this requirement is generally not considered to be an additional burden on industry. The NSR program remains a pre-construction review program. To ensure a level playing field between sources that may approach the pre-construction projection of post-change emissions with different degrees of conscientiousness, monitoring the quality of pre-construction projections is important.

4.13 5-year Tracking - Adequacy of Tracking; Whether Tracking is Working as Intended and Whether It Should be Changed In Any Way

Comment:

4.13.1 Tracking does work

Some commenters (IV-D-28, 120) believed that emissions could be tracked and that the requirement to track emissions provided an adequate safeguard for using the actual-to-actual methodology. One commenter (IV-D-28) believed the 5-year tracking period and potential for extension to 10 years offered sufficient protection to allow the actual-to-future-actual methodology. One commenter (IV-D-120) concluded that a 5-year tracking system is an adequate safeguard since new equipment is installed to track various operating parameters (hours of operation, fuel use, etc.).

Several commenters (IV-D-62, 112, 121) maintained that non-utilities would be able to track emissions as well as utilities can. Two of the commenters (IV-D-112, 121) stated that because all major sources will soon be required to conduct CAM-level monitoring, recordkeeping, and reporting under title V of the CAA, verifying future-actual emissions should be a task that sources are equipped to handle. One commenter (IV-D-62) stated that EPA had no basis for its concern that non-utility industries will fail to adequately monitor emissions because they are not subject to the same level of monitoring required of utilities. The commenter asserted that, under title V and other CAA programs, major sources will be upgrading their monitoring and reporting capabilities, and that these sources will be able to provide the necessary documentation of their compliance with a post-change emissions prediction. Another commenter

(IV-D-121) asserted that the emission parameters of industrial boilers can be monitored as well as the emission parameters of utility boilers.

4.13.2 Tracking does not work and how to improve it

One commenter (IV-D-105) stated that it would be difficult to track past-actual emissions and future-actual emissions. The commenter posed the following questions:

- Must the source always use the same past actual emissions?
- Can the two-year period for determining past actual emissions change depending on what the future-actual emissions become?
- Would the system be based on a 12-month rolling average, which compares past to future-actual emissions?
- What about the possibility of retroactive PSD review which could occur if a physical change subsequently resulted in higher-than-expected emissions, thereby tripping the significant emission rate criteria in a future year?

Several commenters (IV-D-46, 72, 94, 97, 129, 132, 138, 154) suggested various changes or improvements to the tracking requirements in the promulgated rule. One commenter (IV-D-72) stated that some tracking of future-actual emissions is necessary to ensure that a facility does not surpass these projected emissions, but EPA should not require elaborate and time-consuming recordkeeping. The commenter asserted that much of the information should already be available, because, for example, companies often will need to track actual emissions under their title V permits. The commenter believes that the recordkeeping and reporting associated with this tracking exercise undoubtedly will be expensive, and an extension of the period from 5 to 10 years cannot be justified. Moreover, according to the commenter, a reviewing authority will not be able to predict a facility's future production levels. The commenter recommends that future-actual emissions should be determined during the 5-year period by a fairly simple tracking of unit or line utilization, as is done in the WEPCO rule.

Several commenters (IV-D-46, 94, 138) supported keeping tracking records on site, but not reporting emissions as a way to reduce the burden. Two commenters (IV-D-46, 138) stated that there should be no requirement to report the emissions unless there is a problem. The commenter noted that since this recordkeeping requirement would be another applicable requirement for which the owner/operator must report deviations and certify compliance under title V, the added process of submitting these records to EPA or the reviewing authority is unnecessarily duplicative for both the regulated community and the implementing agencies. Another commenter (IV-D-97) stated that EPA should rely on records kept for other purposes to determine compliance.

Three commenters (IV-D-129, 132, 154) stated that because the CAM rule and the title V program will also mandate monitoring and recordkeeping requirements that can be used to make

the 5-year demonstration, the installation of expensive continuous emissions monitors is not justified for demonstrating non-applicability. Two commenters (IV-D-129, 132) stated that stack testing after a modification should suffice as an option for demonstrating compliance during the 5-year period following the application of the actual-to-future-actual test to a physical or operational change. Records of hours of operation, fuel rates, production rates, etc. can then be used with the new emissions factor to demonstrate that NSR is not triggered during the 5-year period.

One commenter (IV-D-67) proposed that recordkeeping should confirm the source's projection of the future-actual calculation rather than confirming that there is no increase over the baseline actuals, and that EPA's discussions of this section confirm this recordkeeping concern. [The commenter provided specific language describing future-actual emissions.] Commenter IV-D-154 agreed that industry should maintain data for 5 years to demonstrate that a significant net increase in actual emissions did not occur, which should be sufficient to meet EPA's needs.

One commenter (IV-G-7) proposed that if a source uses the proposed actual-to-future-actual methodology and the emission tracking shows a increase over the baseline level, the source should be allowed a maximum of 180 days to develop and submit a plan of action to ensure that the source can adequately protect future emissions.

One commenter (IV-D-125) suggested that the 5-year reporting/tracking period should be combined with an enforcement mechanism and strict ramifications for non-compliance. This commenter believes that a tracking period with no enforcement mechanism creates the potential for mischief and limits emission reduction opportunities. The commenter did not support the actual-to-future-actual methodology for non-utility sources.

Two commenters (IV-D-129, 132) stated that EPA should only require 5-year tracking of post-modification emission rates if the source fails the existing actual-to-potential test. That is the existing applicability test should be retained as an option. The commenter recommends that EPA not require additional monitoring in situations where it would not have been required under the current regulations. The commenter did not explain the criteria for judging whether a source had failed the actual-to-potential test.

Response:

We believe that the tracking requirements in the final rules alleviate many of the concerns presented by these commenters, particularly those concerns dealing with the procedures to be used, the elaborateness of required records, minimizing reporting, and enforcement mechanisms. When, according to the owner or operator's best calculations, the physical or operational changes the major stationary source is planning to make at one or more existing emissions units at a major stationary source will not constitute a major modification, but there is a reasonable possibility the project may result in a significant emissions increase, the source must document

its findings concerning the resulting emissions increase, including a description of the project, identification of emissions units that will be changed, baseline emissions calculations and any adjustments made, and projections of post-change actual emissions. Moreover, if the projection shows that the physical or operational change will result in a significant emissions increase, then additional calculations associated with any contemporaneous increases and decreases used for netting purposes must also be documented and maintained.

In addition, when there is a reasonable possibility that a project may result in a significant emissions increase, the final rules require a source to maintain records of post-change emissions from the project. The source must maintain this information and compare the project's post-change annual emissions, in tons per year, it to its baseline actual emissions for at least 5 years. If the project will increase the design capacity or potential to emit of any emissions unit, the source must maintain and compare this data for that emissions unit to its baseline actual emissions for 10 years. The information that must be maintained may include continuous emissions monitoring data, operational levels, fuel usage data, source test results, or any other readily available information of sufficient accuracy for the purpose of determining an emissions unit's post-change emissions.

As mentioned in previous comment responses, sources must report to reviewing authority any increase in a post-change emissions rate when the rate exceeds the baseline actual emissions by a significant amount, and is inconsistent with the initial projections. See, for example, new §52.21(r)(6)(iii).

Finally, in addition to the reporting requirements discussed above, sources are also obligated to ensure that the necessary emissions information is available for examination upon request by the reviewing authority. A source must also be prepared to make this information available to the general public upon their request pursuant to existing State procedures meeting the requirements of §70.4(b)(3)(viii) of the title V permit program, which requires that the reviewing authority has legal authority to "make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to section 503(e) of the Act, except for information entitled to confidential treatment pursuant to section 114(c) of the Act."

4.14 5-year Tracking - Length of Tracking Period

Comment:

Several commenters (IV-D-14, 79, 120, 170) specifically supported the 5-year emissions tracking requirement. Two commenters (IV-D-79, 170) stated that since the relevant data would tend to be collected and reported anyway in the context of title V compliance, this approach would dovetail well with other CAA regulations.

One commenter (IV-D-191) supported a 2-year tracking period for the actual-to-future-actual test, but objected to a longer tracking period because it asserts that the relationship between a modification and emission increases more than 2 years after the modification is too remote and tenuous to justify tracking. One commenter (IV-D-97) preferred no tracking but stated that if EPA requires tracking, a 3-year period should be sufficient to indicate that the source was correct or incorrect in its projection.

Two commenters (IV-D-72, 160) stated that the final rule should not extend the proposed 5-year tracking period to a longer time frame (for example, 10 years). The commenters (IV-D-72, 160) noted that extending the tracking period would be unfair to sources because it would impose an unreasonable presumption that emission increases occurring as much as 10 years after a particular PC-CMO are attributable to that change. According to the commenter, the relationship between a PC-CMO and emission increases more than 5 years later is too tenuous to justify this presumption. Finally, the commenter asserts that the proposed requirement that sources submit records during the 5-year tracking period would increase the reporting burden on industry without providing any corresponding environmental benefit. The commenter suggests that it would be sufficient to require industry to maintain data for 5 years to demonstrate that a significant net increase in actual emissions did not occur.

One commenter (IV-D-138) advocated a 5-year information tracking period after a determination that emissions after a particular source change will not increase significantly. During this tracking period the source owner should be required to maintain records and estimates of actual emissions on-site, and immediately report to the reviewing agency should the increase in actual emissions resulting from the source change exceed the applicable NSR significance level.

Two commenters (IV-D-33, 149) suggested that the more logical endpoint for tracking emissions would be at the expiration of the part 70 or 71 permit term when the required monitoring provisions, if any, would be renewed. [The commenter recommended specific language revisions to the proposed §51.166(b)(21).]

Response:

Generally, a source's projection of post-change actual emissions must be tracked against a facility's emissions for 5 years following completion of the changes, unless there is not a reasonable possibility that the project may result in a significant emissions increase. We will presume that any increases that occur after 5 years are not associated with the physical or operational changes. If, however, one of the effects of the physical or operational change(s) is to increase a unit's design capacity or potential to emit, such that a significant emissions increase could result, but the source does not believe that the new capacity or potential to emit will be fully utilized (so as not to cause a significant net emissions increase), the projection of post-change actual emissions must represent the maximum actual annual emissions rate that will

result from the unit in any one of the 10 calendar years after the change. This extended period allows for the possibility that the increased capacity that was added via the physical or operational changes could be fully utilized during a normal business cycle.

The final rules require sources to keep a record of post-change emissions projection and to track post-change emissions and retain those records on site when there is a reasonable possibility that the project may result in a significant emissions increase. These records will enable the source and the reviewing authority to ensure that the physical or operational changes that were made do not actually trigger a major modification. If the source determines, during the 5 or 10 years of required recordkeeping, that the changes made to an emissions unit result in annual emissions that are higher than the initial projections, and such emissions increase or the emissions projection results in a significant emissions increase, the source should submit a report to the reviewing authority to explain the discrepancy and could be subject to major NSR.

We believe that these added recordkeeping and reporting measures will improve the overall compliance rate and provide the information necessary for reviewing authorities to assure that such changes are made consistent with the Clean Air Act requirements. Altogether, we believe these 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. The amendments will also require greater accountability on a source's part to retain information from which the reviewing authority can determine the nature of any changes that are made at an emissions unit, as well as the actual emissions increases that are associated with those changes.

Chapter 5 - Comments on NOA NSR Applicability Test

5.1 Overview

This section includes general comments on amending the current applicability test for modifications, general comments on the statutory and regulatory bases for applicability, and specific comments on components of the proposed NSR Applicability test. These general comments were made in response to our July 24, 1998 NOA [63 FR 39857].

5.2 General Comments on Amending the Current Applicability Test for Modifications

Comment:

5.2.1 General Support for Amending the Current Applicability Test for Modifications

There were no comments generally supporting the provisions concerning the applicability test for modifications.

5.2.2 General Opposition for Amending the Current Applicability for Modifications

Eleven industry commenters (IV-D-264, 265, 270, 289, 292, 297, 298, 306, 307, 313, 314), twelve utility industry commenters (IV-D-257, 276, 280, 281, 282, 286, 295, 300, 316, 322, 323, and IV-G-22), two regulatory agency commenters (IV-D-211, 317), and one environmental commenter (IV-D-291) opposed the provisions concerning the applicability test for modifications for the various reasons indicated below.

5.2.2.1 Proposal is too restrictive

Ten industry commenters (IV-D-264, 265, 270, 289, 292, 297, 298, 306, 313, 314) and nine utility industry commenters (IV-D-257, 280, 281, 282, 286, 295, 300, 323, and IV-G-22) considered the proposed approach to be more restrictive than the current rules. These commenters considered the proposal to be generally unreasonable and cumbersome.

One utility industry commenter (IV-D-286) maintained that the proposed provisions would complicate the existing NSR program and add another level of enforceable restrictions. Another utility industry commenter (IV-D-300) claimed that the proposed applicability provisions would make it difficult to make the changes required to keep facilities operating safely and efficiently.

Two industry commenters (IV-D-292, 297) considered the current NSR rules restrictive and believed that the NOA did not ameliorate the situation. One of these commenters (IV-D-297) further explained that the current rules impose limits, based on actual emissions, that are more restrictive than those in the operating permits. The commenter (IV-D-297) recommended that NSR applicability be based on the permit limit. One industry commenter (IV-D-297) stated that the EPA should not be expanding NSR applicability by "retrenching on the WEPCO rule." The commenter also believed that the costs of complying with the NSR program would be completely out of proportion to the minimal environmental benefit gained. The other industry commenter (IV-D-292) believed that the current NSR applicability test encouraged the continued operation of obsolete, higher-emitting equipment because it was too difficult to obtain the required modification to replace it. The commenter felt the sheer complexity of the new applicability test would defeat its usefulness.

5.2.2.2 Proposal is not environmentally protective enough

One regulatory agency (IV-D-211) and one environmental group (IV-D-291) commented that the NOA approach was not as protective of the environment as the current rules.

5.2.2.3 Proposal is ambiguous

One utility industry commenter (IV-D-282) felt the applicability provisions in the current rules were frequently misapplied or misinterpreted. The commenter argued that the proposed revisions were even more complex than the current rules, and that sources would not have fair notice of what was required of them. The commenter stated that the EPA should not allow the "perpetuation or adoption of ambiguous standards."

5.2.2.4 Proposal is contrary to the CAA and regulations

One industry commenter (IV-D-307), seven utility industry commenters (IV-D-257, 280, 281, 282, 295, 323, and IV-G-22) and one environmental commenter (IV-D-291) maintained that the concepts in the NOA contravened the CAA and existing regulations, and were also contradictory to stated EPA policy. The utility industry commenters maintained that the proposed applicability approach conflicted with the CAA definition of modification. One industry commenter (IV-D-307) argued that the proposed changes would create "substantial risk of unlawful, retroactive enforcement actions."

5.2.2.5 Proposal discourages efficiency

One utility industry commenter (IV-D-286) felt the applicability test provisions would discourage efficiency by increasing the number of changes that would have to be reviewed. Another utility industry commenter (IV-D-316) believed that the proposed approach would discourage energy efficiency, as it would make it more difficult to replace units with newer, more efficient units that were less polluting. Existing units, on the other hand, consumed more power

and thereby increase greenhouse gas emissions. Three utility industry commenters (IV-D-271, 300, 316) further charged that such an approach was contrary to the EPA's policy of energy efficiency in electrical production as a means to reduce greenhouse gas emissions. Two utility industry commenters (IV-D-271, 300) also suggested that the methodology was incongruent with the EPA's policy concerning the use of renewable energy sources to reduce NO_x and CO emissions. One industry commenter (IV-D-313) and two utility industry commenters (IV-D-276, 322) believed the NSR applicability tests encouraged sources to continue to operate less efficient, higher polluting units instead of replacing them with new units. One utility commenter (IV-G-23) claimed that EPA's proposal is a strong disincentive for any industrial source to voluntarily undertake environmentally beneficial modifications.

5.2.2.6 Proposal is not necessary given other CAA requirements

One utility industry commenter (IV-D-286) believed that the EPA's proposal was unnecessary given the comprehensive requirements under other sections of the CAA such as SIPs, NSPS, RACT, MACT, the acid rain rules, and the recent NO_x SIP call.

5.2.2.7 Proposal impairs competitiveness

One utility industry commenter (IV-D-286) believed the applicability test provisions would paralyze American industry by requiring lengthy waiting periods prior to approval of new projects. The commenter felt that these provisions would also impair competitiveness by making it more difficult to enhance the reliability and efficiency of existing equipment. One industry commenter (IV-D-313) noted that the proposal can affect competitiveness, resulting in shutdown of businesses or relocation to other countries, as well as loss of reductions in air pollutants.

5.2.2.8 Proposal is burdensome

Two utility industry commenters (IV-D-286, 300) and one regulatory agency (IV-D-317) claimed that the proposal would increase the administrative burden for the reviewing authority and lead to permitting delays. One utility industry commenter (IV-D-286) further claimed that the proposal was contrary to the stated Clinton Administration goal of tailoring regulations to impose the least burden on society. One utility industry commenter (IV-D-276) stated that EPA had intended to simplify the NSR program, however, the opposite has occurred.

Response:

While we do not necessarily agree with all of the reasons that these commenters provided for opposing the applicability options presented in the NOA, we have decided that the proposed changes, which included an "actual-to-enforceable-future-actual" applicability test (now promulgated as the "actual-to-projected-actual" test) without a demand growth exclusion, were not appropriate for the final rulemaking. We do believe that the imposition of an enforceable limit on the projected post-change emissions level would have resulted in unnecessary burdens,

because the regulations already provide that a modified source which results in a significant net emissions increase must undergo NSR.

The definition of "modification" in both the statute and regulations provides that there be a causal relationship between the physical or operational change undertaken by the source and the emissions increase. To better focus on those emissions increases that result from a change, we are extending the demand growth concept to all modified existing emissions units using the "actual-to-projected-actual" applicability test.

We continue to believe that it is reasonable and appropriate to adopt the new method for establishing a modified unit's baseline actual emissions. Our complete set of responses to comments on the new baseline approach is contained in chapters 2 and 3 of this volume, and chapter 2 of volume 2.

Finally, we do not believe that the actual-to-projected-actual test would be less protective of the environment than the existing rules because modifications that result in a significant net emissions increase would continue to be subjected to NSR, including a source impact analysis. In addition, the procedure for determining emissions levels for carrying out the ambient impact analysis would continue to be based on the existing procedures which use the existing definition of "actual emissions."

Comment:

5.2.3 Suggested Alternative Approaches

5.2.3.1 Use a PTE-to-PTE test

Thirteen industry commenters (IV-D-219, 260, 267, 289, 293, 297, 298, 302, 304, 307, 310, 313, 314) preferred that the EPA adopt a PTE-to-PTE test for determining applicability of modifications in lieu of an actual-to-future-actual test, or at a minimum provide a PTE-to-PTE test as an option. These commenters did not specifically identify the CMA Exhibit B as the preferred applicability test. The commenters believed that a potential-to-potential test would simplify and streamline the NSR program, eliminate the need to track past actual emissions, and improve compliance and enforcement. Several industry commenters (IV-D-260, 297, 298, 304, 313) advocated the PTE approach because it would capture modifications that significantly increased emissions and avoid capturing increased utilization in the NSR applicability net. One industry commenter (IV-D-307) preferred the potential-to-potential test, but would accept a past-actual-to-future-actual test as a second choice. Three industry commenters (IV-D-260, 307, 313) advocated the PTE test because it is simple for sources and reviewing agencies, and ensures that the NSR program applies to large increases in actual emissions. One industry commenter (IV-D-297) also preferred the PTE approach because compliance would be based on the permit limit. One industry commenter (IV-D-313) also challenged EPA's claim that the court agreed with EPA's policies in the *Puerto Rican Cement* case. The commenter (IV-D-313) wrote that

"the judge did not say that potential-to-potential (test) was not allowed, rather that the source in this case had not availed itself of that argument in a timely manner."

Seven utility industry commenters (IV-D-257, 268, 280, 281, 295, 323, and IV-G-22) identified a "hybrid" potential-to-potential approach, under which NSR would be triggered only where a given activity at a source would increase the source's rate of emissions (on a kg/hr basis) above the rate the source was capable of accommodating during a representative baseline period. These commenters further explained that the calculation of the unit's emissions for netting or offsets would be based either on the unit's actual or allowable emissions, whichever was lower. The commenters considered this approach to be the practical application of the current WEPCO rule.

Two industry commenters (IV-D-289, 313) strongly advocated basing applicability on a potential-to-potential test. These commenters maintained that the CAA would permit a potential-to-potential test, but that the EPA had rejected such a test in developing the initial NSR rules because it would allow actual emissions to rise above the NAAQS and the PSD increments. The commenters quoted the preamble to the 1980 NSR rule (45 FR 52676) regarding the creation of "paper offsets" to illustrate this point. The commenters further explained that State and local agencies had made huge leaps in air quality management since the 1970's, that most sources were now subject to preconstruction permits limiting emissions, and that requirements pursuant to the 1990 CAAA also limited emissions. According to the commenter, the combination of these factors means that the SIP and permit system can handle the "paper offset" problem. Therefore, the commenters assert that the EPA's previous concerns regarding the air quality impacts of a potential-to-potential test are no longer valid, clearing the way to "lift the categorical ban against the PTE-to-PTE system." The commenters urged the EPA to provide adequate guidance to reviewing authorities so that the SIPs and permits would be able to support a PTE-to-PTE system. The commenters maintained that adopting the potential approach would result in an ideal regulatory regime and facilitate the use of improved combustion technologies that would be beneficial to the environment.

Two industry commenters (IV-D-260, 313) advocated the potential-to-potential test because it would not prohibit changes that improve productivity or energy efficiency and reduce the ratio of waste to product. The commenters (IV-D-260, 313) argued that the potential-to-potential test avoided applicability determinations for changes that would improve economic performance or efficiency. Furthermore, they indicated that it was highly unlikely that such changes would substantially increase actual emissions; and, therefore, the potential-to-potential test would ultimately benefit the environment. One industry commenter (IV-D-313) claimed that improved efficiency would provide for both emission reductions and economic development; however, the current proposal thwarts installation of more efficient equipment. The commenter (IV-D-313) provided several examples of projects that could lower emissions and that an industry could pursue if they did not trigger NSR, such as product replacement, raw material changes, process changes, and replacement of older equipment with higher efficiency equipment.

Two industry commenters (IV-D-260, 313) also maintained that pollution prevention and pollution control projects, which sometimes result in increased capacity, can trigger the actual-to-potential test. However, they assert that this problem would not occur under a potential-to-potential test. The commenters (IV-D-260, 313) explained why a potential-to-potential test would also improve compliance and enforcement. According to the commenters, under the current regulatory regime, sources set limits well above actual emission levels to avoid penalties associated with exceedances, and the sources also maintain unnecessarily high actual emissions to raise the baseline for NSR calculations. Thus, the commenter asserts that permit levels do not serve as a reference for operational limits. They believe that the potential-to-potential test would remove this problem.

Another industry commenter (IV-D-219) preferred the potential-to-potential test because potential emissions were fixed, unlike actual emissions, which were difficult to estimate. The commenter also believed that the potential-to-potential test would eliminate the need for costly and time consuming minor permit modifications.

5.2.3.2 Use an allowable emissions test

Six industry commenters (IV-D-260, 265, 292, 304, 310, 313) recommended that the EPA adopt an allowable-to-allowable test in lieu of the actual-to-future-actual test. Such a test would base applicability on enforceable emission limitations that the regulatory agencies had previously approved. One industry commenter (IV-D-265) endorsed this approach because it would improve the environment, draw only changes that increased PTE into NSR applicability, encourage sources to increase production without increasing PTE, and be consistent with market-based systems. Two industry commenters (IV-D-265, 310) also maintained that the present regulations at 40 CFR 52.21(b)(21)(iii) provide for such an approach, stating that reviewing authorities may "presume that source-specific allowable emissions for any unit were equivalent to the actual emissions of the unit." Another industry commenter (IV-D-220) suggested including a permitted-to-future-permitted test provided that both existing and future equipment be controlled.

Three industry commenters (IV-D-260, 267, 313) preferred a potential-to-potential test, but would accept an allowable-to-allowable test as a second option. These commenters suggested that emission limits pursuant to other CAA requirements (for example, RACT, NSPS, MACT, SIPs, and others) be used as the pre-change emission level against which post change emissions were compared. In their view, if the change were sufficient to trigger NSR, the source could still accept an emission cap instead of going through NSR review. The commenters cited the approach for grandfathered sources without allowable emission levels as one of many details that would need to be worked out.

One industry commenter (IV-D-310) stated that the EPA had proposed the allowable approach for Clean Units and Clean Facilities, and therefore the EPA should use the allowable approach for all changes to be consistent.

Two industry commenters (IV-D-297, 314) suggested that an allowable-to-allowable approach would work if the EPA accepted potential emissions as allowable emissions for sources not subject to legal emission limits.

5.2.3.3 Adopt CMA Exhibit B

Five industry commenters (IV-D-264, 270, 292, 309, 313) and seven utility industry commenters (IV-D-257, 268, 280, 281, 295, 323, and IV-G-22) specifically identified the CMA Exhibit B as the preferred applicability test. The six utility industry commenters also offered two other options for applicability determinations, which are described in sections 5.2.3.1 and 5.2.3.4.

Three industry commenters (IV-D-264, 270, 313) requested that the EPA provide the potential-to-potential approach in the final rule as an option. This methodology would have the advantage of greatly simplifying the NSR process. The commenters acknowledged that the Exhibit B approach might need to be modified by creating offsets and emission credits, with the offsets linked to actual emissions.

One industry commenter (IV-D-304) stated that it was questionable whether the EPA was meeting its obligations for notice and comment under the CMA settlement agreement, considering EPA's failure to address the potential-to-potential approach in the NOA.

5.2.3.4 Use the NSPS definition of modification

Four industry commenters (IV-D-264, 270, 284, 313) and twelve utility industry commenters (IV-D-257, 268, 276, 279, 280, 281, 282, 286, 295, 322, 323, and IV-G-22) suggested that the EPA adopt the definition of modification that was used in the NSPS developed pursuant to section 111 of the CAA. These commenters argued that the CAA gives the EPA statutory authority to use this definition of modification in the NSR program. Such an approach would simplify the NSR program while improving compliance with the regulations, the commenters argued.

One utility industry commenter (IV-D-282) cited 42 U.S.C. 7475(a), 7479(2)(C), 7411(a)(4), 7501(4), and 7502(c)(5) as indicative of Congressional intent that the EPA use the same definition of modification for the NSPS and NSR programs. The commenter believed that the use of the NSPS definition of modification would not restrict capacity utilization, would create incentives for using pollution prevention and control projects, and would be consistent with current modeling guidance and SIP demonstration requirements.

One industry commenter (IV-D-284) and one utility commenter (IV-D-286) endorsed the NSPS modification test because it did not confiscate underutilized production capacity from complying sources. The industry commenter (IV-D-284) maintained that using the NSPS definition of modification would erase the problems in the current rules by making applicability determinations without regard to fluctuations in annual utilization rates.

One utility industry commenter (IV-D-276) claimed that the proposed approach conflicts with the CAA's definition of "modification," and stated that under Parts C and D of the CAA, Congress directed the term modification be deemed as it was under section 111. Seven utility industry commenters (IV-D-257, 268, 280, 281, 295, 323, and IV-G-22) offered the section 111 definition of modification as one of three options that would be consistent with the CAA and workable for affected sources. The commenters did not state a preference among the three options. The commenters believed that a methodology based on the definition of modification in sections 111, 169(2)(C), and 171(4) of the CAA would focus on an existing source's true capacity to emit a pollutant -- the hourly emission rate during some representative baseline period. Instead of focusing on changes in the number of hours a facility was operated, which can be influenced by innumerable factors, the CAA section 111 definition of modification would focus on true increases in pollution as measured by the hourly emissions rate.

One utility industry commenter (IV-D-286) asserted that reviewing agencies also supported the use of the NSPS methodology for determining whether a modification had occurred.

Three industry commenters (IV-D-264, 270, 313) considered the NSPS definition of modification to be a potential-to-potential approach, and recommended that the EPA adopt such an approach.

5.2.3.5 Other alternative applicability approaches

Three utility industry commenters (IV-D-281, 282, 286) suggested that the EPA eliminate NSR applicability for pollutants and sources subject to an approved emissions trading program. The commenters specifically requested that the EPA waive applicability for SO_2 for utility or opt-in sources subject to the Acid Rain rules, as well as for NO_x for utility, large industrial, and opt-in sources in States with an approved NO_x trading rule.

STAPPA/ALAPCO (IV-D-259) recommended that applicability determinations be made using an actual-to-potential test. They believed that such a test would be more protective of air quality because it makes NSR applicability consistent with SIP assumptions and avoids double counting emission reductions.

One commenter (IV-D-313) presented an alternative approach for the EPA to use to determine whether NSR should apply to a source. Under the approach, the changes at a source would be evaluated cumulatively against the source's maximum or permitted emission level (such as a PAL). This emission level would not be reduced except under certain conditions such as: (1) an area becomes nonattainment and the SIP requires emission reductions; (2) the source becomes subject to another Federal, State, or local regulation that reduces emissions of many types; (3) the source voluntarily reduces emissions by installation of emission control devices; or (4) the source reduces emissions or reduces its permitted levels to provide offsets, etc., to another source. The emission level would be reviewed every 5 years to coincide with the title V

operating permit review. The emission level would be included in the title V permit and any future changes in source configuration would be evaluated against this emission level.

Two utility industry commenters (IV-D-276, 322) recommended that the NSR program should focus on new sources and new units at existing major sources. Regarding modifications at existing units, the commenters suggested adopting the NSPS approach to determining a major modification at an existing unit (any increase in the hourly emission rate at maximum capacity). Under this approach, an increase in the hourly emission rate must be demonstrated, along with an increase in annual emissions over applicable thresholds. The commenters objected to the proposed approach, which would trigger a modification based solely on a projected increase in hours of operation (without an increase in hourly emission rate).

Response:

We disagree that an "allowable-to-allowable" test should be used to determine an emissions increase at existing emissions units that have not undergone major NSR in recent years. We believe that these types of units, having neither applied state-of-the-art control technology nor undergone an air quality impact analysis, are the very sources that the Act intends to be required to undergo major NSR when a physical or operational change results in a significant net emissions increase at the unit. For those emissions units which have undergone major NSR in the past 10 years, new requirements for units having a Clean Unit status are being adopted as part of the rulemaking. These requirements provide a new applicability test based on a determination that a project at a Clean Unit will not cause the need for a change in the emission limitations or work practices in the permit for the Clean Unit that were adopted in conjunction with the BACT or LAER requirement, as applicable. For units that have not previously undergone major NSR, we believe the best approach is to use the "actual-to-projected-actual" test to determine the emissions increase that will result from the physical or operational change to the unit. Thereafter, the Clean Unit test would apply as long as the unit retains a Clean Unit status.

We disagree with the commenters who recommended using the NSPS definition of "modification" under the NSR rules. We have addressed this issue previously and pointed out the differences in the objectives of the two programs to explain why they rely on two different approaches to the concept of "modification." In keeping with our concern for increases in annual emissions, we believe that "actual-to-projected-actual" test based on a tons per year emissions increase is the best option for determining an emissions increase for modifications of existing units that have not undergone major NSR in the past 10 years.

We disagree that our new approach conflicts with the Act's definition of "modification." The Act is stipulates that the emissions increase must result from the physical or operational change, but it is silent on how to determine the emissions increase that will result from a physical or operational change. We have exercised our discretionary authority to establish an appropriate approach.

The potential-to-potential test supported by these commenters is similar in many respects to the CMA Exhibit B methodology that we presented in the 1996 NPRM. We received many comments in response to the 1996 proposal regarding CMA Exhibit B. Although some commenters believed the potential-to-potential test appropriately focuses on the significant emission changes that could produce an adverse environmental impact, several commenters believed that a potential-to-potential test would be environmentally detrimental. These commenters believed that CMA Exhibit B and other potential-to-potential tests represent a substantial weakening of the PSD program with large increases in actual emissions, which in itself could lead to a significant deterioration of air quality. They also agreed with our concerns regarding the creation of paper credits and other impacts on the broader air quality planning process.

We agree with these commenters that a potential-to-potential test for major NSR applicability could lead to unreviewed increases in emissions that would be detrimental to air quality. We also agree with the commenters that the potential-to-potential test could make it difficult to implement the statutory requirements for state-of-the-art controls.

Our own concerns, coupled with the concerns expressed by some commenters, have caused us to reject the use of the Exhibit B regulatory changes for general purposes of determining whether a proposed physical or operational change would result in a major modification. For the reasons stated above, we do not believe that a potential-to-potential approach is acceptable for major NSR applicability as a general matter. However, we agree with the commenters in part--some of the benefits of a potential-to-potential approach are desirable. We believe that in more limited circumstances a potential-to-potential like approach would be acceptable. Therefore, we are promulgating two new applicability provisions that capture the benefits of a potential-to-potential approach but still have the necessary safeguards to ensure environmental protection–PALs (see chapters 7 and 8) and Clean Units (see chapter 9). We believe that these two applicability provisions adequately address the concerns of the commenters supporting a potential-to-potential applicability test. More detail on PALs and Clean Units is provided in separate chapters of this document. For replacement units, however, which some commenters felt should be allowed to use a "potential-to-potential" test, we have decided not to require the use of the "actual-to-potential" applicability test as it applies to new emissions units, but to allow such units to be treated in the same manner as existing emissions units undergoing a physical or operational change. Consequently, under the new rules, replacement units will be allowed to use the "actual-to-projected-actual" test to determine whether such units' post-change actual emissions will result in a significant emissions increase.

Concerning the comments suggesting that we should use the NSPS definition of modification, we note that the CAA itself is silent on whether increases in emissions for purposes of determining whether a physical or operational change constitutes a modification must be measured in actual emissions, potential emissions, or some other currency. Therefore, we have the discretion to determine the appropriate basis for modifications. In the NSPS program, we determine whether there has been an "increase in any air pollutant emitted" by the source by

comparing the hourly potential emissions under maximum capacity immediately before the change to emissions at maximum capacity after the change. EPA and the courts have recognized, however, that the NSR programs and the NSPS programs have different objectives, and thus, we have utilized different emissions tests in the NSR programs. We have now established a special applicability test for Clean Units (see chapter 9 of this volume and chapter 5 of volume 2) and an "actual-to-projected-actual" applicability test for any modified existing emissions units (including EUSGU).

Under the two-part test set forth in Chevron, U.S.A. v. NRDC, 467 U.S. 837 (1984), EPA's interpretation of an ambiguous phrase in a statute that it is responsible for administering should be followed as long as it is "a permissible construction of the statute." Id. at 843-4. Our discretion is not unbounded, however, and we may not adopt an interpretation that "completely nullifies ... provisions meant to limit [our] discretion" or that "is at odds with ... [the statute's] structure and manifest purpose," Whitman v. American Trucking Association, Inc. et al., 531 U.S. 457, 485-6 (2001). We believe our establishment of an "actual-to-projected-actual" test for existing emissions units is based on a reasonable interpretation of the phrase "which increases...or results in the emission of any air pollutant...." which is not contrary to the manifest purpose of the NSR statutes.

We also fully considered the comments recommending other applicability tests such as the allowable-to-allowable test, or retaining the "actual-to-potential" test . While each of these tests has its merits, we believe that they are inappropriate for the general purpose of determining whether a proposed physical or operational change would result in a major modification. However, applicability tests and options that we have included in the final rule (Clean Units, actuals PALs, and " actual-to-projected-actual" for modified existing emissions) provide broad flexibility to allow sources to respond to rapidly changing markets and plan for future investments in pollution control and prevention technologies.

Comment:

5.2.4 Other General Comments on NSR Applicability Test

One regulatory agency commenter (IV-D-305) recommended that any changes to the applicability provisions must be accompanied by provisions ensuring protection of AQRVs in Class I areas.

One regulatory agency commenter (IV-D-216) agreed with the EPA's statement that the actual-to-future-actual modification test should only apply to existing sources.

One utility industry commenter (IV-D-261), who belonged to a group that generally supported EPA's applicability proposal, emphasized that the support was based on an assumption that the EPA would retain the PCP exclusion. The commenter argued that the PCP exclusion and other applicability provisions were closely related.

Another utility industry commenter (IV-D-282) believed that the universe of NSR applicability determinations had reached "overwhelming proportions." This commenter gave an example in which EPA Region VII decided that changes to be made to a steam turbine at the Sunflower Electric Power Company in Kansas were subject to NSR review. The commenter asserted that Region VII incorrectly required a PSD permit application for a unit that did not emit any regulated pollutants and was not subject to CAA requirements.

Another utility industry commenter (IV-D-300) indicated that the NOA would have a "chilling effect" on future voluntary efforts by the utility industry.

Two industry commenters (IV-D-265, 292) strongly urged the EPA to retain a Clean Unit exclusion and offered extensive rationale for this view. One commenter (IV-D-265) urged that the Clean Unit test also applied to units that were netted out.

Two industry commenters (IV-D-260, 313) provided four examples of the adverse effects of the current NSR policy as an Appendix to their comments concerning the NOA.

Response:

Many of the comments in this section have been addressed in the responses to comments in Sections 5.2.2 and 5.2.3, above. In general, as we discussed in those sections, we believe our new rules meet the statutory requirements, ensure environmental protection, and provide flexibility for sources. The responses below address those comments not already specifically discussed.

We agree with the commenter that protection of AQRV is important, as is protection of the NAAQS and PSD increments. While we chose not to adopt the "actual-to-enforceable-future-actual" test that the commenter opposed, the new applicability test for existing units undergoing physical or operational changes does not change the way in which source impact analyses are to be completed once it is determined that a major modification (significant net emissions increase at the source) has occurred. If the physical or operational change does not result in a major modification, we believe that most of the projects will undergo minor NSR, which should include a determination that the source will not cause or contribute to a NAAQS violation. Where a source would cause an emissions increase that is less than significant, we believe it is unlikely that its emissions would cause a problem with the PSD increments or AQRVs. Nevertheless, when such problems are identified, States should take the appropriate course of remedy through their approved implementation plan. (The commenter may be referring to the new procedures for protection of Class I areas, as proposed in the 1996 proposal. We have not made an ultimate decision not to promulgate such procedures; however, we did decide not to promulgate such procedures in this particular rulemaking.).

Consistent with the request by some of the commenters, we have adopted the Clean Unit test and the PCP exclusion in the new rules. These topics are discussed in more detail in chapter 9 for Clean Units, and chapter 10 for PCPs.

5.3 Comments on the Statutory and Regulatory Bases for Applicability

Comment:

5.3.1 Physical Change or Change in the Method of Operation

Two industry commenters (IV-D-265, 292) and two utility commenters (IV-D-269, 271) felt that the EPA was extending the circumstances under which the provisions for a physical change or change in the method of operation would occur. These commenters interpreted the EPA's statements in the NOA as extending the modification provisions to any project that improves reliability or efficiency, reduces costs, or involves replacements that reflect improved design. The commenters were concerned that the overall effect of EPA's proposal would be to draw previously unregulated changes into NSR applicability. One industry commenter (IV-D-265) stated that everything a company did to improve its market position could conceivably be classified as a physical change or change in the method of operation, including changing company leadership or installing a new computer system. The utility industry commenters (IV-D-269, 271) contended that the policy was contrary to the EPA's goal of reducing emissions overall. The commenters (IV-D-269, 271) stated that utilities should be encouraged to make beneficial improvements that decrease emissions per unit of energy produced, not penalized for making improvements.

Four industry commenters (IV-D-263, 284, 308, 311) and ten utility industry commenters (IV-D-252, 257, 276, 280, 282, 295, 316, 322, 323, and IV-G-22) opposed what they termed EPA's "activist policy" to expand NSR applicability to increases in utilization. These commenters insisted that EPA policy and rules had always allowed increases in capacity utilization without triggering a modification. Two industry commenters (IV-D-263, 308) and one utility industry commenter (IV-D-286) cited the rules at 40 CFR 52.21(b)(2)(iii)(f) and Congressional intent as allowing increases in hours of operation or in production rate without triggering a modification. Expanding NSR jurisdiction to utilization increases would penalize American industry for periodic underutilization of existing equipment, the commenters maintained.

Two industry commenters (IV-D-285, 311) stated that facilities had always been allowed to operate up to their design capacities in the absence of other restrictions. One of the commenters (IV-D-282) argued that capacity utilization increases were common sense exemptions just like routine maintenance and repair. The commenter asserted that restricting increases in capacity utilization would be inconsistent with Congressional intent and judicial precedent; it would also strangle American industry and exacerbate enforcement.

One industry commenter (IV-D-265) viewed the applicability provisions in general as tantamount to suggesting that any change would be subject to actual-to-potential accounting. The commenter gave an example of a company putting a statue of its founder over its gate. Such a change would not be routine, so would it trigger NSR?

A regulatory agency commenter (IV-D-216) recommended that all changes be considered physical or operational changes, in which case the applicability determination would be made on the basis of whether a significant net emissions increase occurred. Emission offsets would be required for any significant net emissions increase. The commenter (IV-D-216) also believed that increases in capacity or PTE should be considered modifications.

5.3.2 Increase in Emissions

Four industry commenters (IV-D-264, 270, 292, 313) stated that emission increases that were not the result of the modification currently were not and should not be subject to NSR.

One industry commenter (IV-D-292) believed that increases in emissions not associated with the change itself should not be subject to NSR review. This commenter gave an example of a recovery furnace in which criteria pollutant emissions were not increased when a wet bottom precipitator was replaced with a more efficient dry bottom precipitator. However, NSR applicability would be triggered by the modification, and emissions of pollutants not influenced by the change would also be reviewed. This approach would discourage the source from incorporating the environmentally beneficial, pollution preventing change.

A regulatory agency (IV-D-262) commented that changes in the operating schedule that lead to increased emissions should not be considered modifications.

Response:

We agree with these commenters that only those emission increases related to a physical change or a change in the method of operation should be considered increases under the definition of "modification." Both the statute and implementing regulations suggest that there should be a causal link between the proposed change and any post-change increase in emissions, that is, "...any physical change or change in the method of operation that would result in a significant net emissions increase..." [emphasis added]. See, for example, existing §52.21(b)(2)(i).

Similarly, we agree with the commenters who argued that an emissions increases resulting from increased utilization alone should not be subjected to review as major modifications unless the increase results from a physical or operational change or is the result of an action that is otherwise prohibited by a condition of the currently-enforceable permit. Accordingly, we have decided not to adopt the proposed applicability approach described in the NOA. Instead, under the final rules, when projecting post-change actual emissions, a source

may exclude emissions resulting from an increase in utilization (e.g., demand growth) if the emissions unit was able to accommodate the increase in utilization during the 24-month period it selected to establish the baseline actual emissions and the increased utilization of existing equipment is not related to the change.

In response to the commenters who suggested we have extended the reach of the NSR program to any change at a facility, we note that, in order to trigger NSR, the modification must affect one or more emissions units. The types of modifications suggested by the commenters generally would not affect emissions units at the facility and, therefore, would not be subject to review under the final rules.

Comment:

5.3.3 Routine Maintenance, Repair, and Replacement

Six industry commenters (IV-D-265, 270, 277, 289, 298, 313) and twelve utility industry commenters (IV-D-257, 268, 269, 271, 275, 280, 281, 295, 322, 323, 328, and IV-G-22) stated that the current NSR rules excluded routine maintenance, repair, and replacement from the modification provisions. These commenters believed that the changes that the EPA was proposing would require applicability determinations in nearly all circumstances, which would prevent the use of the routine maintenance and repair exclusion. They assert that the proposed changes would also be contrary to previous regulations and the CAA. The commenters cited numerous examples of routine maintenance, repair, and replacement, and stated that such activities were necessary to operate facilities safely and properly. They also stated that requiring applicability determinations regarding these types of changes would be extremely burdensome and lead to inevitable delays.

Six utility industry commenters (IV-D-257, 280, 281, 295, 323, and IV-G-22) explained that industry-wide statistics show that coal handling systems were repaired or replaced at least 5,000 times each year and that $100 million was spent annually on valves and valve parts. These commenters also disparaged a recent applicability determination by EPA's Region VII in which the replacement of deteriorated turbine blades did not constitute "routine" replacement. In their view, new and improved equipment is frequently the only type available, and should fall in the category of routine repair and replacement.

One utility industry commenter (IV-D-261) stated that their group's support of changes to the applicability provisions was contingent upon a "fair and reasonable" definition of what was routine in the electric generating industry. This commenter offered to assist the EPA in defining routine maintenance and repair for the electric utility generating industry. Another utility industry commenter (IV-D-282) cited the November 19, 1991 EPA policy memo from John Rasnic as the correct interpretation that repair and replacement of existing equipment did not have to trigger NSR.

Three industry commenters (IV-D-265, 270, 277) and one utility industry commenter (IV-D-269) indicated that the EPA has never defined "routine repair and replacement." One industry commenter (IV-D-265) also questioned whether a replacement pump, which was more efficient because it was newer, would trigger NSR.

Two industry commenters (IV-D-221, 250) requested clarification as to whether changes in power in turbines and turbocharged engines occurring as a result of changes in the weather and routine turbine parts replacement were exempt from the NSR process. The commenters explained that routine but infrequent maintenance activities like turbine parts replacement were part of manufacturer's maintenance. The commenters explained that maintenance such as changing rotor compressor blades may result in the replacement of an entire gas generator assembly, for the sake of convenience and to save money. One commenter (IV-D-250) referred to the "Standards Support and Environmental Impact Statement Volume I: Proposed Standards of Performance for Stationary Gas Turbines" which states that "substantial portions of turbines may be replaced as a matter of routine maintenance during normal overhauls," and that replacement of parts like stator vanes, bleed valves, compressor rotor blades, air intake snouts, nozzle box, etc. was a normal part of routine turbine maintenance.

One utility industry commenter (IV-D-328) explained that turbine blades need to be replaced every 5 to 10 years due to the corrosive effect of superheated steam. The commenter further noted that recent improvements in blade design have increased the efficiency of the turbine blades without increasing the emissions. The commenter believed that such changes should be considered routine and exempt from major NSR.

STAPPA/ALAPCO (IV-D-259) believed that like-kind replacements for maintenance and repair should not be considered new equipment subject to modification provisions. The commenter further indicated that it was critical to distinguish between new equipment being added at a facility and modifications to existing equipment.

One environmental group (IV-D-303) maintained that the EPA should narrow the categorical exclusions for routine maintenance, repair, and replacement, as the current provisions can be interpreted so broadly as to allow grandfathered sources to continue to escape NSR applicability.

Response:

We disagree with the commenters who claimed that our proposed changes would have prevented the use of the routine maintenance, repair and replacement exclusion. The proposal was not intended to address that particular issue. Nevertheless, we did not select the option presented in the NOA for the final rulemaking. In addition, we are planning to propose amendments which address the issue of routine maintenance, repair, and replacement in a forthcoming notice of proposed rulemaking. Commenters will be given an opportunity to discuss the merits of our proposal when the notice is formally published in the Federal Register.

Comment:

5.3.4 "Begun Normal Operations"

Thirteen industry commenters (IV-D-264, 265, 270, 277, 285, 289, 292, 293, 307, 310, 312, 313, 319) and twelve utility industry commenters (IV-D-257, 268, 271, 279, 280, 281, 282, 295, 300, 312, 323, and IV-G-22) objected to EPA's statement in the NOA that no existing source that had been subject to a modification could be said to have already "begun normal operations." These commenters maintained that the law and existing regulations already provided for an actual-to-actual test for modifications in non-utility sources, at least for like-kind replacements. Some of the commenters interpreted the WEPCO language more broadly, suggesting that the WEPCO court decision did not limit the application of the actual-to-future-actual methodology to like-kind replacements or to utilities. The commenters indicated that the EPA had mischaracterized the current NSR rules to suggest that a unit that had undergone any non-routine physical or operational change was and always had been deemed to have "not begun normal operations," thus making it subject to the PTE test.

One utility industry commenter (IV-D-279) extended this argument with the interpretation of the Puerto Rican Cement court case made by the commenter's organization. [Puerto Rican Cement Co. v. EPA, 889 F.2d 292 (1st Cir. 1989)]. The commenter maintained that, unlike EPA's interpretation, "Puerto Rican Cement is in harmony with the WEPCO holding that those nonroutine physical changes that do not so alter the character of the unit that the unit can be considered to have not 'begun normal operations' must not trigger the actual-to-potential methodology for calculating the net emissions increase."

One industry commenter (IV-D-307) maintained that the EPA could not use the proposal interpretation concerning the use of PTE for existing units, if adopted, to "impose retroactive liability for reading the provision literally over the past 18 years."

Three industry commenters (IV-D-264, 270, 313) believed that many State reviewing authorities did not interpret the current applicability provisions to require that existing units (for example, those that had already begun normal operations) must use the PTE methodology. The commenters (IV-D-264, 270, 313) believed that the validity of the applicability provisions in the current regulations had never been affirmed in court, and that it was unlikely that the regulations would stand up in court if repromulgated as proposed in the NOA.

Four industry commenters (IV-D-264, 270, 293, 313) also believed that the EPA had acknowledged the difficulty of using a begun normal operations test in the WEPCO preamble when the EPA stated that "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." [57 FR 32317]

Response:

We disagree with the commenters who believe that the court in WEPCO rejected our interpretation of the phrase "begun normal operations" for all sources. We have set forth our legal rationale for the existing regulations in various preambles and policy memoranda. The purpose of our proposed rules was not to seek alteration of these interpretations, but to request comment on how our approach for determining emissions increases might be improved. Therefore, we consider comments addressing the phrase "begun normal operations" to be outside the scope of this rulemaking.

5.4 Specific Comments on Components of NSR Applicability Test

Comment:

5.4.1 Support for EPA's Proposal on Actual-to-enforceable-future-actual Test

Ten industry commenters (IV-D-208, 210, 254, 263, 270, 299, 308, 311, 315, 321), one utility industry commenter (IV-D-261), and one regulatory agency commenter (IV-D-216) generally supported an actual-to-future-actual test for all source categories, although they did not necessarily support the EPA's specific proposal for the actual-to-enforceable-future-actual test.

One regulatory agency commenter (IV-D-216) supported the EPA's proposal if all changes were considered physical or operational changes and any source with a significant net emissions increase was required to certify offsetting emissions. This commenter further stated that any source not obtaining offsets prior to the applicability test would later be required to obtain three times as many offsets.

One utility industry commenter (IV-D-261) supported the actual-to-actual test, arguing that the courts recognized that the PTE methodology was based on an absolutely worst case scenario, even when more realistic predictions were available.

5.4.2 Oppose Actual-to-future-enforceable-actual Test

Thirty industry commenters (IV-D-219, 221, 254, 260, 263, 264, 265, 266, 267, 270, 272, 283, 284, 285, 289, 292, 293, 298, 301, 302, 304, 306, 307, 308, 310, 311, 312, 313, 319, 324), twenty utility industry commenters (IV-D-252, 257, 261, 267, 271, 275, 276, 278, 279, 280, 281, 282, 294, 295, 300, 312, 318, 322, 323, and IV-G-22), five regulatory agency commenters (IV-D-211, 246, 255, 287, 305), STAPPA/ALAPCO (IV-D-259) and two environmental commenters (IV-D-291, 303) opposed the EPA's proposed actual-to-enforceable-future-actual test for the various reasons indicated below.

5.4.2.1 Oppose because contrary to the CAA and WEPCO

Four industry commenters (IV-D-265, 279, 285, 293) and seven utility industry commenters (IV-D-268, 271, 275, 281, 282, 294, 300) maintained that the EPA's proposal was contrary to the CAA. Four industry commenters (IV-D-267, 270, 272, 274) and seven utility industry commenters (IV-D-252, 269, 271, 275, 276, 318, 322) argued that the proposal was contrary to the WEPCO rule. Four utility industry commenters (IV-D-268, 271, 275, 281) maintained that requiring sources to obtain applicability determinations every time they undertook any physical or operational change at the source was a "radical change to existing law."

5.4.2.2 Oppose because burdensome to sources and permitters

Seven industry commenters (IV-D-274, 283, 284, 301, 304, 306, 307), eight utility industry commenters (IV-D-261, 271, 275, 278, 281, 282, 294, 318), two regulatory agency commenters (IV-D-255, 287) and STAPPA/ALAPCO (IV-D-259) believed that the actual-to-enforceable-future-actual test provisions would be burdensome. One industry commenter (IV-D-307) argued that the addition of different applicability methods for different types of changes (that is, modifications and netting) would add complexity and burden to the program.

One utility industry commenter (IV-D-261) believed that the proposed approach would adversely affect the ability to make reasonable and customary changes. Another utility industry commenter (IV-D-281) stated that the EPA's proposed methodology would require applicability determinations before making any type of change, which was infeasible.

One utility industry commenter (IV-D-261) and one regulatory agency commenter (IV-D-287) believed that extending the future-actual test would impose significant administrative burdens on reviewing agencies.

5.4.2.3 Oppose because not environmentally protective enough

One regulatory agency commenter (IV-D-211) and one environmental commenter (IV-D-303) believed the proposal would lead to detrimental effects on air quality.

5.4.2.4 Oppose using actual-to-future-actual test for any source categories

One regulatory agency (IV-D-287), STAPPA/ALAPCO (IV-D-259) and two environmental groups (IV-D-291, 393) opposed allowing any facility to use an actual-to-future-actual test for determining whether a modification had occurred. STAPPA/ALAPCO (IV-D-259) believed that utility industry deregulation would mean that adequate emission projection and tracking data was no longer available, and that this information

was not currently available for other industries. Therefore, regulators and the public would not have a "high level of confidence that their data are sufficient to accurately assess NSR applicability."

5.4.2.5 Retain actual-to-future-actual for utilities and do not extend

Four regulatory agency commenters (IV-D-211, 246, 255, 305) recommended retaining the actual-to-future-actual test for utilities, but not extending its applicability to other industries.

5.4.2.6 Retain actual-to-future-actual test for utilities and extend

Twenty industry commenters (IV-D-221, 250, 254, 263, 264, 266, 267, 270, 273, 274, 285, 289, 298, 302, 304, 306, 307, 308, 311, 313) and five utility industry commenters (IV-D-252, 269, 294, 312, 318) recommended that some version of the actual-to-future-actual test should be extended to all source categories. However, all of these commenters opposed eliminating demand growth and adding an enforceable limit.

Twelve industry commenters (IV-D-263, 264, 266, 270, 285, 298, 304, 306, 307, 308, 311, 313) and two utility industry commenters (IV-D-294, 312) recommended retaining the current applicability test as included in the WEPCO rule, but extending it to all industries. However, two industry commenters (IV-D-298,307) identified the WEPCO rule as a second choice to a PTE-to-PTE applicability test. Two industry commenters (IV-D-298, 304) interpreted the WEPCO court case and current regulations at 40 CFR 52.21(b)(21)(iv) to already allow any non-utility unit that had begun normal operations to use the actual-to-actual methodology. Six industry commenters (IV-D-254, 264, 270, 285, 289, 313) preferred that the EPA retain the actual-to-future-actual test as proposed for all source categories in the July 23, 1996 NSR Reform package (61 FR 38250).

Three industry commenters (IV-D-266, 298, 302) preferred that the EPA add recordkeeping and notification requirements rather than eliminating the actual-to-future-actual methodology. One of these commenters (IV-D-266) further suggested that the information be publicly available. One industry commenter (IV-D-254) suggested that the source owner should be required to maintain records and estimates of actual emissions on-site and immediately report to the reviewing agency should the increase in actual emissions resulting from the change ever exceed the applicable NSR significance level. The commenter maintained, however, that on-site recordkeeping was sufficient and that automatic submission of emissions data would be burdensome.

One utility industry commenter (IV-D-252) recommended that the WEPCO rule be amended to identify a protocol for post-change verification of future actual emission estimates. There would also be penalties for not complying with the protocol. In this manner, all sources would be able to use the actual-to-future-actual methodology.

5.4.2.7 Other reasons to oppose

Eight industry commenters (IV-D-265, 285, 289, 301, 302, 307, 312, 313), four utility industry commenters (IV-D-271, 282, 300, 316) and one regulatory agency (IV-D-255) opposed the actual-to-enforceable-future-actual test for various reasons.

One utility industry commenter (IV-D-316) was concerned that the proposed applicability approach would negate the alternative fuel use exemption currently found in the PSD rules. This commenter thought that the temporary emission limit would prohibit plant owners from purchasing a lower cost coal or switching to a different coal mine, changes that would not be reviewed under the current rules. Another utility industry commenter believed the proposal would disrupt State and local agency minor NSR programs.

Another utility industry commenter (IV-D-271) contended that the proposal was in direct opposition to the efforts of electric utilities to maximize the efficiency of generating units and subsequently reduce CO_2 and other green house gas emissions. The commenter was concerned that the revocation of the WEPCO rule would derail future efforts to reduce carbon dioxide emissions.

One industry commenter (IV-D-307) argued that the actual-to-enforceable-future-actual methodology should also apply to new units when their operation was limited physically or operationally by the existing equipment. In such cases, the commenter believed, the future emissions could be estimated.

Two industry commenters (IV-D-289, 313) viewed the proposed provisions as the EPA's attempt to "create civil liability (for example, penalties) if a company underestimates the relevant emissions in an applicability determination, even if it did everything possible to make an accurate estimate." The commenters objected to the interpretation that emission estimates must be correct, not just reasonable.

One regulatory agency (IV-D-255) opposed extending the actual-to-future-actual test to non-utilities because the proposal did not require verification of emissions or consequences for exceeding the projected emission level.

Two industry commenters (IV-D-285, 312) felt the proposal was unclear regarding how future actual emissions would be projected.

5.4.2.8 Oppose because proposal is restrictive

Nine industry commenters (IV-D-265, 274, 284, 285, 292, 298, 310, 312, 324) and six utility industry commenters (IV-D-271, 275, 281, 282, 294, 318) felt that the proposed applicability test would be more restrictive than the current rules. One industry commenter (IV-D-265) believed that the proposed methodology would result in tighter emission limits that

would constrain production. A utility industry commenter (IV-D-294) stated that the proposal would penalize utilities that were not currently operating at full capacity by forcing them to accept permit limitations for any nonroutine changes.

Another industry commenter (IV-D-265) believed that the methodology would be especially problematic for plants that had experienced a significant period of below-capacity operation. These plants would not be able to avoid NSR without sacrificing production capacity, as any limit would be based on their unrealistically low past actual emissions.

Another industry commenter (IV-D-324) was concerned that EPA's proposal would unnecessarily restrict capacity increases, thereby discouraging efficiency improvements.

One industry commenter (IV-D-301) claimed that the proposal would sweep too many modifications into the NSR program.

5.4.2.9 Oppose because proposal is the same as actual-to-potential test

Six industry commenters (IV-D-265, 292, 293, 298, 304, 319) and twelve utility industry commenters (IV-D-257, 271, 276, 279, 280, 281, 294, 295, 300, 322, 323, and IV-G-22) opposed the proposed applicability test, claiming that it was only another version of the current actual-to-potential test. These commenters maintained that the actual-to-enforceable-future-actual test was essentially the same as assuming a synthetic minor permit to limit post-change emissions below the major source threshold amounts, with the only difference being the length of the emission limit (that is, 10 years versus permanent). According to these commenters, the proposed methodology and the current rules each allow the same two choices--undergo NSR or limit emissions to past actual levels.

One industry commenter (IV-D-292) asserted that the current actual-to-potential methodology restricted sources from using permitted capacity, and that the proposed approach exacerbated the problem. Many companies intentionally had emission limits that were higher than actually anticipated to establish a safety buffer between permitted levels and actual emissions, as well as to cover small emission increases due to equipment degradation over time. This buffer allowed for variation in normal source operations and helped assure compliance with the permitted limits. The commenter maintained that many companies routinely operated at levels below the permitted limits.

The commenter (IV-D-292) gave an example of a company with permitted VOC emissions of 500 tpy, but average actual emissions for the past 5 years of 300 tpy. The current NSR rules would prohibit the source from increasing emissions to levels more than 340 tpy without a full NSR review. If the source then wanted to make a change, it would have to either accept an emission limit that was 52 percent less than the current limit or risk months of permit negotiations and additional costly control requirements. Such a scenario would even prevent the

installation of pollution prevention technology. The commenter argued that the NSR proposal did not offer any relief from these problems.

5.4.2.10 Oppose because sources can already take an enforceable limit

Five industry commenters (IV-D-219, 254, 283, 284, 310), one utility industry commenter (IV-D-282), and one regulatory agency (IV-D-305) maintained that the proposed applicability test did not improve the NSR program because a source can already take an enforceable limit to avoid regulation. Thus, the EPA's proposed approach would complicate the existing program while failing to provide any relief from administrative burdens. One of the industry commenters (IV-D-284) argued that the temporary limit was no different than a synthetic minor limit, except that the representative baseline emission level was artificially diminished.

Response:

We agree with the commenters who argued that the "actual-to-enforceable-future-actual" test proposed in the NOA would have been unnecessarily restrictive and burdensome due to its creation of a temporary emissions cap and the elimination of the demand growth exclusion. In addition, as mentioned above in the responses following section 5.3.2, we have concluded that it is appropriate to extend the demand growth exclusion to all existing emissions units and the emissions cap placed on units under the "actual-to-enforceable-future-actual" approach would have likely prohibited such increases from occurring. The final rulemaking does not include this test, but instead adopts the "actual-to-projected-actual" test for modifications to existing emissions units . We disagree, however, with those commenters who felt that either test would have adverse environmental effects. Under either approach, we indicated that the requirements for an ambient impact analysis would follow the same procedures as contained in the current rules. That is, emissions levels would continue to be determined in accordance with the existing definition of "actual emissions," which was to be retained for all NSR purposes other than determining whether physical or operational change at an existing emissions unit (other than an electric utility steam generating unit) would result in a significant emissions increase. The requirement for an ambient impact analysis would continue to be triggered by an increase that results in a significant net emissions increase, i.e., a major modification. The new approach better ensures that a project will not be considered a major modification where there will not be a significant emissions increase resulting from the modification project at the source. Accordingly, the new approach can be summarized as follows:

- *A source will determine the pre-change (baseline) actual emissions by calculating an average annual emissions rate, in tons per year, using any consecutive 24-months during the 10-year period immediately preceding the change. This rate may need to be adjusted to reflect current emission factors.*

- *A source will project post-change actual emissions rates, in tons per year, to reflect the increase in actual emissions resulting from the proposed change, that is, excluding increases that could have legally been accomplished during the baseline period, and that are not related to the change. The projected actual emissions are not required to be enforceable permit limits.*

- *When there is a reasonable possibility that the project may result in a significant emissions increase (even though the projection of post-change emissions shows no significant increase), the source must maintain sufficient emissions information for at least 5 years following a physical or operational change to demonstrate that projected actual emissions do not represent a significant emissions increase from the emissions unit(s) modified, or affected by the modification. If during those years of recordkeeping the source determines that its post-change annual emissions rate exceeds the baseline actual emissions by a significant amount and is inconsistent with the original projection of post-change emissions, then the source must submit a report to the reviewing authority.*

We are eliminating the existing applicability test for projecting post-change emissions at existing EUSGUs and allowing them to use the new "actual-to-projected-actual" test now applicable to changes at all existing emissions units, including replacement and reconstructed units. In addition, EUSGUs must submit a notice to the reviewing authority prior to making the proposed changes, and must report its post-change annual emissions rate to the reviewing authority for the required period of time after the change. Also, we are codifying the "2-years-in-5" presumption for calculating the baseline actual emissions for modified EUSGUs. However, the "2-years-in-5" baseline method does not apply to EUSGUs when calculating contemporaneous emissions changes for netting purposes. Instead, EUSGUs must continue to use the current procedures based on the definition of "actual emissions."

We agree that the reporting requirements that we originally proposed to apply to all existing units would have been a burden on sources, but more so on the reviewing authority, (that is to report every year for 5 or 10 years the annual emissions from the affected emissions units, regardless of whether the emissions level exceeded the predicted level). However, we disagree with the commenters who thought the added recordkeeping requirements would be too burdensome. The new rules require a source to keep a record of its post-change emissions projections, and, where there is a reasonable possibility that the project may result in a significant emissions increase, to track the post-change emissions and retain those records on site for 5 years (10 years if the physical or operational change at an existing emissions unit will increase the unit's design capacity or its potential to emit a regulated pollutant) from the date a modified emissions unit returns to regular operation. We believe that the new "actual-to-projected-actual" test warrants these recordkeeping requirements (instead of a temporary emissions cap, as required by the "actual-to-potential" test) in order to enable the source and the reviewing authority to ensure that the physical or operational changes made at unit do not actually result in a major modification. We believe the benefits to sources of the new

applicability test outweigh any residual burden placed on them to maintain the necessary post-change source records when they are required to do so. See also our response to comments on this issue following section 4.2 of this volume.

We believe that these added recordkeeping and reporting (of emissions exceedances) measures will improve the overall compliance rate and provide the information necessary for reviewing authorities to assure that such changes are made consistent with the CAA requirements. Altogether, we believe that the final rules focus on the types of changes occurring at existing emissions units that are more likely to result in significant contributions to air pollution. The final rules will also require greater accountability on a source's part to retain information from which the reviewing authority can determine the nature of any changes that are made at specific emissions units, as well as the actual emissions increases that are associated with those changes. We believe these added benefits far outweigh the additional burden of maintaining the records. Additionally, many existing SIP programs (such as minor NSR programs) already require such emissions tracking, so this requirement is generally not considered to be an inappropriate or unnecessary burden on industry.

We disagree with those commenters who believed the actual-to-projected-actual test was contrary to the CAA and WEPCO. Please see our responses in Sections 5.2.3 and 5.3.4 for further details.

For our response as to why we do not believe the actual-to-projected-actual test should include an enforceable emission cap , see Section 5.5.

Comment:

5.4.3 Adequacy of Existing Emission Projection and Tracking Abilities

5.4.3.1 Adequacy of existing emission projection and tracking abilities for utilities

Two industry commenters (IV-D-263, 308) believed that the utility industry emission projection and tracking abilities were adequate for purposes of applying the actual-to-enforceable-future-actual test. One utility industry commenter (IV-D-294) stated that power pools will continue to require utilities to accurately predict projected capacity utilization. Therefore, the commenter argued, emission projection and tracking abilities will continue to support the actual-to-future-actual test.

STAPPA/ALAPCO (IV-D-259) maintained that the deregulation of the utility industry would change its ability to provide accurate emission projections. Local public utility commissions had historically required utilities to make reliable estimates of future capacity utilization, but deregulation of electric utilities was quickly reducing the public utility

commission's role. Therefore, according to STAPPA, utilities will no longer be able to accurately project emissions.

5.4.3.2 Adequacy of existing emission projection and tracking abilities for non-utilities

Fourteen industry commenters (IV-D-210, 221, 254, 260, 263, 264, 270, 273, 289, 299, 301, 308, 311, 313), two utility industry commenters (IV-D-252, 254), and one regulatory agency commenter (IV-D-253) maintained that non-utility industry facilities do have sufficient recordkeeping and reporting to track future emissions, with reliability comparable to that of the utility industry sector. These commenters believed that requirements under the title V operating permit program and other regulations adopted pursuant to the 1990 CAAA had improved the emission projection and tracking abilities of non-utility sources so that they would be able to comply with the actual-to-future-actual test. Furthermore, these commenters suggested that EPA now has broad experience with a number of industries other than utilities.

Six industry commenters (IV-D-210, 263, 264, 270, 308, 313) cited the CAM rule as providing substantially more information from the non-utility sector than was available when the WEPCO rule was promulgated. Two industry commenters (IV-D-260, 313) noted that requirements for yearly emission inventories would mean that adequate emissions tracking information was available. These commenters further indicated that annual emission statements of actual VOC and NO_x emissions were currently required in the Northeast Ozone Transport Region. Another industry commenter (IV-D-301) stated that they had completed an extensive and costly project to establish accurate emission factors for many rubber manufacturing processes, and that these factors could easily be used to quantify post-modification emissions. One industry commenter (IV-D-311) stated that the ability to track emissions was dependent upon assuming that demand for the company's product was within projections.

Two regulatory agencies (IV-D-246, 287) and STAPPA/ALAPCO (IV-D-259) maintained that non-utility industry facilities did not have adequate emission tracking and projection capabilities. STAPPA/ALAPCO (IV-D-259) stated that emission factors and other methods used by non-utility sources were not sufficiently accurate to quantify either past emissions or future actual emissions. Two of these commenters (IV-D-246, 259) further commented that most industries did not have ability to track NO_x emissions in particular. One commenter (IV-D-246) noted that emissions tracking might be adequate for some non-utility sources using continuous emissions monitors (CEMs), or that other stringent quality assurance/quality control measures might be acceptable on a case-by-case basis.

5.4.3.3 Adequacy of existing emission projection and tracking abilities should not be a consideration

Two industry representatives (IV-D-260, 313) commented that the adequacy of existing emission projection and tracking abilities should not be a consideration in determining whether to apply an actual-to-future-actual test. The commenters believed that the uncertainties associated with an actual-to-future-actual test were probably less than those for an actual-to-potential test because they were based on known factors and did not include safety factors.

Response:

We believe that the tracking requirements in the final rules alleviate many of the commenters' concerns about industry's alleged inability to predict their post-change actual emissions increases. Numerous industry commenters indicated that they believed adequate emissions predictions could be made. We agree that all sources are now in a better position to predict post-change emissions increases. Nevertheless, when, according to its best calculations, the physical or operational changes being planned for one or more existing emissions units at a major stationary source will not constitute a major modification, yet there is a reasonable possibility that the project may result in a significant emissions increase, the source must document its findings [including a description of the project, an identification of emissions units whose emissions could increase as a result of the project, the baseline actual emissions for each emissions unit, the projection of post-change actual emissions before adjustments, the adjusted post-change emissions (post-change actual emissions, or potential emissions) and the reason for the adjustment (for example, increase in product demand unrelated to the change)]. If the projection of post-change actual emissions shows a significant increase, the source must also document its compliance with applicable netting procedures if it uses offsetting emission reductions elsewhere at the major stationary source to avoid being a major modification. With the exception of EUSGUs, however, sources are not required to report their post-change annual emissions unless the recorded annual emissions rate in any given year exceeds the baseline actual emissions by a significant amount and is inconsistent with the original projections.

In addition, where there is a reasonable possibility that the project may result in a significant emissions increase (even though a source's projection of post-change emissions shows that it would not), the final rules require a source to maintain emissions data for all emissions units that are changed. The source must maintain this information and compare it to the calculated baseline actual emissions for at least 5 years. (We will presume that any emissions increases that occur after 5 years are not associated with the physical or operational changes.) If the project will increase the design capacity or potential to emit of any emissions unit, the source must maintain and compare this data for that emissions unit to its baseline actual emissions for 10 years. (This extended period allows for the possibility that the increased capacity that the source added via the physical or operational changes could be fully utilized during a normal business cycle.) The information that must be maintained may include

continuous emissions monitoring data, operational levels, fuel usage data, source test results, or any other readily available information of sufficient accuracy for the purpose of determining an emissions unit's post-change emissions. With the exception of EUSGUs, the source must report to the reviewing authority any post-change annual emissions rate only when that rate exceeds the baseline actual emissions rate by a significant amount and is inconsistent with the original projections. See, for example, new §52.21(r)(6)(iv). For EUSGUs, however, an annual report of post-change annual emissions is required even when the projected post-change emissions rate is not exceeded. See, for example, new §52.21(r)(6)(iii).

As mentioned earlier, we believe that these added recordkeeping and reporting measures are justified and will improve the overall compliance rate and provide the information necessary for reviewing authorities to assure that such changes are made consistent with the CAA requirements. Altogether, we believe these 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. The amendments will also require greater accountability on a source's part to retain information from which the reviewing authority can determine the nature of any changes made to emissions units, as well as the actual emissions increases that are associated with those changes.

Industry commenters generally indicated that they would be able to make a projection of a project's post-change emissions and track their actual emissions following the change as required by the new "actual-to-projected-actual" applicability test. We believe that most sources should be able to adequately project the emissions increases that will result from the physical and operational changes that they choose to make. If for some reason the projection is not accurate, the required tracking of emissions for 5 years following the changes will determine whether a significant emissions increase has actually occurred. Where the change is found to be a major modification, despite the projections made by the source, the reviewing authority will be expected to proceed with the process of subjecting the source to the major NSR requirements.

We disagree with the commenter who stated that increased competition and deregulation in the electric utility industry would lead to less accurate estimates of post-change utilization and demand growth. Nevertheless, the new rules require modified EUSGUs to submit a notice to the reviewing authority prior to beginning actual construction that is not considered a major modification. and must submit post-change annual emissions rate data, in tons per year, annually for 5 years after a change is made. Again, this requirement applies to EUSGUs when the new "actual-to-projected-actual" applicability test shows that the change will not result in a significant emissions increase at the unit (or significant net emissions increase at the source), even in cases when the post-change annual emissions during the 5-year period do not show a significant emissions increase. We believe these provisions will continue to provide accurate information on post-change emissions at EUSGUs. Moreover, we believe that EUSGUs will continue to have adequate emission projection and tracking capabilities, regardless of deregulation of some aspects of public utilities. Also, EUSGUs are still required to meet rigorous monitoring requirements under title IV.

5.5 Proposal to Create Enforceable 10-year Emissions Level

Comment:

5.5.1 Support Enforceable 10-year Emission Level

One industry commenter (IV-D-273) and one utility industry commenter (IV-D-252) supported the 10-year emission limit. Another industry commenter (IV-D-321) supported a 10-year tracking period, but did not specifically endorse the proposed enforceable 10-year emission level. One industry commenter (IV-D-250) stated that a 10-year limit would be acceptable if the applicant desires it.

One utility industry commenter (IV-D-252) believed the temporary emissions cap was necessary to ensure that a significant net emissions increase did not occur. The commenter stated that "Otherwise, as it stands now, if these estimates of future emissions prove to be low, it is possible that a source would have inappropriately avoided NSR review at the time of the modification of the unit and the only 'penalty' they would pay would be to install BACT or LAER emission controls years after they would otherwise have had to."

5.5.2 Oppose Enforceable 10-year Emission Level

Twenty-seven industry commenters (IV-D-219, 254, 260, 263, 264, 265, 266, 270, 279, 283, 289, 292, 293, 297, 298, 299, 301, 302, 304, 306, 307, 308, 310, 311, 313, 314, 315), eight utility industry commenters (IV-D-251, 261, 266, 278, 279, 294, 300, 318), eight regulatory agency commenters (IV-D-211, 216, 246, 255, 262, 287, 305, 317), STAPPA/ALAPCO (IV-D-259) and four environmental commenters (IV-D-291, 303, 325, 327) opposed the enforceable 10-year emission level for various reasons. One of the utility commenters (IV-D-251) requested that the EPA withdraw the proposal for the 10-year limit.

One utility industry commenter (IV-D-251) questioned EPA's statements regarding the necessity of the 10-year cap. The commenter reminded the EPA that utility sources were already required to submit 5 years of post-change emissions data to the reviewing authority. This requirement would provide adequate assurance that a source did not inappropriately avoid NSR review. The commenter also asserted that it was unlikely that a source would make a modification and then wait 5 years to use the modification in order to avoid major NSR permitting. The commenter also questioned how the current proposal alleviates EPA's concern that reviewing authorities can "only examine data submitted after-the-fact by the source." The commenter explained that once a source had committed to meeting a certain emissions level to qualify for minor rather than major NSR, the source had accepted responsibility for ensuring compliance with the emission limitations contained in the preconstruction permit. The commenter contended that the proposed temporary cap just served to extend the period of post-change data provision from 5 years to 10 years.

5.5.2.1 10 years is too long

Twelve industry commenters (IV-D-263, 264, 270, 293, 297, 298, 301, 302, 307, 308, 313, 314) and one utility industry commenter (IV-D-261) maintained that 10 years was too long a period for an enforceable emission level to be in place. These commenters believed that the emission limit period did not have to equate to the look back period for determining the emission baseline. Four industry commenters (IV-D-264, 270, 293, 313) explained that the purpose of the two different periods was different. The look back period defined the representative year to which future emissions could be compared. The future year determined whether a change caused an emissions increase.

Seven industry commenters (IV-D-264, 270, 297, 298, 307, 313, 314) felt emission increases would occur well before 10 years, and therefore believed the period for the limit was too long. One industry commenter (IV-D-298) believed that any emissions increase resulting from a change would occur in a short period of time, probably less than 2 years. The commenter (IV-D-298) and another industry commenter (IV-D-302) recommended a 2-year limit if the EPA were to adopt a limit.

Two industry commenters (IV-D-297, 314) indicated that 10 years could be several product cycles, and that a 10-year limit would require a business to accurately forecast the demand for products it was not yet making. One industry commenter (IV-D-307) agreed, stating that market returns were expected and weighed before a project was constructed. Three other industry commenters (IV-D-264, 270, 313) also indicated that changes were not generally made to achieve benefits years into the future.

5.5.2.2 10 years is not long enough

Two environmental commenters (IV-D-291, 303) maintained that the emission limit must be permanently enforceable by the EPA and by citizens, as provided in sections 113 and 304 of the CAA. Three regulatory agencies (IV-D-211, 246, 262) and STAPPA/ALAPCO (IV-D-259) also recommended a permanent limit. Another regulatory agency (IV-D-216) agreed that it was preferable to track emissions indefinitely. These commenters noted that a short-term limit could complicate future applicability determinations and compromise air quality.

STAPPA/ALAPCO (IV-D-259) also indicated that a temporary limit was inconsistent with current practice, in which the permanent enforceable limit on PTE was contained in the preconstruction permit and carried over into the title V permit.

5.5.2.3 Other reasons to oppose

Twelve industry commenters (IV-D-265, 266, 289, 293, 297, 301, 302, 304, 307, 313, 314, 315), five utility industry commenters (IV-D-271, 278, 294, 300, 318), and two environmental commenters (IV-D-291, 303) opposed the enforceable 10-year emission level for

various reasons. One utility industry commenter (IV-D-278) held that the 10-year limit would not be a temporary limit, but would become a "*de facto* baseline" for any additional permitting at the facility and would discourage reviewing agencies from allowing increases in PTE at the facility. Two utility industry commenters (IV-D-278, 294) further explained that the 10-year limit would likely be used in SIP planning to meet air quality goals, which would make it unlikely that the reviewing agencies would allow an increase at the end of the 10-year period. One of the utility industry commenters (IV-D-294) stated that the problem would be even worse when the limits were met using pollution controls, as State law would force the source to continue to operate the controls.

One industry commenter (IV-D-307) maintained that the 10-year limit was not based on economic theory. The commenter had several questions about how the 10-year limit would work, including whether the source would have to reassess changes made during the 10-year period, how the baseline would be determined if changes were made during the 10-year period, and what would happen if the past actual emissions decreased.

One industry commenter (IV-D-265) and one utility industry commenter (IV-D-294) opposed the 10-year limit because the regulatory structure for designing and implementing such limits was in its infancy. Two utility industry commenters (IV-D-294, 318) stated that the EPA had not explained how the temporary limit would be terminated or relaxed at the end of the 10-year period.

Another industry commenter (IV-D-301) opposed the 10-year limit because of the additional enforcement liability it would impose. The commenter argued that it would be unfair to subject a facility to enforcement proceedings if it exceeded the limit, as predicting future emissions was difficult.

Two industry commenters (IV-D-289, 313) objected to the 10-year limit, claiming that it usurped State prerogatives. The commenter stated that "How tightly to weave the PSD/NSR applicability net is a decision for each State to make in the context of its SIP."

An industry commenter (IV-D-266) stated that the unit would constantly be subject to a "temporary" emissions limitation since the limit established for any given change would not expire before the next change was made.

Three utility industry commenters (IV-D-271, 294, 318) felt the 10-year limit would discourage sources from making efficiency improvements. Two of the commenters (IV-D-271, 294) stated that the efficiency improvements were required to reduce emissions, and the 10-year limit was thus counter to the EPA's greenhouse gas emission reduction program. One of the commenters (IV-D-318) further explained that the temporary limits would make many projects economically infeasible.

5.5.2.4 Oppose 10-year limit because it is burdensome

Nine industry commenters (IV-D-219, 265, 272, 297, 298, 301, 304, 314, 315), six utility industry commenters (IV-D-268, 271, 275, 278, 294, 324), two regulatory agencies (IV-D-255, 287) and STAPPA/ALAPCO (IV-D-259) opposed the enforceable 10-year emission level on the grounds that it would create an administrative burden by increasing the number of applicability determinations. One industry commenter (IV-D-298) and four utility industry commenters (IV-D-268, 271, 275, 324) characterized the enforceable limit provision as mandating formal applicability determinations.

One industry commenter (IV-D-301) stated that the limitations would also make compliance overly burdensome and time-consuming. The commenter (IV-D-301) believed that a 10-year period as opposed to a 5-year period would create additional burdens.

Two regulatory agency commenters (IV-D-255, 287) and STAPPA/ALAPCO (IV-D-259) believed that the additional work required for establishing the temporary limits and tracking emissions would create a severe administrative burden for State and local reviewing agencies. STAPPA/ALAPCO (IV-D-259) explained that the temporary limits would require additional preconstruction permits, even though some of the changes would be true minor NSR changes under the current rules and do not require a permit now. Such permits would necessitate public comment and reopening permits to include applicable monitoring and recordkeeping requirements, which would require additional staff time and resources. Tracking the actual emissions resulting from numerous modifications would also be unwieldy.

One industry commenter (IV-D-219) and one regulatory agency commenter (IV-D-317) opposed the temporary limit asserting that, because it would cover modifications that would be minor or exempt under the current rules. The regulatory agency commenter (IV-D-317) further explained that the temporary limit would create an additional administrative burden by covering these types of changes.

Two utility industry commenters (IV-D-278, 294) objected to the 10-year limit because it would impose a “hard limit” on emissions, including emission increases due to changes that would not be regulated under the current rules. The proposed limit would thus be more burdensome than the current rules. One of these commenters (IV-D-278) interpreted the 10-year limit as a major shift in the applicability of the rules that would hamper operational flexibility. Two utility industry commenters (IV-D-294, 318) argued that the 10-year limit would prohibit production rate increases or increases in hours of operation. According to the commenter, this inability to increase utilization would severely affect electric reliability and lead to brownouts or blackouts.

One industry commenter (IV-D-265) believed the temporary limit would impose a severe burden in unpredictable markets. Another industry commenter (IV-D-304) stated that the temporary limit would exacerbate administrative burden because it would involve the same

permitting process required under the current approach, but would require more permit revisions. Another industry commenter (IV-D-315) explained that the permit emission limits may change at the end of the 5-year period. Therefore, the commenter asserts that a 10-year limit would create confusion and additional burden.

One utility industry commenter (IV-D-300) opposed the 10-year limit because it was more stringent than the current rules.

5.5.2.5 Oppose 10-year limit because it is like PTE

Five industry commenters (IV-D-263, 283, 304, 306, 308) and two utility industry commenters (IV-D-278, 300) viewed the enforceable 10-year emission level as similar to the current procedures for limiting PTE by obtaining a synthetic minor permit limit. The commenters believed there was no advantage to including another such mechanism in the permitting rules. One of these commenters (IV-D-304) maintained that there would be so many changes that the temporary limit would not ever expire. Therefore, the proposed approach would in effect be an actual-to-potential methodology because a temporary limit would always exist.

5.5.2.6 Oppose 10-year limit because lower than PTE limit

Five industry commenters (IV-D-266, 292, 298, 304, 310) opposed the enforceable 10-year emission level because it would be based on actual emissions, which were typically lower than the allowable emission levels on which current enforceable limits were based. One industry commenter (IV-D-298) explained that enforceable emission limits under the NOA proposal would be even tighter than PTE limits because the limits would be based on actual emissions. The limits would thus be below the significance levels. In cases where a second or third change occurred, additional tightening of the limit would occur. The 10-year limit would thus restrict operating flexibility. Because the limit would be lower than a limit set under the PTE approach, one industry commenter (IV-D-304) stated that the limit would be an unnecessary barrier to productivity and would restrict the source from making changes that were not regulated under NSR.

5.5.2.7 Oppose 10-year limit because it is illegal

Three industry commenters (IV-D-265, 304, 307), two utility industry commenters (IV-D-279, 294), one regulatory agency (IV-D-305), and one environmental group (IV-D-303) asserted that the 10-year limit would be illegal. One regulatory agency (IV-D-305) and one environmental group (IV-D-303) believed the 10-year limit contravened the CAA because requirements under it should be enforceable for their duration.

One utility industry commenter (IV-D-279) stated that the *WEPCO* and *Puerto Rican Cement* court cases found "EPA's imposition of a federally enforceable permit limit at the NSR trigger level unreasonable." One industry commenter (IV-D-304) argued that the 10-year limit

exceeded statutory authority by requiring a Federal permit exercise in cases where the emission increase did not exceed the significance level. The commenter claimed that his requirement would thereby subject all sources to some form of major NSR program regulation. The commenter (IV-D-304) compared the temporary limit to the erroneous implementation of the modification provisions in the 1978 NSR rules, which the *Alabama Power* court overturned. One utility industry commenter (IV-D-294) agreed that the WEPCO rule allows insignificant increases in emissions without requiring an emissions cap.

One industry commenter (IV-D-307) argued that the 10-year limit was inconsistent with the existing rules at 40 CFR 52.21(r)(4), which require a source to be subject to major NSR if it increases its emissions after accepting an emission limit to remain a minor source. To correct this problem, the commenter further maintained that regulatory language would be required to state that the source would regain all the temporarily foregone utilization emissions without triggering NSR review at the end of the 10-year period.

Another industry commenter (IV-D-265) maintained that the EPA had no authority to require sources to cap their plantwide emissions in the absence of NAAQS and increment violations.

5.5.2.8 Oppose 10-year limit because cannot track emissions

One industry commenter (IV-D-315) maintained that it was impossible to track emissions for a 10-year period. The commenter explained that most industries cannot anticipate product mixtures, market demand, and raw materials accurately for more than 5 years.

5.5.3 Retain 5-year Tracking

Thirteen industry commenters (IV-D-250, 254, 260, 263, 298, 299, 301, 304, 307, 308, 311, 313, 315) and one utility industry commenter (IV-D-318) supported retaining a 5-year tracking period, as opposed to requiring a 10-year enforceable emission limit. The commenters maintained that a 5-year period would be consistent with the requirements under title V and that industry forecasting was often performed 5 years forward.

An industry commenter (IV-D-311) stated that returns on investments must be made in a shorter period of time than 10 years; therefore, 5-year tracking was adequate. The commenter noted that they usually required a return within less than 2 years. Two other industry commenters (IV-D-260, 313) noted that the EPA had accepted a 5-year period under the WEPCO rule, and thus questioned why the time period would need to change now.

5.5.4 Other Comments Concerning 10-year Enforceable Limit

5.5.4.1 Two-year limit is preferable

Four industry commenters (IV-D-264, 270, 298, 313) preferred a 2-year enforceable limit if the EPA adopted an enforceable limit. The commenters argued that any emission increases resulting from a change would occur within 2 years.

5.5.4.2 Additional comments concerning 10-year limit

Two industry commenters (IV-D-263, 308) and one utility industry commenter (IV-D-261) preferred a 5-year limit rather than a 10-year limit. Two of the commenters (IV-D-263, 308) specifically identified a 5-year limit (not just 5 years of tracking emissions) as preferable to not allowing the use of the actual-to-future-actual methodology. The commenters (IV-D-263, 308) proposed that title V and CAM compliance certifications be used to verify the annual emission reports that would be submitted. Failure to submit the reports would be a separate violation of the NSR program. If the actual emissions exceeded the applicable NSR threshold during the 5-year period, the source would then have to undergo NSR review. Advance notice of using the actual-to-future-actual methodology would be required. Another industry commenter (IV-D-299) noted that a 5-year limit would be acceptable if it included a reasonable cushion over the future actual emission level to provide operational flexibility.

One industry commenter (IV-D-304) provided an alternative actual-to-future-actual approach in which there would be no temporary emission limit. Under the approach, the source would calculate and document past actual emissions and anticipated future actual emissions for each regulated pollutant. If the change would not increase emissions over the significance levels, the source would then submit a notification to the reviewing authority. The notification would include a description of the modification and the results of the actual emission estimates. The source could then make the change, but would have to track emissions for 5 years after the change and report them periodically. The commenter clarified that the notification and reporting provisions would be required in the rule. The commenter (IV-D-304) believed that this approach would eliminate the need for preconstruction review and temporary limits while providing sufficient compliance assurance and enforcement of major NSR requirements.

One utility industry commenter (IV-D-261) opposed the 10-year limit because it would mean that the permit limit, which was based on actual emissions, would be lower than the NSR applicability thresholds. The commenter gave the example of an actual projected future emissions increase of 30 tons of NO_x where the NSR significance level was 50 tons. The permit should allow 49 tons of additional NO_x emissions, the commenter maintained.

Another utility commenter (IV-D-252) maintained that the temporary limit should only last for 5 years if the demand growth provisions were eliminated.

One regulatory agency (IV-D-317) and STAPPA/ALAPCO (IV-D-259) offered two alternative proposals. The first was to exclude changes that did not increase emissions above the regulatory thresholds from the temporary limit. The second was to allow States to develop streamlined methods for dealing with minor changes. These streamlined methods would include compliance determination procedures, which would allow the temporary limit to be incorporated into the SIP. Under such an approach, the reviewing authority could issue a permit setting the temporary limit without providing for additional public comment. However, this approach would be contingent upon the SIP allowing such a procedure.

STAPPA/ALAPCO (IV-D-259) also recommended that NSR applicability be assessed any time that a synthetic minor or temporary permit limit was removed. Otherwise, the source could increase capacity, just as if new physical capacity were being added. This approach would eliminate any ambiguity about whether an increase that occured more than 10 years after the change would trigger NSR.

One regulatory agency (IV-D-320) requested that the EPA clarify what emission limits would apply to a source after the temporary limits had expired, as the temporary limit established minor source status. The commenter questioned whether the title V permit would have to be modified upon expiration of the temporary limits or whether the limits that would apply upon expiration of the temporary limits would be incorporated into the permit at the time of issuance.

One regulatory agency (IV-D-255) supported a 10-year tracking period for utilities only. Another regulatory agency (IV-D-305) believed that the enforceable limit should be for the same period of time as the source's operating and minor source permits.

Response:

After a thorough review of all the comments received both in support and opposition to establishing a 10-year enforceable limit on the projected post-change actual emissions, we decided not adopt a requirement that would establish a source's projection of post-change actual emissions as an enforceable limitation. If we were to establish a permanent cap, then it would be similar to the existing "actual-to-potential" test, and such emissions increases as those resulting from demand growth would likely be prohibited under the cap. We do not believe that a 10-year cap is necessary to ensure that a significant net emissions increase does not occur. Notwithstanding the absence of such an enforceable restriction, if the annual emissions rate of a regulated NSR pollutant from the project is determined in a given calendar year to have resulted in a significant emissions increase or significant net emissions increase at the major stationary source, then a source must report this increase to the reviewing authority. If this increase is related to the physical or operational change, then the source may be required to comply with the major NSR requirements, such as an evaluation of BACT, and an analysis of air quality impacts to ensure that a major modification does not cause or contribute to a violation of any NAAQS or PSD increments. Moreover, sources may be subject to an enforcement action for being in violation of the major NSR requirements. Thus, we believe that

the existing requirements prohibiting the construction of a major modification without undergoing major NSR make any additional requirement for an enforceable emissions cap–short-term or longer-- unnecessary to ensure compliance.

We agree with the commenters who claimed that the 10-year enforceable limit could inappropriately place an emissions cap on a source that is capable of operating at levels that could cause emissions achieving–and possibly exceeding–that cap in the absence of a physical or operational change. As alluded to above, a cap based on the maximum emissions increase resulting from the physical or operational changes would likely prevent a source from increasing production levels that would otherwise be allowed.

Additionally, we are concerned that an enforceable post-change actual emissions level may place an unmanageable resource burden on reviewing authorities. As claimed by a number of industry and regulatory agency commenters, States would have to establish the 10-year enforceable caps through some form of applicability determination and issue a minor source permit, SIP revision, or other legal mechanism–even in cases where the change was not subject to minor NSR or other SIP programs .

As previously mentioned, for any project using the "actual-to-projected-actual" applicability test, when there is a reasonable possibility that the project may result in a significant emissions increase, the new rules require that a source's projection of post-change actual emissions must be tracked against a modified unit's emissions for 5 years following completion of the changes. We will presume that any increases that occur after 5 years are not associated with a physical or operational changes. If, however, one of the effects of the physical or operational change(s) is to increase a unit's design capacity or potential to emit, such that a significant emissions increase could result, but the source does not believe that the new capacity or potential to emit will be fully utilized (so as not to cause a significant net emissions increase), the projection of post-change actual emissions must represent the maximum actual annual emissions rate that will result from the unit in any one of the 10 calendar years after the change. This extended period allows for the possibility that the increased capacity that was added via the physical or operational changes could be fully utilized during a normal business cycle.

5.6 Comments Concerning Elimination of the Demand Growth Exclusion

Comment:

5.6.1 Support Eliminating Demand Growth Exclusion

Five regulatory agency commenters (IV-D-216, 247, 253, 305, 317), STAPPA/ALAPCO (IV-D-259) and five environmental commenters (IV-D-291, 303, 324, 327, 393) supported eliminating the demand growth exclusion.

One regulatory agency (IV-D-216) maintained that a facility's post change emission increases due to demand growth could not be disassociated from those that resulted directly from the physical or operational change.

One environmental commenter (IV-D-303) stated that, "There simply is no logic to support a claim that demand growth resulted in an emission increase but the change itself did not." The commenter further maintained that the EPA never had a permissible rationale for demand growth.

5.6.2 Oppose Eliminating Demand Growth Exclusion

Twenty-eight industry commenters (IV-D-208, 212, 219, 221, 250, 260, 264, 265, 266, 270, 283, 284, 285, 289, 292, 293, 298, 299, 301, 302, 304, 306, 307, 310, 311, 312, 313, 319), and 23 utility industry commenters (IV-D-252, 257, 268, 269, 271, 275, 276, 278, 279, 280, 281, 282, 286, 294, 295, 300, 316, 318, 322, 323, 324, and IV-G-22, 23) opposed eliminating the demand growth provisions, stating that market factors do independently cause emission increases absent physical and operational changes. The commenters objected to what they considered to be the EPA's irrefutable presumption that all emission increases result from physical or operational changes. Eight utility industry commenters (IV-D-257, 279, 280, 281, 295, 323, 327, and IV-G-22) further maintained that the EPA was incorrectly establishing an irrefutable supposition that any non-routine change would result in the unit operating at its maximum design PTE. One of these commenters (IV-D-279) argued that emission units could be operated at higher capacity absent physical or operational changes, so that it was incorrect to assume that a change automatically resulted in an increased capacity and higher emissions.

These commenters also indicated that demand could increase coincidentally with a physical or operational change, but be unrelated to the change. Such increases associated with demand should not be subject to an applicability test predicated on whether a physical or operational change occurred. Three industry commenters (IV-D-285, 310, 319) noted that changes were often made to increase efficiency to stay competitive. Even though production increases, such changes would not increase emissions because the newer process was more efficient (and less polluting) than the process it replaced.

5.6.2.1 Oppose eliminating demand growth for utilities

Twenty-two industry commenters (IV-D-219, 254, 260, 264, 266, 270, 283, 284, 285, 289, 293, 298, 299, 301, 302, 304, 306, 307, 311, 312, 313, 319), and thirteen utility industry commenters (IV-D-257, 278, 279, 280, 281, 282, 286, 294, 295, 300, 316, 323, and IV-G-22) stated that they specifically opposed eliminating the demand growth provisions for utilities.

5.6.2.2 Oppose not extending demand growth for non-utilities

Twenty-three industry commenters (IV-D-212, 219, 254, 260, 264, 266, 270, 283, 284, 285, 289, 293, 298, 299, 301, 302, 304, 306, 307, 311, 312, 313, 319), and thirteen utility industry commenters (IV-D-257, 278, 279, 280, 281, 282, 286, 294, 295, 300, 323, 324, and IV-G-22) stated that they specifically opposed not extending the demand growth provisions to other industries. One industry commenter (IV-D-254) endorsed the July 1996 NSR Reform package concepts, which included the actual-to-future-actual test without removing the demand growth provisions. The commenter (IV-D-254) further indicated that they would have the data to make the demand growth concept viable.

5.6.3 Other Comments Regarding Demand Growth Exclusion

5.6.3.1 Contrary to court, law, policy

Twelve industry commenters (IV-D-264, 265, 266, 270, 284, 285, 298, 307, 311, 312, 313, 319), and sixteen utility industry commenters (IV-D-257, 269, 271, 275, 276, 278, 279, 280, 281, 282, 286, 294, 295, 300, 323, and IV-G-22) maintained that demand growth exclusion was legally required under the CAA, the *WEPCO* court decision, and existing EPA regulations. These commenters asserted that the EPA's current statements in the NOA contradict EPA's previous acknowledgment of the causation factor in the preamble to the WEPCO rule. Six utility industry commenters (IV-D-257, 280, 281, 295, 323, and IV-G-22) quoted the EPA's statement in the preamble to the WEPCO rule (57 FR 32327) that "the analysis of the causation requirement may disclose that an emissions increase that follows a non-routine physical or operational change is merely coincidental and in fact results from independent factors such as demand growth." One utility industry commenter (IV-D-294) cited the April 6, 1993 EPA policy memo from David McKee as evidence that the EPA recognized that fuel switches may not lead to increased utilization.

5.6.3.2 Independent factors causing emission increases

Six industry commenters (IV-D-260, 265, 307, 311, 313, 319) and ten utility industry commenters (IV-D-257, 271, 279, 280, 281, 294, 295, 316, 323, and IV-G-22) identified a number of reasons why they believe that emission increases unrelated to physical or operational changes occur. These included general improvements in the economy; deterioration of equipment; making changes to comply with EPA, OSHA, or disability regulations; demand skyrocketing because the product becomes a fad; a mishap from one supplier causing increases for another supplier; the decreasing of the raw material price; a factory making a competing product closes; new management techniques allowing the company to cut prices; new markets developing; demand in existing markets increasing; one unit increasing its output because another unit had shutdown or had been physically or legally restrained; increasing output due to a meteorological condition such as heat wave; severe storms or system breakdowns reducing unit utilization for extended periods; variations in regional electric utility demands; variations in

electricity demand from large industrial users; investments to improve efficiency and reliability; and improved economic conditions in other economic sectors.

One utility industry commenter (IV-D-316) gave an example where the natural variability of the fuel supply, which was an independent factor, would cause the facility to violate an enforceable permit limit such as the EPA was proposing to adopt. In the example, the amount of energy generated, efficiency, and fuel source remained the same over a 10-year period. However, the fuel supply sulfur content varied enough to cause an exceedance of the permit limit in all but one of the 10 years in the baseline period. The commenter believed that not recognizing the fuel supply variability as an independent factor, in combination with using the current emission factor for the baseline determination, would lead to the violation. Therefore, the rules should account for independent factors in determining both whether a major modification occurs and in setting the enforceable emission level.

Another utility industry commenter (IV-D-294) cited a recent decision in which the EPA agreed with Eli Lilly that increases in utilization were related to weather conditions. Eli Lilly proposed switching to natural gas combustion at three existing coal-fired boilers. The change would decrease emissions, but the lower costs from using natural gas would increase utilization.

An industry commenter (IV-D-311) noted that there was a flood of extraordinarily cheap raw aluminum in the early 1990's when the Soviet Union collapsed and Russian companies sold off stockpiles of aluminum that had already been produced. This event curtailed aluminum production in the United States. However, the commenter stated that aluminum manufacturers later increased production. The increased production was a result of demand growth due to external factors beyond the company's control. No modifications occurred, the facilities remained in the State emission inventories, and permits were not rescinded. Therefore, according to the commenter, it would be incorrect to characterize the increased production as the result of a physical or operational change.

5.6.3.3 Source must demonstrate independent factors

One industry commenter (IV-D-307) and one utility industry commenter (IV-D-252) believed that the EPA should retain the demand growth provisions but require the source to demonstrate that demand growth, rather than the physical change or operational change, caused increased emissions. One of these commenters (IV-D-252) stated that the EPA had the discretion to provide the burden of proof on the source for demonstrating demand growth eligible for the exclusion. The commenter (IV-D-252) suggested that the EPA use this discretion as a practical and fair way of preserving the exclusion. The commenter (IV-D-252) further stated that one way to demonstrate increased utilization of a unit resulting from demand growth, as opposed to a physical change, was to use load growth factors available for the NERC regions within which a particular electric company operates.

5.6.3.4 No technical basis for removing demand growth

Three industry commenters (IV-D-264, 270, 313) claimed that the EPA had not "conducted any real world study to support its assertions" concerning demand growth. One utility industry commenter (IV-D-281) noted that the EPA's "experience" lead to the conclusion that sources generally make changes to improve market position.

5.6.3.5 Burdensome to eliminate demand growth

Two industry commenters (IV-D-284, 285) and three utilities (IV-D-281, 282, 286) stated that removing the demand growth provisions would create additional burdens for sources. The commenters indicated that removing the demand growth provisions would create many additional and unnecessary regulatory reviews. One utility industry commenter (IV-D-282) was concerned that eliminating demand growth would make it more difficult to make the changes necessary to comply with new title IV and NO_x SIP call requirements.

5.6.3.6 Eliminating demand growth would discourage changes to improve efficiency and reliability

Eight utility industry commenters (IV-D-257, 279, 280, 281, 282, 295, 323, and IV-G-22) maintained that eliminating demand growth would discourage changes to improve efficiency and reliability. These utilities stated that projects to improve efficiency, reduce costs, or maintain reliability were necessary to stay in business and may or may not contribute to an improvement in market share. If the demand growth provisions were eliminated, it would be difficult to make the necessary changes to conduct business in a competitive world economy. One utility industry commenter (IV-D-279) specified that operating at lower efficiency results in higher fuel consumption and an increase in emissions of the NSR regulated pollutants. One other utility commenter (IV-G-23) also stated that eliminating the causation requirement would be a strong disincentive toward projects that could increase efficiency, lower emission rates, or were otherwise environmentally beneficial.

One utility industry commenter (IV-D-279) also argued that eliminating demand growth would be restrictive because it would effectively limit a source to the level of its past actual emissions.

5.6.3.7 Other comments on demand growth

Two industry commenters (IV-D-263, 308) did not directly state support or opposition for removing the demand growth provisions. However, the commenters preferred that the EPA clarify that the regulations at 40 CFR 52.21(b)(2)(iii)(f) were not being eliminated. These provisions allow increases in production rates and hours of operation without a modification. According to the commenters (IV-D-263, 308), the EPA should specify that increases in production rates and hours of operation were a separate issue from demand growth.

One utility industry commenter (IV-D-252) offered two methods of isolating changes due to demand growth. The first method was to use load growth factors from the NERC region. The commenter compared this approach to that used under the Acid Rain rules. Under those rules, a unit did not have to decrease its SO_2 allowance if it could be demonstrated that underutilization was due to decreased utilization in the NERC region. The second, and their preferred option, was to require the owner of the unit to submit proof at the time of NSR review that increases in capacity factor at the unit (relative to the baseline level) could be accommodated without any capital expenditures. The commenter explained that this approach was similar to the NSPS methodology for determining emission rates before and after a proposed physical change.

Two industry commenters (IV-D-250, 299) noted that title V monitoring requirements could be used to verify demand growth. One of the commenters (IV-D-250) further indicated that the reviewing agency could specify a test for verifying emissions due to demand growth. Two industry commenters (IV-D-298, 304) recommended that the EPA retain the demand growth provisions but add notification and reporting requirements. One industry commenter (IV-D-304) offered an alternative proposal in which the demand growth provisions would be retained, but sources would be required to keep records and report emissions occurring after the change. Any use of the demand growth provision, including a detailed justification, would be recorded. The commenter believes this approach would ensure compliance and enforcement with the demand growth provisions.

One industry commenter (IV-D-265) questioned whether the EPA was presuming that any change always brings the affected unit to its maximum emission levels or that any change causes any emissions increase that may take place at that unit over the next 10 years.

Other industry commenters (IV-D-264, 270, 313) supported the demand growth provisions because these provisions make it explicit that emission increases that were not caused by the change must be excluded from the applicability determination. The commenter thinks the demand growth provisions thus eliminate confusion regarding how emissions should be calculated.

Two industry commenters (IV-D-289, 313) stated that in some cases a company will be able to factor demand growth accurately in estimating emission increases and in other cases it will not. However, the EPA should still allow demand growth exclusions. Instead, the EPA should provide guidance on methodologies and burden of proof.

One industry commenter (IV-D-212) recommended that demand growth be retained for essential public service facilities as long as their capacity remains in conformity with population growth in their respective service areas. This commenter offered to assist the EPA with developing the definition of essential services.

One industry commenter (IV-D-221) saw no justification for eliminating this exemption and stated that emission calculations should be the same for everyone. A utility industry

commenter (IV-D-269) suggested that instead of eliminating all load growth, EPA should allow future growth consistent with what had occurred over the baseline period.

One industry commenter (IV-D-272) stated that most non-utility sources would not be able to take advantage of the actual-to-future-actual methodology unless the demand growth exclusion was retained. Otherwise, the commenter indicated, the non-utility sources would project significant future actual emission increases.

One industry commenter (IV-D-307) recommended that the EPA convene a group to discuss why the recordkeeping and notification provisions in the WEPCO rule had not worked (in EPA's view) and changes that could be made so that the exclusion could be used more easily by the rest of the industry. One utility commenter (IV-G-23) also suggested that EPA's efforts should be focused on developing meaningful guidance to address perceived concerns with the WEPCO rule, rather than simply discarding the rule.

One industry commenter (IV-D-301) stated that demand growth was especially necessary for cyclical industries such as the rubber manufacturing industry. The commenter (IV-D-301) noted that an increase in demand for automobiles could increase demand for rubber tires in the time period after a modification occurred. In this case the increased emissions would not be related to the modification, but to the increased demand for rubber tires.

One utility commenter (IV-G-23) stated that EPA's proposal eliminates the causation requirement from the existing NSR rules. The causation requirement has always been required to show that a physical or operational change was a modification and that the modification itself resulted in a significant emissions increase.

Response:

We agree with those commenters who opposed eliminating the demand growth provisions when the emissions increase resulting from such growth is unrelated to the physical or operational changes at the source. Moreover, we agree with the commenters who believed this provision should apply to all industries, not just EUSGUs. We have concluded that this provision is appropriate and consistent with both the statute and implementing regulations, which suggest that there should be a causal link between the proposed change and any post-change increase in emissions, that is, "...any physical change or change in the method of operation that would result in a significant net emissions increase..." [emphasis added]. See, for example, existing §52.21(b)(2)(i). While in a very few cases it may be difficult to determine whether a particular emissions increase is directly attributable to a physical or operational change that is made to an emissions unit, it would be inappropriate to completely eliminate the availability of the exclusion to everyone. Consequently, the final rules follow the 1996 NPRM in that when a projected increase in equipment utilization is in response to a factor such as growth in market demand, the emissions increases may be subtracted from the unit's post-change actual emissions if it can be shown that the unit could have achieved the necessary level of utilization

during the consecutive 24-month period selected to establish the baseline actual emissions, and the increase is unrelated to the physical or operational change(s) made to the unit. See, for example, new §52.21(b)(41)(ii)(c). On the other hand, if the operation of an emissions unit to meet a particular level of demand could have been accomplished during the representative baseline period, but it can be shown that the increase is related to the changes made to the unit, then the emissions increases resulting from the increased operation must be attributed to the modification project, and cannot be subtracted from the projection of post-change actual emissions. It is, therefore, very important that the source retain a record of all information available to support its initial claim that an emissions increase predicted to occur as a result of demand growth did not result from the physical or operational change to an emissions unit. This information may be required by the reviewing authority should there be a question about the project being a major modification.

5.7 Should the Actual-to-enforceable-future-actual Test Apply to Increases in Design Capacity or PTE?

Comment:

5.7.1 Support Applying to Increases in Design Capacity or PTE

Nine industry commenters (IV-D-208, 260, 266, 285, 298, 304, 307, 311, 313) agreed that the actual-to-enforceable-future-actual test should be available for increases in design capacity or PTE. These commenters argued that it was inappropriate to automatically assume that such increases will affect normal operations, which would require the potential-to-potential test. One utility industry commenter (IV-D-208) maintained that modifications that increase capacity generally do not increase emissions because these modifications improve efficiency and add better control devices, allowing units to operate at higher capacity with lower emissions. One industry commenter (IV-D-307) believed that the new applicability test would have little value if increases in design capacity or PTE were not covered.

One industry commenter (IV-D-304) stated that changes that increase the design capacity or PTE of a unit but do not affect "normal operations" were common. The commenter (IV-D-304) gave the example of replacing an existing conveyorized solvent cleaning machine with a similar machine having 20 percent more capacity. The change would simply "speed up" normal operations. The future actual emissions could easily be calculated on the basis of past operating experience.

Two industry commenters (IV-D-260, 313) noted that the use of the actual-to-future-actual methodology for increases in design capacity or PTE should not mean that such changes would require an enforceable emission limit.

Another industry commenter (IV-D-311) questioned why the EPA was worried about this issue. To increase design capacity was very expensive. Therefore, it could be assumed that a

company would use the additional capacity as soon as it was available. A temporary limit in this case would be a moot point.

5.7.2 Oppose Applying to Increases in Design Capacity or PTE

Two regulatory agency commenters (IV-D-287, 305) opposed using the actual-to-enforceable-future-actual test for increases in design capacity or PTE. One regulatory agency commenter (IV-D-305) maintained that physical or operational changes that increase design capacity or PTE should be treated just as any other modification would be under the current rules, using an actual-to-potential test. One regulatory agency commenter (IV-D-287) maintained that increasing the design capacity or PTE would alter normal operations and make previous actual emissions "unreliable and irrelevant." The commenter (IV-D-287) instead recommended that increases in design capacity be evaluated using PTE.

One industry commenter (IV-D-285) believed that increases in design capacity or PTE do not require applicability determinations at all. The commenter stated that Congress never envisioned that the NSR program would hamper a source's ability to increase utilization up to its original design capacity.

5.7.3 Assuming the actual-to-enforceable-future-actual test is appropriate for increases in design capacity or PTE, is it appropriate to assume that any emission increases resulting from the change will occur within 10 years of the change?

5.7.3.1 Yes, appropriate to assume emission increases will occur within 10 years of the change

One regulatory agency commenter (IV-D-287) stated that the 10-year period would redefine normal operations for the changed unit, and there would be no need to track emissions after that period.

5.7.3.2 Not appropriate to assume emission increases will occur within 10 years of the change

One environmental commenter (IV-D-303) stated that, "There is no provision in the CAA that says such increases may be ignored if they occur more than ten years after the change." The commenter further maintained that the EPA's proposal was based on a presumption that there was no emission increase 10 years after the change. Plants with changes were the ones that had emission increases and it is an "exercise in fantasy" to claim that emission increases would occur without the change, the commenter stated.

5.7.4 Other Comments on Design Capacity Increases

A regulatory agency (IV-D-287) commented that it would be difficult to determine what BACT or LAER would be at the end of the 10-year period following a capacity or PTE increase. This commenter recommended a de-evaluation of the economic factors involved in determining BACT if the applicability determination was delayed because the company initially increases capacity and then later (that is, after the end of the 10-year period) utilizes it.

One industry commenter (IV-D-307) questioned the meaning of the EPA's statement in the preamble regarding a "mode of operation that could not have been achieved without the change." The commenter was concerned that this "ambiguous term" would mean that some types of changes would be excluded from the actual-to-future-actual test. The commenter stated that it was unclear what the EPA was requesting comment on, and questioned why the EPA was posing questions concerning increases in design capacity. The commenter believed that the EPA's intent was to eliminate exclusions for repairing and replacing basic equipment because these repairs and replacements increase utilization. The commenter requested that, if that was the case, the EPA state this argument directly for public comment. They stated that the practical implication of EPA's position was that sources keep duplicates of all parts (for example, 1980 pumps if the plant was built in 1980). Such a requirement was never intended under the 1980 PSD rules, the commenter maintained.

Response:

We do not believe that every modification that includes added capacity or PTE is intended for full use of that new capacity or PTE. Such actions could well be intended to enhance current operations without resulting in increased production or operation. However, where a source does intend to use the added capacity, we believe it is reasonable to assume that the capacity will be utilized within the source's normal business cycle. Sources are not likely to wait more than 10 years to use capacity simply to avoid NSR. Therefore, under the new rules, sources are not required to count the emissions increase that would result from full use of new capacity or PTE if they conclude that such capacity or PTE will not be fully utilized and the emissions increase resulting from that portion of the capacity that will be used will not result in a significant emissions increase from the modification or a significant net emissions increase at the source. The new requirements include a provision that requires sources to monitor the emissions from the modification project for 10 years following the resumption of regular operation of the emissions units modified, or affected by the modification. The 10-year period reflects our determination that this time frame is sufficient to encompass the normal business cycle for industry in general. This extended recordkeeping requirement represents a special condition that supersedes the normal 5-year period for the recordkeeping requirements being adopted in the final rules. During the 10-year period, a source must report to the reviewing authority any information that indicates that the modification project at its facility did actually exceed the baseline actual emissions by a significant amount, and is inconsistent with the original projections. As mentioned earlier, we have decided not to adopt the "actual-to-

enforceable-future-actual" test in the final rulemaking, Instead, we have adopted the "actual-to-projected-actual" test. Accordingly, the new applicability test includes the provision described above calling for a 10-year recordkeeping period when a project deemed not to be a major modification would, nevertheless, increase an emissions unit's capacity or potential to emit.

5.8 Should the Actual-to-future-actual Test Apply to Netting?

Comment:

5.8.1 Yes, the Actual-to-future-actual Test Should Apply to Netting

Thirteen industry commenters (IV-D-208, 219, 260, 263, 264, 265, 266, 270, 298, 301, 304, 308, 313) and six utility industry commenters (IV-D-252, 266, 279, 282, 294, 318) maintained that the actual-to-future-actual test should also be used for the netting analysis. These commenters believed that the rules could not define emission increases differently for netting than for modifications. One utility industry commenter (IV-D-279) based this assertion on their interpretation of the *Alabama Power* court case. [Alabama Power Co. v. Costle, 636 F.2d 323, 401-03 (D.C. Cir. 1979)] The commenter quoted the court's language, stating that "There is no basis in the Act for establishing two different definitions of modification, one that looks only at net increases for substantive requirements, and a second that looks at all increases, without allowing offsets, for procedural requirements." Another utility industry commenter (IV-D-294) believed that applying a potential methodology to netting was contrary to *WEPCO*. The commenter (IV-D-294) also stated that the EPA had not provided public opportunity for comment for the actual-to-potential methodology, which was required by the *WEPCO* court and by section 307 of the CAA. A third utility commenter (IV-D-282) stated that reviewing authorities routinely rely on enforceable and creditable emission decreases as part of the netting analysis.

One industry commenter (IV-D-265) argued that netting involved real emission reductions that completely canceled out any increase in PTE. Therefore, the actual-to-future-actual test should definitely apply to netting transactions. Another industry commenter (IV-D-298) believed that two sets of books would be required unless the actual-to-actual methodology applied to netting.

One industry commenter (IV-D-304) maintained that it would be illogical not to allow the actual-to-future-actual approach for netting because a change that was not a modification would then still be significant under the netting analysis. Two commenters (IV-D-298, 304) further argued that not allowing the actual-to-future-actual approach would penalize sources in serious, severe, and extreme nonattainment areas. Such sources must offset all emission increases and decreases over a rolling 5-year period. If future actual emissions were not available for netting purposes, the sources would never be able to use the actual-to-actual methodology because these sources would need to establish limits to effectively manage their rolling net total.

Two industry commenters (IV-D-263, 308) believed that not applying the actual-to-future-actual methodology to netting transactions would lead to "absurd results." The commenters (IV-D-263, 308) gave an example of two facilities, each proposing modifications. Facility Number 1 had an actual emissions increase of 39 tons per year (tpy), and Facility 2 had an actual emissions increase of 25 tpy. Facility 2 was shutting down two units, but would not be eligible for the future-actual comparison because a netting transaction was involved. Therefore, Facility 2 would unfairly be subject to NSR, while Facility 1 would not. The commenters thus maintained that not allowing the future-actual methodology for netting would discourage incentives to shutdown less efficient units.

One industry commenter (IV-D-301) believed that both the WEPCO rule and the NSR Reform package supported using actual-to-future-actual accounting for netting.

Another industry commenter (IV-D-219) believed that if the temporary limit were enforceable, it should be appropriate for netting and offsetting. The commenter (IV-D-219) further explained that if the netting baseline were not the enforceable level, the rules in effect require offsetting emissions that could never legally be emitted.

5.8.2 No, the Actual-to-future-actual Test Should Not Apply to Netting

One regulatory agency (IV-D-262) and one environmental group (IV-D-303) opposed allowing the actual-to-future-actual approach to apply to netting increases. One of the commenters (IV-D-262) maintained that the sole purpose of the actual-to-future-actual methodology was to determine if an emission increase will occur. The environmental group commenter (IV-D-303) maintained that the EPA should revise the netting provisions in the existing rules, as current netting policy allowed high-emitting sources to continue to escape NSR applicability. This commenter further insisted that the EPA had the authority to eliminate netting. The commenter recommended that the EPA change its definition of contemporaneous so that only project activities, as opposed to plantwide activities, were included in the netting analysis. The commenter also proposed that the netting credits for shutdowns and curtailments be reduced.

One industry commenter (IV-D-250) requested clarification on the use of netting/contemporaneous changes for actual-to-future-actual comparisons and the issue of Federally Enforceable.

Response:

We disagree with the commenters who stated that retaining the current procedures for measuring contemporaneous increases and decreases will require two different accounting systems and lead to absurd results. Regardless of which methodology is used to determine changes in emissions, the same type of emissions information must be reviewed and maintained to support a source's conclusion. For example, although a source may rely on its projection of

post-change actual emissions in the actual-to-projected-actual applicability test, part of determining the post-change actual emissions requires the source to consider what amount of emissions increase the modified emissions unit could have emitted before the change and after the change before the source subtracts emissions unrelated to the change. It also requires the source to consider whether it is increasing its potential to emit of any regulated NSR pollutant from an emissions unit. Accordingly, we believe that the information necessary to compute a contemporaneous emissions increase or decrease based on an emissions unit's potential to emit will be available. We do not believe that performing two separate analyses (one for determining a significant emissions increase at an emissions unit and one for determining a significant net emissions increase at the source) presents an unreasonable burden. Moreover, we have required different methodologies for the basic applicability test and netting for EUSGUs since the 1992 WEPCO rules and we are not aware of any absurd results or undue burden placed on EUSGUs from the implementation of those rules. Accordingly, we are not extending the "actual-to-projected-actual" methodology to the computation of contemporaneous emissions changes for netting.

5.9 Debottlenecking

Comment:

Two industry commenters (IV-D-265, 307) believed that collateral emission increases arising after debottlenecking changes to non-emitting equipment should not trigger NSR analysis under the actual-to-potential methodology. The commenters maintained that actual emission increases resulting from increased utilization of the equipment because of a change elsewhere in the plant were not subject to an "actual-to-potential" test. One commenter (IV-D-307) also believed their interpretation was consistent with policy memos from EPA Regions IV and VI. The other commenter (IV-D-265) was concerned that other recent policy memos reversed longstanding regulations and policy to apply NSR to debottlenecked sources. The commenter (IV-D-265) reasoned that since BACT and LAER did not apply to debottlenecked units, the applicability test also should not apply.

Response:

We did not specifically request comments on debottlenecking issues in the 1998 NOA. However, we are currently reviewing these issues. Please see our press release at http://www.epa.gov/air/nsr-review/ concerning expected action related to debottlenecking.

Chapter 6 - CMA Exhibit B

6.1 Overview

As part of the settlement of a challenge to the EPA's 1980 NSR regulations by CMA and other industry petitioners, EPA agreed to propose for public comment and take final action on a methodology for determining whether a source has undertaken a modification based on its potential emissions. The exact regulatory language that EPA was to propose was set forth in Exhibit B to the Settlement Agreement. Under this methodology, sources may calculate emission increases and decreases based on either the actual emissions methodology in the existing rules or the unit's potential emissions, measured in terms of hourly emissions (that is, pounds of pollutant per hour). In the July 23, 1996 NSR reform proposal, EPA proposed the CMA Exhibit B methodology (the potential-to-potential test) as an alternative for determination of NSR applicability to modifications. This chapter contains the specific public comments on the CMA Exhibit B methodology. See chapters 4 and 5 for related comments on the potential-to-potential methodology in general and other applicability tests favored by commenters.

6.2 Support CMA Exhibit B

Comment:

6.2.1 Support CMA Exhibit B

Numerous commenters (IV-D-21, 31, 33, 38, 42, 62, 81, 98, 114, 127, 130, 146, 149, 154, 160, 161, 183) supported CMA Exhibit B. The commenters also offered various reasons for supporting CMA Exhibit B.

Two commenters (IV-D-33,114) stated that the potential-to-potential test will simplify and improve the administration of the NSR process. One commenter (IV-D-33) said potential-to-potential accounting reduces unnecessary NSR recordkeeping. Other commenters (IV-D-154, 160) stated that the potential-to-potential test in CMA Exhibit B will improve compliance and enforcement.

Some commenters (IV-D-154, 160) stated that the potential-to-potential test in CMA Exhibit B is an appropriate "apples-to-apples" comparison. Commenter IV-D-160 added that this would be fairer than the existing actual-to-potential approach, which has the inequitable result of capturing a source's unused capacity.

Some commenters (IV-D-62, 154) preferred the potential-to-potential test in CMA Exhibit B because it facilitates tracking emissions. One commenter (IV-D-62) stated that the test would provide a more understandable system with easier tracking for both industry and EPA compliance personnel. Other commenters (IV-D-154, 160) also stated that unlike the actual-to-

potential approach, the proposed potential-to-potential test in CMA Exhibit B is more likely to facilitate applicability decisions at the plant level.

Several commenters (IV-D-33, 38, 42, 114, 149, 160) preferred the potential-to-potential test in CMA Exhibit B because it would allow utilization increases. One commenter (IV-D-160) stated that the potential-to-potential test in CMA Exhibit B should be available for sources in cyclical industries such as automobile manufacturing plants because using existing capacity is critical. Another commenter (IV-D-114) encouraged the EPA to consider this option particularly in the utility/natural resource sector where utilization and demand are so closely related.

6.2.2 Partial Support

Some commenters (IV-D-22, 36, 106, 108, 121, 151, 153) gave partial or conditional support for the potential-to-potential test in CMA Exhibit B.

Three commenters (IV-D-36, 106, 153) indicated CMA Exhibit B as one of several acceptable choices for determining applicability. One of the commenters (IV-D-106) advocated CMA Exhibit B as a second preference to an actual-to-future-actual test. To avoid a decrease in representative actual emissions that may result from economic fluctuations within the 12-month period, the EPA should also develop the potential-to-potential methodology. The other commenter (IV-D-153) advocated allowing CMA Exhibit B as another choice for applicability that sources can choose to use in certain situations. The commenter (IV-D-153) endorsed CMA Exhibit B because it would not require a source to forfeit utilization increases, but did not specify when sources could choose to use the CMA Exhibit B methodology. One commenter (IV-D-36) supported an allowable-to-allowable methodology, but believed that CMA Exhibit B was really an allowable-to-allowable accounting.

Two commenters (IV-D-22, 108) supported a potential-to-potential applicability test such as CMA Exhibit B. The commenters did identify CMA Exhibit B as an example of an acceptable potential-to-potential test, but did not indicate directly that EPA should promulgate the proposed CMA Exhibit B. One of the commenters (IV-D-108) said in some parts of the country (such as the South Coast AQMD in the Los Angeles area) there should be a cap based on peak actual emissions during the previous 10 years. This cap could be supplemented as appropriate, with full permitted emissions for any units that had previously undergone NSR and thus are fully offset. The cap could also be supplemented with other increases due to collateral or cross-media impacts of excluded projects or ODS substitutions.

6.2.3 Support Potential-to-Potential Methodology

Many commenters supported using a potential-to-potential methodology, but did not directly support CMA Exhibit B. The comments generally supporting a potential-to-potential methodology are in chapter 4 of this document.

Response:

We recognize that the test prescribed under the CMA Exhibit B approach would provide additional flexibility to existing sources with respect to general determinations of applicability to the NSR requirements when a physical or operational change is made at a source. However, we do not believe that a test based on changes in a unit's hourly potential emissions would be appropriate as a general test for implementing the statutory definition of "modification" in the NSR program. We believe the statutory definition is best interpreted in the NSR program on the basis of actual annual emissions increases that will result from a physical change or a change in the method of operation of an emissions unit. However, as described below and in chapter 9 of this volume, we have not completely rejected an altered version of the concept for modified emissions units under certain circumstances, i.e., for emissions units with Clean Unit status.

Under our new rules, we are adopting a general applicability test that tracks the statutory definition of "modification" and eliminates the some of the burdens associated with the current "actual-to-potential" test when a source can project its actual emissions increases that will result from a modification project. This new test– the "actual-to-projected-actual" test–authorizes a source to project the post-change actual emissions of existing emissions units (including replacement and reconstructed units) that will undergo physical or operational changes. (New units will continue to undergo the current "actual-to-potential" test.) This projection of post-change actual emissions is compared to a baseline emissions rate that is based on the unit's actual operation during any consecutive 24-month period during the 10 years preceding the change to the unit. By allowing the source to use any consecutive 24-month period in the past 10 years, the problems associated with fluctuating emissions from one year to the next, as expressed by some commenters, are addressed by the new baseline approach. (See additional discussion of the rationale for the fixed 10-year look back in chapters 2 and 3 of this volume.) When more stringent emissions factors and operational limitations have been imposed on a unit since the representative period selected, the average annual emissions calculation derived from the unit's operation during such 24-month period must be adjusted as appropriate to account for the more stringent emissions factors and operational limitations. The adjustment helps to ensure that the unit's baseline emissions rate will not exceed the level of emissions the unit could emit currently when operating at the representative utilization level. The new applicability test, based on the new "actual-to-projected-actual" test, allows the source to exclude any component of the post-change annual emissions that could have been achieved by the unit before the change if that amount of increase is not related to the change. We believe this new test follows an appropriate interpretation of the statutory definition of "modification" for addressing emissions increase that result from a physical change or change in the method of operation at an existing emissions unit. It also addresses commenters' concerns about losing credit for capacity utilization under the original procedure.

The new rules provide some alternative applicability tests for certain existing emissions units when we believe it is appropriate to deviate from the new "actual-to-projected-actual" test.

The first alternative applies to sources that wish to establish an actuals PAL based on a plantwide actual emissions cap. If the source keeps the emissions below the emissions cap, then it will avoid the major NSR permitting process when alterations are made to the facility or to individual emissions units. The actual emissions become the de facto potential emissions and the source may emit up to the permitted level without going through major NSR, even if changes are made to the facility. The PAL allows a source to make changes quickly by allowing it to alter emissions units without first going through major NSR review. It thus limits the number and complexity of NSR applicability determinations, and reduces costs and delays. It also allows a plant manager to authorize changes, as long as the emissions remain under the permitted level, without first obtaining reviewing authority review under major NSR. Furthermore, it provides an incentive to use state-of-the-art controls and install new, lower-emitting equipment, which will allow sources to increase utilization. In return for the flexibility a PAL allows, a source must monitor emissions from all of its emissions units under the PAL. Therefore, the PAL ensures good controls and protection of air quality.

The Clean Unit test relies on current emission limitations as part of the test for particular units. The Clean Unit test recognizes that when a source goes through major NSR review (including air quality review) and installs BACT or LAER or comparable technology, the source may make any subsequent changes to the CU without losing Clean Unit status as long as the proposed project 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, as applicable. Therefore, for Clean Units, the emission limit is set at a level that is protective of air quality, but the source is not required to examine the impact of every subsequent physical change or change in the method of operation that meets the stated test. With these provisions, sources will have improved certainty and flexibility, reduced burden, and opportunity for utilization increases without compromising air quality. Like the PAL, the Clean Unit test includes necessary safeguards by requiring enforceable permit terms and conditions to ensure environmental protection.

6.3 Oppose CMA Exhibit B

Comment:

Many commenters (IV-D-7, 11, 14, 16, 47, 125, 137, 152, IV-G-7, 11) opposed the CMA Exhibit B potential-to-potential test. These commenters generally believed that the CMA Exhibit B test would be environmentally detrimental.

Three of the commenters (IV-D-14, 125, IV-G-11) believed the potential-to-potential test would allow sources to escape the major modification provisions. One commenter (IV-G-11) predicted that the potential-to-potential test would virtually eliminate NSR in most modification cases. Allowing facilities to use representative actual emissions as future emissions would make NSR a retrospective regulation program, which is neither the purpose of the program nor an

effective way to control air pollution. Once a facility has proceeded without NSR based on the representative actual emissions test, it would be difficult to take an enforcement action years later that would successfully require that facility to retrofit LAER and obtain offsets retrospectively. One commenter (IV-D-125) stated that the test would inappropriately exclude physical and operational changes at existing sources from major NSR due to the maximization of flexibility that the Exhibit B methodology provides. Under the potential-to-potential test, an existing source could make any change so long as the change did not significantly increase the source's hourly potential emissions rate. This is an unacceptable provision because it allows less control of greater numbers of emission sources. One of the commenters (IV-D-14) was concerned that CMA Exhibit B would mean that the statutory requirement for BACT was circumvented.

One commenter (IV-D-152) opposed CMA Exhibit B in its entirety. The commenter stated that under this approach, paper credits would dominate the program and real emission increases that would damage air quality would be allowed without review or the requirement to minimize emissions. The commenter indicated support of EPA's analysis of the problems of CMA Exhibit in the July 23, 1996 proposed rulemaking.

One commenter (IV-D-11) disagreed with the CMA Exhibit B methodology except in cases where the SIP is based on allowable emissions rather than actual emissions. This would preclude sources from trading emissions reductions that had already been relied on in the SIP.

Response:

As mentioned above, we agree with these commenters that a potential-to-potential test–especially one that focuses on short-term emissions rates--for major NSR applicability could lead to unreviewed significant emissions increases resulting from a physical or operational change made to an emissions unit. Such increases could be detrimental to air quality. We further agree with the commenters who were concerned regarding the creation of paper credits and other impacts on the broader air quality planning process. We also agree with the commenters that the potential-to-potential test prescribed by CMA Exhibit B could inappropriately enable certain modification projects to avoid the statutory requirements for state-of-the-art controls. However, as stated in Section 6.2 of this chapter, we believe the potential-to-potential methodology has benefits, and we have included PALs (see chapters 7 and 8) and the Clean Unit test (see chapter 9) into the final rule to take advantage of some of these benefits. See our response in section 6.4 of this chapter for more details concerning the environmental impacts of the CMA Exhibit B applicability test.

6.4 Environmental Impacts of CMA Exhibit B

Comment:

6.4.1 General Comments on Environmental Impacts of CMA Exhibit B

Some commenters (IV-D-62, 106, 114, 154, 160) believed the potential-to-potential test in CMA Exhibit B would be environmentally beneficial. They stated that the potential-to-potential test appropriately focuses on the significant emissions changes that could produce an adverse environmental impact. Some commenters (IV-D-154, 160) stated that by ensuring significant changes would be captured within the NSR system and by providing sources with an incentive to reduce emissions by installing new, lower-emitting equipment (which might inappropriately trigger NSR under the current actual-to-potential test), the potential-to-potential test in CMA Exhibit B would maintain the integrity of environmental protection. They also said it removes the disincentive to investments in process modifications.

One commenter (IV-D-160) stated that the test in CMA Exhibit B will promote the objective of environmental protection in a more cost-effective manner than the existing actual-to-potential approach. The current expansive application of the actual-to-potential approach imposes significant costs on sources and reviewing authorities without yielding environmental benefits. The potential-to-potential test would improve the cost-effectiveness of the NSR program by substantially reducing the associated costs without sacrificing environmental protection. The uniform application of the potential-to-potential test would lower the costs of the NSR process by reducing the complexity of the NSR applicability determination.

Several commenters (IV-D-7, 14, 47, 125, 152) believed that CMA Exhibit B would be environmentally detrimental. One of the commenters (IV-D-14) stated that CMA Exhibit B represents a substantial weakening of the PSD program with large increases in actual emissions, which in itself could lead to a significant deterioration of air quality.

6.4.2 Actual Emission Increases Without Review (Paper Credits)

Some commenters (IV-D-14, 16, 125, 152; IV-G-7) agreed that EPA's concern that potential accounting could lead to real emission increases due to unreviewed paper credits is legitimate. One commenter (IV-G-7) stated that the potential-to-potential test would conflict with SIPs that are based on actuals, threaten a State's RFP demonstration, and interfere with emissions credits relied on by SIPs. One of the commenters (IV-D-14) noted that older sources could use equipment that is not operating (that is, paper emissions) to avoid PSD. Even if the test was whether the equipment was operating, the source could game the system by just turning on the equipment. Also, there is nothing to prevent a source from acquiring equipment but not using it except to gain potential emissions for netting out of PSD. Finally, since there would be no requirement for equipment to be listed in the emission inventory, a company could move

equipment from one plant to another and thus gain credit for netting purposes due to the equipment potential emissions, even though the equipment was never operated.

On the other hand, other commenters (IV-D-33, 62, 183) believed that EPA's concerns regarding the environmental impact of a potential test were unfounded, particularly when potential emissions are used in attainment demonstrations and impacts analyses. One commenter (IV-D-183) noted that projects authorized under the PSD program have already undergone a sufficient review of air quality impacts in the pre-construction permitting process. The potential-to-potential test would eliminate the creation of paper reductions and ensure that only true emission reductions could be certified as such.

One commenter (IV-D-160) said the potential-to-potential accounting methodology in CMA Exhibit B would promote the objective of environmental protection in a more cost-effective manner than the existing actual-to-potential approach. The uniform application of the potential-to-potential test would lower the costs of the NSR process by reducing the complexity of the NSR applicability determinations, and by limiting the scope of the program to encompass only those significant physical changes that Congress intended to cover. By ensuring that significant changes would be captured within the NSR system, and by providing sources with an incentive to reduce emissions by installing new, lower-emitting equipment (which might inappropriately trigger NSR under the current actual-to-potential test), the potential-to-potential test would maintain the integrity of environmental protection.

One commenter (IV-D-146) noted that in reality actual and allowable emission rates are close because of other CAA requirements. These requirements will ensure that paper credits would not occur under a potential accounting system. The commenter said EPA's reservations about the use of allowable emission levels as a basis for NSR and PSD review are based on historical data. This fails to consider the convergence between actual and allowable emission rates being forced upon major sources that are required to comply with recently promulgated RACT and MACT standards. As the stringency of standards for new and existing sources increases, any gap between actual and allowable emission levels will narrow enough to be inconsequential for purposes of establishing generic administrative criteria for major source permitting.

Some commenters (IV-D-146, 154) noted that current programs are really based on allowables, so EPA's concern about the gap between actual and allowable emissions is unfounded. One commenter (IV-D-146) agreed that allowable emission rates and production levels are the currency upon which EPA and State and local reviewing agencies issue pre-construction and operating permits, and for major sources this will be included for entire facilities in their title V operating permits. Most States employ allowable emission levels and production rates as the basis for SIP demonstrations and air quality modeling.

One commenter (IV-D-31) agreed with EPA that under the CMA Exhibit B methodology past paper emissions could become future actual emissions not subject to NSR. However, the commenter did not believe this was a reason to reject a potential-to-potential test. It could happen under an actual-to-actual methodology also, where nothing precludes sources from maximizing their emissions 12 months before the planned modification.

Response:

Before proposing the CMA Exhibit B language, we did a preliminary analysis of the impact on the NSR program of the CMA Exhibit B changes. Clearly, these changes would provide additional flexibility to existing facilities with respect to determining if a significant net emissions increase would result from a physical or operational change. However, we also expressed concern about the environmental consequences associated with the CMA Exhibit B provisions. For example, a source could modernize its aging facilities (restoring lost efficiency and reliability while lowering operating costs) without undergoing preconstruction review, while increasing annual pollution levels as long as hourly potential emissions did not change. Also, CMA Exhibit B would allow sources to generate netting credits and ERCs for offsets based on potential hourly emissions, even if never actually emitted. This, too, could sanction even greater actual emissions increases to the environment often from older, unreviewed facilities, without any preconstruction review. In addition, significant increases in actual emissions resulting from unreviewed modification projects could go largely undocumented until a PSD review is performed by a new or modified facility that ultimately must undergo review. By that time, however, a violation of an increment could have unknowingly occurred. We were also concerned that Exhibit B would ultimately stymie major new source growth by allowing unreviewed increases of emissions, particularly those increases resulting from the physical or operational change, to consume all available increment in PSD areas. In addition, contrary to what a commenter indicated, the types of modifications that will be subject to the "actual-to-projected-actual" test are units that have not recently undergone NSR (some, if grandfathered, may have never undergone NSR) and generally lack up-to-date control technology, so as not to be eligible for the Clean Unit test, which checks to ensure that a project at a Clean Unit does not cause the need for changes in the emission limitations or work practices associated with BACT or LAER, as applicable (see chapter 9 concerning Clean Units).

In our analysis supporting the 1996 NPRM, we were unable to reach any conclusions as to the magnitude of any environmental impacts beyond noting that the effects would vary from State to State depending on how much cumulative difference exists between the unused potential emissions and actual emissions in a given inventory of sources and the extent to which any unused potential emissions have been used in attainment demonstrations. However, our analysis did show that typical source operation frequently does result in actual emissions that are below allowable emission levels.

6.5 Impact on Permitting New Greenfield Sources

Comment:

Some commenters (IV-D-7, 14, 125; IV-G-7) had concerns that the potential-to-potential test in CMA Exhibit B would consume a State's PSD increment. Two commenters (IV-D-14, 125) predicted that Exhibit B would negatively affect the permitting of new greenfield sources. One of the commenters stated that CMA Exhibit B would result in increment being consumed because BACT would be circumvented. This would result in inadequate air resources, which would mean that development would be blocked.

Two commenters (IV-D-62, 160) disagreed that CMA Exhibit B methodology would result in a State's PSD increment being consumed. One of the commenters (IV-D-160) noted that neither title I, part C of the CAA, nor the current PSD regulations contemplates that all activities resulting in emissions increases will be reviewed to determine their impact on PSD increments. For example, emissions increases from activities at existing sources would not trigger PSD review, provided that such activities do not meet the definition of PC-CMO. The CAA specifies that, if emissions increases resulting from such activities trigger increment violations, the appropriate remedy is to revise the SIP. Accordingly, the SIP revision process set forth in the statute should not be used to address any PSD increment violations that might result from activities not captured with the PSD system under the potential-to-potential approach.

One commenter (IV-D-62) believed that CMA Exhibit B would not have an impact on increment consumption, as permitting decisions, inventories, and SIPs consider potential emissions.

Response:

In the preamble, we discussed our concerns about the environmental effects that could result from the general use of an applicability test based on the CMA Exhibit B approach. We indicated that the approach, based on increases in hourly potential emissions, could result in unreviewed emissions increases on a tons per year basis from modifications of existing sources consuming all available increment in PSD areas. We agree, in part, with the commenters who stated that neither the Act nor our regulations contemplate that all activities resulting in emissions increases will be reviewed to determine their impact on PSD increment–even though these increases would consume increment. In fact, our definition of "major modification" excludes as physical or operational changes "routine maintenance, repair, and replacement," as well an "increase in the hours of operation or in the production rate" that occur alone and are not otherwise prohibited. We continue to believe that the "actual-to-projected-actual" test–and not the CMA Exhibit B test–is the more appropriate method for measuring actual emissions increases that result from a physical or operational change, while not counting for applicability purposes the emissions increases that result from excluded activities.

With regard to the comment that the CMA Exhibit B approach would not have an impact on increment consumption because permitting, emissions inventories, and SIP's consider potential emissions, we believe that this conclusion overlooks the fact that the regulatory increment consumption process is based on changes in "actual emissions." PSD increment analyses performed with potential emissions tend to be screening analyses, which are accepted if the results show that no violations will result. Hence, while many analyses may be done initially with potential or allowable emissions, PSD applicants always have the ability to perform a more refined analysis should the initial analysis reveal problems meeting the increment. That is, actual emissions increases ultimately may need to be (and in some cases have been) used to determine whether an increment is being violated. This is one reason why we believe that it is important to retain an applicability process that triggers NSR on the basis of actual emissions increases.

6.6 Air Quality Planning Process

Comment:

Several commenters (IV-D-7, 11, 14, 16, 47, 125) agreed that CMA Exhibit B is inconsistent with the air quality planning process. One of the commenters (IV-D-14) stated that tighter PSD applicability is conducive to the air quality planning goals of the CAA and the CMA Exhibit B relaxes PSD applicability. One commenter (IV-D-125) stated that CMA Exhibit B is inconsistent with the air quality planning goals of the NSR program in which section 173 of the CAAA requires offsets to be based on actual emissions, and the PSD increment system and many nonattainment area plans are keyed to an actual emissions baseline. Another commenter (IV-D-11) questioned whether the CMA Exhibit B methodology is consistent with section 173(c) of the CAAA regarding offsets in nonattainment areas. Another commenter (IV-D-14) agreed that increments are tied to actuals and having a potential baseline would be problematic for determining increment consumption.

One commenter (IV-D-47) said that the commenter's State has completed its SIP modeling based on actual emissions from existing facilities. Because the potential-to-potential test would require modeling to be based on potential emission levels, it would be virtually impossible for the State to meet the CAA requirements for attainment.

Two commenters (IV-D-154, 160) said the problem for air quality planning could be easily avoided by requiring that only actual emissions be used by sources in nonattainment areas to calculate offsetting emissions reductions to secure ERCs. Commenter IV-D-153 agreed that the CMA Exhibit B approach might need to be modified with regard to the creation of offsets and emission credits, because as currently drafted it would allow sources to rely on offsets resulting from a reduction of potential emissions even where actual emissions are not reduced. The commenter said offsets would probably have to be linked in an appropriate fashion to actual emissions.

One commenter (IV-D-62) maintained that using CMA Exhibit B would not disrupt air quality planning. The commenters (IV-D-62) believed that potentials could be used for ERCs and offsets.

One commenter (IV-D-33) believed the reviewing authority should be responsible for ensuring that netting credits and ERCs under the CMA Exhibit B potential applicability approach were accounted for in SIP planning. The commenter suggested that if the State or local reviewing authority has not accounted for increased emissions, a source should be given the discretion to adopt control measures, install control technology at the facility to limit emissions, or otherwise reduce the amount of ERCs generated but still be allowed to generate such credits for offsets based on potential emissions. The State or local reviewing authority would have the burden of showing that it has not accounted for the effect of the increased emissions in their SIPs.

Response:

We believe that, in addition to the CMA Exhibit B methodology being inadequate for accounting for actual emissions increases associated with physical or operational changes at existing emissions units, the methodology would also be problematic for generating ERCs, particularly for use as offsets. The use of potential emissions for offset credits is in direct conflict with the Act. Under section 172(c) of the Clean Air Act, emissions offsets must be based on reductions in actual emissions. Allowing sources to get credit for reductions in potential emissions would result in "paper" credits, and could allow sources to receive credit for reducing emissions that never actually occurred. Thus, our rules have not changed with regard to the calculation of reductions in actual emissions for offsetting purposes.

With regard to the amount of emissions increase that must be offset, consistent with our proposal, the new rules provide once a physical or operational change is determined to be a major modification (based on the "actual-to-projected-actual" applicability test) the current definition of "actual emissions" would continue to be used for other NSR purposes, including ambient impact analyses. Based on this position, the new rules for nonattainment NSR provide that the total tonnage of increased emissions, in tons per year, resulting from a major modification must be determined by summing the difference between the allowable emissions after the modification and the "actual emissions" (as defined by the current rules) before the modification for each emissions unit affected by the modification. [§See 51.165(a)(3)(ii)(J)]

6.7 Modifying CMA Exhibit B

Comment:

Two commenters (IV-D-81, 143) proposed modifying CMA Exhibit B.

One commenter (IV-D-81) stated that new and replacement sources with reasonable allowable emission rates and that have been reviewed under PSD, NSR, BACT, and other existing regulations should be treated as potential-to-potential emissions in PSD determinations. Grandfathered sources that have unreasonable emission limits that have not been similarly reviewed should be treated as actual-to-actual or actual-to-future-actual sources. This modification of the approach to CMA Exhibit B would allow a smooth transition to the new method without significant increases in actual emissions. This approach would also address the CMA concerns with the existing and proposed methods.

Another commenter (IV-D-143) recommended that NSR would be triggered only where a given activity at a source would increase the source's rate of emissions (on a kg/hr basis) above the rate that the source was capable of accommodating, physically and legally, during a representative baseline period. (Presumptively 5 years before the change, with the option of demonstrating that some further "look back" period is more representative.) Emission calculations for netting or offsetting would be based on actuals or allowables (taking into account enforceable permit conditions), whichever is lower.

Response:

After considering the commenters' suggestions for improving the CMA Exhibit B methodology, we ultimately decided to reject this methodology for the general purpose of determining whether a physical change or change in the method of operation would result in a major modification. We recognize, however, that the methodology does have certain benefits. Accordingly, we included provisions for PALs and Clean Units in the final rules to implement some of these benefits. Some of the recommendations given by these commenters are similar to provisions in our final rules. These include the use of the actual-to-projected-actual methodology for the emissions increase resulting from a physical or operational change at an emissions unit that has not recently undergone major NSR, and the use of permitted allowable emissions (and associated work practice requirements) for determining NSR applicability for units with Clean Unit status.

6.8 Other Comments on CMA Exhibit B

Comment:

One commenter (IV-D-14) stated that if the EPA is intent upon using the potential-to-potential test, a different means of ensuring BACT should be considered. Alternatives could include minimum control requirements for netting transactions. The only way the CMA Exhibit B methodology would work would be to require that control technology be employed on all new emission units or modified existing units regardless of whether they net out of PSD. The CMA Exhibit B methodology does not eliminate the need to track actual emissions since this is still needed for PSD increment consumption (PM, SO_2, NO_2).

One commenter (IV-D-42) stated that a potential-to-potential test could be used in the South Coast Air Quality Basin (SCAB), provided that a cap is imposed on all or part of a facility, and that it is based on peak actual emissions during the highest 12-month consecutive period in the preceding 10 years.

Two commenters (IV-D-62, 161) stated that EPA has not acted in good faith regarding the 1982 Settlement Agreement, noting that EPA essentially dismisses the CMA Exhibit B methodology in the proposal. Commenter IV-D-161 stated that the CMA Exhibit B changes are not incorporated into the proposed PSD/NSR rules revisions and are referenced as an alternative. Therefore, the July 23, 1996 NPRM does not accomplish the goal of proposing the CMA Exhibit B changes.

Response:

We disagree that we did not act in good faith when we proposed the CMA Exhibit B methodology. In the 1996 NPRM, we explained in detail the methodology contained in the CMA proposal. Although we did not include regulatory language for the potential-to-potential test in the 1996 NPRM, we explained that the language was contained in CMA Exhibit B, which was available to the public in the docket for the rulemaking. Then, in 1998, we published a NOA soliciting comments on a specific policy option for determining the applicability of NSR to modifications at existing major stationary sources. We did not specifically address CMA Exhibit B in the NOA because ample opportunity for comment was provided in the 1996 NPRM, and we knew of no issues at that time requiring additional public comment. Nowhere in the 1998 NOA did we explicitly or implicitly dismiss the CMA Exhibit B methodology, nor did we downplay its significance in the rulemaking process.

Because we decided to use a methodology other than the CMA Exhibit B methodology to determine whether a physical or operational change would result in a major modification, the concerns expressed by these commenters on the BACT analysis and how the CMA Exhibit B methodology could work in practice are no longer relevant.

Chapter 7 - 1996 PALs

7.1 Overview

We received numerous public comments on PALs in response to the 1996 NSR Reform Proposal. The comments on PALs concerned general support or opposition to PALs, area-wide PALs, alternatives for establishing emission levels for PALs, options for the permitting authorities, changes under the PAL, PAL review and adjustment, PALs in serious and above nonattainment areas, air quality changes, partial or mini-PALs, monitoring and enforcement of PALs, and PALs and clean facilities, as well as other miscellaneous comments on PALs.

We considered the public comments on the 1996 Reform proposal. In response to those comments and to further deliberations, we subsequently published a NOA concerning PALs in 1998. The NOA solicited comments on when, how, and why adjustments to PALs should be made. Chapter 8 of this document contains our responses to the PAL comments from the NOA.

7.2 General Support for or Opposition to PAL Concept

Comment:

7.2.1 General Support for PAL Concept

Many industry commenters generally supported EPA's proposal allowing PALs. (IV-D-9, 33, 42, 43, 45, 47, 57, 62, 65, 66, 67, 72, 73, 74, 78, 79, 80, 87, 90, 94, 97, 106, 111, 126, 129, 132, 138, 142, 150, 153, 154, 157, 167, 176; IV-G-04). Several regulatory agency commenters also generally supported EPA's proposal allowing PALs. (IV-D-19, 29, 70, 117, 137; IV-G-1, 2, 11)

One commenter (IV-D-43) stated that the PAL is one of the most important and positive changes EPA has proposed. Commenters (IV-D-43, 70, 72, 90, 129, 132, 138, 150, 176; IV-G-11) gave the following reasons why they supported the proposal.

- Readily understandable approach to emissions control
- Focus on what really matters– emissions
- Increased operational flexibility
- Quick reaction to market demand
- Permitting predictability, including certainty regarding the level of emissions at which a stationary source will be required to undergo major NSR
- Reduced costs for industry and permitting authorities
- Provides benefits without compromising air quality
- Incentives for source owners and operators to create room for growth under the cap by implementing pollution prevention and other pollution reduction strategies on existing emission units.

One commenter's company (IV-D-111) obtained the first auto industry PAL at one of their plants. The commenter stated that the effort involved in obtaining the PAL was reasonable, and it was able to establish practically enforceable conditions acceptable to EPA and the State authorities, and the current PAL is working well.

One commenter (IV-D-157) endorsed PALs as a true "win-win" approach both for sources and for the environment. The commenter claimed that sources are relieved of the burden of permit review for every little change and are more readily able to innovate, shift production, and respond to demand shifts.

One commenter (IV-D-52) supported PALs because they make many of the proposed changes to the NSR program unnecessary. The commenter stated that because the PAL methodology contains its own comparisons method (requiring actual emissions to be tracked and limited), the proposed changes to the comparison methods do not affect modifications under the PAL. In addition the commenter feels that sources with PALs may undertake pollution control and pollution prevention projects without an NSR exemption; the PALs assure an overall benefit to the environment. Also, claimed the commenter, sources with PALs may initiate their construction activities at any time, as long as they comply with the terms of their permit. Thus, according to the commenter, a widespread use of PALs would eliminate the need for these types of exemptions, exclusions, and other ways to allow projects to avoid NSR analysis.

One commenter (IV-D-65) strongly supported PALs but cautioned that they would be successful only if implemented correctly. Commenter IV-D-65 said the PAL is a way for sources that are generally well-controlled and have good compliance monitoring techniques to make changes that have little or no effect on air quality without encountering substantial procedural delays. However, confirmed the commenter, implementation will work only if the title V operational flexibility provisions, the rules for implementing Section 112(g), and the major NSR rules create an integrated approach for making physical and operational changes.

Other commenters (IV-D- 92, 98, 180) stated qualified support. One commenter (IV-D-98) stated that this regulation has the potential to be extremely valuable, but is not well defined. The standard, asserted the commenter, will allow inequities among facilities that are even greater than those allowed by current regulations. Some commenters (IV-D-92, 180) said they could only support a PAL program limited to well-controlled facilities. Otherwise, the commenters claim, the States' ability to disallow use of the PAL will be undermined by pressure to be no more stringent than EPA.

One commenter (IV-D-67) stated that if litigation holds up other NSR reform provisions, the EPA should still issue guidance establishing the groundwork for PAL.

7.2.2 General Opposition for PAL Concept

Several commenters (IV-D-08, 19, 34, 77, 110, 119, 128, 144, 147, 152; IV-G-02, 04) generally opposed the PAL proposal because of the burden it would impose.

One commenter (IV-D-128) objected to the extent PALs are intended to replace current law with what would, in fact, be a more burdensome and restrictive regulatory approach. The commenter stated that the agency should not pursue PALs (or any other supposedly beneficial "new" approach) at the cost of refusing to recognize and affirm the full extent of the relief that is already available under current law. The commenter stated that the relief that already is available to their industry under the current NSR rules (including the existing WEPCO rule), where those rules are properly understood and given their full effect, is far more beneficial than anything provided by the PAL approach.

Two commenters (IV-D-19, 77) stated that the proposed rule is much too complex, especially the applicability provisions. The commenters claim they are burdened with many complicated preconditions, especially those for PAL users.

One commenter (IV-D-160) maintained that, although PALs hold promise for simplifying NSR and providing greater certainty for all concerned parties, the proposed rule does not yield the full promise of PALs because it sets inappropriate ground rules for their establishment and implementation.

One commenter (IV-D-110) stated that the PAL proposal was not beneficial and that it contained pitfalls and threatened the flexibility the title V program was supposed to provide. The commenter claimed that the essential flaw of the PAL program is that it will be more restrictive than the current options available to source operators. Today, noted the commenter, a source operator can avoid PSD/NSR as long as emissions do not increase by a significant amount as a result of a non-exempt change in the plant or the manner of operation. According to the commenter, plant-wide netting already provides flexibility for the source operator to offset emission increases to stay below the significance threshold. However, unlike today's relative flexibility, the commenter asserted that the proposed PAL program has the potential to straight-jacket management decisions to a degree that will discourage participation in PALs.

One commenter (IV-D-119) disagreed that the new PAL approach is a major streamlining of the NSR program. According to the commenter, the currently applicable bubble approach available to sources is a far simpler way to achieve the same result. The commenter further stated that the PAL process is unnecessarily cumbersome and will not be useful in practice.

One commenter (IV-D-144) stated that the PAL provisions, as proposed, would establish an overly complicated regulatory framework for obtaining and operating under a permit with one or more PALs. The commenter felt that this framework could force a source to engage in an

extensive regulatory process to establish one or more PALs, only to have this process followed subsequently by extensive accounting mechanisms and a burdensome regulatory process every time a source wishes to undertake a change -- even a change that should fall within the PAL permit. According to the commenter, the existing NSR Program regulations already allow States to develop PAL permits. Thus, rather than overlay these regulations with complex and potentially counterproductive requirements, the commenter claims that the Agency should refocus its NSR Reform effort on pursuing measures that would enhance the current regulatory framework. The commenter suggested that such measures should begin with the development of guidance to States on how to integrate PAL permits more fully into NSR programs.

One commenter (IV-D-04) stated that a PAL determination is problematic because it is an applicability determination made in lieu of NSR. The commenter claims that will PALs, the requirement to conduct an analysis of alternatives, environmental cost and social cost in nonattainment areas is not legally required.

Commenter IV-D-152 opposed the proposed PAL approach because it is a voluntary program and the environment is likely to suffer because of gaming in the selection process. According to the commenter, the sources that are most likely to participate in a PAL program are the ones that are least likely to be forecasting increased emissions. In addition the commenter stated that the ones that are most likely to stay out of the program are the sources that are most likely to be considering plans that would increase actual emissions.

One commenter (IV-D-14) believed the benefits of PALs were negligible. According to this commenter, the PAL must be set using minor NSR, which requires enforceable conditions, recordkeeping and reporting requirements, and public comment. Therefore, claimed the commenter, the only real benefit to EPA's PAL as proposed would be if it streamlined the public comment process.

Response:

We appreciate all the supportive comments and agree with the commenters that believe that PALs will provide regulatory certainty and operational flexibility for sources and that PALs will be a win -win approach for you, the public and the environment.

A PAL is an optional approach that provides you with the ability to manage facility-wide emissions without triggering NSR. We believe this added flexibility of a PAL allows you to respond rapidly to market changes. You will benefit from the PAL option because you will have increased operational flexibility and regulatory certainty, a simpler NSR applicability approach, and fewer administrative burdens.

To comply with a PAL, you need to ensure that there are no emissions increases from your major stationary source, as measured against the PAL, through monitoring and

recordkeeping. However, the PAL concept may not be attractive to you if you do not believe that the flexibility and regulatory certainty that a PAL provides is worth the investment needed to operate a well-maintained facility with the necessary monitoring, recordkeeping, and reporting.

Finally, we believe that PALs will provide environmental benefit. Over the past several years, we have allowed use of major stationary source-wide emissions caps to demonstrate compliance with major NSR in a select number of pilot projects. We recently reviewed six of these innovative air permitting efforts and found substantial benefits associated with the implementation of permits containing emissions caps (among other types of permit terms offering greater flexibility than conventional permitting programs). Specifically, we reviewed on-site records to track utilization of these flexible permit provisions, to assess how well the permits are working and any emissions reductions achieved, and to determine if there were any economic benefits of the permits. Overall, we found significant environmental benefits occurred using the permit terms for each of the permits reviewed. In particular, the six flexible permits established emissions cap-based frameworks that encouraged emissions reductions and P2 , even though such environmental improvements were not an explicit requirement of the permits.

Based on the results of these pilot projects, we believe that PALs will over time tend to shift growth in emissions to cleaner units, because the growth will have to be accommodated under the PAL cap. Specifically, we expect that PALs will encourage you to undertake such projects as replacing outdated, dirty emissions units with new, more efficient models; installing voluntary emissions controls; and researching and implementing improvements in process efficiency and use of P2 technologies so that you can maintain maximum operational flexibility.

Lastly, we disagree with the commenters that believe that PALs are complex, burdensome and difficult to implement, based on our study of the pilot projects mentioned above.

7.3 Area-wide PALS

Comment:

7.3.1 Support Area-wide PALs

Several commenters (IV-D-31, 129, 140, 160, 167, 183, 189; IV-G-4) supported including provisions for area-wide PALs in the regulations.

Two commenters (IV-D-167; IV-G-4) recommended that the PAL concept be expanded to allow multi-facility bubbles where appropriate. Because reductions for ozone and fine particulates are district-wide mandates, the commenter claimed that the location of a particular reduction within a district is inconsequential. According to the commenter, EPA should simply require that title V permits clearly identify those limits that are intended to meet regional emission reduction targets. The commenter proposed that groups of facilities could exchange

limits back and forth without penalty, as long as the appropriate monitoring and record-keeping were in place to document that the aggregated individual facility limits stayed under the limit. In that way, claims the commenter, sources could negotiate among themselves to implement the most cost-effective means of meeting the region's emission reduction targets. The commenter also proposed that RACT-based limits and percentage reduction requirement based limits, intended to help control regional pollutants like ozone or fine particulate, should be interchangeable within and among facilities.

One commenter (IV-D-31) stated that an area-wide PAL approach could be meritorious. The commenter noted that precedent for such an approach has been clearly established in SCAQMD Rule 1135. According to the commenter, the SCAQMD rule set up a basin-wide flexible NO_x limit control strategy for utility boilers, essentially assigning a maximum annual limit for each specific utility company. In the rule, the annual limit was ratcheted downward each year for purposes of attainment. The commenter stated that the rule allowed the utilities to distribute the NO_x load among their operating boilers as they saw fit. As many as 60 utility boilers were under the rule at one time, according to the commenter.

One commenter (IV-D-129) observed that an area-wide PAL presents an excellent method for coordinating pollution control programs between two companies sharing space in the same complex. One commenter (IV-D-183) supported the concept of area-wide PALs in situations arising from change of control or ownership. The commenter felt that such a program may become increasingly important in a deregulated electric industry.

One commenter (IV-D-140) supported the use of area-wide PALs but requested careful consideration of the method EPA uses to set area-wide PALs and allowance of individual facilities to opt-out of the area-wide PAL at any time. For those facilities that are included in the PAL, the commenter stated that the PAL should be set following the precedent established in the facility-specific PAL definition; that is, the "area-wide" actual emissions plus a margin less than the cumulative applicable significant emission rate for each participating facility. The commenter stated that one complicating factor would be how the Agency addresses the situation where a PAL exceeds the area limit. In the situation, the commenter felt that the facility should only have to undergo the NSR review.

One commenter (IV-D-160) asserted that although States should have the flexibility to implement PALs on an area-wide basis, the final rule should clarify that individual sources may "opt out" of area-wide PALs.

7.3.2 Oppose Area-wide PALs

Several commenters (IV-D-11, 43, 86, 92, 94, 103, 105, 106, 125, 137, 142, 147, 153, 154, 157, 180, 191) opposed including provisions for area-wide PALs in the regulations.

7.3.2.1 Area-wide PALs are unworkable and of little practical use

One commenter (IV-D-11) raised concern with the workability of an area-wide PAL. According to the commenter, the source-specific PAL system is unduly restrictive and its complexity outweighs the operational flexibility offered. An area-wide PAL, notes the commenter, if it is defined with the same level of complexity as is the source-specific PAL, will be unworkable.

One commenter (IV-D-86) believed that units with technology-based source-specific emission limitations, generally units regulated through BACT, LAER, and NSPS, are excluded from full consideration in the area-wide PAL program. The commenter claimed that the law does not require these units to be excluded. As proposed, the commenter felt that the area-wide PAL program will in most instances be of little practical use. Excluding these sources , notes the commenter, results in increased spending of EPA, permitting authority, and industry resources via the high load of permitting and review actions, which are neither necessary nor required to protect the nation's air. The commenter also felt that the area-wide PALs impedes economic growth diverted from other worthy public and private projects. Moreover, the commenter claimed that the environment is adversely affected. For example, according to the commenter, the proposed rule provides incentives for older equipment with greater emissions to be operated for as long as possible and at the highest capacity, since it is only this "grandfathered" equipment that can participate in the area-wide PAL program contemplated by the proposed rule.

Some commenters (IV-D-86, 92, 137, 180) maintained that the area-wide PAL concept made the most sense when a close relationship exists between actuals and allowables. However, claims the commenter, this type of trading should be considered under the open market trading rules, not the NSR rules, as many issues must be explored. These issues, noted the commenter, include the enforceability of the cap, off-property impacts, and cooperation between participating companies.

One commenter (IV-D-105) expressed particular concern about area-wide PALs. According to the commenter, area-wide PALs would effectively require reductions in emissions from sources that are currently in compliance with all applicable regulations. Therefore, the commenter asserted that a company would be hesitant to install any type of pollution control equipment voluntarily or by permit if an area-wide PAL could be set by a regulatory agency that will require further reductions.

One commenter (IV-D-125) argued that implementing an area-wide PAL will lead to forgone emissions control opportunities.

One commenter (IV-D-137) said State and local air agencies will need time to develop PALs consistent with the approaches provided in the final NSR rule, as well as to develop data management and compliance assurance approaches that will accommodate the PAL approach.

Thus, the commenter claimed that adding the area-wide PAL, at the same time as the source-specific PAL, may create several administrative headaches.

One commenter (IV-D-157) stated that in cases where the attainment and PSD demonstrations for an area are based on allowable or potential emissions, the PAL should be based on such limits as well. The commenter believed that any such new site-specific limit should be presumed to represent actual emissions and, thus, can provide the basis for a PAL. And even when such a PAL is reviewed after having been in effect for 10 years, the commenter stated the PAL should be reaffirmed without change as long as its emissions levels are still consistent with all applicable air quality goals. The commenter questioned that if this is the case, what justification is there for a new regulatory proceeding?

7.3.2.2 Area-wide PALs should be a voluntary program

Many commenters (IV-D-09, 33, 39, 43, 94, 103, 109, 111, 142, 147, 153, 154, 191) said PALs should never become mandatory. These commenters supported the PAL concept as long as it was voluntary and the source could choose whether to request one.

One commenter (IV-D-94) opposed an area-wide PAL unless EPA can ensure that all subject facilities in an area want PALs as an alternative to NSR.

One commenter (IV-D-103) observed that as proposed the area-wide PALs would require all major sources in an affected non-attainment area to operate under PALs, whether they wanted to or not. The commenter stated that States might then unfairly focus on facilities with PALs when trying to meet Reasonable Further Progress requirements. The commenter felt that facility owners, not State agencies, should decide whether to operate under PALs.

Two commenters (IV-D-106, 142) said area-wide PALs would be inequitable. Commenter IV-D-106 said, because of the variation among facilities, the criteria for establishing a PAL may work well in some situations, but not in others. The commenters claimed that adoption of a PAL program on an area-wide basis would help some companies, but hurt others, and the commenter could see no compelling regulatory reason for universal application of this approach to all sources in an area. The commenter (IV-D-142) added that such an approach would penalize facilities that are underutilized and could lead to the imposition of BACT/LAER for even minor changes at such units.

Commenter IV-D-154 added that sources need the flexibility that mandatory PALs threaten to take away from them.

Response:

We agree with the many commenters who opposed an area-wide PAL system, believing that the approach would be complex and resource and time intensive. We also perceived little interest in such an approach from the various stakeholders with whom we have met. Accordingly, we are not including any provisions in our final rules to implement an area-wide PAL system. However, if a State has or proposes to have an area-wide PAL, they would have to demonstrate that their program is equivalent to or more stringent than our Federal rule and complies with the minimum elements of the Federal program.

7.4 Alternatives for Establishing PALs

Comment:

7.4.1 Base PALs on Actual Emissions

One commenter (IV-D-20) supported basing the PAL level on actual emissions. Another commenter (IV-D-14) supported basing the PAL level on actual emissions as one of two acceptable options, but only if actual emissions were based on the highest 12 months of utilization in the past 10 years, as well as on actual emissions plus an operating margin less than the significance level. The commenter (IV-D-14) believed that basing the PAL on actual emissions as defined in current §51.166(b)(21)(ii), the highest 2 years in the past 5, would be more stringent than emission limits under the current netting procedures. Such provisions, claimed the commenter, would benefit the environment, but would also require some sources to give up capacity if their limits were based on a period of economic slump. If the actual emissions were based on the highest 12 months in the past 10 years, the commenters felt that the source would not have to give up unused capacity because the highest year emissions is almost certain to exceed a 2-year average.

Four commenters (IV-D-96, 109, 177; IV-G-11) advocated basing the PAL level on historic actual emissions.

One commenter (IV-G-11) stated that it was essential to clarify that (in a nonattainment area) a facility is precluded from using a base year that is prior to the year of the most recent SIP inventory (on which the State's attainment demonstration is based). The commenter claimed that EPA suggests a reasonable operating margin that is less than a "significant increase" could then be added. The commenter also claimed that the historical actual is an acceptable baseline, but it does not comport with adding a margin that is less than "significant." The commenter felt that this margin is still an environmentally significant amount of emissions. As it is possible this increase could occur without a physical or operational change, the commenter claimed that many jurisdictions would have no legal handle to review or in any way "control" that emission increase. According to the commenter, EPA's requirement that the PAL approval would have to

be made up of RACT, BACT or other operational limitations (so as to be federally enforceable) would be difficult to put into place in the approval, particularly for this "margin."

Commenters (IV-D-96, 177) viewed the PAL and the use of historic actual emissions as a practical approach to limit mass emissions and to clarify the conditions from which emission increases are determined. In addition to their being used to establish a reasonable baseline, the commenters believed the historic actual emissions are used in establishing a source's surplus reductions that may be used as offsets. The commenters further stated that the PAL emissions should be calculated based upon current information.

One commenter (IV-D-04) stated that if actual emissions are calculated using the proposed baseline determination (highest 12 months in past 10 years), the methodology creates the risk that an emissions cap will be significantly higher than emissions under normal operations. Moreover, claims the commenter, any inflexible formula for the baseline determination prohibits the permitting authority from considering the interests of nearby communities.

One commenter (IV-D-125), who requested that the alternatives for establishing PALs be structured to optimize air quality improvement and avoid opportunities to forego emissions control, said the "actual emissions" alternative for establishing a PAL could be problematic if the source is permitted for actual emissions and then allowed to use PTE.

7.4.2 Base PALs on Actual Emissions Plus an Operating Margin

7.4.2.1 Agree with proposal

Several commenters (IV-D-28, 31, 47, 52, 53, 67, 72, 80, 97, 106, 110, 111, 112, 113, 137, 138, 142, 157, 163, 170, 172) supported basing the PAL on actual emissions plus an operating margin. However, only six of these commenters (IV-D-106, 110, 112, 113, 142, 172) specifically supported basing the PAL on actual emissions plus an operating margin less than the applicable significance level.

One commenter (IV-D-110) stated that using actual emissions plus a "reasonable operating margin less than the applicable significant emission rate" is the only appropriate definition. The commenter stated that EPA's other options are to expand the EPA's jurisdiction to regulate changes beyond its current authority, or violate the Act. The commenter stated that an increase of emissions to above the PAL level triggers PSD/NSR review, but under the PAL proposal, it is not only for the major source or the changed source, but for all emission sources for that pollutant, including minor and *de minimis* sources. In essence, the commenter felt that accepting a PAL is an acquiescence by the operator to Federal enforcement authority of all emission sources of that particular pollutant. The commenter also felt that preemption of State jurisdiction over minor sources and *de minimis* sources is simply inappropriate. Another

commenter (IV-D-142) also recommended that the PAL level include a reasonable operating margin that is less than the applicable "significant" emissions level, as defined in the NSR regulations. The commenter noted that major NSR does not apply to changes that do not result in a "significant" increase in emissions. The commenter supports including a reasonable operating margin less than the applicable significant emission level in the PAL is consistent with this approach. The commenter stated that if sources are prohibited from including a reasonable operating margin in their PALs, the PAL could be exceeded for relatively minor changes, or for routine activities.

One commenter (IV-D-14) identified actual emissions plus an operating margin less than the significance levels as one of two acceptable options, but only if actuals were based on the highest 12 months in the past 10 years. The commenter believed this approach would be roughly equivalent to the current rules with netting provisions. The commenter believed that an operating margin **greater** than the significance level would weaken the PSD program and would not be true "reform." The commenter claimed that more physical source modifications could escape installation of the BACT during plant modernization. The commenter believed that because most minor NSR programs do not have any BACT provision, emissions to the atmosphere would increase.

7.4.2.2 Proposal is too stringent

Several commenters (IV-D-17, 28, 52, 72, 138, 163) believed that an operating margin less than the significance level would be too stringent.

One commenter (IV-D-52) stated that PALs set by the current calculation method are particularly difficult for large sources to accept. The commenter claimed that normal fluctuations in emissions would probably cause the source to exceed its PAL level set at the current definition of past actuals about half the time (since the definition is based on an average). The commenter felt that adding an operating margin equivalent to the significance level can mitigate part of this problem, but if the variation in VOC emissions (for example) can exceed 100 tons per year, an operating margin of 40 tons per year will not be sufficient to allow the source to remain below the PAL level.

One commenter (IV-D-17) pointed out that basing a PAL on actuals plus an operating margin is not a viable option in extreme nonattainment areas where the significance level is zero. One commenter (IV-D-28) believed that the "reasonable operating margin" should be at least greater than the "applicable significant emissions rate;" otherwise, there would be no room for growth.

One commenter (IV-D-138) endorsed EPA's proposal to set the PAL based on actual emissions, with the addition of an operating margin to accommodate short-term and long-term production growth. However, the commenter believed there is no good reason to restrict the

growth allowance in the PAL to no more than the significance levels for the particular emissions. The effects on air quality of emission increases beyond the significance levels can be assessed as part of the PAL permitting process to ensure no impairment of air quality would accompany the increased emissions from higher production levels.

One commenter (IV-D-72) failed to understand why PALs should be restricted to actual emissions plus a reasonable operating margin that is less than the applicable significant emissions rate. The commenter claimed that few facilities would elect to establish such a restrictive PAL because current NSR rules allow a greater emissions increase during the 5-year period. The commenter noted that the ceiling currently imposed by the "significant emission rate" (for example, 39 tons for VOCs) applies for each facility modification, and not for a period as long as 5 years. In fact, according to the commenter, under today's rules a source could possibly make three 39-ton modifications over a 5-year period without triggering NSR.

One commenter (IV-D-163) stated that the proposed PAL would require facilities to undergo NSR review if emission increases were made that were greater than the significance threshold. The commenter stated that this is the same as the current NSR program.

7.4.2.3 Other definitions for operating level

Several commenters (IV-D-28, 46, 47, 52, 67, 72, 80, 106, 138, 157, 163) supported basing PALs on actual emissions with an operating margin, but defined the operating level differently than EPA's proposal of less than the applicable significance levels.

One commenter (IV-D-47) suggested that the baseline emissions cap determinations should be consistent with the methodology used in determining ERCs. In those circumstances, described by the commenter, the emissions baseline is calculated using the two calendar years immediately preceding the actual emissions reduction that generated the ERC. To address those instances when the two consecutive calendar years preceding the emissions reduction are not representative of normal facility operations or emission rates, the commenter proposed that the generator of the ERC may use any consecutive 2 calendar year period within the preceding 5 years that is representative of facility operations. The facility emissions cap would be set at the actual baseline plus any unused major source growth allowed up to the pollutant threshold levels that trigger NSR. This emissions add-on would be affected by increases that have occurred during the appropriate contemporaneous period for this facility. If individual sources or groups of sources already have existing emission caps for PSD or NSR purposes, those caps must be retained or the sources must undergo a new PSD or NSR evaluation. All new sources installed must also undergo a State BAT analysis. This approach ensures that all sources are controlled to at least today's available technology standards without diminishing a facility's emissions cap, even if the technology is installed on existing sources. The facility would not be penalized by the BAT requirement with a reduced emissions cap, but retaining the State BAT requirements assures the continued development of lower emitting sources for the future.

One commenter (IV-D-52) proposed setting the PAL at a level that gives sources sufficient room to operate, calculating the baseline and the operating margin as follows: set the PAL level at the sum of the baseline and the operating margin. The commenter proposed that the baseline would be either the source's highest 12-month utilization during the last 5 years times its current emission factor or its highest 12 months of emissions during the last 5 years. In addition, the commenter proposed that the operating margin would be three standard deviations of the normal fluctuation of the emission data or the appropriate significance level.

Several commenters (IV-D-80, 97, 134, 142, 157, 162) advocated using the 12 months of highest utilization in the past 10 years as the PAL baseline. One commenter (IV-D-142) recommended that the PAL level be set as actual emissions, as based on 12 consecutive months of utilization data within the past 10 years, coupled with current permitted emission rates. Further, the commenter recommended that the source should be allowed to use different utilization data for each emissions unit in establishing the PAL level. Another commenter (IV-D-157) requested that the EPA allow States to set the PAL baseline by using the same "twelve consecutive months out of 10 years" rule that it has proposed for other "past actual" determinations. The commenter claimed that a 10-year baseline for determining "past actual emissions" is needed to avoid an NSR system that confiscates production capacity by setting a baseline for determining "past actual" emissions that is too short to take in past high production years. One commenter (IV-D-80) supported choosing any consecutive 12-month period within 10 years prior to the modification or establishment of a PAL. Based on the commenter's experience with multiple process units and maintenance turnarounds, the "12 in 120" method will alleviate confusion surrounding the representative period vs. the preceding 2-year period. The commenter noted that different process units have differing periods of highest utilization. The commenter claimed that selection of a single 12-month period would result in several process units not being at their highest utilization. The commenter asserts that this is typical of a large complex facility with multiple products and cyclic variation. If facilities are required to use one time period for all sources of pollutants, the commenter feels that the PAL may be set too low and become overly restrictive for some pollutants. Commenter IV-D-134 further indicated that the baseline could be from before November 15, 1990. Another commenter (IV-D-157) stated that otherwise unused production capacity would be confiscated.

One commenter (IV-D-163) stated that the PAL should be based on a 10-year past production basis plus a reasonable margin based on growth and inherent process variability. A PAL constructed in this manner, asserted the commenter, could be greater than an NSR criteria pollutant threshold. However, if this were the case, the commenter noted that a source would have to demonstrate compliance with the NAAQS. The commenter felt that this system would allow a PAL to be constructed such that it reflects real operation and market-conditions. An exceedance of the limit would then be subject to NSR. According to the commenter, changes within this "real-life" PAL would not be subject to NSR, as proposed by the Agency.

Two commenters (IV-D-67, 139) also urged EPA to consider utilization in setting the PAL. One commenter (IV-D-139) raised concern that the "reasonable operating margin" (used to establish the PAL) is not properly defined. According to the commenter, the term should be presented as a percentage of emissions, which could also vary with the pollution control equipment, processing, or throughput capacity. Another commenter (IV-D-67) advocated basing the operating margin on predicted utilization.

Two commenters (IV-D-55, 67) advocated having a demand growth provision in the PAL. One of the commenters (IV-D-55) believed that the permitting authority and the source should decide how the demand growth exclusion would be used for industries other than utilities. The other commenter (IV-D-67) stated that it is not realistic for sources seeking PALs to base them on future potential emissions. The commenter stated however that, basing PALs on very recent actual emissions, with no "breathing room" for a facility, eliminates any benefit PALs may provide. Therefore, asserts the commenter, PAL caps should be set based on multiplying baseline actual emissions by a demand growth factor.

One commenter (IV-D-72) proposed the operating margin be based on the significant emissions rate multiplied by three -- during the life of the PAL.

One commenter (IV-D-157) claimed that the PAL approach is an application of the EPA's 1980 view that site-specific allowable emissions could be considered equal to actual emissions and they recommended that the "baseline" for each PAL reflect that same approach. Accordingly, they requested that the PAL should be set equal to the "actual emissions" at the time the PAL is created, plus an "operating margin" to reflect the fact that any source that aims at reliable compliance will always hold its actual emissions somewhat under its PAL.

One commenter (IV-D-31) maintained that PALs could be established at levels higher than actual emissions, particularly if a source has fully offset potential emissions, and if appropriate monitoring is in place. According to the commenter, establishing the PAL at existing actual levels would make the program unattractive to many sources in severe and extreme areas since they would be "donating" valuable property (the difference between actuals and purchased offsets for a higher PTE). The commenter did not specify what the level of emissions above actuals should be.

Commenter IV-D-113 would add definitions for significance for serious, severe, and extreme ozone nonattainment areas. (That is, less than 25 tpy in serious and severe ozone nonattainment areas and 0 tpy in extreme ozone nonattainment areas.)

Commenter IV-D-125 said if an operating margin is allowed, it should be minimal.

7.4.3 Other Methods for Establishing PALs

Several commenters (IV-D-11, 31, 33, 44, 52, 53, 67, 80, 84, 87, 92, 94, 98, 108, 121, 139, 140, 142, 147, 149, 152, 157, 180, 184, 192) offered other methods for determining the PAL level.

One commenter (IV-D-44) advocated choosing a PAL baseline that has been promulgated through notice and comment rulemaking. The commenter emphasized that the procedures for establishing the PAL should be simple or companies will not enter the PAL program.

Two commenters (IV-D-94, 147) strongly encouraged the EPA to finalize a provision that supports the use of a number of different baselines (that is, actuals, potentials, and allowables) in establishing the PAL. Under the current proposal, claimed the commenters, many facilities will be penalized severely if they re-permit their facilities to an actual baseline and relinquish unused capacity that currently exists in the form of potential or allowable emissions.

One commenter (IV-D-192) urged EPA to consider ambient air quality averaging times in addition to annual emissions for establishing the PALs. The commenter maintained that the increased operational flexibility provided to the source creates a situation where the facility could make substantial operational changes that unknowingly exceed the PAL. The commenter noted that responsibility would fall upon the State to discover this violation and assess penalties. Unfortunately, according to the commenter, the PAL as proposed only considers annual emissions as the primary parameter of environmental effect. The commenter requested a greater recognition of all the NAAQS averaging times. This approach, claimed the commenter, would utilize operational changes that do not involve either any appreciable change either in the quality or nature, or any increase in either the potential to emit or the effect on air quality.

One commenter (IV-D-152) recommended that the PAL be set at a level that achieves significant overall emission reduction or, in some cases, a reduction in emissions per unit of production. The commenter suggested that in the latter case, there be an air quality impact review, and that it also be limited to PSD areas so as not to risk creating or exacerbating nonattainment problems.

One commenter (IV-D-87) argued that the proposed PAL definition will reduce the effectiveness of PALs. The commenter claimed that basing the PAL on actual emissions could have the unfortunate effect of encouraging companies to operate older, dirtier equipment at maximum rates in order to maximize the actual emission cap. Instead, the commenter advocated basing levels on the sum of a company's actual and allowable emissions, divided by two, with a reasonable operating margin that recognizes the cyclical nature of operations.

Commenters (IV-D-92, 180) argued that the PAL should be established based on maximum design capacity with BACT controls installed across the entire plant site (maximum

potential to emit, but calculated after controls). Using this method, the commenters claimed that the maximum emission rate is contrasted to the prior actual emissions and compared with Federal significance levels up front. Under the PAL, the commenters stated that the emissions a source will produce over time may be expected not to increase. The commenter felt that no target or motivation is provided to the source to reduce emissions. Conversely, under the State's flexible permits guideline, the commenters claimed that the emissions a source will produce over time may be expected to decrease. The target, the commenters stated, is measured reduction over defined time. The commenter requested clarification on how EPA's second and third methods would be applied. The commenter predicted that under the current PAL proposal, a poorly controlled facility will come away with a distinct market advantage over its well-controlled competitor. The commenters claimed that higher historical emission rates translate to a higher PAL. According to the commenters, as long as the PAL is not exceeded, the source can add units, shut down units and replace units without being subjected to a rigorous Federal review. On the other hand, claimed the commenters, the well-controlled competitor will have tighter restrictions and fewer options under the low emission cap it is granted and will be more likely to trigger Federal review for even minor changes. The commenters believed limitations on the PAL should be set based on a minimum level of control. In addition, the commenters believed flexibility should reward well-controlled facilities and motivate less well-controlled facilities. The commenters claimed the PAL as proposed does neither.

One commenter (IV-D-98) preferred using either allowable or potential emissions as the basis for the PAL level.

Two commenters (IV-D-33, 149) supported the use of a methodology that conforms to either "potential-to-potential" or "actual-to-future actual" to establish PALs. The commenters suggested that options conforming to both methodologies for establishing PALs be incorporated into the final rule.

One commenter (IV-D-121) maintained that there are instances where a PAL set at potential emission levels would not interfere with timely attainment and maintenance of NAAQS and increments and therefore could receive EPA approval. The commenter acknowledged that perhaps the company would have to perform some modeling, or the State would have to do a study. The commenter felt that EPA should not foreclose those opportunities. Instead, according to the commenter, the Agency should give guidance and assistance to States on the burdens they would have to carry to gain approval for a PAL program based on potential emissions.

One commenter (IV-D-184) referred to lessons learned from the adoption of the NO_x/SO_x RECLAIM program and the rejection of the VOC RECLAIM program in the South Coast Air Basin and requested that the PAL be derived from the emissions of only the highest level of activity year.

One commenter (IV-D-140) stated that the permitting authority should also have the flexibility to aggregate emission units in order to establish PALs. The commenter gave examples of situations in which a source cannot determine the exact emission rate from an individual emission unit, however, the aggregated emissions from a group of emission units could be determined. In these cases, according to the commenter, an administrative change should be sufficient to modify existing permits from an individual emission unit basis to an aggregated basis.

One commenter (IV-D-52) proposed a market-based approach to air emissions with the PAL concept. The commenter claimed that a significant fee would encourage each source to identify its inefficient processes and eliminate or change them (through pollution prevention activities, for example). The commenter believed that the PAL would provide a flexible environment for the source to make these changes. In addition, the commenter believed the PAL would be a safeguard; for those sources at which the emission fee was not a major cost (relative to the product), the PAL would still require technology review for projects exceeding the PAL, as well as providing the incentives for remaining below the PAL.

7.4.4 Other Comments on Establishing PALs

Some commenters (IV-D-11, 14, 47, 113, 147) raised other issues regarding setting PALs.

One commenter (IV-D-11) recommended that initial permitting should use best available information to estimate emissions for purposes of setting the PAL. The commenter stated that provisions should be integrated into the rulemaking for revising the PAL when better information is obtained in the future regarding changes in actual emissions. In existing PAL-like programs, claimed the commenter, emission factors or limited test data often improve after a PAL is set for a facility. According to the commenter, the permitting authority should be able to make adequate corrections without the permittee having to fear enforcement for noncompliance. On the other hand, if those changes trigger any new applicable requirements, those new requirements must be addressed.

One commenter (IV-D-47) recommended that all emission changes at a facility be reported, although they may be allowed under the PAL. The commenter claimed that this stipulation allows the State permitting authority to make assessments of these changes, including ambient impact analysis.

One commenter (IV-D-14) maintained that PALs should not be set so high that they create paper emissions. The commenter provided that one way in which paper emissions could be created would be to go far enough in the past in order to include emissions from equipment or processes no longer in use or emissions that are no longer capable of being generated because of alternations or reconfiguration to processes (upstream or down stream) of the equipment in

question. The commenter urged EPA to set the PAL to prevent discontinued equipment and process lines from potentially being included in the PAL, as there is no 5-year contemporaneous time period like in the netting analysis.

One commenter (IV-D-14) requested clarification of proposed §51.166(u)(3)(i)(A): that is, does the wording of the section "Emission limitations and conditions" mean that : (1) the PAL can exceed current allowable emissions once the operating margin is added, or: (2) that PAL is the plantwide actual emissions and after a reasonable operating margin is included the PAL cannot exceed allowable emissions? The commenter stated that if the PAL were, for instance, to exceed a level assumed to avoid PSD, then this approach would undermine previous PSD actions.

One commenter (IV-D-147) said EPA should clarify in the final rule that PALs should not be imposed on sources that do not want them.

One commenter (IV-D-113) said establishing a PAL should require at least a minor source construction permit review or be consider a minor modification of a major source. The commenter requested that the rule should be more specific regarding the information that must accompany a request for a PAL.

Response:

After considering the many comments on alternatives for establishing PALs, we have decided to go forward with PALs based on actual emissions. We believe that a major stationary source's compliance with an actuals-based PAL system is a permissible means of assuring that the source does not have a significant net emissions increase. Under the final regulations, the PAL level will be set by summing the baseline actual emissions of the PAL pollutant for each emissions unit at your existing major stationary source, and then adding an operating margin amount equal to the applicable significant level for the PAL pollutant under paragraph 40 CFR 52.21(b)(23) or under the Act , whichever is lower.

We believe that the operating margin is necessary for the following three reasons: To be consistent with the current NSR applicability rules - the current regulations exempt emissions increases of less than significance level from NSR since they do not result in a significant net emissions increase and hence a major modification. Secondly, it is important to provide this margin to ensure that a source has some room to allow for operational fluctuations - otherwise every fluctuation potentially could trigger a violation. Finally, we believe that this margin will serve as an incentive for sources to opt for this program, since these sources will be giving up their allowable emissions when they obtain a PAL based on baseline actual emissions.

We agree with those commenters who advocated a 10-year baseline period for PALs. In the final rules, we are changing the definition of baseline actual emissions for the major NSR

program to allow a look back period of 10 years (except for utilities). This change was based on a study of business cycles ["Business Cycles in Major Emitting Source Industries," September 25, 1997; Eastern Research Group, Inc.] . The study's findings supported a 10-year look back to ensure that the normal business cycle would be captured generally for any industry. For consistency with the base program and ease of implementation, we believe that the baseline period for PALs should also be 10 years.

We do not agree with the commenters who preferred different baseline periods for different units under the PAL. In the final rules, we are requiring the use of the same single consecutive 24-month period within the 10-year look back period to calculate the baseline actual emissions for existing emissions units in the major NSR program. For consistency with the base program and ease of implementation, we believe that the baseline period for all units while setting a PAL should be the same.

We do not agree with those commenters who believed that the PAL should be based on the ambient air quality averaging times. When establishing a PAL, you must comply with all applicable requirements of the reviewing authority's minor NSR program, including modeling to ensure the protection of the ambient air quality. The reviewing authority would ordinarily request air quality modeling for any changes if it believes that the changes under the PAL may affect the NAAQS or PSD increments or cause an adverse impact on an AQRV in a Class I area .

One commenter stated that the PAL baseline must not be before the most recent SIP inventory on which an attainment demonstration is based. While, we agree that the PAL baseline must be consistent with current assumptions regarding the source's emissions that are used under the applicable SIP for planning or permitting purposes, we believe it is up to the States to use appropriate measures to ensure consistency between PALs and the emissions levels used by them in their attainment demonstrations.

We agree with the commenters who believed adequate corrections to the PAL should be made if incorrect emission factors have been used. The reviewing authority must reopen the PAL during the PAL effective period to adjust for typographical and calculation errors.

In summary, to calculate the level of the actuals PAL under the final rules, you first sum baseline actual emissions from each emissions unit at your major stationary source. To determine the baseline actual emissions for each emissions unit, you must use the definition of baseline actual emissions in the major NSR rules. [See 40 CFR 51.165(a)(1)(xxxv)(B), 51.166(b)(47), and 52.21(b)(48) as amended by the final rules.] For most types of existing emissions units (units with > 2 years operating history), this means that the baseline actual emissions of the PAL pollutant you would use to establish the PAL will equal the average rate, in tpy, at which your emissions units emitted the PAL pollutant during a consecutive 24-month period, within the 10-year period immediately preceding the application for a PAL. Consistent with the final rule, you will have broad discretion to select any consecutive 24-month period in

the last 10 years to determine your baseline actual emissions. If you did not operate an existing emissions unit during the period you select, then you must not include the baseline actual emissions from this unit when establishing your PAL. For most new emissions units (units with < 2 years operating history), the baseline emissions shall equal the potential to emit of the units.

7.5 Other Alternatives for Establishing PALs

7.5.1 Base PALs on Allowables

Comment:

Multiple commenters (IV-D-10, 46, 61, 62, 79, 107, 111, 132, 135, 147, 160, 164, 191) supported basing the PAL level on allowable emissions. One commenter (IV-D-147) asserted that it was particularly important that sources with recent PSD/NSR determinations be authorized to use "allowables" as the PAL baseline. Use of allowables PAL, claimed the commenter, would avoid severe penalties for well-controlled sources and may make PALs generally more attractive. According to the commenter, the Agency appears to have disregarded this concern, indicating that the "clean unit" exclusion addresses this issue. The commenter claims, however, that clean units may be individual pieces of equipment or discrete process lines. Moreover, claims the commenter, as the EPA would currently provide, there would be little, if any, flexibility to modify a clean unit or change its emissions, particularly for batching processes -- a place where PALs may be most beneficial -- and remain within this narrow exclusion.

One commenter (IV-D-111) stated that the PAL limit should be based on a facility's allowable emissions instead of actuals in certain cases; otherwise, a plant's full production capacity could never be utilized. The first case, provided the commenter, is when a source has gone through LAER and offsets review or netted out of NSR with enforceable limits going into effect after 1990. The commenter requested that facilities that have been issued a PSD permit since 1990 should also be permitted to use their allowable emissions for the same reasons.

One commenter (IV-D-10) maintained that it does not seem correct to require a PAL to be based on actual emissions. The commenter notes that each facility currently is limited to federal/State enforceable emission limits, so why not continue these limits as a PAL by adding up the total to set the PAL? According to the commenter, if the PAL is set at actual emissions, it may immediately restrict the operation to existing levels. The commenter claimed that existing PAL-type programs have already determined that the allowed emissions are acceptable. Therefore, the commenter asserted that allowed emissions should be acceptable for PALs.

One commenter (IV-D-164) raised concern that the Agency's current proposal only supports the use of actual emissions in establishing a PAL in an attainment area. According to the commenter, if this is the only possible baseline, many facilities will be penalized severely if they re-permit their facilities under a PAL. The commenter claimed that establishing a PAL for a

new facility at the actual baseline will cause the facility to relinquish unused capacity that currently exists in the form of potential or allowable emissions. The commenter believed that a facility with a PAL based on a PSD review should not be required to reduce its allowable emissions to obtain the benefits of a PAL. According to the commenter, this approach only encourages new facilities to run operations at levels to maximize emissions to obtain the benefits of a PAL based on actual emissions. The commenter claimed that this "use it or lose it" mentality should not be fostered by an approach that has the potential to provide environmental protection and flexibility. The commenter claimed that facilities that have been issued a PSD permit since 1990 should be able to base a PAL on allowable or potential emissions because the allowable emissions have been fully accounted for in the PSD permit review by the State. Regardless of the form of the baseline, the commenter acknowledged once a facility's emissions are capped under a PAL, both the source and the permitting agency would have a predictable framework for evaluation of changes at a facility for NSR purposes.

One commenter (IV-D-107) expressed concerns about precluding PSD-permitted facilities from obtaining PALs based on their allowable emissions. As an alternative, the commenter stated that the permitting authorities should be allowed to establish PAL levels based on the annual allowable limits contained in PSD permits for such sources. This alternative approach, according to the commenter, should be used at least in cases where the source has received a PSD permit or reconfirmed through a NSR modification in PSD annual allowable limits within the last 5 years.

Two commenters (IV-D-61, 132) requested that the PAL be based on plantwide maximum or allowable emissions as they currently exist, since such emissions have already been approved for the source and undergone environmental scrutiny.

One commenter (IV-D-132) stated that if an agency has reviewed the plant for control technology and environmental impacts within the preceding 5 years, there is no reason why the plant's PAL should not be based on allowable emissions. The commenter also stated that States should be allowed the flexibility to craft PALs that increase with the phased installation of equipment when such phased installation is authorized under an NSR permit.

Two commenters (IV-D-160, 191) maintained that the final rule should provide that the initial PAL emissions limitation should be established at a level equal to the current allowables, if consistent with the State's air plan. The commenter further maintained that if a source does not have an allowable limit, then the PAL limit should be established, at a minimum, at the facility's actual emissions as determined using the actual emissions baseline approach discussed above, including a reasonable operating margin. The commenter questioned that EPA clarify that, in determining what constitutes a "reasonable operating margin," permitting authorities should take into consideration significant levels and the *de minimis* provisions in section 182 (c)-(e) of the Act.

One commenter (IV-D-160) stated that under the current NSR regulations, permitting authorities "may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit." See, for example, §52.21(b)(21)(iii). Therefore, according to the commenter, sources may use their current allowables as past actuals for purposes of determining whether a physical change or change in method of operation results in a significant net emissions increase. Furthermore, the commenter asserted that assuming they are federally and practically enforceable, the source's allowables may be used as future potentials (as well as future actuals). Accordingly, the commenter felt that an enforceable PAL could be viewed as the source's past actuals and future potentials/future actuals (that is, a de facto allowable-to-allowable test). Under this formula, the commenter believed changes (including any physical change or change in method of operation) resulting in emissions below the PAL limit would not result in a significant net emissions increase and, therefore, would not trigger NSR.

One commenter (IV-D-79) requested that EPA consider adopting an element of Oregon's program, that is, basing the PAL on emission rates established in the permit rather than on the previous 6 months of actual emissions. The commenter stated that the proposed approach is overly restrictive and would merely reduce the incentives for sources to utilize the PAL option, without adding any substantive air quality protection.

One commenter (IV-D-147) believed that EPA should permit a reasonable increase over the allowable PAL, which would not be restricted to the significance levels. The commenter claimed that such an emission level could be set by the applicant with the permitting authority.

Another commenter (IV-D-135) believed that basing the PAL on source-specific allowables would breathe life into a concept that, as proposed, preserves most of the unrealistic features of the current rules. According to the commenter, EPA's proposal: (1) would not account for variations in the business cycle; (2) would trigger NSR review for changes that EPA has exempted from the definition of modification (use of alternate fuels and raw materials); (3) would subject a source to major NSR for changes that do not approach the source's current allowable emissions ceiling; and (4) would retain the uncertainty and burdens associated with trying to quantify current actual emissions.

Response:

As noted above, we have concluded that a major stationary source's compliance with an actuals-based PAL system is a permissible means of assuring that a major stationary source does not have a significant net emissions increase. We also concluded that this approach can be implemented in a manner that is consistent with the Act. Thus, we are adopting regulations that authorize States to issue actuals PALs. However, we also plan to develop an alternative that would give a source the option of obtaining a PAL based on allowable emissions.

7.5.2 Permitting Authority Should Determine How to Set PAL Emission Levels

This section only includes comments on State discretion to establish the PAL level. For other comments on permitting authority options, see section 7.5.

Comment:

Several commenters (IV-D-04, 11, 42, 46, 67, 94, 97, 114, 147) believed that each State or local agency should have discretion to determine how the PAL would be set. One commenter (IV-D-04) supported allowing each permitting authority to determine the PAL level according to whatever methodology they felt best. Another commenter (IV-D-11) believed that each permitting authority should include a prescriptive methodology for establishing a PAL in their SIP.

One commenter (IV-D-97) recommended that the EPA not require any of the proposed alternatives to establishing a PAL level, but instead give States some discretion in setting PAL levels, allowing States to approve a level that is appropriate for a particular source. Another commenter (IV-D-114) stated that EPA should allow flexibility under a PAL by giving States the option to offer sources the following three alternatives: actual emissions plus an allowance margin; allowable emissions; and future actual emissions. Another commenter (IV-D-46) believed EPA should provide permitting authorities the discretion to work with the permittee to establish a PAL, subject to public review and comment, that makes the most sense given the unique circumstances surrounding the plant (including its location, operations, and current environmental controls and pollution prevention practices), as well as the State's environmental programs and needs. The commenter also believed EPA should eliminate the requirement that PALs must be based on actual emissions or allowable emissions established in a major NSR permit issued within the last 2 years, and replace this requirement with an adaptable provision that allows consideration of specific source or State issues.

One commenter (IV-D-67) supported giving States flexibility to choose any one of a number of methods for calculating PAL emission caps, providing that States do not prescribe a methodology that arbitrarily limits sources to the average of their last 2 years of actual emissions.

One commenter (IV-D-42) maintained that the successful implementation of a PAL concept will hinge largely on the calculation methodology used to determine emission increases and decreases for individual units within a source. The commenter believed that a single methodology cannot be made to work for all industries and equipment types. Accordingly, the commenter stated that EPA should develop several methodologies so that local permitting authorities could use the methodology that most accurately reflects the proposed modification. The commenter felt that having several methodologies available will give local jurisdictions the

tools needed to address the conflicting issues of protecting short-term NAAQS and PSD increments while also protecting industry's capacity and flexibility.

Response:

We do not agree with the commenters that believe that your reviewing authority must have discretion to use different methods for setting the PAL level. This would lead to inequitable treatment of sources by different States. Hence to provide consistency and uniformity for sources across the nation , in our final PAL rules today, we are establishing minimum elements of the program that all States are required to meet. A State's alternative PAL program must be equivalent to or more stringent than the Federal program for it to be approved into the SIP.

7.6 Permitting Authority Issues

One commenter (IV-D-53) agreed with the options EPA proposed for permitting authorities in adopting the PAL approach, but did not give further details. These options, specific comments, and our responses are presented in the following sections.

7.6.1 PALs and Minor NSR Programs

Comment:

Several commenters (IV-D-09, 47, 67, 111, 160) urged EPA to encourage States to streamline their minor NSR programs and craft them to be consistent with EPA's proposed PAL provisions, specifically regarding setting limits that cover multiple pieces of equipment and allow netting. Otherwise, the PAL provisions in the Federal NSR regulations will be moot. Of these, some commenters (IV-D-09, 67, 111, 160) believed sources with PALs should be exempt from the requirements of minor NSR programs. These commenters endorsed exemption from the minor NSR program, rather than just advocating exemption from the synthetic minor emission limits specifically (for example, (r)(4) limits; see section 7.13). Some of these commenters (IV-D-67, 111) urged EPA to encourage States to offer minor NSR relief for sources with PALs.

One of the commenters (IV-D-47) argued that PALs can and should be available for both major and nonmajor facilities. Pursuant to existing authority to implement PALs for sources operating under a federally enforceable emissions cap, all new and modified sources are still subject to the State BAT requirement, regardless of the size of the facility. The PAL emissions cap, established independently for the permitted facility, would not eliminate any existing applicable requirements.

One commenter (IV-D-09) requested that EPA encourage States to modify their existing regulations to provide relief from the extensive procedural requirements for minor NSR projects. Some States still require equipment-specific NSR for new equipment located in areas regulated

by an existing PAL or PAL-like permit. Any new VOC-emitting equipment must still undergo minor NSR, even if emissions from the new equipment will not result in an exceedance of the PAL. In addition, the State regulations do not allow sources to use netting to determine NSR applicability. The existing State rules thus negate any flexibility provided by EPA's proposed PAL approach. EPA should require or, at a minimum, specifically request that States with these types of provisions modify their rules to allow the PAL flexibility provisions contained in this proposed rulemaking.

One commenter (IV-D-111) recommended that EPA encourage States to provide PAL sources with relief from minor NSR as long as the PAL limit is still met. For example, States could preapprove, when the PAL is set, certain changes that are common to the source. This would maximize the intended benefits of the PAL. Minor NSR can be triggered for even small changes at a facility, and this can cause significant delays.

One commenter (IV-D-67) maintained that most if not all State minor NSR programs currently allow PALs. Therefore, EPA should send a strong message to States that if their current rules do not allow sources ways to become exempt from minor NSR (through either a PAL or a standard permit that allows advance minor NSR and therefore does not trigger minor NSR), they should actively work to change their rules. In this regard, EPA should ask States to: (1) consider the overall effect their minor NSR, air toxics and other programs might have on the viability of emission caps; and (2) construct programs that do not present barriers to PALs.

One commenter (IV-D-160) asserted that the benefits EPA hopes to create through its proposed PAL provisions, including operational flexibility and a reduced permitting burden, will be greatly increased if the principles of those provisions extend to minor NSR programs as well. If the PAL exclusion is limited to major NSR only, then facilities will still need to undergo time-consuming State permit reviews, even for small changes. EPA should indicate that States can provide the same treatment under minor NSR as is provided under major NSR. Alternatively, States should be able to preapprove certain types of changes common to the source at the time the PAL is established, as had occurred in several PALs that have already been issued.

Response:

The final major NSR rules do not extend the PAL provisions to State minor NSR programs or otherwise affect those programs. We do not agree that our major NSR regulations should provide PALs for both minor and major sources, since PALs are an alternative applicability scenario to major NSR. We do not believe it is appropriate for us to dictate or encourage States to streamline their minor NSR program. Lastly, we did not propose or seek comment on the PAL program's interaction with the State's minor NSR program and as such are not taking any action relative to the State's minor NSR program.

7.6.2 PALs in Attainment and Nonattainment Areas

Comment:

7.6.2.1 PALs in attainment areas

Four commenters (IV-D-11, 14, 52, 53, 137) agreed that PALs should be available for new sources in attainment areas based on the review of the entire facility. Other commenters (IV-D-106, 107, 139, 164) believed that PALs should be available for new sources in attainment areas without specifically stating how the PAL level would be determined. Commenter IV-D-137 indicated that the initial PAL level should be revised once emissions data were available.

Another commenter (IV-D-14) endorsed PALs for new greenfield PSD sources provided that they were limited to sources with a normal operations record of at least 2 years based on historical actual emissions (plus possibly a safety factor not exceeding the PSD significance level). EPA should allow the States to determine whether PALs for new sources make sense, which would be consistent with EPA's general approach of providing greater deference to States in customizing a NSR program that meets each State's individual needs. Also, it will be difficult to successfully pre-judge the relative usefulness of the PAL and clean facility mechanisms before either mechanism has been implemented and tested in "real world" situations. The resolution of this issue should be left to States administering the NSR program and sources subject to NSR.

7.6.2.2 PALs in nonattainment areas

Several commenters (IV-D-11, 42, 52) supported allowing PALs in nonattainment areas. One commenter (IV-D-42) stated that PALs should be available to sources in nonattainment areas. If there is an emission increase over the PAL, the source should offset the emission increase. Emission offsets should be enforceable through the SIP or the title V permit.

One commenter (IV-D-52) requested that EPA clarify that PALs may be used in operating permits and administrative orders where no operating permits are required (or in any other regulatory documents that are the basis of a SIP submittal for nonattainment areas), and that if necessary EPA should make rule amendments to extend PAL availability to these other documents. This flexibility in nonattainment areas is particularly important because many of these types of permits will be submitted as part of a SIP. Every amendment to these permits will have to go through Federal rulemaking, in addition to the State process. Since permit amendments are doubly complicated, the administrative benefits of reducing the need for such amendments is twice as great. Otherwise, new sources undergoing NSR in nonattainment areas would gain the advantages of PALs but existing sources would still be required to have unit-by-unit limitations in their permits or orders, and still have to seek amendments at both the State and Federal levels.

Two commenters (IV-D-147, 184) opposed requiring an approved attainment demonstration plan as a condition for establishing PALs in nonattainment areas. One commenter (IV-D-147) stated that EPA should clarify that PALs should be approved even if there is no currently approved SIP for an area. The commenter expressed concern that the EPA still seems to be requiring some sort of consistency with SIP demonstrations as a pre-condition for approving PALs in a State. To the extent that so few PALs are currently approved, and in the event that so many States will be required to submit new demonstrations under the likely new NAAQS, references to such restrictions should be removed. One of the commenters (IV-D-184) stated that the concept of the PAL being set at "any emissions level completely offset and relied upon in an EPA approved State attainment demonstration plan" could potentially force a facility to reduce its emissions at a rate that will prove unachievable in practice. This is because many plans rely upon technology forcing rules to produce lower emitting products, processes, etc.

Response:

After considering these comments and discussions at stakeholder meetings, we have decided to go forward with PALs in both attainment and nonattainment areas, except in extreme nonattainment areas. Under our final rules, actuals PALs are available only to existing major stationary sources. The initial PAL level will be set based on baseline actual emissions, plus the significant level for the PAL pollutant, as discussed above in section 7.4. For new major greenfield sources, we also plan to develop an alternative that would give them the option of obtaining a PAL based on allowable emissions.

As stated earlier, PALs are permissible in all but extreme nonattainment areas. (Also, See section 7.9.) We agree with the commenters who indicated that an approved attainment demonstration plan should not be a requirement for establishing PALs in a nonattainment area. Consequently, no such requirement appears in the final rules.

7.6.3 PALs Only for Sources With at Least 2 Years of Records

Comment:

One commenter (IV-D-46) opposed limiting PALs to sources with only 2 years of emission records. Conversely, another commenter (IV-D-52) believed PALs should only be available for sources with a record of existing emissions or normal operations for at least 2 years, in order to establish a PAL based on historical actual emissions.

Response:

Under our final rules, actuals PALs are available only for existing major stationary sources. As stated above, actuals PALs are based on your source's actual emissions. Without at least 2 years of operating history, your source has not established actual emissions upon which

to base an actuals PAL. However, for individual emissions units with less than two years of operation, allowable emissions would be considered as actual emissions. Therefore, you may obtain an actuals PAL only for an existing major stationary source even if not all emissions units have at least 2 years of emissions data.

7.6.4 PALs Only for Some Source Categories

Comment:

One commenter (IV-D-52) believed PALs should be restricted to certain source category codes, but did not identify which ones.

Response:

The final rules do not restrict PALs to certain source category codes. We see no basis for such a restriction, and none was offered by the commenter.

7.6.5 PALs For All Pollutants

Comment:

One commenter (IV-D-52) believed that States should offer PALs for all pollutants.

Response:

In the final rules, PALs are allowed only for regulated NSR pollutants as defined in final rules. An individual PAL must address only one pollutant, but you may apply for PALs for one or more pollutants.

7.6.6 Permitting Authority Option on Whether to Allow PALs

Comment:

Two commenters (IV-D-111, 126) urged the EPA to require States to adopt PALs as opposed to offering it to States on a voluntary basis; that is, the State agencies would have to include PALs in their rules, but the PAL would still be optional for sources. The commenters claimed that the PAL option will provide existing sources both flexibility and certainty with respect to their operations and planning. In addition, the commenters claimed that it will also ease the permitting burden of States while maintaining air quality. One of the commenters (IV-D-111) stated that the benefits of PALs are too great to make the PAL approach optional. Also, one commenter (IV-D-111) suggested that a relatively consistent NSR program and PAL provisions among States would simplify the process for those applicants with facilities in more

than one State. In contrast, one commenter (IV-G-11) argued that States should have discretion to decide whether to provide for PALs.

Response:

We agree with the commenters who indicated that PALs should be a required element in State major NSR programs, since PALs provide potential benefits to you, the public and the environment. . Accordingly, the PAL provisions of the final rules are mandatory in that States are required to amend their major NSR programs to include a PAL program, unless they can demonstrate that their program, without PAL provisions, is more stringent than a program with PALs under these rules. (However, the PAL program is optional for sources.) The State may adopt the PAL provisions of the final rules or may adopt an alternative PAL program. To use an alternative PAL program, the State must demonstrate to us that their alternative program is equivalent to or more stringent than the PAL provisions of the final rules, and we must approve the alternative PAL provisions into the SIP.

Comment:

Three commenters (IV-D-10, 67, 137) recommended that EPA develop guidelines for States to use in identifying when PALs would be beneficial.

In consideration of agency resources, one commenter (IV-D-67) recommended that the EPA identify circumstances in which PALs may be beneficial and suggested the following guidelines for States to consider in determining whether sources should seek a PAL:

- Whether the source has several synthetic minor permits
- Whether the source needs operational flexibility, due to the rapid changes what will be needed at the facility to meet market demand
- Whether there have been or are expected to be multiple netting situations at the source
- Whether the source has production constraints that need to be removed
- Whether the source would benefit from coordinating or consolidating applicable requirements (for example, meeting overlapping State and Federal reporting or monitoring requirements for a large facility by implementing one overall reporting or monitoring system).

Another commenter (IV-D-137) recommended that the EPA list characteristics (guidelines) for determining the best candidates for PALs. The commenter recommended characteristics include the activities necessitating minor NSR review, willingness to reduce emissions from older units to make room under the PAL, location in attainment areas for PAL pollutants, good working relationship with the permitting authority, and lack of significant compliance problems.

Response:

We do not, at this time, have plans to issue guidelines for when PALs may be beneficial. We believe that you must weigh the pros (for example, certainty and flexibility) and cons (for example, allowable emissions foregone and increased monitoring requirements) to determine what is best for your unique circumstances. Similarly, the reviewing authority should evaluate the suitability of the source for a PAL. Reviewing authorities retain the discretion not to provide a PAL for a particular source.

7.6.7 Permitting Authority Option on Type of PAL Rule

Comment:

Several commenters (IV-D-42, 43, 46, 67, 92, 147, 180) believed States should have discretion in setting up their PAL rules. Two commenters (IV-D-42, 43) urged EPA to provide a menu of PAL options, among which States could choose. Several commenters (IV-D-42, 43, 46, 67) believed States should have options regarding the PAL baseline, enforceability, and other features. One commenter (IV-D-43) believed States should be able to select from a range of possible program elements such as alternative PAL calculation methods, mechanisms to ensure enforceability, and other features consistent with each State's unique program. Another commenter (IV-D-67) proposed that States be granted the flexibility to select appropriate program elements such as alternative PAL calculation methods, mechanisms to assure enforceability, appropriate PAL reopeners (perhaps based upon the method used to establish the PAL cap) and other features consistent with each State's unique program. One commenter (IV-D-147) recommended that the final rule should give the States the right to adapt or customize these options, or develop new options, so long as the State's approach yields equivalent applicability results.

Several commenters (IV-D-04, 11, 42, 46, 67, 94, 97, 114, 147) believed that each State or local agency should have discretion specifically to determine how the PAL baseline would be set. Their comments on establishing the PAL baseline are included in Section 7.4.4.

Some State agency commenters (IV-D-29, 92, 180) believed that if the PAL provisions are adopted as proposed, it will seriously undermine a State's ability to disallow the use of the PAL, since States will be pressured to be no more stringent than the EPA. The State commenter claimed that this proposal will have serious repercussions to air quality in Texas, which has its own more stringent PAL program. According to the State commenters, the permitting authorities should be allowed to demonstrate that their State program is at least as stringent as the PAL proposal and to determine the best approach for their State. On the other hand, two commenters (IV-D-170, 39) cautioned EPA against establishing overly stringent PALs. The commenters claimed that allowing States to impose PALs that are more stringent than Federal and allowing

States to ratchet-down PALs in the future could have severe consequences for industries that need to maintain capacity regardless of recent use history.

Response:

After considering the comments and input gathered at public hearings and stakeholder meetings, we are requiring that States adopt the PAL provisions contained in the final rules or an alternative program demonstrated to be equivalent to or more stringent than the PAL provisions of the final rules. We believe that this approach is necessary to ensure that the PALs are consistent with the statutory requirements, as well as to promote a degree of certainty and uniformity across the nation.

7.6.8 Accommodate Existing Programs and Permits

Comment:

Several commenters (IV-D-29, 92, 118, 129, 180, 189) urged EPA to allow permitting authorities to demonstrate that their State PAL program is equivalent to EPA's. These commenters (IV-D-92, 118, 129, 180, 189) specifically indicated that Texas and Oregon should be allowed to demonstrate their programs are equivalent. One commenter (IV-D-118) requested the PAL rules allow States that already have PAL's in place -- Oregon, Texas, etc. -- to substitute their programs for EPA's if they provide adequate environmental protection. Two commenters (IV-D-129, 183) encouraged EPA to work with the Texas Natural Resource Conservation Commission to coordinate their flexible permit program with EPA's program for establishing PALs. Commenter IV-D-129 urged EPA to deem the Texas program, under 30 TAC §116.715, equivalent to EPA's PAL provisions. The commenter claimed that the Texas program requires not only BACT and covers toxic air pollutants, but also would reduce emissions to a greater extent than the Federal program would. The commenters (IV-D-129) further suggested that if EPA did not deem the Texas program as equivalent, the Agency should adopt the Texas approach to establishing emission caps as an additional means of calculating the PAL. One commenter (IV-D-11) argued that EPA should not require any State with an existing EPA-approved PAL-like program to demonstrate compliance with or equivalency to the final PAL rules. The commenter noted Oregon has been using its Plant Site Emission Limit program since 1981 and has brought all of its nonattainment areas into attainment with this program in place. The commenter also noted it would be a tremendous waste of both State and Federal resources to require the State to expend an iota of resources in demonstrating equivalency or compliance. In addition, the commenter stated, it would be ironic not to accept Oregon's program in light of EPA's ongoing promotion of the permitting program and the industrial operational flexibility it provides. The commenter claimed that providing operational flexibility while successfully improving the environment is good reason to keep hands off something that is not broken.

One commenter (IV-D-189) raised concern that EPA's PAL program may supersede existing State permit programs or cause those companies who have pioneered PALs to have their existing permits invalidated by the proposal as an unintended result. Therefore, the commenter stated that EPA should include a provision that allows existing State programs with at least equal environmental protection to continue uninterrupted.

Several commenters (IV-D-11, 43, 67) believed States should be able to develop PALs that are approvable into the SIP under major NSR but also accommodate existing PALs and PAL programs. These commenters believed permitting authorities should have enough flexibility in developing PAL rules that they could accommodate existing programs. These commenters did not specifically state that an equivalency demonstration would be necessary for the existing PAL programs to continue.

One commenter (IV-D-43) noted that States have issued, and continue to issue, federally enforceable PAL-type permits. According to the commenter, some PAL-type approaches have already started under existing State regulations that are federally approved as part of the SIPs. The commenter also noted that other PALs are, or will soon be, starting as part of title V permit cap permits. The commenter claimed that States and companies have the ability to continue those PALs in full operation without any need for revision until such time as a PAL would normally be reviewed. The commenters requested that at that time, pre-existing PALs can be reviewed for consistency within the revised NSR regulations. The commenter noted that because EPA is only clarifying its existing PAL-type approval authority in the NSR proposal, EPA should not disqualify previous PAL-type provisions that have been adequately reviewed under SIP or title V rules. According to the commenter, to avoid uncertainty, EPA should clarify this point in the final NSR reform package.

Another commenter (IV-D-67) proposed that States be granted the flexibility to craft the EPA-approvable NSR programs that accommodate existing PALs, by selecting appropriate program elements consistent with each State's unique program.

Several commenters (IV-D-33, 43, 67, 72, 118, 153, 189) urged EPA to clarify that promulgation of PAL provisions in the NSR rules would not invalidate existing emission caps. One commenter (IV-D-118) stated that it is important that existing PALs should not be subject to reopening because of this rulemaking. Commenter IV-D-153 stated that EPA should not promulgate a final rule that inadvertently interferes with certain emission caps that are already in place.

Several commenters (IV-D-72, 147, 160, 163) requested that the EPA clarify in the final rule that PALs can be adopted under existing regulations. In addition, these commenters requested that EPA help companies use this innovative approach even before the "reformed" NSR rules take effect. Otherwise, provided the commenters, State permitting staff will not even realize that adopting a PAL is an option under the current system. One commenter (IV-D-147)

requested that the EPA not delete §51.165(a)(1)(xii)(C) from the existing NSR regulations, as this provision authorizes the existing PAL limits established by States. According to the commenter, its deletion would not only minimize the use of PALs in jurisdictions without specific SIP authorizations, a result apparently not intended by the Agency, but it also would jeopardize current PALs.

Response:

We do not agree with the commenters who believed that existing State programs should automatically be deemed equivalent or otherwise not required to demonstrate equivalency. After considering the comments and input gathered at public hearings and stakeholder meetings, we are requiring that States adopt the PAL provisions contained in the final rules. Once the final rules are promulgated, States must demonstrate that any alternative PAL-like programs they use are at least as stringent as or more stringent than the PAL provisions of the final rules. Thus, existing PAL programs need not be changed, provided that they are at least equivalent to the final rules.

Nothing in the final rules specifically precludes reviewing authorities from issuing PAL-like permits under the existing regulations during the period prior to adoption of any new PAL provisions into the State major NSR program. However, to minimize transition problems (see below), we recommend reviewing authorities consider our final rules in developing any PALs issued in this interim period.

The final rules contain transition provisions for any PAL-like permits issued prior to approval of the final PAL rules into the State's major NSR program. Under these provisions, the reviewing authority has the discretion to supersede the existing PAL-like permit with a PAL that meets the new requirements. Thus, adoption of the final PAL provisions (or their equivalent) into the State major NSR program does not automatically invalidate existing PAL-like permits. However, the reviewing authority may not issue a PAL that does not comply with the new requirements after they have been approved in the SIP. Thus, any existing PAL-like permit must be converted to a PAL that meets the new requirements at the time of renewal.

7.7 Changes Under PALs

7.7.1 Emission Increases Above the PAL

7.7.1.1 Application of BACT and LAER to modifications under the PAL

Comment:

Many commenters (IV-D-20, 21, 28, 31, 33, 37, 47, 52, 53, 56, 61, 62, 67, 72, 78, 79, 80, 92, 93, 97, 105, 106, 108, 118, 126, 137, 138, 139, 140, 142, 147, 150, 157, 160, 163, 172, 180) commented on whether BACT or LAER should apply to modifications under the PAL.

Several commenters (IV-D-28, 37, 52, 56, 62, 78, 92, 118, 126, 163) disagreed with EPA's statement that BACT or LAER should be required for modifications under the PAL. Two of the commenters (IV-D-52, 56) believed instead that the source should be allowed to select the control strategy that would produce emission reductions equivalent to those achieved under BACT or LAER. Commenter IV-D-118 claimed that the requirement for BACT/LAER controls on major modifications is inconsistent with the objectives of PALs. Instead, the commenter claimed, EPA should require determinations of reductions that would be accomplished by installation of either BACT or LAER. According to the commenter, once those pollutant reductions are determined, a source should be allowed to achieve the determined reductions by using any control strategy that the source develops (including shutdowns) and verifies to the permit agency. One commenter (IV-D-37) recommended that where changes included multiple emission units within the facility resulting in minor emission increases at each unit, it would be inefficient and costly to apply BACT or LAER to each unit. The commenter requested that the existing source be given the opportunity to identify those emission units to contribute to the emissions increase above the plantwide applicability limit and evaluate which of these units could effectively control to BACT or LAER requirements. According to the commenter, the source should be given the flexibility to install controls on those units that would most effectively reduce emissions to a level below the existing PAL.

Several commenters (IV-D-20, 21, 31, 33, 47, 61, 67, 72, 80, 92, 93, 97, 105, 106, 126, 137, 138, 140, 142, 147, 150, 160, 180) believed BACT or LAER should apply only to those modifications that can be associated with the increase. Commenter IV-D-126 explained that review for all units under the PAL would be unnecessary, as most States have a mini-NEPA environmental impact review process. It is likely, according to the commenter, that any new emissions unit will have to undergo the scrutiny of this process aside from the NSR process. One commenter (IV-D-106) recommended that, where a PAL is exceeded as the result of a specific new unit or physical operational change (such as a new production line, or modification to a specific process), the applicable BACT or LAER requirements should only apply to the unit that causes the triggering increase in emissions. At the same time, claimed the commenter, there will

be some cases where the reason for emission increases are less distinct. In that instance, assuming that the facility chose to accept a PAL voluntarily, the commenters believed that the BACT or LAER requirements should be applied to those units or modifications that the facility identifies as associated with the increase. If those units or modifications cannot be reasonably identified, asserts the commenters, the requirements should apply to those physical changes or changes in operating method that occurred since the last PAL renewal or that have occurred during a distinct prior time period (such as 2 to 3 years). Commenter IV-D-147 added that changes to non-emitting equipment should not require NSR.

One commenter (IV-D-47) stated that if the company is not able to identify the specific sources causing the cap exceedance, then all sources installed or modified since the cap was established should potentially be subject to the BACT or LAER re-analysis.

Another commenter (IV-D-172) expressed concern regarding retrospective application of BACT or LAER if a PAL is exceeded. The commenter emphasized that any BACT or LAER evaluation should happen before the construction or modification occurred. The commenter claimed that the increased complexity of retrospective evaluation of permit approvals is undesirable. According to the commenter, retrospective requirements create problems with the engineering and installation of a retrofit and confusion as to which equipment must be retrofitted. Also according to the commenter, retrospective application of requirements adds permitting requirements and review time, requiring additional permitting personnel. Finally, the commenter claimed that the same emission reduction levels will not be achieved through retrofit as are achieved through installation of emissions control at the time of the construction or reconstruction.

Commenter IV-D-53 supported EPA's Option 2, that BACT or LAER should apply to all modifications that have occurred under the PAL since the last PAL renewal. One commenter (IV-D-139) advocated applying BACT or LAER either to all changes under the PAL since renewal or in the last 5 years.

Some commenters (IV-D-62, 79, 92, 137, 180) suggested that only emission increases above the cap exceeding significance levels should trigger an evaluation of Federal NSR applicability. Commenter IV-D-137 stated that once the significance level was triggered, all emission units associated with the project that caused the exceedance should be subject to BACT/LAER. However, noted the commenter, units applying BACT should be held outside of the PAL until enough time as passed to establish past actual emissions (for example, 1 to 2 years).

Another commenter (IV-D-92) believed that once Federal review has been triggered, only the modification that triggered the review should be processed through Federal NSR. According to the commenter, the EPA-suggested alternative that all modifications made under the PAL should be reviewed appears to be unnecessarily punitive. The commenter concurred that

emission increases that trigger Federal NSR should be offset in nonattainment areas. The commenter preferred that any changes to the PAL, including control technology requirements, be made at permit renewal. In addition, the commenter noted, the source would be responsible for complying with regulatory limits (even if a modification occurred) over the period in which the change occurred before the PAL limit was revised.

One commenter (IV-D-79) stated that EPA should not limit the PAL usefulness by subjecting all exceedances, however incrementally insignificant, to major NSR. The commenter claimed that EPA should more closely parallel Oregon's approach, which under certain circumstances would allow "*de minimis*" emission increases (that is, increases of less than 40 TPY) that also result in exceedance of the PAL to undergo minor, rather than major NSR. These changes, according to the commenter, would not require a BACT determination. Requiring major NSR in all such instances, according to the commenter, would increase the risk of requiring BACT for minor modifications and therefore, would significantly reduce the usefulness of the PAL concept for many sources who would otherwise wish to adopt it.

One commenter (IV-D-157) believed that PALs should not be subject to BACT or LAER for any reason. This commenter added that RACT and SIP requirements should also be suspended for units under PALs.

Response:

After considering the comments received relative to an increase in PAL level, we have chosen middle ground - that is neither require major NSR on the entire source nor require no major NSR on any emissions units - but require major NSR only on the emissions units (either new or modifications of existing units) causing the increase. Accordingly, in the final regulations, we are confirming our proposed requirement that only those emissions units that are part of a PAL major modification would be subject to major NSR. We believe this approach is consistent with the treatment of new or modified emissions units in major NSR.

We believe that a PAL provides you with an incentive to control existing and new emissions units to maximize your operational flexibility under your PAL. We also believe that you must request a PAL increase only after you have attempted to control all your units. Therefore, under our final rules, before the reviewing authority may approve a mid-term increase in your PAL, you must demonstrate that you are unable to maintain plantwide emissions below your current PAL even if you were to assume BACT equivalent controls on all of your significant and major emissions units (adjusted for a current BACT level of control unless the emissions units are currently subject to a BACT or LAER requirement that has been determined within the preceding 10 years, in which case the assumed control level shall be equal to the emissions unit's existing BACT or LAER control level.). The new PAL level is the sum of the allowable emissions from the new and/or modified units that have gone through major NSR; plus the sum of the baseline actual emissions of the other significant and major emissions units,

assuming application of BACT control; plus the baseline actual emissions of the small emissions units.

Compliance with the PAL increase procedures mentioned above would avoid retrospective application of BACT or LAER (a concern raised by one commenter) in situations that cause a PAL exceedance.

We do not agree that major NSR should be triggered only by significant increases above the PAL. Keeping in mind that the PAL level is initially set by adding the significance level to the baseline actual emissions, any increase up to or above the PAL level is a significant increase above baseline emissions.

7.7.1.2 Types of emission increases covered by BACT and LAER

Comment:

Several commenters (IV-D-20, 42, 47, 57, 62, 72, 73, 74, 103, 108, 125, 126, 139, 142, 147) commented on whether BACT or LAER should apply for emission increases over the PAL that are not associated with a physical change or change in method of operation.

Several commenters (IV-D-20, 47, 57, 62, 72, 73, 74, 103, 126, 142) believed that increases above the PAL resulting from an increase in overall plant production should not be subject to BACT or LAER. Other commenters (IV-D-108, 147) believed that in such cases the source owner or operator and the permitting authority should work together to apply BACT at the most appropriate units, and not to each unit. Another commenter (IV-D-126) advocated that the source should be allowed to acquire external emission offsets to compensate for the increase in emissions when the increase was not associated with a physical or operational change. Two of the commenters (IV-D-73, 74) further clarified that emission increases above the PAL due to demand growth should not result in the requirement to apply BACT or LAER. These commenters believed that if EPA included such provisions requiring major NSR for an increase over the PAL due to production increases or demand growth, the Agency should provide additional flexibility in setting and meeting the PAL, or in responding to a violation of the PAL.

One commenter (IV-D-42) stated that BACT or LAER should only apply to the particular pollutant that triggered the increase over the PAL. In other words, according to the commenter, if the project that increased emissions over the PAL had increases of more than one pollutant, only the pollutant(s) that increased the emission level over the PAL should be subject to BACT/LAER.

Commenter IV-D-125 believed that BACT or LAER should be applied to emission increases that are not directly associated with a particular modification or physical change to an emission unit to maximize emission reduction opportunities.

One commenter (IV-D-108) believed that when an increase over the PAL occurred, any unit whose emissions rate was the same or lower should not be subject to BACT or LAER.

Response:

A PAL offers you the advantage of flexibility to make changes quickly at your facility without obtaining a major NSR permit. In return for this flexibility, you must commit to monitor emissions from all of your emissions units and keep the emissions from the facility below the PAL level. In the event the PAL level is exceeded, the facility may be subject to enforcement action. Such action may also require retroactive application of BACT or LAER and procurement of offsets . Where the PAL exceedance results from an increase in production rate, we agree that you and the reviewing authority should work together to identify the appropriate unit(s) for controls. If you need to increase your PAL for any reason, the final rules provide a mechanism to do so (see section 7.7.1.1 above).

7.7.2 Adding New Units Under a PAL

Comment:

Several commenters (IV-D-14, 28, 33, 34, 42, 43, 50, 52, 67, 92, 106, 107, 108, 118, 120, 125, 135, 157, 162, 170, 172, 180; IV-G-11) commented on whether new units added under a PAL must meet BACT or LAER.

Some commenters (IV-D-34, 92, 172, 180; IV-G-11) believed that all new units added under a PAL must at least meet BACT. One commenter (IV-G-11) stated that whether individual BACT approvals or "presumptive BACT" would be installed under the auspices of the PAL should then be up to each individual State.

Three commenters (IV-D-14, 34, 50) believed PALs are inappropriate if they allow a facility to net out of BACT. According to the commenters, construction and modification of equipment without the application of BACT violates the basic principles of NSR. In addition, the commenters stated that units under the PAL should also be subject to LAER.

Commenter IV-D-125 advocated applying BACT or LAER to all new units that net out of major NSR or new units added under the PAL.

Several commenters (IV-28, 33, 42, 43, 52, 67, 106, 107, 108, 118, 120, 135, 157, 162, and 170) opposed requiring the application of a particular level of control technology to new units that net out of NSR or that are added under the PAL. One commenter (IV-D-52) stated that allowing sources the flexibility to decide how they can reduce emissions at the least expense is an important benefit resulting from the use of a PAL. This benefit, according to the commenters, would be minimized if the PAL rule required mandatory control on new or modified units. One

commenter (IV-D-106) opposed any suggestion (such as made at 61 FR 38265-66) that would require all new units at a PAL facility to meet a particular control technology standard. According to this commenter, a facility should be given the flexibility of operating in the most cost-effective means possible, without skewing that choice with government mandated choices of particular control technologies.

Commenter IV-D-107 questioned the need for the EPA to impose BACT or LAER technology requirements on new units at PAL sources. In the event, however, that EPA decides in favor of imposing a technology control requirement on the new unit, the commenter stated that this requirement should be applied through performance-based standards, rather than the installation of a specific control technology. More importantly, noted the commenter, EPA should establish very flexible procedures for completing the BACT or LAER determinations, such as through minor NSR review procedures.

One commenter (IV-D-108) requested that changes under the PAL not trigger BACT or LAER because the PAL would, in essence, be set based on peak actual emissions.

Two commenters (IV-D-120, 170) stated that for a major modification at a PAL facility involving the addition of new equipment, such as the addition of a new engine or turbine to a compressor station, the level of control on the new equipment will have to be a pollutant reduction equivalent to BACT or LAER. The commenter requested that EPA allow one of two approaches to achieve the required level of control; either require (1) the new equipment itself to meet BACT/LAER requirements or: (2) the operator to obtain an equivalent emission reduction(s) within the PAL facility itself. Thus, according to the commenter, control requirements for a new engine could be met by installing controls on one or more existing engines at the compressor station.

One commenter (IV-D-67) proclaimed strongly that there should be no regulatory control technology requirement for new units that net out of major NSR or for new units added under a PAL (other than as required by another program such as MACT or NSPS). The commenter noted that a PAL is a performance-based limit, and sources should be allowed to decide how best to meet that limit. It also noted that as a practical matter, sources adding new units probably will need to apply control technology or pollution prevention measures to avoid triggering major NSR or exceeding the PAL. By mandating prescribed levels of control, claimed the commenter, EPA or States could preclude innovative use of pollution prevention. Moreover, according to the commenter, the PAL should be set to account for the need for flexibility as well as the maintenance of air quality, and therefore there is no need for a new unit control standard in the rule.

One commenter (IV-D-33) maintained that if a new unit has netted out of NSR, then the net emission increases, if any, are judged to be insignificant and there should be no further technology installation requirement. The commenter further claims that the owner or operator

would be most knowledgeable about where to apply the most cost-effective changes in its operation in order to net out a new unit. Therefore, the commenter claims that a rigid requirement by EPA to install controls on a new unit, after net-out, would be burdensome and inconsistent with the intent of NSR reform.

Response:

We have considered all your comments and agree with the commenters that suggest that requiring controls for new units added under the PAL would reduce the benefits provided by the PAL program. Accordingly in the rules to be finalized, we have decided not to require any controls on new units added under a PAL. . Our decision is based on a review of the performance of a limited number of facilities that are participating in PAL pilot projects. (See our study, "Evaluation of the Implementation Experience with Innovative Air Permits," a copy of which is located in the docket for this rulemaking.) From this study, we have found that these facilities' desire to maintain a large degree of operational flexibility under a PAL system has encouraged them to voluntarily install state-of-the art controls on new emissions units. We anticipate similar results as we extend the PAL program more broadly. Alternatively, we believe that you will add emissions controls to existing emissions units if this is a more cost-effective approach to controlling your emissions. This is precisely the type of flexibility you should have for managing your total source wide emissions under a PAL system.

Accordingly, we do not believe that it is necessary to mandate the installation of emissions controls on new emissions units if you are able to continue to comply with your PAL even after installing the new emissions unit.

As discussed in section 7.4, we have concluded that actuals PALs are a permissible means of assuring that a major stationary source does not have a significant net emissions increase and can be implemented in a manner that is consistent with the Act. Thus, we do not agree that allowing the installation of new units under a PAL without the application of BACT or LAER violates the basic principles of NSR.

7.7.3 Other Comments on Changes Under PAL

Comment:

Four commenters (IV-D-43, 144, 150, 191) believed any change under the PAL should be allowed, as long as it does not increase emissions above the PAL level. One commenter (IV-D-144) stated that the NSR Reform Proposal appears to indicate that "a physical change or change in the method of operation" that would not otherwise trigger major NSR might be treated as a major NSR change simply because the source has a PAL. According to the commenter, such an approach would nullify any manufacturing flexibility offered by a PAL, and moreover, would be infeasible to implement. Instead, the commenter claims that EPA should recognize that a State

would retain authority to require minor NSR for all changes under the PAL below NSR significance levels, and that there is no major NSR "look back" for changes at PAL renewal or otherwise. To increase the flexibility afforded by a PAL, however, the commenter thinks EPA should encourage States to pre-approve such minor NSR changes to the maximum feasible extent.

Response:

We agree that any change at your source that can be accomplished under the PAL should not trigger major NSR. As discussed above, new emissions units that can be added without exceeding the PAL will not be required to install BACT or LAER. No Major NSR "look back" is required at renewal. BACT or LAER will be applied retroactively, however, if you exceed your PAL without prior approval from the reviewing authority.

We also agree that your State minor NSR program continues to apply to all changes at the source that are accomplished under the PAL. Under the final PAL provisions, by definition, all such changes (regardless of the size of the change itself) are below major NSR significance levels and, as such, may be subject to minor NSR.

7.8 PAL Review and Adjustments

7.8.1 PAL Adjustments During the Effective Period

Comment:

7.8.1.1 Revise PAL to Correct Technical Error

Several commenters (IV-D- 20, 28, 47, 52, 53, 67, 87, 92, 97, 98, 106, 108, 109, 111, 112, 127, 137, 140, 160, and 163) commented on whether a PAL should be adjusted for a new applicable requirement. These commenters supported revising the PAL to correct a technical error. The commenters advocated revisions to adjust PAL calculations based on outdated data and methodologies (IV-D-53, 92, 106, 112, 127), reduction of an emission factor (IV-D-112), and mistakes (IV-D-98).

Two commenters (IV-D-72, 103) opposed revising the PAL to correct a technical error. Commenter IV-D-72 explained that it would be a mistake to amend PALs downward when technical errors have been made, as the proposal preamble suggested. To avoid enormous disruptions, the commenter feels that facilities should be "shielded" from honest technical mistakes, just as they are when a title V permit limit is discovered to be based on erroneous data.

One commenter IV-D-92 stated that the legal authority to revise a PAL to correct a technical error already exists and there is no need to include such provisions in the rules.

7.8.1.2 Adjust PAL for New Applicable Requirement

Several commenters (IV-D-20, 47, 53, 67, 78, 92, 98, 109, 111, 118, 126, 127, 137, 142, 160, 163, 180) supported adjusting the PAL for a new applicable requirement. However, four of the commenters (IV-D-67, 118, 160, 163) emphasized that the PAL should only be adjusted for criteria pollutants that the PAL addressed, not to meet new MACT requirements. Commenter IV-D-67 preferred to handle most changes, including those for toxic air pollutants, through an advance NSR process. Commenter IV-D-56 believed that the source should be allowed to implement any control strategy under the PAL that will accomplish equivalent emissions reduction to MACT or other Federal requirements.

Two commenters (IV-D- 97, 147) opposed adjusting the PAL when new requirements were added. One of these commenters (IV-D-97) further indicated that to avoid any ambiguity EPA should include language in the regulation that a new MACT standard would not trigger a review and possible revision of a PAL. The other commenter (IV-D-147) believed that the PAL should not be reduced for a RACT or Reasonable Further Progress requirement, as the source with a PAL had already limited its emissions and should not be penalized by a "double hit."

7.8.1.3 Adjust PAL for Offsets or Shutdowns

Two commenters (IV-D-52, 105) commented on adjusting the PAL for offsets or shutdowns. One commenter (IV-D-52) believed the PAL should be opened to account for permanent offsets. The other commenter (IV-D-105) believed that the PAL should only be decreased if the unit was permanently shutdown.

7.8.1.4 Reduce PAL When Negative Air Quality Impacts

Several commenters (IV-D-11, 39, 43, 47, 52, 56, 60, 61, 67, 72, 78, 80, 107, 118, 138, 149, 153, 170) commented on whether PALs should be reduced when there are negative air quality impacts.

Some commenters (IV-D-43, 47, 52, 60, 61, 78, 80, 118, and 170) supported reducing the PAL when air quality might be negatively impacted. However, other commenters (IV-D-43, 52, 78, 118) cautioned that there should be a downward change only if modeling clearly shows that maintaining the PAL would violate the NAAQS.

Several commenters (IV-D-11, 39, 56, 60, 61, 67, 72, 78, 80, 107, 138, 149, 153, 170) believed that proposed regulatory language concerning changes to PALs for air quality reasons and "other appropriate reasons" was too vague and broad. Commenter IV-D-170 explained that

the need for a mechanism to revise the PAL to reflect changes at the source or to address changes in applicable requirements does not justify the broad language at §51.165(a)(9)(v)(B)(1) "...air quality consideration...," or §51.165(a)(9)(v)(B)(3) "Other appropriate considerations." According to the commenter, regulatory authorities should not be given this broad, poorly defined authority to revise the PALs. Another commenter (IV-D-80) claimed that reducing the PAL as provided in §52.21(x)(5)(ii)(B) "for changes at the source" seems to defeat the purpose of the PAL because PALs are specifically designed to accommodate benign changes without undergoing the major NSR review process. The commenter noted that the language at §52.21(x)(5)(ii)(B) seems to allow the Administrator to change the PAL after each and every "change," including changes that would not trigger NSR. The commenter asserts that sufficient provisions exist in Part 70 and Part 71 for the Administrator (or delegated State) to re-open a permit, including any PAL provisions, for any cause. According to the commenter, as proposed, the Administrator need not demonstrate any cause or concern, but can simply revise the PAL. The commenter claims that this does not provide adequate protection for the owner of a facility covered by the PAL, nor does it allow for the due process considerations in part 70 and 71. The commenter also asserts that §52.21(x)(5)(ii)(C), "other appropriate considerations," is extremely vague, and should be deleted.

Response:

After considering the comments, we have finalized the PAL rules to require the reviewing authority to reopen and adjust the PAL under certain circumstances, and to provide the reviewing authority with discretion to reopen and adjust the PAL under other circumstances. The reviewing authority must reopen the permit for the following reasons: (1) to correct typographical/calculation errors made in setting the PAL or to better reflect a more accurate determination of emissions used to establish the PAL; (2) to reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets; (3) to revise a PAL to reflect an increase in the PAL (PAL increase provisions discussed in volume I, 7.7.1).

The reviewing authority may reopen the permit to: (1) to reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date (however, your reviewing authority shall specify a reduced PAL level(in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the reviewing authority is aware of prior to issuance of the PAL permit);(2) to reduce the PAL consistent with any other requirement, that is legally enforceable, and that the State may impose on the major stationary source under the SIP; (3) reduce the PAL if the reviewing authority determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an AQRV that has been identified for a Federal Class I area by a FLM and for which information is available to the general public. Except for typographical or calculation errors that do not increase the PAL, all other mandatory and discretionary reopenings must be conducted in

accordance with the public participation requirements that apply to initial establishment and renewal of PALs.

While the final rule does not require the source's reviewing authority to immediately reopen the PAL permit to reflect newly applicable Federal or State regulatory requirements (for example, NSPS, RACT) that become effective during the PAL effective period, it does require the PAL to be adjusted to reflect the requirements at the time of the source's title V permit renewal or PAL permit renewal, whichever occurs first. The reviewing authority should not wait for a renewal, but should reopen the permit to adjust for new requirements if it is taking credit for the reductions resulting from those requirements in its attainment demonstration.

As the final rules indicate, we agree with the commenters who supported PAL adjustments to correct technical errors to protect sources that may have inadvertently underestimated baseline actual emissions while establishing the PAL.

We agree with the commenters who supported adjusting PALs for new applicable requirements. However, we believe the reviewing authority should have discretion regarding when to adjust the PAL for a new applicable requirement.

We do not agree with the commenter who stated that you should be allowed to implement any control strategy under the PAL that will accomplish equivalent emissions reductions to other Federal requirements. Requirements such as RACT and NSPS are applicable to specified equipment, and you must meet such requirements independent of the PAL. Note also that you are required to demonstrate compliance with a new applicable requirement on the schedule included in requirement. The fact that the reviewing authority has discretion to delay adjusting the PAL until renewal has no bearing on the applicable compliance date.

We do not agree with the commenter who indicated that the PAL should not be adjusted for RACT or RFP requirements. These requirements are instrumental in achieving and maintaining compliance with the NAAQS, and must bring about real reductions in emissions. If the PAL were not adjusted downward to reflect these requirements, you would be free to increase emissions at unaffected emissions units by an amount equal to the reductions at affected units. Thus, the reductions counted upon by the State might not be achieved. Nevertheless, for administrative convenience, the final rules give the reviewing authority the option of reopening the PAL or waiting to adjust it at title V permit revision or PAL renewal, whichever comes first.

We agree with the commenters who believe emissions from shutdown units (during the PAL term) must be excluded from the baseline emissions when renewing a PAL. Under our initial PAL setting and renewal provisions, the PAL level is calculated as the sum of the baseline actual emissions (for all existing and new emissions units) plus significant level. When establishing the actuals PAL level, only one consecutive 24-month period may be used to determine the baseline actual emissions for all existing emissions units. Emissions associated

with units that were permanently shutdown after this 24-month period must be subtracted from the PAL level. Emissions from units on which actual construction began or begins after the 24-month period must be added to the PAL level in an amount equal to the potential to emit of the units. This flexibility to reallocate emissions within the major stationary source is precisely the flexibility that compliance with the PAL allows. However, if the facility intends to make the emissions reductions federally enforceable for use as offsets, then the PAL permit must be reopened immediately and the PAL adjusted by the amount of the emissions reductions.

We agree with the commenters who supported reopening and adjusting the PAL when needed to address air quality concerns. We believe reviewing authorities are in the best position to determine whether there is a need to reduce the PAL for air quality reasons and therefore the final rules give the reviewing authority the discretion to do so. Note also that a reopening requires a public participation process similar to that required for initial establishment or renewal.

We share the commenters' view that the PAL should not be frequently and arbitrarily revised. We also agree with the commenters who objected to some of the broad, open-ended language of the 1996 proposal, such as "air quality reasons and other appropriate reasons" . Accordingly, our final rules provide specific requirements for when the PAL should or may be reopened as discussed above in section 7.8.1.

7.8.2 Periodic PAL Review and Adjustment

Comment:

7.8.2.1 Need for periodic review and timing

Several commenters (IV-D-17, 22, 28, 33, 37, 52, 53, 56, 67, 68, 72, 80, 87, 92, 97, 98, 103, 105, 106, 107, 108, 110, 111, 112, 126, 137, 138, 142, 144, 147, 150, 152, 153, 157, 160, 163, 180, 191) addressed the need for periodic review and when it should occur.

Several commenters (IV-D-37, 56, 67, 72, 80, 87, 97, 98, 105, 107, 110, 111, 126, 138, 147, 153, 163) were concerned that the proposed regulations would allow permitting authorities too much leeway to frequently and arbitrarily revise PALs. Such requirements, according to the commenters, would result in too little certainty for sources and little incentive to establish PALs. One of the commenters (IV-D-37) believed provisions for changing the PAL were unnecessary. The commenters claimed that if there is that much variability, the permitting authority should not write a PAL, but should instead permit each emission unit. Another commenter (IV-D-147) cautioned that sources would not accept PALs to begin with if the permitting authority could reduce the PAL at any time that the source reduced emissions. The primary benefit of a PAL, according to the commenter, is having room for future growth without a permit modification; and

if the permitting authority is able to adjust the PAL downward, there will be no motivation to obtain a PAL in the first place.

Several commenters (IV-D-22, 67, 72, 97, 106, 107, 111, 112, 138, 142, 150, 163) emphasized that the periodic review should not be viewed as an opportunity to "rachet down" the PAL level. One commenter (IV-D-22) maintained that possible lowering of limits would destroy the incentive to get a PAL.

One commenter (IV-D-152) believed that PALs should be permanent. The commenter notes that the PAL concept allows unreviewed changes to occur at a plant site that will involve the construction of emitting facilities that may stay in operation for thirty or forty years or more. The commenter claims that if the PAL limit is not permanent, the EPA could create a "shell-game." That is, according to the commenter, a source would get its new construction built without review and live under the PAL for a few years when capacity factors at the new equipment are low. Then, as noted by the commenter, when the source is ready to ramp up to its full production capacity of the projects it built under the PAL, the PAL could expire and emission increases could occur from equipment that effectively received grandfather status under the PAL. Therefore, the commenter recommended that there either be permanent limits, or if the PAL terminates, then BACT/LAER should be determined for those projects that were constructed during the term of the PAL and additional emission reductions should be required.

Several commenters (IV-D-17, 33, 52, 53, 67, 80, 87, 97, 103, 108, 112, 150) supported reviewing the PAL at the title V permit renewal. Other commenters (IV-D-22, 28, 37, 67, 68, 72, 80, 103, 108, 110, 111,137, 142, 144, 147, 160, 163, 191) opposed reviewing the PAL periodically. Some commenters (IV-D-92, 180) believed each permitting authority should determine how and when the PAL would be reviewed, and preferred conducting reviews under the NSR program rather than the title V program. These commenters also believed it would be more appropriate to schedule a renewal of a PAL permit. Commenter IV-D-137 preferred that the permitting authority set the schedule for renewing the PAL. One commenter (IV-D-153) preferred that the PAL be reviewed at the end of the PAL term (i.e., every 10 years). Another commenter (IV-D-157) advocated reviewing the PAL only at 10-year intervals. According to the commenter, this would ensure that PALs do not lose their reliability. One commenter (IV-D-191) said that if EPA must propose periodic review of PALs, the Agency should clearly define exactly how frequently the reviews should occur so that the review period is not arbitrary.

One commenter (IV-D-80) requested that EPA add specific language to the proposed regulations at §52.21(x)(3) to state that the PAL will not be revised unless there is a modification or a scheduled renewal.

One commenter (IV-D-43) stated that PALs should not be subject to changes in emission limits through NSR review, CAM or the title V reviewing process. The commenter supported States accounting for PALs in their SIP processes. Yet, claims the commenter, a source

accepting a PAL level based on actual emissions -- as EPA proposed in §51.166(b)(ii) (emissions during 10-year baseline) -- should not be subject to reopening except for extraordinary circumstances.

7.8.2.2 Review criteria

Some commenters (IV-D-10, 43, 53, 67, 137) recommended that EPA define the specific conditions under which the PAL limit could be revised. Commenters (IV-D-11, 56, 105, 107, 138, 153) further urged EPA to define specific criteria for when the PAL should be opened, rather than stating it should be opened for "other appropriate considerations." One commenter (IV-D-11) requested that EPA clearly spell out the conditions under which the PAL can be revised downward by the permitting authority. Unless clear, the commenter claims that facilities will have no incentive to voluntarily reduce their emissions. Likewise, the commenter asserts, permitting authorities should have the ability to "retrieve" unused allowable emissions from the airshed, under some clearly defined procedures, for planning purposes. The commenter claims that establishing a procedure for industry to "preserve" unused emissions by identifying future uses of the emissions or by establishing a finite lifetime for the preserved emissions may be a possible solution. The commenter reiterated that certainty is important for both industry and the permitting authority.

One commenter (IV-D-138) believed EPA or the implementing State permitting agency should adopt, through a notice and comment rulemaking, criteria under which "the appropriateness" of the emission caps will be judged prior to adjustment. These criteria, according to the commenter, should include the frequency of review and the reasons for any downward adjustment of the PAL permit limits.

One commenter (IV-D-10) requested that the types of changes, and the parameters that would trigger State review, should be spelled out. For example, the commenter claims that if changes in stack configurations cause an ambient modeled impact increase over a certain amount in its State, then the source must undergo minor NSR. They requested that other such changes that would require review be detailed in either the final rule or in policy.

7.8.2.3 Other comments on periodic review

Five commenters (IV-D-78, 80, 112, 118, 184) opposed public review of changes under the PAL. Commenter IV-D-112 advocated that an administrative process with no public review would suffice if a downward adjustment were required. One commenter (IV-D-78) stated that a source jeopardizes its ability to operate every time the PAL goes to public notice. According to the proposed rule, the commenter notes that the permit authority reviews the PAL and may reduce the PAL for any "appropriate consideration." The commenter further notes that this puts a source who chooses to use a PAL at risk for losing its allowable emissions at least once every 5 years (title V permit renewal). One commenter (IV-D-80) believed that the proposed language in

§52.21(x)(5)(i)(B), allowing for re-evaluation of the PAL pursuant to "another process with public notice and opportunity for comment," could allow any party to request a revision during a public hearing that is unrelated to the PAL, such as an NPDES permit or a State waste disposal permit. The commenter recommended deleting this provision. One commenter (IV-D-184) stated that it would be preferable to limit public participation to the general development of a rule for establishing and maintaining a PAL, rather than on permitting a specific proposed PAL as part of the permitting process.

Several commenters (IV-D-97, 98, 106, 112, 138, 150, and 170) opposed decreasing the PAL for any reason. One commenter (IV-D-112) explained that because sources will generally operate at an emission level below the PAL to provide a "reasonable operating margin," there may be a tendency upon a review of the PAL to adjust the PAL downward because the "plantwide actual emissions" are consistently below the PAL. To make the PAL useful and prevent abuse of the PAL by State or local agencies, the commenter requested that EPA propose for public comment the specific criteria for when the periodic review of the PAL may result in a downward adjustment. Otherwise, according to the commenter, sources will be encouraged to operate as close to the PAL as possible to avoid losing the emission limits. The commenter claims that this could result in increased pollution and violations. Another commenter (IV-D-97) stated that facilities should be allowed to operate within defined parameters for some certain period of time. If the State can revise the PAL downward as a routine matter, asserts the commenter, then the facility cannot undertake any meaningful planning activities because the emissions target will be constantly changing. Commenter IV-D-138 stated that the source should be able to make any change under the PAL without revising it.

One commenter (IV-D-80) believed the PAL should be revised to incorporate modifications separate from the existing PAL or emission increases above the PAL from unmodified units.

One commenter (IV-D-53) recommended that the source must show compliance with new requirements at the time it becomes subject, even though the permit will not be revised until the title V renewal or modification. Also, the commenter recommended that consistent notification procedures be developed to provide a mechanism for a facility to tell the permitting authority when a change in plant operations has occurred.

Response:

After considering the related comments on our 1996 proposal and 1998 NOA, we have gone forward with final rules that provide for mandatory and discretionary PAL reopenings, as well as a fixed PAL effective period of 10 years. At the end of 10 years, the PAL can expire or be renewed. The level of the PAL must be reevaluated at renewal. Thus, the renewal process serves as a periodic review and adjustment of the PAL.

We agree with the commenters that we should define exactly how frequently the reviews should occur. Furthermore, we agree with the commenters who advocated a review of the PAL after 10 years. We announced that we were considering (and requested comment on) a 10-year effective period for PALs in our 1998 NOA. We disagree with those commenters who believe reviewing the PAL at the same time as title V permit renewal. Instead, we believe that 10 years is a reasonable effective period for PALs for the following two reasons. First, we believe that a 10-year period is practical and reasonable both for the reviewing authority and you. While a logical stopping point may seem to be 5 years in line with the title V permit period, we do not believe that requiring PALs to be reviewed every 5 years provides industry with a sufficient period of regulatory certainty. We also believe that while the overall administrative burden for you and the reviewing authority is reduced if you are complying with a PAL, the establishment of a PAL requires an initial commitment of substantial resources. Given this initial resource investment, we do not believe that a 5-year, fixed term for a PAL provides you or your reviewing authority with an adequate incentive to participate in the PAL system. Thus, in an effort to balance the need for regulatory certainty, the administrative burden, and a desire to align the PAL review and renewal with the title V permit renewal, we believe a fixed term of 10 years, the equivalent of two title V effective terms, is most appropriate. Second, a study conducted by Eastern Research Group, Inc.[1] supported a 10-year look back to ensure that the normal business cycle would be captured generally for any industry. However, we do suggest that you request that your reviewing authority renew your title V permit concurrently with issuance of your PAL in order to align the two processes for administrative convenience.

We disagree with the commenters who opposed periodic review of the PAL. In the 1998 NOA, we gave several reasons why it might be appropriate to require PALs to be periodically adjusted. We continue to have concerns with an approach that would allow a PAL to be renewed without any evaluation of the appropriateness of the current PAL level. We believe such an approach would be contrary to the Act, and contrary to the court's decision in WEPCO v. Reilly, 893 F. 2d 901, 908 (7th Circ. 1990). In WEPCO, the court determined that one statutory purpose of the NSR requirements is "to stimulate the advancement of pollution control technology," and that, "allowing increased production (and pollution) through the extensive replacement of deteriorated generating system" without triggering NSR review would create, "vistas of indefinite immunity from the provisions of ... PSD."

We believe the final PAL rules avoid this inappropriate outcome by requiring the reviewing authority to consider whether your source's PAL continues to be reasonably representative of its baseline actual emissions and of its PTE (if lower than its baseline actual emissions) at the time of PAL permit renewal.

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1 Eastern Research Group Inc. Report on "Business Cycles in Major Emitting Source Industries" dated September 25, 1997.

Although we firmly believe that a periodic review of the level of the PAL is necessary, and that this should result in an adjustment in your PAL to a level that is representative of your baseline actual emissions or current PTE (whichever is lower), we do not believe that we should mandate an adjustment to the PAL based on only one prescribed methodology. Such an approach could lead to inappropriate results. Instead, we believe that our concerns can be appropriately addressed by providing the States the authority to adjust the PAL considering your source's baseline actual emissions (or current PTE). We agree in part with the commenters who were concerned about downward adjustments to the PAL. Although today's final rules allow the reviewing authority to consider a downward adjustment of the PAL when your current baseline actual emissions plus the significant level are less than 80 percent of your PAL level, it also provides the reviewing authority the discretion to establish the appropriate level.

We share the concerns of the commenter who indicated that PALs should be permanent. However, rather than make PALs permanent, we have adopted a different approach to address PALs that expire. After expiration of your PAL, each of your emissions units that existed under the expired PAL will be subject to an allowable emissions limitation. This allowable emissions limitation will represent a redistribution of the PAL level to individual emissions units or group of emissions units. After PAL expiration, the reviewing authority must issue a revised permit with unit-specific emissions limitations to restore your source to the major NSR program. After a PAL expires , a physical or operational change at an individual emissions unit must be evaluated to determine whether this change will result in a major modification.

Today's final rules do not contain specific provisions related to the issue of terminating a PAL. Decisions about whether a PAL can or should be terminated will be handled between you and your reviewing authority in accordance with the requirements of the applicable permitting program.

We do not agree with the commenter who suggested that additional notice and comment rulemaking is needed to adopt criteria under which the appropriateness of the PAL level will be judged prior to adjustment. We believe that the 1996 proposal and the 1998 NOA provided ample notice of the approaches and criteria we were considering. Accordingly, in the final rules we are proposing that while determining the PAL renewal level, the EPA will and the reviewing authority may, at its discretion, also take into account such factors as air quality needs, advances in control technology, anticipated economic growth in the area, desire to encourage voluntary emissions reductions, and cost effective emissions control alternatives.

In response to the commenter who requested that we spell out the types of changes and the parameters that would trigger State review, we note that State minor NSR provisions are not affected by the final PAL rules. Consequently, existing State review requirements continue to apply normally. As discussed above, we have spelled out the circumstances that can trigger mandatory and discretionary PAL reopenings and the timing and considerations for periodic PAL review and adjustment.

We do not agree with the commenters who oppose public review of PAL permit actions, except for reopenings to correct typographical or calculation errors that do not result in a higher PAL level. Major NSR has historically required public participation pursuant to 40 CFR 51.160 and 51.161 of this chapter, and we believe that PAL permitting should be no exception. The public has a legitimate interest in emissions at major sources. We do not believe, however, that changes under the PAL need to be subject to public review beyond that which applies under any applicable State minor NSR program. We believe that State minor NSR programs will provide the appropriate mechanism for notifications, where required, to the reviewing authority when you make changes under a PAL.

We do not agree that the language proposed for §52.21(x)(5)(i)(B) in the 1996 proposal (which would have allowed for reevaluation of the PAL pursuant to "another process with public notice and opportunity for comment") would have allowed any party to request a revision during a public hearing that is unrelated to the PAL. Nevertheless, we have not included this language in the final rules.

7.9 PALs in Serious and Above Nonattainment Areas

7.9.1 PALs in Serious and Severe Ozone Nonattainment Areas

Comment:

One commenter (IV-D-157) believed that the requirements of CAA section 182(c)(6) are met if increases over the PAL are limited to less than 25 tpy.

Two commenters (IV-D-160, 191) believed that as long as the PAL is not exceeded, the requirements of 182(c)(6) through (8) have been met. One commenter (IV-D-160) stated that EPA should interpret section 182(c)(6) through (8) such that PALs will not go through any NSR offsetting or full NSR review so long as the PAL for VOCs is not exceeded. The commenter (IV-D-160, trade association) agreed that in certain circumstances it may be necessary to take steps to ensure that changes under a PAL do not contribute to an adverse impact on ambient standards. The commenter noted, however, that this must be done in a way that retains key benefits of PALs, including the flexibility to make operational changes without triggering time-consuming State or Federal review as long as PAL are met.

One commenter (IV-D-191, business association) expressed concern that, in practice, a requirement that major NSR is triggered by any increase in a facility's actual emissions over the PAL in severe ozone nonattainment areas contravenes the ability of industries to increase production on existing permitted equipment.

One commenter (IV-D-140, trade association) supported the availability of a PAL in serious and severe ozone non-attainment areas. The appropriate PAL should be the *de minimis* emission rate of 25 tpy for VOCs.

One commenter (IV-D-137, STAPPA) recommended that in serious or severe ozone nonattainment areas, all changes resulting in an aggregate increase of 25 tons over a five-year period be subject to major NSR, LAER, and 1.2 to 1 or 1.3 to 1 offset ratios, as required by CAA section 182 (c) and (d). They pointed out that tracking of emission increases under PALs in these areas and the amount of emission increases allowed under the PAL before major NSR is triggered will have to be consistent. Moreover, the commenter notes, offsets should be required for increases triggering nonattainment review.

One commenter (IV-D-125, environmental group) recommended that special provisions for modifications to major sources in serious, and severe ozone nonattainment areas be toughened. According to the commenter, in such areas, a PAL may be problematic because it could allow for an increase at an emissions unit although there would be no emissions increase of the source's PAL. At minimum, noted the commenter, a PAL should comport with the statutory requirements for modifications to major sources in these nonattainment areas by looking at the new air quality benefit. The commenter did not otherwise specify how the special modification provisions should be toughened.

Response:

We agree with commenters who believe that the PAL approach does not conflict with the provisions of 182(c)(6). We do not interpret this section to be a limitation on our ability to authorize PALs in serious and severe nonattainment areas. This section directs that when there is an increase meeting certain criteria, it may not be considered de minimis, but it does not specify the methodology by which an emissions increase must be calculated. Accordingly, we have the discretion to establish the methodology; and we are doing so in this rule by having the PAL serve as the actuals emissions baseline against which future emissions increases are measured. If your source's emissions equal or exceed the PAL, it will trigger NSR, whereas maintaining plant emissions below the PAL ensures that there is no emissions increase. We believe that our interpretation reasonably implements the statutory purpose of the section, given that PAL sources agree to be subject to a plantwide cap that serves as the reference point for determining whether there has been an increase and that the appropriateness of the PAL level is reviewed at 10-year intervals. Actuals PALs effectively prevent the small serial unrelated emissions increases that section 182(c)(6) is designed to address. Additionally, the provisions of sections 182(c)(7) and (8) of the Act apply only if a particular physical or operational change under a PAL at a major stationary source in a serious or severe ozone nonattainment area is not considered de minimis under section 182(c)(6).

We do not agree with the commenter who indicated that a PAL contravenes the ability of industries to increase production on existing permitted equipment, since the source can create sufficient headroom for the increase by controlling other emissions units at the source.

We do not agree with the commenter who suggested that the requirements of section 182(c)(6) are met if increases over the PAL are limited to less than 25 tpy. The 25 tpy significance level in these areas is included in the PAL; therefore, any increase to or above the PAL constitutes a PAL major modification subject to major NSR (except where you have received prior approval from the reviewing authority to increase the PAL). We agree with the commenter who indicated that offsets in the required ratios for serious and severe nonattainment areas should be required for emissions increases above the PAL. The final rules require your PAL major modification to undergo major NSR as applicable in the area where your source is located.

We do not agree with the commenter who recommended that the special provisions for modifications to major sources in serious and severe nonattainment areas be toughened. As noted above, we have concluded that our PAL rules comport with statutory requirements, including the requirement for offset ratios of 1.2 to 1 and 1.3 to 1 where required.

We agree with the commenters who indicated that in certain circumstances it may be necessary to take steps to ensure that changes under a PAL do not contribute to an adverse impact on ambient standards. See section 7.10 below for more on this topic.

7.9.2 PALs in Extreme Ozone Nonattainment Areas

Comment:

Five industry commenters (IV-D-17, 42, 108, 160, 191) and one regulatory agency (IV-D-31) opposed requiring a declining emissions cap for PALs in extreme ozone nonattainment areas.

Two commenters (IV-D-42, 108) strongly disagreed with EPA's belief that CAA section 182(e)(2), applicable in extreme ozone nonattainment areas, appears to allow for a PAL, as long as it contains a "declining value cap." The commenter claims that the provisions of 182(e)(2) would be satisfied if the PAL were set at historical actual peak emission rates (using the highest 12 months of actual emissions during the 10-year look-back period); the potential-to-potential method could be used to determine net emission increases at units for which actuals are not available. Thus, according to the commenter, only physical or operational changes that result in emission rates above the applicable PAL would trigger the need for offsets. The commenter referred to the genesis of 182(e)(2), which was designed by its crafters to allow modifications within an electric utility's system-wide bubble (as existed in the SCAQMD under Rule 1135 before RECLAIM) without triggering the offset requirement, so long as the system-wide cap was

part of the SIP, or the utility's compliance plan was contained in its SCAQMD permit. The commenter claims that a PAL is far less extensive in scope than the type of multi-facility electric utility system for which this section was designed, and thus PALs should be allowed under the same section.

One commenter (IV-D-31) argued that PALs with declining caps for extreme nonattainment areas are a further burden on South Coast facilities. The commenter claims that EPA is dwelling on the RECLAIM model, which was implemented as an attainment strategy, not for general NSR flexibility. According to the commenter, sufficient constraints already are in place for South Coast stationary sources to make mandatory declining caps unnecessary.

Two commenters (IV-D-160, 191) maintained that activities under the PAL should not trigger NSR requirements even if significance levels or the sections 182(e) *de minimis* levels are exceeded, so long as the PAL limit continues to be met.

One commenter (IV-D-17) maintained that the proposed PAL is overly restrictive for sources operating in an extreme nonattainment area. For instance, the commenter notes the PAL is based upon actual emissions plus a margin "less than the applicable significant emission rate." In an extreme nonattainment area, the significant emission rate is zero; therefore, according to the commenter, a source in an extreme nonattainment area cannot have any margin as currently proposed. The commenter proposed that one way to alleviate this would be to allow a source to purchase ERCs and use them to provide an ample margin.

Two commenters (IV-D-137) recommended that in extreme ozone nonattainment areas, all changes resulting in an emission increase are subject to major NSR and LAER, unless offsets at a ratio of 1.3 to 1, as required by CAA section 182 (e) are obtained. They pointed out that tracking of emission increases under PALs in these areas and the amount of emission increases allowed under the PAL before major NSR is triggered will have to be consistent. Moreover, the commenter claims that offsets should be required for increases triggering nonattainment review.

One commenter (IV-D-50) believed units under the PAL in extreme ozone nonattainment areas should be subject to LAER. The commenter noted that for an extreme ozone non-attainment area, Section 182(e)(2) of the Act states that "any change...at a major stationary source which results in any increase in emissions from any discrete operation, unit or other pollutant emitting activity at the source shall be considered a modification...." and therefore subject to LAER and offsets. The commenter notes that while offsets can be obtained externally or internally relative to the source, and on the aggregate relative to the State or local program, LAER is required for each unit subject to NSR.

One commenter (IV-D-125) recommended that special provisions for modifications to major sources in extreme ozone nonattainment areas be toughened. In such areas, the commenter claims that a PAL may be problematic because it could allow for an increase at an emissions unit

although there would be no emissions increase of the source's PAL. At a minimum, asserts the commenter, a PAL should comport with the statutory requirements for modifications to major sources in these nonattainment areas by looking at the new air quality benefit. The commenter did not otherwise specify how the special modification provisions should be toughened.

Response:

*Because section 182(e)(2) clearly requires consideration of **any** increases at individual emissions units in extreme ozone nonattainment areas, we have concluded that PALs for VOC or NOx should not be allowed in these areas. Any increase in emissions from any unit in those areas (unless offset at a ratio of at least 1.3 to 1 by an emissions decrease within the same facility, for the purpose of complying with the offset requirement) constitutes a major modification subject to major NSR. Thus, we disagree with those commenters who indicated that a PAL was permissible in extreme nonattainment areas.*

7.10 Air Quality Changes

Comment:

7.10.1 Support Requiring Modeling Under PAL

One commenter (IV-D-125) recommended that modeling or other types of ambient impact assessments be required at a very low threshold for changes occurring under a PAL. According to the commenter, the threshold should either be all the time or based on a per ton fee to pay for interim impact assessments wherever new emissions exceed 3 percent of inventory. The commenter also recommended that changes in stack parameters and locations should also be evaluated because such changes can affect local air quality even if the emissions do not increase.

One commenter (IV-G-12) referred to EPA's acknowledgment that certain changes under the PAL can change a source's impact area, and must be assessed to demonstrate protection of NAAQS, increments, and AQRVs. Therefore, according to the commenter, when any emission changes under the PAL are proposed, the applicant should consult with the Federal Land Manager to determine what analyses will be needed to demonstrate that the proposed changes do not adversely affect AQRVs.

7.10.2 Require modeling only for significant change

Three commenters (IV-D-11, 52, 137) recommended that modeling under the PAL be required only for significant changes.

One commenter (IV-D-11) believed that requirements to evaluate ambient impacts conflict with the goal of operational flexibility and minimal oversight by permitting authorities

for minimal-impact changes. The commenter claims there should be a definition of significant changes requiring ambient impact evaluation or guidance on permit conditions that describe allowable changes not requiring evaluation. The commenter proposed that a compromise may be to establish mini-caps over sources with equal impacts and allow trading under each mini-cap but restrict trading between mini-caps or require contemporaneous demonstration of equivalent impact for trading between mini-caps. Either way, the commenter acknowledges, the establishment of mini-caps results in less operational flexibility than a facility-wide cap.

One commenter (IV-D-52) claimed that if traditional NSR fails to require facilities to examine the potential ambient impacts from emission increases, facilities with a PAL should not be required to examine these impacts (beyond ensuring that an emission decrease has approximately the same qualitative significance or public health and welfare as that attributed to the increase from the particular change). The commenter noted one exception to this is that modeling should be required for sources that can have a significant impact on the local attainment status. However, the commenter notes that a common sense approach should dictate the method for performing the modeling. According to the commenter, a facility could report the modeled effect of a minor change after the change is made (quarterly, semi-annually), while more significant changes should be modeled prior to construction. Nevertheless, the commenter stated that the permitting authority would need to review the modeling to check its accuracy and to assess the status of the air quality in the area.

One commenter (IV-D-137) stated that requirements to evaluate ambient impacts conflict with the goal of operational flexibility and minimal oversight by permitting authorities for minimal-impact changes. The commenter suggested that EPA finalize a definition of significant changes requiring evaluation or issue guidance on permit conditions that describe changes allowed that do not require an ambient impact evaluation. Moreover, the commenter suggested modeling should be required for sources that can have a significant impact on the local attainment status. However, the commenter notes that a common sense approach should dictate the method for performing the modeling. In this regard, according to the commenter, a facility report that shows the effects of a minor change after the change is made (in a quarterly, semi-annual, or perhaps annual modeling summary) is recommended, while significant changes should be modeled prior to construction. The commenter recommends that the facility be given a lot of responsibility in these cases and then held accountable (that is, required to mitigate) should an air quality increment or NAAQS be exceeded. The commenter proposed that the impacts evaluation be conducted at the time the PAL is established. In addition, the commenter proposes that the PAL clearly define what flexibility the source is allowed without further ambient impacts review and the types of changes for which additional review will be required.

7.10.3 Oppose Modeling under PAL

One commenter (IV-D-147) opposed requiring modeling under the PAL. The commenter believed most emissions would not even raise the issue, but stated that if EPA were to require

modeling for changes under the PAL, the PAL would be of little benefit. The commenter advocated discussing up front with permitting authorities which emission shifts might have consequences that would require additional modeling or monitoring. If there are any such concerns, claims the commenter, the PAL should be approved with conditions assuring that a post-approval modeling analysis be submitted.

7.10.4 Other Comments on Modeling under PALs

Commenters (IV-D-92, 180) suggested that modeling and other impact assessments be done up front, at issuance of the PAL. Thus, according to the commenter, the initial review defines what changes a source can do without additional approval and what changes require additional permitting action.

One commenter (IV-D-157) said sources that have undergone site-specific analysis showing their allowable or potential emissions are low enough to attain and maintain air quality standards and increments should quality for PALs. A relevant example provided by the commenter is the case where a source is subject to a generic SIP regulation, but satisfied an evaluation showing that it is the "functional equivalent" of a site-specific emission limit.

Response:

We agree with the commenters that requirements to evaluate ambient impacts would be likely to conflict with the goal of operational flexibility and minimal administrative burden, especially for small changes under the PAL. Moreover, we believe that we can rely on the reviewing authority's existing programs for addressing air quality issues resulting from changes under your PAL. As a result, the final PAL rules do not explicitly require modeling or other types of ambient impact assessments.

Certain changes in effective stack parameters under the PAL would generally be covered by the reviewing authority's minor NSR program. The reviewing authority would ordinarily request air quality modeling for any changes if it believes that the changes under the PAL may affect the NAAQS or PSD increments. We agree with the commenters who recommended that you and your reviewing authority establish in advance what sorts of changes under the PAL will trigger such requirements.

7.11 Partial or Mini-PALs

Comment:

7.11.1 Support for Partial or Mini-PALs

Several commenters (IV-D-46, 47, 72, 80, 94, 131, 140, 147, 154, 157, 162, 186, 188) supported the use of partial facility PALs.

One commenter (IV-D-140) stated that the permitting authority should have the flexibility to establish a PAL for an individual process or production unit within a plant site, especially a large complex consisting of many different process or production units, each operating under separate control rooms. Otherwise, according to the commenter, large complex plants would be penalized in comparison to smaller individual facilities without affording any additional emission reductions.

One commenter (IV-D-131) stated that it would be very difficult to implement one PAL for a large, complex site. Also, the commenter claims, there is no reason to penalize a large site by preventing it from taking advantage of the flexibility of a PAL for one or more process units. The commenter also claims that a large company may have competitors with smaller sites that would be allowed to use PALs.

One commenter (IV-D-72) requested that EPA clarify that a PAL need not be established on a facility-wide basis. Instead, the commenter proposes several sets of units should be able to be grouped together as separate PALs – with limits for each set within the facility. Another commenter (IV-D-186) requested that PALs be allowed for a designated portion of a facility or site. Often, according to the commenter, a single PAL for the entire site is unreasonable because of the diversity of operations or products produced. Also, the commenter requested that PALs be considered for a source if the major emission units which comprise a process are covered.

One commenter (IV-D-154) stated that the PAL should be able to apply to only a portion of a site. The commenter noted that one PAL for the entire site may not be realistic; the more diverse the operations, the harder it is to combine them under one PAL. The commenter stated that most large sites have a multitude of small sources that contribute only insignificantly to the source's total emissions of pollutants. Since having a PAL will impose burdensome monitoring, reporting and recordkeeping requirements, the commenter thinks it would be a disincentive to participation, with negligible offsetting environmental benefits, to require a source to include every emission point (for example, every analyzer) on a site in the PAL. Moreover, according to the commenter, there are sources at a site that are difficult or impossible to quantify. The commenter stated that the EPA should consider emissions that are independent of capacity separately from those that depend on capacity. As an example, the commenter noted that VOC

from piping fugitive emissions is only a function of hours that VOC is present in the piping and not dependent on operating rates or even VOC composition (as long as the VOC does not change from light liquid to heavy or vice versa). The commenter thinks it may be logical to handle emissions such as these separately from those that are a function of operating rate or product type, in order to reduce or eliminate the monitoring, reporting and recordkeeping burdens associated with a PAL.

One commenter (IV-D-46) stated that many major stationary sources have a variety of processes, with independent yet autonomous division operations. In these circumstances, the commenter feels a PAL is difficult to administer. Furthermore, the commenter feels that sharing an operating margin of 40 tpy VOC across the entire facility would provide no flexibility to the individual operating division. Moreover, the commenter noted that certain activities at the plant are not well suited to recordkeeping associated with a PAL. According to the commenter, a PAL should be established for a portion of a plant with the appropriate safeguards. Examples of safeguards provided by the commenter include: (1) partial PALs cannot be used to change a portion of the plant's status as a major stationary source; and (2) an activity performed within a portion of the facility covered by a partial PAL may only be moved to another portion of the facility covered by a partial PAL, unless major NSR applicability is determined or the partial PALs in question are adjusted accordingly.

One commenter (IV-D-94) stated that many plant sites in the pharmaceutical industry are diverse enough (for example, bulk chemical manufacturing and formulation frequently exist at the same plant site) that a PAL is more practical for part of the entire site. The commenter feels that the source definition should accommodate using either a single process or a collection of processes.

One commenter (IV-D-147) stated that frequently batch or cyclical operations within a large plant would make the entire plant ineligible for the advantages offered by PALs. The commenter notes, however, that in many industries certain facilities within a plant are ideal candidates for PALs because of their controls, monitoring, and general operations. The commenter requested the EPA to explicitly authorize States to allow the use of the PAL by these operations.

One commenter (IV-D-188) argued that allowing PALs for significant portions of a site would simply provide equal treatment for all members of the regulated community. For example, according to the commenter, a large company may have competitors with smaller sites that would be allowed to use PALs.

One commenter (IV-D-80) advocated allowing a PAL to be established for a process or other logical portion of a source as was done for VOC process emissions, but not VOC boiler emissions, in the 3M "minor modification" permit.

One commenter (IV-D-157) stated that what was particularly encouraging was EPA's explanation at the September, 1996, Advisory Subcommittee meeting that PALs could apply to sets of units within a source, or to single units, even though to date the PAL approach has focused on entire plants.

7.11.2 Oppose Partial or Mini-PALs

Some commenters (IV-D-53, 92, 137, 157, 180) opposed partial or mini-PALS. Commenter IV-D-137 recommended that each PAL cover all emission units, including insignificant activities (unless the EPA defines insignificant activities for NSR purposes). The commenter stated that facilities should not be allowed to select more than one PAL baseline. Moreover, the commenter claimed that short-term VOC and PM_{10} emissions from temporary operations at a site, such as intermittent construction or site remediation activities, should be included in the PAL. In addition, the commenter claimed that PAL limits should be based on some minimum level of control. The commenter feels that only well-controlled facilities should get the additional flexibility offered by the PAL. Some commenters (IV-D-92, 180) objected to allowing facilities to create partial PALs. According to the commenters, partial PALs will exacerbate existing problems with this proposal, especially when combined with the other exclusions.

One commenter (IV-D-157) said the PAL should be established as a single source-wide number for compliance and applicability. The commenter stated that this will give the plant flexibility to achieve the necessary reduction of emissions by different combinations of controls at different times. In addition, the commenter noted, a single source-wide PAL helps limit enforcement exposure.

Response:

We have not made a final decision about whether partial PALs (that is, PALs that would not include all quantifiable emissions of the PAL pollutant at a major stationary source) are permissible under the current regulations, nor are we adopting any partial PAL provisions in our final rules. We will continue to explore partial PALs on a case-by-case basis and the circumstances, if any, under which such PALs might be appropriate.

7.12 Monitoring and Enforcement of PALs

Comment:

Several commenters (IV-D-04, 31, 42, 43, 67, 152, 163, 191) commented on monitoring and enforcement of PALs. One commenter (IV-D-43) stressed that the PALs should be easily implemented and that the PAL provisions among the various regulatory programs should be

coordinated to avoid conflicting requirements under title V or under the CAM Rule. All of these programs, according to the commenter, should reduce administrative burdens for companies and permitting authorities by ensuring there is not an increase in monitoring, reporting, and recordkeeping burdens, as indicated in the EPA's draft R.A. The commenters feel that the owner/operator of the source and the permitting agency should be able to develop a single PAL permit that meets the criteria under the title V and CAM programs, as well as the revised NSR rules. The commenters also feel that the final NSR rule should contain provisions to provide clarity, avoid duplication, and ensure that sources covered by PALs achieve the full operating flexibility and other benefits of the PAL program.

One commenter (IV-D-31) raised concern with the degree of monitoring that a facility would be required to perform under a PAL. The commenter claimed that the proposed CAM explicitly exempts PALs from those considerations, suggesting that sufficient monitoring restrictions must exist within the PAL to forego imposing CAM. The commenter feel that EPA should not impose real time monitoring or other severe monitoring protocols as the only practical demonstration that a facility complies with its PAL. The commenter also feels that monitoring requirements under PALs should be reasonable and not so restrictive as to deter facilities from taking advantage of this new flexibility. Also, according to the commenter, EPA should provide more reasonableness with respect to "truing up" a PAL facility's emissions at the end of a reporting period. According to the commenter, this includes a reasonable reconciliation period at the end of a reporting cycle, the ability to buy and apply credits to make up any shortfall, reduction in the allowable facility emissions in the ensuing year in the event of a shortfall, etc.

One commenter (IV-D-04) claimed that the flexibility under a PAL emissions cap, although beneficial to plant managers and permitting authorities, might be more burdensome on enforcement officials. The commenter noted that if "practically enforceable" means that enforcement personnel can determine if a violation has occurred only after inspecting the facility, compiling information, and correlating voluminous data, then what is gained at the permitting end, in the way of saving regulatory resources, is lost at the enforcement end. The commenter found the demonstrated disparity in public enforcement for low income communities and communities of color particularly troublesome. Unless there are continuous monitoring requirements or other straightforward means to determine compliance, the commenter felt the PAL approach might unintentionally perpetuate inequities at the enforcement end.

One commenter (IV-D-67) supported the EPA's decision not to define the term "practical enforceability" when establishing a PAL permit. In discussions with various State permitting authority representatives on the meaning of "practically enforceable," however, the commenter has become concerned that States may be thinking that they need to apply measures that may be overly restrictive given the circumstances, in an effort to ensure "practical enforceability." The commenter did not believe, for example, that achieving "practical enforceability" requires facilities to use continuous emission monitors for all emitting sources and claims that systems of monitoring production information and recordkeeping provide practical enforceability for

permitting authorities. Based on the commenter's past experience with a PAL cap at one of its plants, certain monitoring requirements can be overly burdensome in comparison with the benefits achieved.

One commenter (IV-D-152) requested that the EPA address the issue of monitoring and enforceability of PALs. The commenter claims that the Agency has not spoken to these issues in the context of the PAL, and where it has spoken to the issue of monitoring in the case of compliance assurance monitoring, the Agency's approach is entirely inadequate. The commenter asserts that the CAM approach did not provide an adequate basis for enforcing source-specific limits; and it would not provide an adequate basis for enforcement of a plant-wide limit. The commenter referred to the problems of scarce resources at regulatory agencies and stated that those scarce resources have to be taken into account in determining how easy or difficult it is to enforce a PAL. The commenter recommended a simple, easily enforceable PAL program, at least for the first few years of the program.

One commenter (IV-D-163) referred to the proposed requirement that the PAL must be incorporated into a federally enforceable permit and contain compliance methods and monitoring requirements. The commenter noted that because PALs would be determined for all priority pollutants, all sources included in the PAL (even unpermitted sources, if applicable) would have to be equipped with adequate monitoring such that compliance can be verified. If the Agency is considering instrument-based monitors (for example, CEMS), the commenter maintained that such monitoring is well beyond the scope of even the recently proposed CAM rule. The commenter felt that EPA should make clear that emission monitoring proscribed in, and required by titles I, III, IV and V, will be wholly sufficient. The commenter claimed that monitoring requirements must be kept as flexible as possible, and still achieve the goals of accurate accounting of annual emissions and practicable enforceability. A CEMS will be prohibitively expensive to equip and operate, and would stifle the utility of a PAL.

Two commenters (IV-D-42,191) maintained that EPA should not require that a PAL be federally enforceable. The commenters claimed that it should be sufficient that the PAL is enforceable by the State. Commenter IV-D-42 did not understand why EPA claims that for a permit limitation to be "practically enforceable" it has to be "federally enforceable." In addition, the commenter claimed that such a requirement for Federal enforceability would bring only confusion to title V sources by necessitating the modification of a source's title V permit and gaining EPA approval of the change. The commenter claimed this approach would present an additional bureaucratic burden that would undermine any streamlining that may be achievable under a PAL approach.

Response:

We believe that the PAL must assure that the source maintains emissions below the PAL level to assure that major NSR does not apply. Therefore, we agree with the commenters who

stated that adequate data collection requirements through means such as monitoring, reporting, and recordkeeping requirements are necessary to ensure that the PAL limits are enforceable as a practical matter. In fact, we find that not only monitoring, recordkeeping, and reporting requirements, but also emissions testing requirements, for emissions units subject to a PAL differ from other MRRT in one important aspect: actual unit emissions must be measured to provide a 12-month rolling total, and compared against a limit. Currently, many emissions units are required only to have MRRT suitable for initial or spot checks on emissions concentrations, not emissions quantification. Even emissions units whose MRRT meets the title V requirements in §70.6(a)(3)(i)(B) or §70.6(c)(1), including those imposed by part 64 (the CAM rule), may need to be upgraded when those units are proposed to become subject to a PAL, because the approved title V MRRT may not be able to count emissions against a cap. While we believe you can obtain data for emissions quantification best through the use of CEMS or PEMS, in today's final rule we are allowing you to propose other types of emissions monitoring quantification systems, depending upon such factors as the size category of the emissions unit and its margin of compliance.

We agree with the commenters who stated that we should address the issue of monitoring and enforceability of PALs. We also agree that PAL enforcement must not be overly burdensome for the reviewing authority. Accordingly, the final rules contain minimum requirements for monitoring for PALs.

You need to propose a monitoring system as part of your PAL permit application submission to your reviewing authority. The monitoring system proposed must accurately determine plant-wide emissions. In your permit application, you must describe how you will collect and transform data from each emissions unit subject to a PAL permit, so that the emissions from each unit can be quantified as a 12-month rolling total. In addition, you need to demonstrate how you can be assured the data are and remain accurate by describing how you will install, operate, certify, test, calibrate, and maintain the performance of your monitoring system(s) on each emissions unit that will be subject to the PAL. You will also need to provide calculations for the maximum potential emissions without considering enforceable emission limitations or operational restrictions for each unit in order to determine emissions during periods when the monitoring system is not in operation or fails to provide data. In lieu of the permit requiring maximum potential emissions during periods when there is no monitoring data, you may propose another alternate monitoring approach as a backup. This backup monitoring, however, must still meet the minimum requirements for the monitoring approaches prescribed in the regulation. In addition, your permit must require you to maintain records of your monitoring and testing data that support any compliance certifications, reports, or other compliance demonstrations. Your permit must also require you to meet the semi-annual monitoring and prompt deviation reporting requirements of the title V operating permit program, since the terms and conditions of an approved PAL become title V applicable requirements that will be placed in your title V permit.

In terms of testing, as part of your PAL application and as directed by your reviewing authority, you must use current emissions or other current direct measurement data to demonstrate that your monitoring systems accurately determine emissions from each unit subject to a PAL. You will need to collect such data from all units subject to the PAL, including those that are unregulated at the present time. If you do not have current emissions data, or if your emissions unit's operation and equipment have changed since collection of that data, you will need to obtain current, accurate data, typically by conducting performance tests or other direct measurements before submission of your complete permit application to obtain a PAL.

You must conduct all testing in accordance with test methods appropriate to your emissions unit and applicable requirement. For example, among the test methods for measuring organic emissions are Methods 18, 25, 25A, and 25B, which can be found in 40 CFR part 60, appendix A. During testing, your emissions unit must operate within the range you wish to subsequently operate (for normal operation), so as to provide an accurate quantification of emissions across the entire range. This may require you to perform more than one performance test. In addition, you will need to re-validate the data and any correlation to demonstrate that your monitoring systems continue to accurately determine emissions from each unit subject to a PAL. This re-validation must occur at least once every 5 years for the life of the PAL. Data must be re-validated through a performance evaluation test or other scientifically valid means that is approved by the reviewing authority.

Any violation of the PAL is subject to enforcement action. Moreover, the failure to conduct, operate, or maintain your monitoring system, including failure to meet ongoing data quality assurance requirements, is also subject to an enforcement action. Because the PAL is a legally enforceable optional alternative to major NSR, an exceedance of your PAL constitutes a violation of major NSR. Once you have chosen to obtain a PAL for major NSR purposes, during the effective period of the PAL you cannot rely on other major NSR provisions to demonstrate compliance regarding your PAL pollutant (for example, exemptions from major modifications or netting), nor do we need to prove the elements of the NSR program to prove a violation of major NSR. You should not presume that in the case of a PAL exceedance that your only responsibility would be to reduce emissions to below the PAL. You could also be required to install additional controls and/or monitors, to conduct emissions testing, or to collect data on a more frequent basis.

7.13 Section (r)(4) Limits

Comment:

Several commenters (IV-D-09, 47, 52, 67, 80, 111, 147, 160) commented on issues related to "(r)(4) limits." This term is based on the requirements of §52.21(r)(4), which states that any time a source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after

August 7, 1980, then the requirements of major NSR apply to the source or modification as though construction had not yet commenced. Similar provisions are included in §§51.165 and 51.166. Such "enforceable limitations" are commonly referred to as "(r)(4) limits." They create synthetic minor sources or emissions units.

One commenter (IV-D-52) urged EPA to revise §52.21(r)(4). Two commenters (IV-D-80, 147) also urged EPA to add provisions eliminating all previous NSR limits once a PAL is established.

One commenter (IV-D-52) believed that certain PSD provisions, not addressed in the NSR proposal, may deter sources from requesting a PAL. One such provision, noted the commenter, guards against sham permitting: 40 CFR 52.21(r)(4). According to the commenter, this provision has been interpreted in at least two ways. The commenter claims that two types of synthetic minor limits currently exist and §52.21(r)(4) only applies to one of the two types. Even as to that one type of synthetic limit, the commenter asserts that the restriction of this section should only apply for a limited amount of time, and the commenter proposed the following language to amend §52.21(r)(4) accordingly.

> (1) Eliminate limits taken on unmodified units. When a source installs a new unit or modifies an existing unit that, standing alone, would be a major PSD modification, it may choose to net out. To create the netting credits, the source may reduce emissions from one or more existing emission units to a level below current actual emissions. The limitations creating these netting credits become "federally-enforceable" in a construction permit or a combined construction/operating permit (as is the case with this particular State). Where a PAL has been established, the source must acknowledge that this type of condition limits the potential emissions of the unit or units on which the limitation has been placed. Then, once the PAL is set (based on actual emissions), the limitation need not be retained, as actual decreases in emissions must offset any emission increases from the units previously limited for the source to remain below the PAL.
>
> (2) Create a "sunset" provision for limits taken on modified units. When a source takes a limit on the modified unit to avoid PSD review, the commenter believes that the limit must be maintained (unless the source performs a new PSD review) for some period of time. This must be done to prevent sham permitting; to make sure that unscrupulous sources do not circumvent regulations. However, it is clear that a planning cycle has a limited duration; at the conclusion of the planning cycle, a federally-enforceable condition on a modified unit becomes an artifact of a regulatory process, rather than a restriction that prevents circumvention of the regulation. Section 52.21(r)(4) should be amended to provide for a "sunset" provision on these types of limits. The sunset period would last as long as the planning cycle, with 5 years as an extreme outer time limit.

One commenter (IV-D-147) stated that §52.21(r)(4) should not be used to require facilities to retain old synthetic minor limits when a PAL is established. The commenter believed that the language of the regulation clearly provides an alternative to major NSR application when synthetic minor limits are replaced by plantwide emission caps. The commenter claims a source that has gone through many minor NSR permitting actions and expects to continue to need permit modifications in the future gains flexibility under the PAL because the unit-specific limits become unnecessary. The commenter feels EPA should recognize this and provide guidance and provisions for the PAL option that synthetic minor limits and netting limits are to be replaced by the PAL.

Commenter IV-D-80 stated that if a facility and agency accept a PAL that has been calculated with a federally enforceable limitation on emissions, then the PAL incorporates the facility's individual unit emission limits. Thus, according to the commenter EPA can be assured of sustained air quality even if previous individual unit limits are not expressly noted in the permit, because they have been incorporated into the PAL. In addition to eliminating §52.21(r)(4) limits, the commenter maintains that the limits taken in order to generate netting credits and BACT emission rate limits should also be eliminated. If the previous limits are not superceded, notes the commenter, EPA should at least provide sunset provisions that the limits will not apply after 5 years.

Commenter (IV-D-147) maintained that the PAL option will be of little use to many facilities if the EPA does not address the treatment of unit-specific limits at the facility when a PAL is adopted. As noted by the commenter, some of these limits are BACT or LAER limits, some are limits taken in prior NSR permits to keep a modification minor, and some are limits taken to create netting reductions.

Response:

We agree with the commenters who indicated that (r)(4) limits need not be retained when your PAL becomes effective. The PAL effectively stands in the shoes of the (r)(4) limits as an enforceable limitation that avoids major NSR applicability. Accordingly, the final rules provide that an actuals PAL may eliminate enforceable permit limits you may have previously taken to avoid the applicability of major NSR to new or modified emissions units. Before removing the limits, your reviewing authority should make sure that you are meeting all other regulatory requirements and that the removal of the limits does not adversely impact the NAAQS or PSD increments. If your PAL subsequently expires, the previous (r)(4) limits do not become applicable again.

We do not agree with the commenters who suggested that other types of unit-specific limits should be superseded by a PAL. Such limits are taken as a consequence of NSR applicability or reflect other programs' requirements. The PAL does not substitute for them. Consequently, the final rules do not provide for previously applicable unit specific limits (other

than (r)(4) limits) such as BACT, NSPS limits to be superseded or eliminated when your PAL becomes effective.

7.14 PALs and Clean Facilities

Comment:

Two commenters (IV-D-111, 135) addressed PALs and clean facilities. One commenter (IV-D-111) disagreed with other parties' suggestion that the clean facilities exclusion would work equally well for sources seeking PAL limits based on such allowed emission levels. First, according to the commenter, it is possible to go through Federal NSR/PSD without having all emission units meet the clean facility control requirements. More importantly, claims the commenter, a PAL permit is structured to provide plant-wide flexibility whereas a PSD permit may have unit specific limits that cannot be modified or exceeded under the clean facility exclusion. Lastly, the commenter noted that the clean facility exclusion does not provide a context for pre-approval of changes that might trigger minor NSR. For all other cases the commenter agreed that the PAL limit should be based on a facility's actual emissions, using the 10-year look-back approach to establishing actual emissions, plus a reasonable operating margin.

One commenter (IV-D-135) recommended merging the PAL and clean facility exclusions because they are closely related concepts. The commenter claimed the PAL could cap a source at plantwide actual emissions and the clean facility exclusion could cap a recently permitted major source at its current allowable limits. The commenter asserted that the PAL should be based on source-specific allowables, in which case the clean facility exclusion would be unnecessary.

Response:

Most commenters and stakeholder participants did not support the clean facility exclusion. Some indicated that it would be similar to a PAL based on allowable emissions, although the allowables PAL would be preferable. We have taken no action on clean facilities in the final rules. We will continue to evaluate clean facilities as we consider allowables PALs.

7.15 Miscellaneous Comments on PALs

7.15.1 Notification requirements

Comment:

Some commenters (IV-D-14, 52, 137) addressed notification requirements. One commenter (IV-D-52) stated that the source must make periodic reports about its emissions, its compliance status, and its construction activities. The commenter noted that minor changes may be reported after the fact, while the source should notify the permitting authority of major

changes prior to the start of construction. The commenter felt that the notification format should be set by agreement of the permitting authority and the source. In addition, the commenter felt that there should be some flexibility to allow the use of electronic mail and other new communication methods. However, noted the commenter, the public should have ready access to this information. One commenter (IV-D-137) recommended that consistent notification procedures be developed to provide a mechanism for a facility to tell the permitting authority when a change in plant operation has occurred. According to the commenter, the notice requirements should be commensurate to the level of change being made and there should also be a clear linkage between the PAL and source improvements. In addition, the commenter stated that the PAL should explicitly establish a hierarchy of preferences to be considered and analyzed by a source when it determines the potential impact of a new or modified product.

One commenter (IV-D-14) stated that the language in the proposed rule is silent about the process to address the timing and notification for changes under the PAL. That is, when can they make a change, what type of notice to the permitting authority, timing and process for ensuring enforceable conditions to ensure that the PAL limit is not exceeded, the type of review to ensure that emission changes (increases and decreases) will occur within the PAL limit. The commenter felt that discussion of these issues, and any needed additions to the regulation as a result of these factors should follow in the Federal Register announcement of the final rulemaking. The commenter also felt that it is clear that the source may need to perform modeling to address the "qualitative significance" [(§51.166(u)(4)(i)] of an emission trade to ensure that the netting does not worsen air quality. The commenter requested clarification of what EPA is envisioning by the "qualitative significance" of the change. Also, title V may not be an appropriate vehicle since it does not consider any ambient impact analysis; according to the commenter that usually occurs within minor and major NSR. The commenter supported §51.166(u)(4), Plantwide applicability limit modifications.

Response:

We do not agree with the commenters that the PAL rules must require notification for changes under the PAL, and hence the final rules do not contain any such requirements. As long as the source does not meet or exceed the PAL limit and meets the monitoring requirements of the PAL, the source is in compliance with the PAL. Moreover, State minor NSR programs will continue to require appropriate notice and air quality analyses for changes that you carry out under your PAL.

7.15.2 Interaction between PALs and other programs

Comment:

Some commenters (IV-D-52, 114, 137) advised EPA to address how HAPs would be treated under the PAL. One commenter (IV-D-137) claimed that some existing State and local

HAP programs would limit the trading of HAP emissions. The commenter recommended that the EPA either address HAPs in the PAL provisions of the NSR rule or recognize that State and local agencies will continue to operate their own HAP program. The commenter requested that these programs either preclude certain VOC PALs or place restrictions on inter-HAP trading; but nonetheless allow intra-HAP trading. One commenter (IV-D-114) stated that the PAL concept is not discussed in enough detail. For instance, a commenter questioned whether a facility will have to accept plantwide limitations on the more exotic HAPs, and will a modification be major if it requires an increase in any of these limitations? The commenter stated that a notice of proposed rulemaking covering just the PAL issue would be beneficial in terms of focusing review and comments, thus maximizing potential utilization of this voluntary option.

Another commenter (IV-D-52) requested that EPA address several issues related to PALs. They requested that EPA address PAL interaction with other regulations. They suggested that PALs also be discussed in rulemakings for the operating permit program and for the NESHAP. According to the commenter, EPA should ensure that a PAL permit will be able to include "pre-authorization" for all types of changes, including NSPS and NESHAP installations and modifications. To facilitate this, the commenter noted that it would be helpful for EPA to issue guidance on how to include the public in the "PAL-approval" process. This guidance, according to the commenter, would help alleviate public concerns as well as the concerns of environmental groups.

Two commenters (IV-D-45, 62) requested that EPA coordinate the PAL provisions with the title V and CAM rules.

One of the commenters (IV-D-45) stated that PALs need to be coordinated with emission caps for minimizing Part 70 permit review, and flexible compliance through emissions bubbles or other types of averaging approaches. Unfortunately, the commenter claims that EPA has struggled to translate the abstract goal of operational flexibility into regulatory reality. The commenter states that the predominant cause of this problem appears unrelated to inflexible statutory limitations, but rather to rigid institutional barriers to innovative approaches within different offices and regions of the Agency. The commenter claimed that this was all too well evidenced in a recent NSR permit proceeding where the commenter sought to negotiate binding emissions limitations not only for NSR applicability, but also for demonstrating compliance with applicable CAA emissions standards. According to the commenter, although they were able to demonstrate at least the same level of protection as provided by traditional command-and-control limits, EPA regional staff were simply unwilling to allow the incorporation of an emissions cap concept into the final NSR permit for either the entire source or discrete subcategory of operations (for example, the coating operations for the vehicle assembly plant). The commenter feels that this experience does not bode well for the PAL concept, since it would appear to be too limited from an operational flexibility standpoint.

Response:

We do not agree with the comment that PALs should address HAPs. You cannot obtain a PAL for HAP emissions because HAPs are not "regulated pollutants"as defined in today's rulemaking, except where they are constituents of or precursors to a regulated pollutant, such as VOC. See Clean Air Act Section 112(b)(6).

PALs are intended only to govern major NSR applicability, and are unrelated to preapprovals for other types of applicable requirements such as NSPS and NESHAPs. Thus, the permit action under which your PAL is created is not expected to address other types of preapprovals.

We agree that public involvement in PAL permitting is important. Accordingly, the final rules require the reviewing authority to conduct a public participation process before they can issue a PAL permit. This process must be consistent with the requirements at §51.161 and include a minimum of a 30-day period for public notice and opportunity for public comment on the proposed permit. Where the PAL is established in a major NSR permit, major NSR public participation procedures apply.

In reference to title V operating permits and coordination with PALs, the reviewing authority establishes a PAL in a federally enforceable permit using its minor NSR construction permit process, the major NSR permit construction process, or another SIP-approved operating permit process, and eventually rolls these requirements into a title V operating permit. The process for incorporating the conditions of a PAL into your title V operating permit depends on whether your initial title V permit has already been issued. If the initial title V permit has not been issued, the PAL permit would be incorporated during initial issuance of your title V permit. If the initial title V permit has already been issued, the PAL permit would be incorporated through the appropriate part 70 modification procedures. We suggest that you request that your reviewing authority renew your title V permit concurrently with issuance of your PAL in order to align the two processes together and decrease the administrative burden on you and your reviewing authority. Once a PAL is established, a change at a facility is exempt from major NSR, but could require a title V permit modification. Whether a title V permit modification would be required, and which permit modification process would be used, is governed by the current part 70 rule as implemented by the reviewing authority.

7.15.3 Other

Comment:

One commenter (IV-D-67) requested that the EPA clarify that PALs should be available for R&D facilities. The commenter feels that due to the small quantities of chemicals involved in each R&D experiment, and the need to avoid encumbering R&D, EPA should allow very

flexible enforceability provisions for R&D. For example, claims the commenter, purchase records should be more than adequate for demonstrating compliance with the PAL at a R&D facility.

One commenter (IV-D-52) requested that EPA address insignificant activities. The commenter feels that accounting for all minor emission units and their annual emissions can be a tedious job with little environmental benefit. The commenter requested that EPA develop a consistent list of insignificant activities that is effective for both operating permits and for PALs, as well as for other title I and title III provisions. According to the commenter, this would allow the source and the permitting authority to focus their efforts on the more significant pollution emitters.

One commenter (IV-D-67) argued that PALs should be structured to allow use of pollution prevention techniques, because they provide crucial flexibility to facilities operating under PALs. According to the commenter, however, requiring pollution prevention under PALs would limit source flexibility. The commenter feels that sources should be given the freedom to determine how and when to optimize use of pollution prevention techniques.

One commenter (IV-D-67) noted that the proposed additions regarding PALs do not address a situation in which a PAL is withdrawn by an agency due to an exceedance or other violation of the PAL. The commenter requested that EPA add provisions stating that if a PAL is withdrawn, the source will have a reasonable period of time, which may be 180 days or more, to obtain a traditional permit (or to revise the permit to include provisions that substitute for the PAL). The commenter noted that a similar provision was included in Minnesota's recently-adopted Environmental Regulation Innovations Act.

One commenter (IV-D-186) requested that the provisions that require all emissions to be quantified be relaxed to exclude insignificant emission units below a threshold level. Also, according to the commenter, engineering estimates and rates based on emission factors should be explicitly recognized as equivalent to emission rate tests made by standard methods. The commenter claimed that actual stack tests would incur tremendous costs, which would largely defeat the advantages of PALs.

One commenter (IV-D-162) recommended several changes to the proposed PAL provisions: (1) Clarify that the source has the option of adding a new unit with a separate limit outside of the PAL if it wishes to do so (for example, a source has a PAL of 500 tpy on existing units/activities, but takes separate 39 tpy SO_2 limits on 3 new units over the next 5 years); (2) clarify that a PAL can be established--and is presumptively proper--for one or more, but not necessarily all, pollutants (as was done for VOC emissions at 3M); and (3) clarify that sources that seek a PAL are not to be penalized by being treated any more stringently than non-PAL sources (for example, for emissions trades, or with monitoring requirements greater than those minimally necessary to provide reasonable assurance of compliance).

Response:

The final rules do not directly address R&D facilities. Nevertheless, nothing precludes such facilities from using PALs. The monitoring requirements of the final rules are structured to ensure that PALs are enforceable as a practical matter. Nevertheless, there is flexibility built in so that you and the reviewing authority can agree upon reasonable procedures for your situation, including for R&D facilities.

As noted above, the monitoring requirements of the final rules allow enough flexibility for you and the reviewing authority to develop reasonable quantification procedures for all types of emissions units. In particular, the rules allow the use of published emission factors for quantifying emissions from insignificant and trivial units, as referenced in Part 70. We are not, developing a list of insignificant activities that is effective for both operating permits and for PALs. It is up to you to work with your reviewing authority and identify these units.

It is our policy to encourage Pollution Prevention (P2) in all our programs. PALs can be issued for sources using P2. While not specifically addressed in the final rules, the PAL approach encourages you to implement P2 to create headroom under the PAL, allowing greater operational flexibility.

We do not agree with the commenter who suggested that we provide you with the option of adding new units at your source outside the PAL, since we are not providing for partial PALs in the final rules as discussed in section 7.11.

We agree with the commenter who indicated that you do not have to establish a PAL for all the regulated pollutants that your source emits. In fact, a PAL is specific to a single pollutant. However, you may apply for PALs for more than one pollutant.

Chapter 8 - 1998 Comments on PALs

8.1 Overview

We received public comments on PALs in response to the 1998 NOA concerning general support or opposition to PALs, Support or Opposition to not adjusting PALs for MACT purposes, legality of PALs, environmental concerns, periodic PAL review and adjustment, time period for PAL review, adjustments for shutdowns and dismantled units, adjustments for unused capacity, PAL expiration and renewal, adjustments for sources that implement good controls or pollution prevention, and other comments on PAL adjustments. These comments and our responses are summarized in sections 8.2 through 8.12. Other comments and responses on topics not directly addressed in the NOA are included in section 8.13.

Two industry commenters (IV-D-220, 270) and two utility industry commenters (IV-D-276, 322) provided certain comments on the 1996 reform proposal. The comments that were relevant to the topics covered in the NOA have been summarized in appropriate sections in this document. Those comments that were strictly limited to the 1996 NSR Reform proposal, and were therefore out of scope of the NOA, were not summarized.

8.2 General Support for or Opposition to PALs

Comment:

8.2.1 General Support For PALs

One utility industry commenter (IV-D-294), STAPPA/ALAPCO (IV-D-259), nine regulatory agency commenters (IV-D-211, 216, 246, 253, 262, 287, 305, 317, 320), and twenty-two industry commenters (IV-D-210, 219, 220, 256, 258, 263, 266, 270, 274, 283, 293, 296, 301, 304, 306, 307, 308, 310, 312, 315, 321, IV-G-21) generally supported the concept of PALs.

Two regulatory agency commenters (IV-D-253, 262) and eight industry commenters (IV-D-256, 258, 266, 306, 307, 310, 315, 321) supported PALs because of the flexibility provided. Reductions or elimination of PSD applicability determinations, or decreased permitting burdens for sources and permitting authorities, were recognized by the commenters as a positive result of PALs.

Three regulatory agencies (IV-D-253, 287, 305) supported PALs provided that PALs were accompanied by an equivalent or increased level of environmental benefit. One regulatory agency (IV-D-287) and STAPPA/ALAPCO (IV-D-259) supported PALs as long as regulations provided clear and adequate provisions for properly designing and enforcing them. PALs must incorporate unit-specific emission rate limitations, as well as a facility limit, to ensure compliance, contended the one regulatory agency (IV-D-287) and STAPPA/ALAPCO

(IV-D-259). Increased monitoring requirements were deemed appropriate on a case-by-case basis by the one regulatory agency (IV-D-287) and STAPPA/ALAPCO (IV-D-259). One regulatory agency (IV-D-305) supported PALs provided that PALs included the necessary provisions to protect AQRVs, PSD increments, and the NAAQS. A source proposing any emission changes under a PAL must show that the changes would not adversely affect AQRVs or violate any applicable PSD increments or NAAQS, according to the regulatory agency (IV-D-305).

STAPPA/ALAPCO (IV-D-259) was concerned about PALs in nonattainment areas. STAPPA/ALAPCO (IV-D-259) recommended that sources should be subject to future SIP reductions and not receive special protections because they are included in a PAL. STAPPA/ALAPCO (IV-D-259) suggested that EPA should not allow nonattainment to persist indefinitely just to provide incentives for PALs. STAPPA/ALAPCO (IV-D-259) also supported requiring an ambient air impact analysis for each PAL increase to ensure that the NAAQS or increment will not be exceeded.

Two industry commenters (IV-D-256, 321) stated that PALs eliminate the disincentive for pollution prevention efforts that exist under current NSR practices or for encouraging innovative control technologies, pollution prevention, and emission reductions. Another industry commenter (IV-D-306) said that EPA has acknowledged the environmental improvement (incentive for growth industries to reduce emissions, elimination of "paper emissions" in the system) that flexible permitting vehicles (like PALs) provide.

One regulatory agency (IV-D-211) suggested initiating the PAL as a pilot project in two or three States before launching it nationwide.

Another regulatory agency (IV-D-246) wanted to restrict PALs to title IV units or facilities that maintain quality assured continuous emissions data.

One regulatory agency (IV-D-246) contended that the PAL was a good approach to avoiding the "past-actual-to-future-potentials" test for PSD applicability provided that accurate emissions data are available.

One industry commenter (IV-D-321) noted that PALs allow for timely process changes. Industry commenters (IV-D-258, 266) using batch processing supported PALs because future potential to emit was overstated to create flexibility, and batch operations typically means the equipment was operated at rates much lower than theoretical capacity. The industry commenters (IV-D-258, 266) contended that PALs mitigate unfair results of biasing PSD applicability on a past-actual to future-potential test, particularly where utilization was often much less than capacity. Another industry commenter (IV-D-306) said that rapidly changing, global industries (such as the electronics industry) needed PALs and other flexible permitting vehicles to maintain technically and economically viable operations.

Three industry commenters (IV-D-274, 283, 310) who supported the concept of PALs were concerned that the initially proposed rule fell far short of providing sources with significant opportunities for operational flexibility or that the changes proposed in the NOA would limit the usefulness of the PAL. Two industry commenters (IV-D-263, 308) conceptually supported the PAL concept, but said that it would probably result in little practical benefit. The two industry commenters (IV-D-263, 308) noted that their member companies would be hesitant to accept what would amount to a 10-year emission limit and, consequently, a limit on growth. Moreover, the two industry commenters (IV-D-263, 308) explained, regardless of the PAL concept, most State permitting programs will still require facilities to undertake extensive pre-construction review that will nullify most of the benefits associated with a Federal PAL.

8.2.2 General Opposition to PALs

Four environmental commenters (IV-D-290, 291, 303, 327) and two individual commenters (IV-D-218, 247) generally opposed the concept of PALs.

Two of the environmental commenters (IV-D-290, 327) asserted that PALs will allow existing older sources to escape NSR and pollution control requirements.

Another commenter (IV-D-247) stated that the present system has worked well for 20 years, that increased emissions from future facility changes would have to undergo a level of review similar to that currently required, and that PALs could result in additional paperwork for regulators trying to track changes and their emission impacts.

One environmental commenter (IV-D-291) said that the proposed PAL rules would subvert the CAA by allowing the persistence of dirty facilities in non-attainment areas and by allowing an older facility in a PSD area effectively to "use up" emission allowances that would otherwise be available to new economic development.

One environmental group (IV-D-327) opposed PALs because they would interfere with SIP calls to reduce NO_x and SO_2. The commenter believed that allowing PALs would "tie EPA's hands" under NSR, which is a critical program tool for achieving emission reductions.

8.2.3 Generally Oppose PALs Because Not Environmentally Protective Enough

Three environmental commenters (IV-D-290, 291, 303) and one individual commenter (IV-D-218) believed the PAL concept was not environmentally beneficial.

One environmental commenter (IV-D-291) said that while it may be true that some case-by-case PALs are appropriate, for example to encourage innovative process improvements that allow increased production without further fouling the air, Congress did not intend for EPA

to create a universally available "out" from the NSR requirements the commenter claim. The grandfathering of existing large stationary sources was never intended to continue in perpetuity, but the creation of the PAL as proposed would have that effect.

Response:

As discussed in volume I, 7.2, we have concluded that the PAL regulations represent a permissible construction of the Act and are consistent with the Congressional purpose and intent underlying NSR. The PAL regulations constitute a reasonable interpretation of the Act's definition of "modification" and are permissible under current law. Moreover, we believe that PALs will provide many benefits to you, reviewing authorities, the public, and the environment. See our response in volume I, 7.2 for additional detail on these general considerations.

We do not agree with the commenter who suggested allowing PALs on a pilot project basis, since we have already conducted a pilot project study and found PAL like programs to be beneficial both for the source and the environment . Over the past several years, we have allowed use of major stationary source wide emissions caps to demonstrate compliance with major NSR in a select number of pilot projects. We recently reviewed six of these innovative air permitting efforts and found substantial benefits associated with the implementation of permits containing emissions caps (among other types of permit terms offering greater flexibility than conventional permitting programs). Specifically, we reviewed on-site records to track utilization of these flexible permit provisions, to assess how well the permits are working and any emissions reductions achieved, and to determine if there were any economic benefits of the permits. Overall, we found significant environmental benefits occurred using the permit terms for each of the permits reviewed. In particular, the six flexible permits established emissions cap-based frameworks that encouraged emissions reductions and P2, even though such environmental improvements were not an explicit requirement of the permits.

We agree with the commenter who believes that PALs should only be allowed for facilities that maintain quality assured continuous data and in the final rules have included adequate monitoring provisions to ensure availability of accurate data.

8.3 Support for or Opposition to Not Adjusting PALs for MACT Purposes

Comment:

8.3.1 Support for Not Adjusting PALs for MACT Purposes

Seven industry commenters (IV-D-208, 256, 292, 298, 304, 306, 307) and one regulatory agency commenter (IV-D-211) supported EPA's proposal to not adjust PALs to reflect new MACT standards.

Three industry commenters (IV-D-208, 256, 298) asserted that PALs are designed to address criteria pollutants and not to limit HAPs addressed by MACT standards. Two industry commenters (IV-D-298, 307) felt that sources with PALs should be treated no differently than other sources with respect to reductions reflected in the SIP. One industry commenter (IV-D-292) stated that the adjustment would limit the ability to make changes for production demands, limit production capacity, and limit economic growth. One industry commenter (IV-D-298) noted that the MACT reduction level or control requirement may have already been considered and reflected in establishing the PAL.

8.3.2 Opposition to Not Adjusting PALs for MACT Purposes

Three regulatory agency commenters (IV-D-253, 255, 287), STAPPA/ALAPCO (IV-D-259), and one industry commenter (IV-D-315) opposed EPA's proposal to not adjust PALs for MACT purposes.

One regulatory agency commenter (IV-D-255) and STAPPA/ALAPCO (IV-D-259) stated that PALs should be adjusted whenever rules requiring new or additional control technologies are promulgated, for example, RACT, MACT, and SIP requirements. (The regulatory agency commenter was not clear on whether this comment applied broadly or only when the MACT applies to the PAL pollutant, and STAPPA/ALAPCO did not specifically address the case where MACT does not directly regulate the PAL pollutant.)

One industry commenter (IV-D-315) believed that new regulatory requirements, such as a more stringent RACT or new MACT requirements, should be incorporated into a facility's PAL renewal review, and the facility's PAL limit should be adjusted accordingly. The industry commenter (IV-D-315) provided the following example: To meet the MACT requirements to control a specific HAP, a facility may select a system that not only will achieve the HAP control, but also realize VOC reductions. The industry commenter (IV-D-315) believed that the facility should be allowed to keep the VOC reductions as incentives for implementing pollution prevention initiatives.

One regulatory agency commenter (IV-D-253) felt that adoption of a MACT standard should trigger reevaluation of a PAL; however, it could be concluded that the PAL should be reduced (to account for the reduction in gross emissions resulting from MACT compliance) or that the PAL should be unchanged (because the source already complied or will reformulate to comply with MACT but not reduce emissions of criteria pollutants).

One regulatory agency commenter (IV-D-287) stated that not requiring PALs to be adjusted for new MACT standards appears to be a change from current policy. Current policy states that emission reductions at a facility that are required in order for a facility to meet regulatory limits cannot be used for netting purposes. Here EPA appears to be saying that emission reductions required in order to meet a newly promulgated MACT standard may be counted toward emission netting goals.

Response:

As discussed in volume I, 7.8.1, the final PAL rules do not always require the reviewing authority to adjust your PAL for a newly applicable MACT standard. However, if your reviewing authority has adopted the new MACT standard in its SIP, then the reviewing authority must adjust the PAL. The reviewing authority generally has discretion to reopen your PAL immediately for this adjustment or to wait until the time of your title V permit renewal or PAL permit renewal, whichever occurs first. However, the reviewing authority must reopen and adjust your PAL immediately if you are creating creditable emissions reductions for use as NSR offsets.

8.4 Legal Concerns (Contemporaneity Requirement of Alabama Power)

Comment:

8.4.1 PALs Are Legal

Eighteen industry commenters (IV-D-208, 254, 256, 258, 265, 266, 272, 292, 293, 296, 298, 301, 302, 304, 306, 307, 310, 311), three regulatory agency commenters (IV-D-211, 216, 253), and one utility industry commenter (IV-D-279) maintained that PALs are legal.

Two industry commenters (IV-D-298, 302) stated that the legal and policy concerns regarding PAL adjustment raised by EPA in the NOA are unwarranted.

One industry commenter (IV-D-208) believed that PALs will not cause contemporaneity issues.

Two industry commenters (IV-D-304, 306) maintained that PALs are authorized under current law and regulations as clearly illustrated by EPA's development and approval of PALs throughout the country. The two industry commenters (IV-D-304, 306) stated that EPA should acknowledge the current legal viability of PALs to give security to facilities currently operating under PALs and to allow PALs to be developed in the title I and V permitting actions that will occur before NSR Reform is finalized in May 1999. EPA must distinguish and coordinate between PALs and other flexible permitting vehicles, claimed the two industry commenters (IV-D-304, 306).

One regulatory agency (IV-D-211) believed that the key issue in contemporaneity under the PAL is that it must be applied equally to increases and decreases. According to the Commenter until the PAL baseline is reset, all increases and decreases since baseline must be counted to determine if a net significant emission rate increase has occurred.

Another regulatory agency (IV-D-216) agreed with the court that EPA's 1978 regulations limiting plantwide netting conflicts with the language and purposes of CAA, and that EPA should not only permit, but should also require, sources to net on a plantwide basis. In order to net, the regulatory agency (IV-D-216) stated that a PAL should be set by capping actual emissions.

Five industry commenters (IV-D-265, 272, 292, 307, 311), one utility industry commenter (IV-D-279) and one regulatory agency (IV-D-253) commented on the court providing EPA with discretion to define contemporaneity. One regulatory agency (IV-D-253) believed that the Court in Alabama Power interpreted the CAA to require contemporaneity but left the definition to EPA. The commenter claimed that those regulations can be amended such that the proposed 10-year concept put forth in this proposal can encompass contemporaneity. Similarly, two industry commenters (IV-D-292, 307) and one utility industry commenter (IV-D-279) maintained that EPA has discretion, within reason, to define changes that can be considered substantially contemporaneous. One utility industry commenter (IV-D-279) said that EPA should exercise this discretion to expand the scope of the contemporaneity provision previously codified for netting such that the contemporaneity period for PALs that account for shutdowns, unused capacity, or pollution control initiatives is longer than the 10-year contemporaneity period for netting. Another industry commenter (IV-D-292) said that EPA could establish a period for contemporaneous increases and decreases that matches the effective period of the PAL permit itself. According to the commenter upon re-issuance of the PAL permit, a new period for assessing contemporaneity would begin. One industry commenter (IV-D-265) said that the court did not explain its contemporaneity requirement, and nothing in the CAA supports this requirement the commenter claimed that. PALs will require sources to quantify and permanently document the emission changes at their facility with an accuracy unknown in 1978. The commenter felt that A "contemporaneous" rule could serve to make sure that emission reductions were used before the data that supported them grew stale. The commenter claimed that but there is no point to such a rule with PALs, since their data will not grow stale. Because one of the

major purposes - if not the major purpose - of a "contemporaneous" requirement does not apply to PALs, the commenter claimed that EPA could properly make the requirement inapplicable to PALs. Similarly according to the commenter, EPA already allows States to allow sources to "bank" ERCs for an indefinite period. Another industry commenter (IV-D-311) said that PALs were not contemplated when the court made its decision in 1979, so it is inappropriate to assume that the court would have lumped PALs with the normal form of netting. Furthermore, the industry commenter (IV-D-311) surmised that the court would look favorably upon a workable solution that provides facilities with a consistent option to avoid NSR as long as there is no detriment to the environment. One commenter (IV-D-272) stated that EPA cannot rely on Alabama Power to argue that "contemporaneity" dictates the design of PALs. One industry commenter (IV-D-272) discussed Chevron v. NRDC, and stated that the Supreme Court held that neither the statute nor the legislative history addressed the bubble concept, and that Congress had no intent with respect to a plantwide netting analysis. Therefore, one industry commenter (IV-D-272) contended that although the current regulations still contain the "contemporaneity" requirement suggested by the Alabama Power decision, this requirement is a matter of EPA discretion and is not a mandate of the CAA. The industry commenter (IV-D-272) claimed that the reasoning in Alabama Power does not apply to PALs.

Eleven industry commenters (IV-D-254, 256, 258, 266, 272, 296, 301, 304, 306, 307, 310) said that PALs are not a form of netting. One commenter (IV-D-254) did not believe the contemporaneity requirement is ever implicated by the PAL process. Another commenter (IV-D-256) said that Alabama Power does not provide a basis for requiring periodic review of PALs; EPA should not allow that decision to affect PAL policy according the commenter. This requirement [contemporaneity] applies only to netting analyses under NSR requirements. Additional compliance with a PAL exempts a source from NSR requirements, including netting. Furthermore, the commenter felt that PAL adjustments should not require reducing the cap level to reflect the source's emissions during the period of the PAL. Another industry commenter (IV-D-258) said that a PAL is better characterized as a new type of applicability test that simplifies the calculus. The commenter believed that a PAL meets CAA objectives because it is based on the premise that the PAL limit adequately protects air quality and prevents significant deterioration of air quality in attainment areas. Five industry commenters (IV-D-258, 266, 304, 306, 310) provided reasons why PALs should not be considered netting. First according to the commenter's EPA's regulations provide that "source-specific allowable emissions" may be used as a measure of past emissions. Accordingly, the commenter stated that under a PAL, a change would never result in an actual emissions increase because the PAL emissions cap would constitute actual emissions before and after the change. Thus, all changes would occur on an allowable to allowable basis and would not implicate netting. Second, EPA according to the commenter's has discretion to identify categories of activities that do not constitute "physical changes or changes in the method of operation" for purposes of major NSR. The commenter felt that ample justification exists to exclude activities falling under a PAL from this definition. In fact according to the commenter the NSR Reform proposal recognized that changes made under a PAL "shall not constitute a major modification for the pollutants covered by the [PAL]." (61

FR38250, 38343). One industry commenter (IV-D-272) referred to EPA's assertion that PALs may be characterized as a form of netting as illogical, and reminded the EPA that the purpose of PALs is to provide an alternative to netting under the current regulations. Because the timing of emission changes is not relevant to NSR applicability under PALs, the commenter stated that EPA cannot logically argue that PALs need to be periodically adjusted to reflect contemporaneous emission increases and decreases. Another industry commenter (IV-D-301) said that PALs are a flexible mechanism that allows NSR applicability to be determined on a wider basis than a single emissions unit. One industry commenter (IV-D-307) said that netting does not involve public review and there is full public and environmental review of the PAL.

One industry commenter (IV-D-272) noted that the CAA has been amended since Alabama Power to allow and even encourage "market-based" approaches like PALs. The commenter stated that, given the flexible, market-based approach reflected in this and other EPA proposals, PALs can now rest on a variety of authorities.

Two industry commenters (IV-D-304, 306) said that if EPA decides that PALs do constitute a form of netting, EPA must recognize that this interpretation applies only for major NSR applicability, and does not impact minor NSR approaches developed by State PALs to preserve operational flexibility or apply to other non-title I emission caps and other flexibility tools. The commenter claimed that Alabama Power did not create a principle that can be extended to other requirements of the CAA.

Five industry commenters (IV-D-254, 293, 304, 306, 307) said that the essential question of NSR applicability under the PAL approach is not whether a change results in a net significant emissions increase, but whether anything (including changes that currently are not considered modifications) done at the source results in emissions that exceed the PAL.

One industry commenter (IV-D-298) said that EPA's revised NSR regulations should provide that all activities under a PAL do not constitute a physical change or change in the method of operation. According to the commenter Such an exclusion from the regulatory definition would clarify that changes under a PAL do not constitute netting and do not require periodic adjustment under Alabama Power.

Another industry commenter (IV-D-292) said that a more effective way to resolve any legal concerns regarding contemporaneity is to revise the current NSR applicability test to an "allowable to allowable" analysis.

8.4.2 PALs Are Not Legal

Two environmental commenters (IV-D-291, 303) and one individual commenter (IV-D-218) maintained that PALs are not legal and that they will allow circumvention of PSD rules.

One of the environmental commenters (IV-D-291) stated that the EPA has no statutory authority to promulgate PAL rules that act as an exemption from NSR for existing units and would subvert the purpose and intent of the CAA by allowing the persistence of dirty facilities in non-attainment areas.

The other environmental commenter (IV-D-303) stated that the PAL concept does not respect the principle of contemporaneity and that an emission increasing activity at a PAL source could be shielded from NSR/PSD based on an emission reduction that occurred 20 years earlier. This commenter emphasized that both the legal and policy problems of EPA's PAL proposal flow from the Agency's proposed choice of a baseline calculated from historic high levels of emissions. The commenter also emphasized that PALs are outside the EPA's legal authority because they permit reliance on emission reductions that are not contemporaneous with facility changes and that the only legally permissible role for PALs is to ensure that emissions from a facility will decline and approach new source performance levels over a reasonable period.

The individual commenter (IV-D-218) stated that the 10-year look back for defining an emissions baseline is akin to allowing for non-contemporaneous emissions netting (*de facto* emission reductions that occur over time are not contemporaneous with emission increases that will occur with the physical change) and that section 193 of CAA prohibits adoption of both the 10-year look back and the PAL concept. This commenter also asserted that the PAL concept was a form of netting that allowed non-contemporaneous changes and that if EPA insisted on implementing PALs, then PALs should either be revised once every 5 years or the source owners should be given the option of opting out of the PAL plan.

Response:

We have considered these comments and have concluded that PALs are legal. Our reasoning is presented below.

We believe that the concept of contemporaneity, as articulated in Alabama Power and as set forth in the regulations governing major NSR, does not apply to PALs. The PAL program differs in certain important respects from our current regulations and from the 1978 regulations at issue in Alabama Power. The Alabama Power court was not presented with the PAL approach for determining whether there was an increase in emissions and did not consider whether the principles it set forth in its opinion would apply to such an approach.

Under the 1978 PSD regulations (43 FR 26380), a source was not subject to BACT review only if "no net increase in emissions of an applicable pollutant would occur at the source, taking into account all emission increases and decreases at the source which would accompany the modification." 43 FR at 26385. The test for whether a "major modification" had occurred required the source to sum all accumulated increases in potential emissions that had occurred at the source since issuance of the regulations, or since issuance of the last

construction permit, whichever was more recent. Reductions achieved elsewhere in the source could not be taken into account.

In Alabama Power, the D.C. Circuit held that EPA was correct in excluding from BACT review any changes that did not result in a net increase of a pollutant. [636 F.2d at 401.] It concluded, however, that EPA had incorrectly excluded contemporaneous decreases from the calculation of whether a "major modification" had occurred. Id. at 402-03.

The current regulations take contemporaneous decreases into account for all PSD review purposes. Under the current regulations, you look initially at the emissions unit undergoing the change and determine whether there will be a significant increase at that unit. If there is no significant increase at the unit, the inquiry ends there. While we continue to believe that this is a permissible approach, one drawback to this approach is that it allows small, serial, unrelated emission increases. If there will be a significant increase at the unit, then you expand the inquiry to other units at the source. You take into account contemporaneous increases and decreases at the source in determining whether there will be an increase for the source as a whole. Thus, you must calculate increases and decreases at individual units in order to arrive at a net figure for the entire source.

In contrast, under the final PAL regulations, the inquiry begins and ends with the source. Your PAL represents source wide baseline actual emissions. As such, it is the reference point for calculating increases over baseline actual emissions. If your source's emissions will equal or exceed the PAL, then there will be an emissions increase at your source. There is no need to calculate increases and decreases at individual units.

The final PAL regulations constitute a reasonable, though not the only, approach to determining whether there is an emissions increase at your source. While we believe that the principle of contemporaneity continues to be important for purposes of major NSR netting calculations, we do not believe that it is a necessary concept for purposes of PALs. This is because if your source has a PAL, you have accepted a different means of calculating an emissions increase for the PAL pollutant. The only relevant question is whether your source has reached or exceeded the PAL level.

Even though PALs are a new approach, they do not alter the fundamental question, which is whether there will be an increase in emissions from your source. For actuals PALs, we consider whether there will be an increase above baseline actual emissions. Because the PAL serves as the baseline for measuring an increase, we have taken steps to ensure that the PAL is reasonably representative of baseline actual emissions.

In addition, we believe that the PAL renewal provisions ensure that each 10-year term represents a distinct "contemporaneous" period. The renewal process is designed to prevent decreases that occurred outside of the current 10-year PAL term from being used to offset

increases during that term. More generally, the reviewing authority is required to determine at renewal whether the PAL is still reasonably representative of baseline actual emissions and provide a written rationale (for public comment) for either adjusting or not adjusting the PAL at renewal. As part of this process, the reviewing authority must adjust the PAL downward if your source's current PTE is below the PAL level. We believe that this adjustment is important for air quality planning purposes. The reviewing authority may ordinarily renew the PAL at the same level, without considering any other factors, if baseline actual emissions plus significant level of the PAL pollutant equals or exceeds 80 percent of the PAL level. Conversely, if your source's baseline actual emissions plus the significant level are less than 80 percent of the PAL level, the reviewing authority may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the reviewing authority in its written rationale. If you believe that the new PAL level that the reviewing authority proposes for your source is not representative of your source's baseline actual emissions, you may propose a different level. In addition, any person may propose a different level as being more representative of your source's baseline actual emissions. The reviewing authority may approve a higher or lower level if it determines that it is reasonably representative of your source's baseline actual emissions. However, the reviewing authority cannot approve a higher PAL level, unless the source complies with the PAL increase provisions.

Because of the safeguards described above, we believe that the actuals PAL program as finalized ensures that the PAL will serve as an appropriate baseline for determining whether there is a significant net "increase" in overall emissions from the source, and thus whether the source is undergoing a "modification."

Moreover, we believe that a PAL approach satisfies Congressional intent to only apply the NSR permit process when industrial changes cause emission increases to an area and not when changes in plant operations result in no emissions increase from the major stationary source. See Alabama Power, 636 F2d at 401.

We do not agree with the commenter that stated that section 193 of the Act prohibits adoption of both the 10-year look back and the PAL concept. Neither concept allows an existing control requirement in a nonattainment area to be altered in a manner that would fail to ensure equivalent or greater reductions of the nonattainment pollutant.

As discussed in volume I , 7.2 the PAL regulations constitute a reasonable interpretation of the Act's definition of "modification" and are permissible under current law.

8.5 Environmental Concerns Regarding PALs

8.5.1 Environmental Impact of PALs Relative to Conventional NSR

Comment:

Four industry commenters (IV-D-292, 298, 312, 321) said that PALs are equal to or more beneficial than traditional NSR. Another industry commenter (IV-D-272) stated that the EPA has no basis to conclude that PALs will result in more emissions from plant modifications than would result from continued application of the "contemporaneous" rule. One regulatory agency commenter (IV-D-211) believed that PALs would be more beneficial only under certain conditions.

One industry commenter (IV-D-292) stated that environmental concerns raised in the NOA are not significant because PAL permits hold emissions from the source more constant than under traditional permit programs. Under traditional programs, sources can undergo minor NSR and increase emissions numerous times over the course of a few years. In contrast, PALs set actual emission caps, limiting overall emissions to the environment.

Another industry commenter (IV-D-298) emphasized that PALs achieve equivalent or better environmental results than the traditional NSR program's netting option according to the commenter. The PAL setting process subjects the source to intensive public scrutiny the commenter claims that the resulting PAL typically requires the source to forfeit some level of allowable emissions. PALs result in the imposition of new compliance requirements (for example, monitoring, recordkeeping, and reporting). In addition, the commenter claims that PALs also provide greater certainty as to the total levels of pollutants that a source can emit. The commenter also claims that according to the commenter, because PALs cap total source emissions even during periods of growth, sources are encouraged to develop and install good controls and implement pollution prevention measures so that growth can be accommodated without exceeding the PAL limit.

Another industry commenter (IV-D-312) stated that under a PAL, voluntary emission reductions that result in real emission decreases will be more likely. An additional industry commenter (IV-D-321) felt that in order to make modifications, additional control equipment must be added, not only to the new or modified equipment, but to existing equipment that would not otherwise trigger NSR, so that a PAL will actually drive the installation of better control technology faster than traditional NSR.

The regulatory agency commenter (IV-D-211) believed that the PAL can achieve equivalent or better environmental results only if it is applied to an entire geographic area. The commenter claimed that sources can individually elect to opt in to the PAL, those that benefit will and those that do not benefit will not, and the net program will be less stringent that the

traditional approach. The commenter requested that EPA require that any State opting into the PAL to use PAL emissions in the SIP attainment demonstration, and that EPA change its guidance on the use of actual emissions in attainment demonstrations to reflect this.

One environmental commenter (IV-D-290) and one individual commenter (IV-D-218) emphasized that PALs are less beneficial than traditional NSR.

The individual commenter (IV-D-218) stated that the PAL concept is not environmentally beneficial and because it is voluntary, only those owners who stand to gain a significant benefit will participate (namely, those who will have low emissions). The environmental commenter (IV-D-290) emphasized that the proposed rule would allow uncontrolled older sources to come out of cold standby, make significant refurbishments, and yet avoid NSR and modern pollution controls.

Response:

We agree with the commenters who indicated that PALs will be equal to or more beneficial environmentally than major NSR. Through a PAL, we are assuring that air emissions from your major stationary source will not exceed the facility wide cap set forth in the permit unless you first meet the major NSR requirements. Additionally, through the final PAL rules, we are promoting voluntary improvements in pollution controls by creating an incentive for you to control existing and new emissions units to maintain a maximum amount of operational flexibility under the PAL.

Most importantly, for pollutants subject to a PAL, we are prohibiting serial, small unrelated emissions increases above the PAL, which otherwise can occur under major NSR and that could adversely impact air quality. Such emissions increases occur under major NSR because you can make physical changes or changes in the method of operation without triggering major NSR applicability provided the individual changes do not result in significant net emissions increases. We have interpreted this requirement to allow you to make unrelated changes that, standing alone, do not result in significant emissions increases and to allow such changes to occur without considering whether other contemporaneous emissions increases render the change significant. See, for example, Memorandum from John Calcagni, Director, Air Quality Management Division, to William B. Hathaway, Director, Air, Pesticides, and Toxics Division, Region VI, at 1-2 (Sept. 18, 1989). Over time you could undertake numerous unrelated projects without triggering major NSR, provided the individual projects did not increase emissions by a significant amount, thus allowing source wide emissions to increase over time without requiring any emissions controls for these individual projects. For example, a large chemical plant that is located in an ozone attainment area adds a new product line in 2001 and properly avoids PSD (including the BACT requirement) by limiting the VOC emissions increase to 39 tpy. Later, in 2003 the plant adds a different product line and also properly avoids PSD by limiting VOC emissions from the new line to 39 tpy. For this example, two process lines at the

same plant with total potential emissions (78 tpy) above the 40 tpy VOC significant level under PSD were properly permitted over a 3-year period without BACT applying to either new product line.

In addition, under major NSR, production increases at existing emissions units that can be accomplished without modifying the unit are not subject to review (absent a permit limit that would prevent it). Thus, without a PAL, you can increase production at such units up to full utilization, with emissions rising from historic levels up to the full PTE, without review. Such emissions increases are capped under a PAL.

Over the past several years, we have allowed use of major stationary source-wide emissions caps to demonstrate compliance with major NSR in a select number of pilot projects. We recently reviewed six of these innovative air permitting efforts and found substantial benefits associated with the implementation of permits containing emissions caps (among other types of permit terms offering greater flexibility than conventional permitting programs. (A complete copy of our study, "Evaluation of the Implementation Experience with Innovative Air Permits," is located in Docket A-90-37.) Specifically, we reviewed on-site records to track utilization of these flexible permit provisions, to assess how well the permits are working and any emissions reductions achieved, and to determine if there were any economic benefits of the permits.

Overall, we found significant environmental benefits occurred using the permit terms for each of the permits reviewed. In particular, the six flexible permits established emissions cap-based frameworks that encouraged emissions reductions and P2, even though such environmental improvements were not an explicit requirement of the permits. For instance, one company lowered its actual VOC emissions by over two-thirds in becoming a synthetic minor source (that is, 190 tpy to 56 tpy). Other companies lowered their actual VOC emissions by as much as 3,600 tpy by increasing capture, by using voluntary P2 and other voluntary emissions control measures, and by reducing production rates.

Participants reported that two of the benefits of a PAL are having the ability to make rapid, iterative changes to optimize process performance in ways that minimize emissions and reducing the administrative (time delays and uncertainty) associated with making operational and equipment changes, encourages facilities to make changes that improve yields and reduce per unit emissions. It is also critical for responding to product development needs and market demand, and maintaining overall competitiveness.

Reviewing authorities consistently reported that the permits worked well and proved beneficial, and that there was a reduction in the number of case-by-case permitting actions they needed to undertake. Specifically, we found that flexible permit provisions (for example, emissions caps) are enforceable as a practical matter by using a mixture of mass balance-based equations, CEMS, and parameter monitoring. No emissions cap exceedances or violations of the monitoring provisions were experienced by any of the pilot sources. In addition, the monitoring

and reporting approaches worked well and were generally of higher quality and of more extensive scope than those directly required by individual applicable requirements.

Based on the results of these pilot projects, we believe that PALs will, over time, tend to shift growth in emissions to cleaner units, because the growth will have to be accommodated under the PAL cap. Specifically, we expect that PALs will encourage you to undertake such projects as replacing outdated, dirty emissions units with new, more efficient models; installing voluntary emissions controls; and researching and implementing improvements in process efficiency and use of P2 technologies so that you can maintain maximum operational flexibility. Overall, we believe that PALs will prove to be as beneficial to the environment as they are to you and your reviewing authority.

8.5.2 Potential Concerns with Unadjusted PALs

Comment:

8.5.2.1 General Comments on Unadjusted PALs

One utility industry commenter (IV-D-261) generally shared EPA's concerns about allowing sources to retain unused allowable emissions indefinitely. Three industry commenters (IV-D-258, 292, 321) indicated that EPA's potential concerns with unadjusted PALs are unwarranted.

One of the industry commenters (IV-D-258) stated that the environmental concerns in the NOA do not require periodic adjustments to the PAL, do not outweigh the needs of manufacturing and research facilities to make changes quickly and with fewer resources, and can be addressed through other means that do not limit flexibility.

Another industry commenter (IV-D-292) believed that, assuming the permitting authority properly evaluates air quality impacts, the plantwide emissions cap established by the PAL permit will preserve air quality and protect the NAAQS. An additional industry commenter (IV-D-321) stated that EPA concerns with unadjusted PALs are unfounded because PALs will be set using NSR, which requires protection of the NAAQS, and that other environmental impacts and goals be addressed.

8.5.2.2 Effect of Unadjusted PALs on the Environment

Two environmental commenters (IV-D-291, 303) agreed that unadjusted PALs hurt the environment. One environmental commenter (IV-D-291) stated that nonattainment areas must, under the terms of the CAA, continually make progress towards clean air. Therefore according to the commenter, allowing existing older electric generating units to lock in current high emission levels and avoid modernized pollution controls when they invest in life extending

projects runs contrary to the CAA's requirements. In addition the commenter believed the PAL concept as proposed would yield both such results and therefore should not be adopted. The other environmental commenter (IV-D-303) agreed with EPA's observations on the policy problems with permitting a PAL baseline that is based on historically high emissions. According to the commenter such an approach perpetuates the high emission privileges of grandfathered sources. Under EPA's proposal, noted the commenter an 18-year-old youth living near a major source would be told she had no rights to seek review of dramatic increases in emissions from new construction because the source had made an emissions reduction 2 years before she was born.

One regulatory agency commenter (IV-D-211) and one industry commenter (IV-D-258) disagreed that unadjusted PALs hurt the environment.

The regulatory agency commenter (IV-D-211) emphasized that the build-up of unused PAL is not necessarily bad and means that the airshed has benefitted from voluntary reductions. The industry commenter (IV-D-258) believed that unadjusted PALs would have a different effect in the pharmaceutical industry than in other industries. According to the commenter the pharmaceutical industry is characterized by batch operations, which inherently operate at less than full capacity. The commenter noted that there may be no emission reductions that occur; instead, the swing in emission levels are more likely the result of changing products and different utilization of the same equipment. Moreover according to the commenter, a pharmaceutical plant will most likely have already forfeited a substantial amount of capacity to gain the simplicity and flexibility afforded by the PAL.

8.5.2.3 Effect of Unadjusted PALs on Other Sources

Two environmental commenters (IV-D-291, 303) and one industry commenter (IV-D-254) agreed that unadjusted PALs hurt other sources.

The industry commenter (IV-D-254) was concerned with the growth of both new and existing businesses. The commenter believed that under certain circumstances the opportunities for new and expanded business might be stifled if a significant number of existing sources obtain PALs with limits that turn out to be substantially higher than necessary. The commenter required that some balance be struck to provide existing PAL sources a "cushion" above their historic emission rates so their business can thrive and grow with new and increased production demands, while at the same time ensuring that emission allowances are available to other businesses that need them.

One of the environmental commenters (IV-D-291) stated that the PAL concept should not be adopted because, in PSD areas, it would allow an existing unit to "eat up" the emission allowances that would otherwise be available for new economic development, and it would run contrary to the CAA's attempt to balance air quality preservation with the need for economic

growth. The other environmental commenter (IV-D-303) agreed that permitting a PAL baseline based on historically high emissions distorts an area's growth opportunities by giving grandfathered sources a privileged claim on scarce air quality resources.

Three industry commenters (IV-D-258, 301, 311) disagreed that unadjusted PALs hurt other sources.

One of the industry commenters (IV-D-258) said that the concern that PAL's hurt sources seemingly states a preference for new sources to emit actual emissions compared to an existing source holding "paper" emissions--a situation that would result in more emissions to the environment. Furthermore, while this concern may apply to pollutants for which there are PSD increments, the commenter stated that it does not apply to VOC, which is the pollutant most commonly emitted by manufacturing operations needing the most flexibility (such as pharmaceutical, electronics, and automobile manufacturing).

Another industry commenter (IV-D-301) said that any emission reductions obtained by adjustment of PALs in a particular area will be insignificant. According to the commenter the emissions freed up by taking such credits from sources with PALs will not provide much opportunity for growth of other sources, nor will they have any real impact in the SIP attainment planning process. In addition the stated any possible policy benefits of adjusting PALs would be more than offset by the harmful uncertainty that would result from such revisions.

One industry commenter (IV-D-311) said that emission credits have value to the facility that holds them. EPA should allow facilities to sell such credits to other entities. Simply to "take" the credits from the facility that has not emitted up to its PAL is not consistent with the purpose of having a PAL in the first place.

8.5.2.4 Effect of Unadjusted PALs on State Attainment Planning

STAPPA/ALAPCO (IV-D-259), one utility industry commenter (IV-D-261), and one environmental commenter (IV-D-303) agreed that unadjusted PALs disrupt State planning for attainment.

STAPPA/ALAPCO (IV-D-259) recommended that EPA require permitting authorities instituting PALs to account for these potential emissions in the SIP, which will allow State and local agencies to properly achieve the national air quality goals. The environmental commenter (IV-D-303) agreed with EPA's observations of policy problems with permitting a PAL baseline based on historically high emissions, making the job of developing adequate attainment plans more difficult, and stated that sources with PALs based on 20-year-old emission levels could dramatically increase emissions without review in amounts that could jeopardize attainment and maintenance of ambient standards.

Six industry commenters (IV-D-258, 266, 289, 301, 311, 313) and one regulatory agency commenter (IV-D-211) disagreed that unadjusted PALs disrupt State planning for attainment.

One of the industry commenters (IV-D-258) believed that the States should be required to use PAL limits in attainment planning, the commenter also stated that this requirement would not impose burdens on the States because the PAL limit will be readily known by the State and because the commenter expected only a small number of sources will operate under PALs. Another industry commenter (IV-D-266) believed that the number of PAL sources in any particular air quality area is likely to be quite small, both in terms of absolute numbers and in terms of overall emissions and, as a result, it is unlikely that PAL sources will become an impediment to air quality planning.

Two industry commenters (IV-D-289, 313) maintained that there are instances where a PAL, set at potential emission levels, would not interfere with timely attainment and maintenance of NAAQS and increments. The commenter requested that EPA provide guidance and assistance to States on the burdens that companies and States would have to carry to gain approval. In this way according the commenter, PALs could reflect the maximum emissions, provided such emissions have been accounted for in the State planning process. The commenter claimed that Emissions that have been fully offset or otherwise accounted for in the SIP have essentially been "bought and paid for." The commenter stated this was so because the State has relied upon the emission offset at the maximum allowable emission rate of the source in its attainment planning.

Another industry commenter (IV-D-301) stated that any emission reductions obtained by the adjustment of PALs in a particular area will be insignificant. The commenter claimed that the emissions freed up by taking such credits from sources with PALs will not provide much opportunity for growth of other sources, and they will not have any real impact in the SIP attainment planning process. Any possible policy benefits of adjusting PALs would be more than offset by the harmful uncertainty that would result from such revisions.

One industry commenter (IV-D-311) felt that in many cases, a facility would have already received permit approval to emit up to a certain level, and this permitted level should have been accounted for in the State's attainment planning and should continue to be allowed, regardless of the actual level of emissions. The industry commenter (IV-D-311) stated that EPA could require states that issue permits with PALs to use the PAL level in all attainment demonstrations, and that this is an acceptable surrogate for "actual" emissions, since the PAL will be based on past actual emissions anyway.

The regulatory agency commenter (IV-D-211) emphasized that even though the PAL allows modifications to net out of major NSR, it does not prevent a permitting authority from requiring that the modifications be well controlled under a minor NSR program. According to the commenter if SIP attainment demonstrations are based on the PALs, the program is protective of air quality, and if the PAL emissions cannot be accommodated in the SIP, the State

or local agency can adopt rules requiring emission reductions which, in turn, would lead to adjustment of the PAL. The commenter requested EPA require that any State opting into the PAL use PAL emissions in the SIP attainment demonstration, and EPA change its guidance on the use of actual emissions in attainment demonstrations to reflect this.

Response:

In our 1998 NOA, we expressed three reasons why it might be appropriate to require PALs to be periodically adjusted. First, we expressed concern that the allowable-to-allowable applicability system of the PAL would allow you to indefinitely retain the right to pollute at an historical level of actual emissions. Second, we were concerned that a PAL may allow you to retain unused emissions credits that would otherwise be available for economic growth in the area. And third, we were concerned that a PAL may interfere with a State's ability to plan for attainment if your actual emissions to the atmosphere are lower during a SIP planning year than in a subsequent year. Commenters responded to our request for comments in this area with the comments summarized above.

After reviewing these comments, our concerns related to unadjusted PALs remain. We agree with the commenters who noted the potential for unadjusted PALs to affect the environment, economic growth, and attainment planning. The final PAL rules provide for periodic review and adjustment to address these concerns. (See volume I, 7.8.2 and 8.6 for additional detail on this topic.) In addition, the final rules provide for both mandatory and discretionary reopenings to adjust the PAL under some circumstances, in part to address these concerns. (See volume I, 7.8.1 for more detail on PAL reopenings.)

Because the reviewing authority must ordinarily adjust your source's PAL downward if it is no longer reasonably representative of its baseline actual emissions, or it is no longer representative of its current PTE, a PAL will not provide you with a right to pollute at your historical level of baseline actual emissions. Although we firmly believe that a periodic review of the level of the PAL is necessary, we do not believe that we should mandate an adjustment to the PAL based on only one prescribed methodology. Such an approach could lead to inappropriate results. Instead, we believe that our concerns can be appropriately addressed by providing the States the authority to adjust the PAL based on what is representative of your source's baseline actual emissions (or current PTE). This approach allows reviewing authorities to consider the effect of the PAL on the environment, other sources, and attainment planning.

We are providing your reviewing authority discretion to take into consideration air quality planning needs. For example, although we remain concerned that a PAL may allow you to retain unused emissions credits that would otherwise be available for economic growth in your area, we believe that managing an area's economic growth is the primary responsibility of the State. As such, the State, through your reviewing authority, should have discretion to

manage the growth increment for your area. If your State wishes to encourage economic growth, then it may, at its discretion, reduce your PAL for that reason. Conversely, it may decide that encouraging economic growth is not a priority for the area and concurrently find no other concerns that warrant a downward adjustment in your PAL.

We also believe that it is inappropriate for us to mandate in all cases a prescribed methodology for adjusting PALs based on our concern that a PAL system may interfere with a State's ability to plan for attainment. We believe that the concern regarding planning for attainment is not unique to a PAL system. Under our major NSR applicability system, you could increase your emissions over your historical actual emissions by increasing utilization or hours of operation. If this occurs, there may be a discrepancy between the amount the State carries in the emissions inventory and the amount that you emit to the atmosphere. States should be cognizant of these issues and take appropriate measures in their SIP planning procedures to assure that emissions from any major stationary source, including a PAL participant, are properly characterized in the emissions inventory.

8.6 General Comments Regarding Periodic PAL Review and Adjustment

Comment:

8.6.1 General Support for Periodic PAL Review and Adjustment

Two utility industry commenters (IV-D-252, 294) and three regulatory agency commenters (IV-D-222, 305, 317) generally supported periodic PAL review and adjustment.

8.6.2 General Opposition to Periodic PAL Review and Adjustment

Comment:

Thirty-one industry commenters (IV-D-208, 212, 221, 250, 254, 256, 258, 260, 264, 266, 267, 272, 274, 283, 284, 289, 292, 293, 296, 298, 299, 301, 302, 304, 306, 307, 310, 312, 313, 315, IV-G-21), four utility industry commenters (IV-D-269, 279, 294, 318), one regulatory agency (IV-D-211) and one environmental commenter (IV-D-303) generally opposed periodic PAL review and adjustment. One industry commenter (IV-D-220) opposed ratcheting down of PAL limits.

Five industry commenters (IV-D-221, 250, 267, 272, 274) and two utility industry commenters (IV-D-269, 318) opposed the EPA's proposal to adjust or place restrictions on PALs, stating that these requirements would discourage sources from using the PAL approach, reduce their flexibility, limit their application, become a disincentive to efficiency improvements. The

commenter claimed that PAL restrictions are not legally required, and are not consistent with current EPA policies.

One industry commenter (IV-D-208) stated that PAL limits should not be reduced and should be available to the source for either use by that source or for sale as credits to other sources.

One industry commenter (IV-D-296) maintained that a downward adjustment would be totally unreasonable given the anticipated loss of unused operational capacity at the outset of the PAL.

Another industry commenter (IV-D-212) stated that PALs are not an attainment strategy and therefore continuous adjustments are unnecessary.

One industry commenter (IV-D-310) stated that the PAL should not be reduced at any time unless it is necessary for the State to claim the emission reduction in the development of a nonattainment area plan.

One industry commenter (IV-D-315) contended that the commenter questioned that a downward adjustment is an unfair practice and could create an unfair market advantage. How does the permitting agency decide whose emission limit may be reduced and which facility may receive the credit?

Seven industry commenters (IV-D-256, 258, 260, 292, 296, 298, 313) opposed periodic downward adjustments, stating that adjustment would undermine the attractiveness and limit the benefits of a PAL. Some industry commenters (IV-D-292, 293, 298, 301) said that periodic adjustment would discourage sources from participating in the program.

Six industry commenters (IV-D-256, 258, 264, 296, 312, 313) and one regulatory agency (IV-D-211) stated that adjusting the PALs would penalize sources for achieving emission reductions, may actually discourage companies from reducing actual emissions, and eliminate incentives for voluntary emission reductions under the PAL. One industry commenter (IV-D-312) said that a facility would potentially be encouraged to avoid emission reductions or to increase emissions prior to the review to ensure the PAL reduction would not take away potentially needed capacity. One regulatory agency (IV-D-211) said that periodic review and adjustment of PALs can create disincentives to make voluntary reductions or encourage sources to operate inefficient or polluting emission units longer than necessary.

Three industry commenters (IV-D-258, 292, 298) maintained that adjusting PALs would inject uncertainty into the process.

Four industry commenters (IV-D-258, 283, 284, 299) stated that adjusting the PAL would erode the allowed cushion built into the PAL for new products or increased production and eliminate the incentive of operational flexibility.

Two industry commenters (IV-D-289, 313) stated that a 10-year term with periodic adjustments offers no clear advantage over the current system.

Two industry commenters (IV-D-293, 301) said that adjusting the PALs is not legally compelled and recommended that the States should determine whether periodic PAL adjustments are necessary to achieve air quality goals.

One industry commenter (IV-D-254) recommended that PALs be adjusted downward for compelling environmental reasons (for example, new regulatory requirements) or under only those circumstances that clearly jeopardize the ability of other businesses to thrive and grow and only to the extent necessary to ensure that other businesses can thrive and expand.

8.6.3 Other General Comments on Periodic PAL Review and Adjustment

Twelve industry commenters (IV-D-212, 254, 256, 258, 265, 274, 298, 301, 304, 306, 315, 321), STAPPA/ALAPCO (IV-D-259), five regulatory agency commenters (IV-D-211, 216, 253, 262, 287), and one utility industry commenter (IV-D-261) provided other general comments on periodic PAL review and adjustment.

Two regulatory agencies (IV-216, 253) wanted to ensure that the rule does not limit the authority of the regulatory agency to condition, limit, suspend or terminate any PAL, for example upon the adoption of new, more stringent regulations. One industry commenter (IV-D-265) maintained that as long as a PAL is consistent with attaining the NAAQS and the increments, the States should be allowed to make their own decisions whether or not to adjust the PAL limits periodically.

One regulatory agency (IV-D-211) stated that resetting the PAL is a workload intensive option because it requires a review of historical data and negotiation with sources.

One industry commenter (IV-D-212) suggested that the mechanics of PALs should be kept as simple as possible and a regulatory agency (IV-D-253) said that one or two complete approaches for periodically reviewing PAL approaches would be most useful and provide for simplicity of implementation (as opposed to accommodating a number of approaches).

Two industry commenters (IV-D-256, 298) found it difficult to assess whether the options described in the NOA are reasonable when only able to review a portion of the NSR reform package. The industry commenters (IV-D-256, 298) suggested that EPA draft a policy on how

the PAL approach would work (specifically, provide details on how PAL levels are set, and when States can adjust PALs) and release this draft approach for review and comment.

One industry commenter (IV-D-306) said that no special mandate for PAL adjustment should apply in situations with general applicability to all sources according to the commenter. Any PAL adjustment approach should exclude situations that apply to all sources: (1) in the event of NAAQS violations, imposition of additional requirements should proceed through the normal SIP process for all sources, not just PAL sources; and (2) for unused capacity, adjustments should be pursuant to a SIP process that applies to all sources.

One industry commenter (IV-D-306) said that there should be no presumption of downward PAL adjustment, but upward adjustments should be allowed the commenter claimed that because. The cap is set on the basis of site-wide emissions (which may include many emission units that were previously permitted separately), then by analogy to the traditional NSR provisions, the PAL emissions cap is not necessarily limited to a single "significance bump" above site-wide emissions because each separate emission unit qualifies for its own "significance bump." Moreover, noted the commenter if the PAL had previously been adjusted downward, the site should be able to "recapture" the prior reduction without exceeding the original emissions limitation.

8.6.4 Alternatives for Periodic Review and Adjustment

One regulatory agency (IV-D-211) suggested that an option for review and adjustment is to evaluate the difference between the current PTE of a source and the PAL baseline. The commenter claimed that if the PAL baseline exceeds the current PTE by some specified amount (say 100 tpy), the source would be required to submit a plan for use of the PAL within a limited time period (say the next permit term), or some portion of the unused PAL (say 50 percent) would be reduced.

One regulatory agency (IV-D-253) recommended that EPA consolidate several of its proposals to provide for practical use of PALs. According to the commenter PALs should "reward" sources that reduce emissions significantly below PAL levels while "penalizing" sources that do not. The commenter claimed that This can be accomplished by allowing PAL sources with emissions significantly below their PAL levels to continue operating within a slightly lower PAL (10 percent to 15 percent) if they choose to. The commenter also claimed that sources whose actual emissions at review are very close to their PAL levels would not necessarily continue to be eligible for PALs. The commenter noted that "Significantly below" could be a fixed percentage, 20 percent as suggested by EPA or more, like 30 percent. The commenter also noted that "Close to" might be within 5 percent to 15 percent of the level. According to the commenter such sources should be subject to review to determine whether they should revert to traditional NSR, since the environment has not benefitted from lower emissions in exchange for flexibility.

One commenter (IV-D-270) contended that PALs are difficult to establish for large plant sites because these plants often have many emission sources and these plants are at a disadvantage due to their size and complexity. The commenter (IV-D-270) suggested that PALs be established by factoring in a process variability amount above the pollutant significance level. According to the commenter this source-specific variability would be determined using the same data set that established the baseline in a 10-year look back period. In most States, the commenter claimed that PALs are not approved or not understood, and it will take SIP changes and several years before they are practical.

Another industry commenter (IV-D-299) encouraged EPA to tie the PAL process to the title V permit program. The commenter stated that The PAL process should use the 5 years of monitoring gathered under the title V program for verifying that non-routine operational and physical changes are not subject to NSR. In addition the commenter stated that the PAL cap should not be reconsidered until the facility's title V permit is up for renewal. According to the commenter the cap should not be changed unless the verifying data shows emission increases from non-routine changes were "significant." In that event, claimed the commenter the PAL would be reduced by the amount that would be comparable to a BACT or LAER limit for the changed unit, if such a control requirement would have been required under NSR.

One industry commenter (IV-D-301) suggested EPA consider ways in which facilities might be induced to voluntarily adjust a PAL in return for receiving emissions credits elsewhere. Alternatively, the commenter suggested that EPA might allow companies to sell credits to other companies, as is now done under various emission trading programs.

One industry commenter (IV-D-315) said that these options show the definite need for a formalized emission banking and trading system. The commenter felt that emission credits should be treated as a commodity. The commenter also felt that A facility may assess its emission status and decide whether it should buy available credits from other sources or sell its excess emission credits, collected from either shutting down operations, or from implementing good controls or pollution prevention initiatives. One industry commenter (IV-D-274) suggested allowing ERCs, such as PM reductions resulting from the NO_x SIP call, to be sold and also applied towards PALs.

Response:

As discussed previously in volume I, 7.8.2 and 8.5.2, we continue to have concerns with an approach that would allow a PAL to be continued indefinitely or to be renewed without any evaluation of the appropriateness of the current PAL level. We believe such an approach would be contrary to the CAA, and contrary to the court's decision in WEPCO v. Reilly, 893 F. 2d 901, 908 (7th Circ. 1990). In WEPCO, the court determined that one statutory purpose of the NSR requirements is "to stimulate the advancement of pollution control technology," and that, "allowing increased production (and pollution) through the extensive replacement of

deteriorated generating system" without triggering NSR review would create, "vistas of indefinite immunity from the provisions of ... PSD."

We believe the final PAL rules avoid this inappropriate outcome, by requiring the reviewing authority to evaluate your source's baseline actual emissions and of your PTE (if lower than your baseline actual emissions) at the time of PAL permit renewal and provide a written rationale (for public comment) for either adjusting or not adjusting the PAL at renewal. As part of this process, the reviewing authority must adjust the PAL downward if your source's current PTE is below the PAL level. We believe that this adjustment is important for air quality planning purposes. Additionally, the reviewing authority may renew the PAL at the same level, without consideration of any other factors, if your source's baseline actual emissions plus the significant level are equal to or greater than 80 percent of the PAL level. Conversely, if your source's baseline actual emissions plus the significant level are less than 80 percent of the PAL level, the reviewing authority may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the reviewing authority in its written rationale.

We believe that some discretion in determining what is representative of actual emissions is appropriate based, in part, on our experience with the pilot projects previously mentioned. In one instance, a participant voluntarily agreed to reduce its actual emissions by 54 percent in exchange for obtaining a source wide emissions cap. After agreeing to this emissions reduction, the participant further reduced emissions by increasing capture efficiency and incorporating P2 strategies into its operations. Unexpectedly, the participant also suffered an unusual economic downturn that caused a decrease in the rate of production and a corresponding decrease in actual emissions. At the time of renewal of the source wide emissions cap, the participant's actual emissions were 10 percent of its actual emissions before committing to the emissions cap. The participant chose not to renew its emissions caps, because renewal required an automatic adjustment to its current actual emissions level. Clearly, such a result contravenes the mutual benefits operating under a PAL provides, and discourages you from undertaking voluntary reductions.

We are also providing your reviewing authority discretion to take into consideration air quality planning needs. For example, although we remain concerned that a PAL may allow you to retain unused emissions credits that would otherwise be available for economic growth in your area, we believe that managing an area's economic growth is the primary responsibility of the State. As such, the State, through your reviewing authority, should have discretion to manage the growth increment for your area. If your State wishes to encourage economic growth, then it may, at its discretion, reduce your PAL for that reason. Conversely, it may decide that encouraging economic growth is not a priority for the area and concurrently find no other concerns that warrant a downward adjustment in your PAL.

We believe that our adopted approach strikes the proper balance between: (1) providing you with regulatory certainty, flexibility, and incentives to reduce emissions; and (2) addressing the legitimate environmental and air quality planning concerns associated with PALs. In deciding whether to request a PAL initially, and whether subsequently to renew your PAL, you should weigh the advantages and disadvantages relative to major NSR in light of your own particular circumstances. The PAL program is voluntary; it is up to you to determine whether the advantages of a PAL are worth the "price of admission."

We do not agree that downward PAL adjustments based on the reviewing authority's desire to encourage economic growth are unfair or could create an unfair market advantage. We believe that managing an area's economic growth is the primary responsibility of the State. (See Vol. I, 8.5.2)

A PAL does not preclude you from taking part in emissions trading programs established under your State SIP. Thus, we agree with the commenters who indicated that emissions reductions under a PAL should be available to you for sale as credits to other sources. However, you must make such emissions reductions federally enforceable and also reduce the PAL level by the amount of the emissions reductions. The federally enforceable emissions limitations associated with creating such credits fall into the category of new applicable requirements that have become effective during the term of your PAL. As such, your PAL will have to be adjusted to account for the new limitations.

We agree with the commenters who said that the PAL rules should not limit the authority of the reviewing authority to condition, limit, or suspend any PAL, for example upon the adoption of new, more stringent regulations. As discussed above, the final rules provide for mandatory and discretionary PAL reopenings in a number of circumstances, and for periodic review and adjustment at each renewal.

We agree with the commenters who indicated (here and in sections dealing with specific types of adjustments) that resetting a PAL at renewal requiring specific types of emissions reductions at specific emissions units is labor intensive. That is a primary reason for our decision to provide a 10-year term for PALs, rather than a shorter period. (See volume I, 8.7.) In addition, the final rules set out an uncomplicated approach to PAL adjustments that is based on overall baseline actual emissions, rather than specific types of emissions reductions at specific emissions units (See volume I, 8.8, 8.9, and 8.11).

We do not agree with the commenters who recommended that we should draft a policy on how the PAL approach would work and release the draft for review and comment. We thoroughly discussed the options we were considering for PALs in our 1996 proposal and 1998 NOA, and the final rules are a logical outgrowth of those notices and the comments we received.

We agree with the commenter who indicated that sources with PALs should not be singled out for additional requirements in the event of NAAQS violations, and we do not expect such treatment by States. However, we recognize that it is the prerogative of States to determine how best to address air quality problems, including to decide which sources should be required to reduce emissions to accomplish air quality goals.

We do not agree with the commenter who stated that the PAL should be set to provide an operating margin based on adding the significant level for the PAL pollutant for each emissions unit at the facility, either initially or at renewal. The final rules provide for an initial operating margin based on adding a single significant level of the PAL pollutant to baseline actual emissions. (See volume I, 7.4.) We agree with the commenter's assertion that PALs should be able to be increased, but only if the change you wish to make that cannot be accommodated under the PAL undergoes major NSR. (See volume I, 7.7.1.1.)

We disagree with the commenter who suggested that you should be able to retain a PAL level greater than your PTE at PAL renewal. To retain a PAL greater than the PTE of currently operating equipment, you must have binding contracts for new equipment or modifications to existing equipment at the time of renewal. However, if the renewed PAL level is higher than the current PAL level, the source must comply with the PAL increase provisions in the final rules.

We do not agree with the commenter who suggested that PALs should "reward" sources that reduce emissions significantly below PAL levels and "penalize" sources that do not. We believe that if you comply with your PAL, you have fulfilled your part of the "bargain" by maintaining emissions below the agreed level. Additionally, we believe that you and the environment should both benefit if you decrease your emissions significantly below your PAL. Thus, the final rules provide for an adjustment of the PAL at renewal based on your baseline actual emissions, plus an operating margin, determined at that time.

We agree that it may be difficult to establish and review PALs at large plant sites with many emissions units. You must determine whether the flexibility and regulatory certainty of a PAL are worth the initial effort. In many cases, a PAL may be most useful at large plants because of the frequency of changes at such facilities and the many units across which emissions increases and decreases can be balanced.

We do not agree with the commenter who suggested that PALs be established and renewed by factoring in a process variability amount above the PAL pollutant significant level. You are free to select your consecutive 24-month baseline period in the last 10 years to maximize the baseline actual emissions that form the basis for your PAL. We believe that process variability has been adequately accounted for by this process.

We do not agree with the commenter who stated that the PAL process should be tied to the title V permit program. For practical enforceability, we believe that you must conduct

monitoring sufficient to calculate emissions on a 12-month rolling total, which may require better monitoring than that required under title V. (See volume I, 7.12.) In addition, we believe that the PAL term should be 10 years, rather than the 5 years of the title V permit, although we suggest that you and your reviewing authority coordinate the two so that the PAL is renewed concurrently with every other title V permit renewal. (See volume I, 8.7.) We agree that the PAL should be reviewed and adjusted at renewal, but as discussed above and in volume I, 7.8.2, not as suggested by the commenter. In addition, the final rules provide for the PAL to be opened and adjusted under certain circumstances.

We do not agree with the commenters who indicated that you should be able to meet your PAL with ERCs that you purchase from other facilities. Use of ERCs would defeat the purpose of PALs, which include capping your source's emissions and encouraging you to implement good controls and P2, thereby shifting production over time to less-polluting equipment.

8.7 Time Period for PAL Review

Comment:

8.7.1 Ten-Year Time Period for PAL Review

Four industry commenters (IV-D-210, 256, 273, 298) and one regulatory agency commenter (IV-D-253) felt that 10 years is the appropriate time period for PAL review. One industry commenter (IV-D-221) contended that the 10-year review of PALs should be restricted to an administrative review for the purpose of ensuring accurate accounting.

The regulatory agency commenter (IV-D-253) emphasized the following: Ten years is generally an appropriate period, as long as there is recognition of the need for necessary adjustments to reflect any changes in environmental requirements that cannot be addressed by the current terms of the PAL, or to reflect States' needs to demonstrate attainment when the current terms of the PAL may obstruct such a demonstration. The commenter claimed that States must have the flexibility to revisit PALs under certain defined circumstances, which would normally require a source's permit to be revisited anyway. In the absence of such events, the commenter claimed that it would be convenient to review a PAL every other time the title V permit is renewed. The commenter stated stat that given possible delays in processing title V permits, it may be appropriate to provide for expiration of the PAL after 12 years (if a set maximum term for PALs is desired) to allow coordination with the title V cycle. The commenter noted that ten years is generally appropriate for sources to do long-range planning and to have certainty regarding what will be expected of them. The commenter believed that five years is too short; 15 years is too long.

One of the industry commenters (IV-D-256) stated that 10 years is an appropriate period to allow before any adjustments because it allows facilities adequate time to design, order, and

install any new or modified equipment, bring it up to full production, and recover costs. Another industry commenter (IV-D-298) supported the 10-year PAL adjustment time period, but requested EPA allow States to establish less frequent review periods depending on the circumstances of individual sources.

8.7.2 Other Time Periods for PAL Review

STAPPA/ALAPCO (IV-D-259), four regulatory agency commenters (IV-D-255, 287, 305, 317), five industry commenters (IV-D-208, 279, 304, 306, 307), one environmental commenter (IV-D-303), and one individual commenter (IV-D-218) supported time periods other than 10 years for PAL review.

STAPPA/ALAPCO (IV-D-259), four regulatory agency commenters (IV-D-255, 287, 305, 317), one industry commenter (IV-D-208), one environmental commenter (IV-D-303), and one individual commenter (IV-D-218) supported a time period of 5 years for PAL review. Three commenters (IV-D-304, 306, 307) supported a period no shorter than 10 years.

One industry commenter (IV-D-208) said the length of a PAL should not exceed the contemporaneous period EPA selects in the final NSR regulation changes. The commenter stated that A 10-year period is not appropriate or fair; rather a 5-year look back and 5-year overview of emissions should be used for PALs because it is a manageable time period to keep records.

One individual commenter (IV-D-218) stated that if EPA insists on implementing the PAL concept, then PALs should be either revised once every 5 years or the source owners should be given the option of opting out of the PAL plan.

Four regulatory agencies (IV-D-255, 287, 305, 317), STAPPA/ALAPCO (IV-D-259), and one industry commenter (IV-D-220) said that PAL review should be timed to occur in conjunction with the title V permit reissuance every 5 years. One regulatory agency suggested that implementation of the PAL should be carried out through and coincide with the title V permit process for administrative efficiency. According to the commenter A new PAL could be established upon renewal of the title V permit every 5 years, which is also the contemporaneous period under PSD. In addition the new the commenter noted that PAL should be based on application of the level of control at the end of the 5-year period to the highest calendar year operating level during the 5-year period.

One regulatory agency commenter (IV-D-317) contended that the current proposal would allow a facility to combine a PAL baseline set using the highest (one) emission year during the last 10 years with a 10-year PAL, and thus potentially retain one-time high emission levels for 20 years. The commenter claimed that A 5-year permit reduces the maximum term to 15 years. The

commenter also stated that the 5 years ties review and renewal to an existing permit review period.

One regulatory agency (IV-D-255) and STAPPA/ALAPCO (IV-D-259) recommended PAL limits be adjusted whenever: (1) rules requiring new or additional control technology are promulgated (for example, RACT, MACT, State SIP requirements); or (2) changes in calculation methodology affect the limit. According to the commenter the permit holder should still be responsible for complying with the regulatory limits and for keeping records demonstrating this compliance.

One regulatory agency (IV-D-287) suggested that the 5-year schedule would more closely correspond to the length of the operating permit and to the 5-year netting period for PSD. The commenter claimed that using the last 10-year period of historical data to establish both the initial and any subsequent downward revision of the PAL would be appropriate.

One environmental commenter (IV-D-303) said that the period over which such a cap should achieve NSR/PSD performance levels should not exceed a reasonable amortization period for the existing facilities at the site. Some of the most vocal industrial commenters of the PAL concept have argued that their investment cycle is much more rapid than the 20 to 30-year timescale that may have prevailed earlier in the 20th century. By definition, the commenter stated that PALs would apply to plants with facilities that are already partially amortized. According to the commenter given this fact and the need to respect the legal and policy grounds for contemporaneity, the cap should decline to NSR/PSD performance levels over a period no longer than 10 to 15 years.

Three industry commenters (IV-D-304, 306, 307) supported a period no shorter than 10 years. Two industry commenters (IV-D-304, 306) opposed adjustment, but stated that if EPA does have a time period for adjustment, 10 years represents the minimum frequency for PAL adjustments. The commenter noted that the electronics industry is prone to significant periodic market shifts, which could last for more than 10 years, particularly for any particular source (which may be held at low capacity if the economic climate favors shifting production to other facilities in the company). In the final rule, the commenter requested that EPA provide PAL review no more frequently than 10 years, with permitting authority discretion to establish less frequent review depending on site-specific conditions. Legally, the commenter noted that EPA has the discretion to define "contemporaneous." According to the commenter given that market shifts in the electronics industry can exceed 10 years, it is reasonable to establish a system that accommodates periods of 10 or more years. The other industry commenter (IV-D-307) recommended that States should not be encouraged to establish a shorter period than 10 years for reevaluating PALs, given unutilized capacity surrendered by a source when it accepts a PAL.

One utility commenter (IV-D-279) recommended that for shutdowns, unused plant capacity, or situations where sources implement good controls or pollution prevention, PALs be

valid for periods reflective of the source's remaining life. The commenter claim that the adjustment of PALs over shorter periods (for example, the 10-year period in EPA's proposal) creates a disincentive to engage in the very activities that have a salutary effect on air quality.

8.7.3 Opposition to Time Period for PAL Review

Two industry commenters (IV-D-270, 315) objected to the 10-year time period. One industry commenter (IV-D-315) did not believe that reviewing PAL levels every 10 years is necessary because CAM and title V will verify future actual emissions. The commenter noted that title V reviews the emissions every 5 years. According to the commenter adding 10-year reviews for PALs just increases the paperwork burden. The commenter also noted that applicability for major NSR is also based on 5 years. The commenter stated that most industries have difficulty accurately anticipating beyond 5 years. According to the commenter ten years will reduce the facility's ability to react to market demands. The other industry commenter (IV-D-270) objected to the proposed 10-year "look forward" requirement, saying that 10 years is not necessary to see the results of process changes.

Response:

After considering the comments, we have decided to go forward with a 10-year period for PAL review. The mechanism for this review is a 10-year fixed term for the PAL. At the end of 10 years, the PAL expires unless you choose to renew it. See volume I, 8.10 for additional information on PAL expiration and renewal.

We do not agree with the commenters who suggested a 5-year time period for PAL review, consistent with title V permit renewal. We do not believe that requiring PALs to be reviewed every 5 years provides industry with a sufficient period of regulatory certainty. We also believe that while the overall administrative burden for you and the reviewing authority is reduced if you are complying with a PAL, the establishment of a PAL requires an initial commitment of substantial resources. Given this initial resource investment, we do not believe that a 5-year, fixed term for a PAL provides you or your reviewing authority with an adequate incentive to participate in the PAL system. Thus, in an effort to balance the need for regulatory certainty, the administrative burden, and a desire to align the PAL review and renewal with the title V permit renewal, we believe a fixed term of 10 years, the equivalent of two title V effective terms, is most appropriate.

You may elect to renew your PAL after 10 years, for a subsequent 10-year period, rather than allow the PAL to expire. In order to align the PAL review and renewal process with the title V permitting process, we suggest that you request that the reviewing authorities renew title V permits concurrent with issuance of the initial PAL permit, regardless of how many years are actually left on your title V permit.

We agree with the commenters who stated that the PAL may need to be adjusted before the end of its fixed term in some circumstances, such as to incorporate the effect of new applicable requirements, to address air quality needs, or to correct the calculation methodology. Accordingly, the final rules include mandatory and discretionary reopenings for PAL adjustments for just these sorts of situations. See volume I, 7.8.1 for additional detail on these provisions.

We do not agree with the commenters who suggested that the PAL review period should be tied to the 5-year contemporaneous period under major NSR, since we believe that the concept of contemporaneity, as articulated in Alabama Power and as set forth in the regulations governing major NSR, does not apply to PALs. To the extent such a concept has any application in this context, we have also ensured that actuals PALs as adopted in the final rules are consistent with the concept of contemporaneity. We believe that 10 years is a reasonable contemporaneous period for PALs for the following two reasons. First, we believe that a 10-year period is practical and reasonable both for the reviewing authority and you for the reasons outlined above. Second, a study conducted by Eastern Research Group, Inc.[1] supported a 10-year look back to ensure that the normal business cycle would be captured generally for any industry (Eastern Research Group Inc. Report on "Business Cycles in Major Emitting Source Industries" dated September 25, 1997.) See volume I, 8.4 for more information on our position on PALs and contemporaneity.

We do not agree with the commenters who indicated that a 10-year PAL review period is burdensome, suggesting that 5 years is preferable because this is a more manageable period over which to keep records and because most industries have difficulty accurately anticipating beyond 5 years. We do not agree because most industry commenters preferred 10 years or more, wishing to maximize regulatory certainty and minimize administrative burden. If you feel that you cannot adequately anticipate your operations 10 years out, you may not be a good candidate for a PAL. In addition, the final rules include provisions for increasing the PAL if you find during its term that you need to make a change that cannot be accomplished under the PAL.

We do not agree with the commenter who stated that a 10-year PAL review is burdensome and unnecessary because title V and CAM requirements will verify future actual emissions on a 5-year schedule. See volume I, 7.12 for a discussion of monitoring for PALs. In addition, as discussed in volume I, 7.8.2 and 8.6, we have concluded that a periodic PAL review and adjustment is necessary if you wish to continue your PAL beyond 10 years. Typical title V activities are not adequate for this exercise. A more extensive process every 10 years is one price of maintaining the flexibility and regulatory certainty of a PAL.

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[1] Eastern Research Group Inc. Report on "Business Cycles in Major Emitting Source Industries" dated September 25, 1997.

We agree with the commenter who noted that delays are possible in processing title V permit renewals. However, we do not agree that it is necessary to extend the PAL effective period to 12 years to allow coordination with the title V cycle. Instead, the final rules provide that if you submit a complete PAL renewal application no later than 6 months before the expiration date, your existing PAL continues until the renewed PAL is established.

We do not agree with the commenters who suggested that reviewing authorities should be given discretion to extend the PAL review period beyond 10 years based on site-specific conditions. However, the final PAL rules give the reviewing authority discretion to consider, in setting the renewed PAL, any evidence that you present related to your baseline actual emissions being representative of normal operations, such as evidence of a prolonged market shift in your industry that has lasted longer than the previous 10 years, but that you believe is not permanent. We believe that some discretion in determining what is representative of actual emissions is appropriate based, in part, on our experience with various pilot projects.

We do not agree with the commenter who stated that a PAL should be a declining emissions cap that achieves BACT/LAER performance levels over a reasonable amortization period for the existing units at the PAL facility. One of the primary goals of the NSR program is to ensure that air quality is not significantly degraded in areas attaining the NAAQS and to ensure that new emissions do not interfere with a State's ability to meet the NAAQS in nonattainment areas. We believe that the final PAL rules achieve this goal without specifically providing for a declining emissions cap. In addition, we believe that PALs provide real advantages to the environment as well as to you and the reviewing authority, as illustrated by the pilot facilities we have discussed previously. Accordingly, we do not think it is sensible to set up a PAL system that is so onerous that no sources will choose to take part. Such a system would forego the potential environmental benefits of PALs and benefit no one.

8.8 Adjustments for Shutdowns or Dismantled Units

Comment:

8.8.1 Support for Adjustments for Shutdowns or Dismantled Units

Three utility industry commenters (IV-D-261, 278, 318), one regulatory agency commenter (IV-D-216), and two industry commenters (IV-D-221, 254) gave at least qualified support for adjustments for shutdowns or dismantled units.

Three utility industry commenters (IV-D-261, 278, 318) and two industry commenters (IV-D-221, 25) stated that they support downward adjustment of PALs where emission reductions attributable to shutdown or dismantled units are unused for at least 10 years.

One industry commenter (IV-D-254) supported a carefully crafted program for reviewing and adjusting PALs under certain circumstances. The commenter required that A source which has permanently shut down an emissions unit, might forfeit all or a substantial part of the emission reductions accruing from that shutdown if the source's actual emissions remain substantially lower than its PAL limits for a long period, for example, 10 years.

The regulatory agency commenter (IV-D-216) agreed with EPA that the periodic downward adjustment of PALs for the failure to use emissions associated with shutdown or dismantled units is appropriate for air quality planning purposes.

One utility industry commenter (IV-D-318) requested that the EPA specify that only permanent shutdowns or dismantlements be cause for downward adjustment of a PAL.

8.8.2 Opposition to Adjustments for Shutdowns or Dismantled Units

Ten industry commenters (IV-D-219, 260, 289, 293, 299, 301, 307, 311, 313, 315), three regulatory agency commenters (IV-D-253, 255, 317), and one environmental commenter (IV-D-303) opposed adjustments for shutdown or dismantled units.

Two industry commenters (IV-D-219, 315) said that taking away the emission “credits” will result in facilities continuing to pollute at high levels to maintain an emissions cap. One industry commenter (IV-D-219) said that emission credits should be available until a regulatory action takes place to reduce these emissions on a case-by-case basis.

One regulatory agency (IV-D-255) and one industry (IV-D-301) commenter said that adjustment for permanent shutdowns would be counterproductive and discourage facilities from replacing less efficient emission units with more efficient ones. One industry commenter (IV-D-299) urged EPA to allow a source to keep credits generated through replacement of old, worn-out equipment with newer, less-polluting equipment or the retirement of an older unit. Otherwise, according to the commenter sources may find they are forced to continue running old equipment on a limited basis to keep the credits.

One regulatory agency (IV-D-253) said that limiting the PAL adjustment to the narrow situations described in the proposal would not be sufficient. The commenter asserted that A source should not necessarily be "penalized" by downward adjustment for shutdown or dismantled units if it has met other environmental stewardship criteria. Another regulatory agency (IV-D-317) said that this would be difficult to implement, particularly at a complex facility that would shut down several units and start up others.

One industry commenter (IV-D-315) said that these "credits" have value to the facility and should not be taken away with a downward adjustment. If EPA insists that such adjustments are necessary. The commenter requested that EPA should allow States to reset PALs at the new

level of emissions, plus the appropriate significance level. According to the commenter the State would be required to ensure that any ongoing projects that are slated to utilize any excess credits are accounted for and allowed under the new PAL. Conversely, the commenter claimed that the facility should be obligated to inform the State of its plans to use the excess.

Two industry commenters (IV-D-260, 313) supported EPA's proposal that the PAL would not be adjusted where a shutdown unit's emissions have been used elsewhere at the plant.

Two industry commenters (IV-D-250, 299) suggested that a facility be allowed to bank the emission reductions from retiring a unit and said that the facility could notify the permitting Agency, which would then adjust the cap, and all documentation of the reduction could be added as an addendum letter to the permit. One industry commenter (IV-D-250) suggested that EPA add a time period, such as 10 years, by which emissions credits need to be used.

Three industry commenters (IV-D-289, 299, 313) said that if EPA insists on needing PAL adjustments, then adjustments should be limited to equipment that is shut down and dismantled for a minimum of 10 years and should in no instance be used for equipment that is merely underutilized.

One environmental commenter (IV-D-303) maintained that adjusting for unit shutdowns and unused capacity would be easily gamed and invites criticism for creating perverse incentives to maintain emissions at a high level to avoid "losing" them.

One industry commenter (IV-D-272) suggested that PAL adjustments for shutdown or dismantled units is an option that should be left to the States to decide.

8.8.3 Methodology for Calculating Adjustments for Shutdowns or Dismantled Units

Three regulatory agency commenters (IV-D-211, 216, 287), three industry commenters (IV-D-221, 293, 307), and one utility industry commenter (IV-D-294) provided comments on the methodology for calculating adjustments for shutdowns or dismantled units.

One regulatory agency commenter (IV-D-211) recommended against differentiating between shutdowns and under-utilization of capacity because if shutdowns are treated more harshly, sources will have an incentive to continue operating more polluting units. Another regulatory agency commenter (IV-D-216) stated that EPA could follow the New Hampshire Department of Environmental Services example of how to treat shutdown ERCs, which become public credits and revert to the State, although there are procedures for the source to hold on to the credits. The final regulatory agency commenter (IV-D-287) asked: [Is EPA] assuming the PAL would be reduced by the PTE [of the shutdown or dismantled unit]?

One industry commenter (IV-D-293) maintained that, assuming EPA adopts this approach, the reduction should consume only the emissions capacity that is unused for the entire life span of the PAL. The commenter furthermore maintained that the Agency could simplify the accounting by creating a presumption that works against the forfeiture of emission capacity. The other industry commenter (IV-D-307) stated that if an adjustment is required for units that are shutdown or dismantled, the reduction should consume only unused emissions. According to the commenter confiscation of all emissions relating to the shutdown or dismantled units would be entirely unjustified. The commenter claim that it would be impractical to adjust a PAL based on shutdowns because accounting for shutdown equipment and resultant increases in emissions elsewhere in the plant would represent an almost overwhelming burden.

The utility industry commenter (IV-D-294) emphasized that EPA should only adjust a PAL level downward to account for permanent shutdowns and dismantled units where the associated emission reductions remain unused for greater than 10 years, or if a source has sold or traded away any creditable emission rights through a Federal or State program. According to the commenter EPA would consider a shutdown unit to be one that the source did not operate during the 10-year life of the existing PAL. The commenter was concerned that this proposed definition of shutdown unit would encompass shutdowns that are intended to be temporary. The commenter urged EPA to allow sources to demonstrate that shutdowns lasting for more than 10 years were not intended to be permanent. Where sources can make such a demonstration, the commenter requested EPA not adjust the PAL level downward to account for that shutdown.

One industry commenter (IV-D-221) requested clarification on whether shutdown credits and shutdown reductions for the PAL will be based on allowable emissions, that is, the highest actual emission from the unit over a 12-month period during the 10 years prior to shut-down, plus an allowance for operating flexibility.

8.8.4 Other Comments on Shutdowns or Dismantled Units

One regulatory agency (IV-D-287) and STAPPA/ALAPCO (IV-D-259) urged EPA to consider the workload for State and local agencies to adjust PAL limits for unused capacity or shutdowns. STAPPA/ALAPCO (IV-D-259) said that EPA should avoid unnecessary complexities. The commenter examples of the complexities include: (1) sources should not be allowed to switch back and forth between PALs and conventional NSR; (2) coordinate PALs with title V permit renewal; (3) for practical enforceability, specify the ongoing compliance determination method in the permit; and (4) EPA should consider workload for PAL adjustments for unused capacity or shutdowns.

One industry commenter (IV-D-306) said that PALs should be adjusted only when permitted units under the PAL are shutdown or dismantled and the associated emission reductions remain unused for at least 10 years.

Response:

We agree with the commenters who believe emissions from shutdown units (during the PAL term) must be excluded from the baseline emissions when renewing a PAL. Under our initial PAL setting and renewal provisions, the PAL level is calculated as the sum of the baseline actual emissions (for all existing and new emissions units) plus significant level. When establishing the actuals PAL level, only one consecutive 24-month period may be used to determine the baseline actual emissions for all existing emissions units. Emissions associated with units that were permanently shutdown after this 24-month period must be subtracted from the PAL level. Emissions from units on which actual construction began or begins after the 24-month period must be added to the PAL level in an amount equal to the potential to emit of the units. This flexibility to reallocate emissions within the major stationary source is precisely the flexibility that compliance with the PAL allows. However, if the facility intends to make the emissions reductions federally enforceable for use as offsets, then the PAL permit must be reopened immediately and the PAL adjusted by the amount of the emissions reductions.

Additionally, the final rules allow your reviewing authority to consider potential emissions from projects for which you are currently under binding contract. By this we mean to allow the reviewing authority to include future projected emissions from any future project in which you are actively engaged, including a modification to an existing emissions unit or an addition of a new emissions unit. However, in no case may the reviewing authority renew your PAL at a level that is higher than your existing PAL, unless you comply with the provisions for increasing the PAL.

We considered, but did not adopt, an option to exclude emissions from PALs only if a unit did not operate at all during the 10-year life of the PAL. Under this option, the PAL would not be adjusted downward if you utilized those emissions from the shutdown or dismantled units elsewhere at your source (for example, by adding new emissions units or capacity, or by increasing capacity utilization at existing emissions units). As we indicated in our proposal, we believe it is too difficult to determine whether you have actually relied on these emissions decreases in undertaking other activities at your source. We did not receive any comments suggesting ways to overcome this identified problem.

We agree with the commenters who said that we should consider the administrative burdens associated with PALs in adjusting for shutdowns during the PAL term. Accordingly, we have limited PAL review and renewal to once every 10 years and suggested a mechanism for coordinating PALs with title V permit renewal, as discussed above in volume I, 8.7.

We agree that you should have the opportunity to demonstrate that a shutdown is not intended to be permanent. The issue of whether an emissions unit is "permanently shutdown" is discussed in the Administrator's response to a petition objecting to an operating permit for a

facility in Monroe, Louisiana. See Monroe Electric Generating Plant, Petition No. 6-99-2 (Adm'r 1999). A copy of this decision is in the Docket A-90-37 for the final rules.

We do not agree that the overall issue of PAL adjustments for permanently shutdown or dismantled emissions units should be left to the State. However, reviewing authorities are given a great deal of discretion under the final rules to set the renewed PAL at the level that makes sense for your facility after considering a wide range of factors, including but not limited to, air quality needs, economic growth in your area and business cycles affecting operations at your facility.

The final PAL rules do not preclude you from taking part in any emissions trading program authorized under your State's SIP. Thus, you may generate ERCs from shutdowns at your source according to your State requirements. Note that the federally enforceable requirement to permanently shutdown the unit for purposes of the trading program will constitute a new applicable requirement that must be accounted for in the level of your PAL and the title V permit . In addition, if the emissions reduction credits are to be used as offsets or other title I program reductions, your reviewing authority must reopen the PAL permit and reduce the PAL level by the amount of the emissions reductions, before they are creditable.

8.9 Adjustments for Unused Capacity

Comment:

8.9.1 Support for Adjustments for Unused Capacity

One utility industry commenter (IV-D-261) supported downward adjustment of PALs where emission reductions from operation below the capacity levels used to establish the PAL are unused for at least 10 years.

8.9.2 Opposition to Adjustments for Unused Capacity

Sixteen industry commenters (IV-D-208, 219, 221, 250, 254, 260, 272, 289, 293, 298, 299, 301, 307, 311, 313, 315), three utility industry commenters (IV-D-278, 294, 318), one environmental commenter (IV-D-303), and one regulatory agency commenter (IV-D-317) opposed adjustment of PALs for unused capacity.

Six industry commenters (IV-D-208, 219, 221, 250, 254, 299) and one utility industry commenter (IV-D-318) expressed concern that adjusting for unused capacity will result in a forfeiture of a safe "operating margin" that is necessary for compliance. One industry commenter (IV-D-208) said that for these limits to be adjusted downward to reflect a source's non-use of an "operating margin" on emissions effectively would force a cutback on operation because a source would have to reduce its operation to continue to have a safe margin below

allowables to ensure compliance. Another industry commenter (IV-D-219) said that EPA will render the PAL program ineffective by lowering PAL limits as a result of under-utilization. According to the commenter source must always operate below the PAL limit to remain in compliance. One industry commenter (IV-D-254) would not support any downward adjustment of PALs based on unused capacity unless there were safeguards against the confiscation of the operating and emissions cushion necessary to thrive and grow. The commenter claimed that the safeguards suggested in the NOA are too meager. One industry commenter (IV-D-250) said that most sources retain a comfortable margin between "allowable" and "actual" emissions so that an emergency situation cannot throw them out of compliance. The commenter claimed that a adequate margin is also needed for back-up purposes. According to the commenter fear of losing emission allowances would be a very big disincentive to PALs.

One industry (IV-D-221) and one utility industry commenter (IV-D-318) said that it would penalize sources for shutdowns or curtailments, that, while extended, are intended to be temporary.

Two industry commenters (IV-D-260, 313) supported EPA's position that the PAL should not be adjusted due to underutilization of units still under operation. While opposing these adjustments overall, the commenters (IV-D-260, 313) suggested 10-year approaches for determining utilization provide more flexibility that the current 2-year average approach. Nevertheless, the commenters (IV-D-260, 313) contended that these approaches may compromise the operational viability of equipment.

One industry commenter (IV-D-221) stated that it is not appropriate to reduce a PAL when the source voluntarily reduces its emissions. According to the commenter such reductions should continue to be available for netting, NSR, sale, or for whatever the owner deems appropriate within the law.

Two utility industry commenters (IV-D-278, 294) said that adjusting a PAL downward to account for unused capacity is shortsighted and would severely limit operational flexibility. The commenter claimed that if a facility were permitted and built with more than enough capacity for present needs as a way to meet future demand, and the additional capacity went unused for 10 years, that capacity would be lost, regardless of the fact that operation at full capacity was already approved under NSR at the start of the project. According to the commenter this would make a PAL less attractive than standard NSR.

One industry commenter (IV-D-298) said that sources should always be able to maintain allowables based on the use of controls that continue to qualify as BACT/LAER. By proposing that PALs be adjusted in cases of a NAAQS violation or unused capacity, the commenter claimed that EPA is singling out sources subject to PALs and creating an unreasonable double standard that will undoubtedly discourage the use of PALs. According to the commenter if a source has unused capacity under a PAL, it should be treated no differently than any other source in such a

situation - allowable emission levels should not be adjusted except through a SIP process authorizing adjustments for industrial sources generally.

One industry commenter (IV-D-301) said that companies would be encouraged to run at a higher capacity than planned, so as not to lose allowable emissions under the PAL. The commenter claimed that it once again would be unfair to take permitted emission credits from the facility. One environmental commenter (IV-D-303) said that adjusting for unit shutdowns and unused capacity would be easily gamed and invites criticism for creating perverse incentives to maintain emissions at a high level to avoid "losing" them. One regulatory agency (IV-D-317) said that the adjustment for unused capacity would require a significant time investment identifying all the "changed" and "unchanged" units to determine whether to include those units in an adjustment.

One industry commenter (IV-D-311) stated that if a facility ever operated at the level that was used to set the PAL, the facility should be allowed to return to that level without penalty. The commenter claimed that the approach suggested by EPA could cause a source to become subject to major NSR without a modification. The commenter believe, this is contrary to the intent of major NSR and does not support past practices.

One industry commenter (IV-D-315) contended that a facility should not be deprived of a valuable property, and the opportunity to achieve maximum production level, maximum efficiency and hopefully, profitability and creation of jobs.

8.9.3 Methodology for Calculating Adjustments for Unused Capacity

Four regulatory agency commenters (IV-D-211, 216, 253, 287) and six industry commenters (IV-D-210, 272, 293, 299, 301, 307) provided comments on the methodology for calculating adjustments for unused capacity.

One regulatory agency (IV-D-287) maintained that the most appropriate option for reviewing and adjusting PALs is option 4, where the PAL would be reset using the same approach as was used to initially set the PAL. Since the decrease in the PAL would only occur after a 10-year period of under utilization, the commenter claimed that a revised PAL would more closely reflect the actual operation of the installation.

One industry commenter (IV-D-210) suggested that EPA modify the adjustment process from the proposed highest capacity utilization for a single 12-month period to a single 3-month period, and urged EPA to adopt the 3-month time period for purposes of determining the highest capacity utilization. One of the regulatory agency commenters (IV-D-253) stated that basing a PAL adjustment on the highest capacity utilization at the entire source during a single 12-month period within the past 10 years is not appropriate, and it would not necessarily provide a

meaningful evaluation of the range of operation under the PAL, with appropriate emphasis on recent years.

One industry commenter (IV-D-299) suggested the facility could identify when underutilized units are no longer needed for operational purposes, such as back-up for electric outages or possible market demand opportunities. The commenter claimed that the facility could seek agency approval to retire the unit and, if desired, take credit for the reductions. In addition the commenter claimed that the process could apply to a voluntary addition of control technologies on units that are not legally required to have such controls. According to the commenter credits could be made available for such reductions, and the cap could be adjusted accordingly.

Another industry commenter (IV-D-301) believed that if EPA does adopt this option, it should limit the downward adjustment to no more than 5 percent, and should not adjust the PAL at all if the highest capacity utilization during the review period is within 20 percent of the original utilization. Another regulatory agency commenter (IV-D-216) stated that the PAL adjustment should be based on the highest capacity utilization at the entire source, not for each individual unit, and the highest utilizations of the individual units may not occur simultaneously.

Another industry commenter (IV-D-293) believed that the proposed adjustment for unused capacity might require sources to track the capacity utilization of each emissions unit under the PAL for the entire life span of the PAL, which is a significant additional burden on sources that reduces the attractiveness of PALs. If EPA promulgates the unused capacity adjustment, the commenter requested that EPA should also promulgate provisions that will ensure that an appropriate operating cushion exists after the adjustment is made. Otherwise, according to the commenter the plant will probably be unable to operate at the PAL levels to which it is legally entitled, owing to the need to maintain a compliance margin and to avoid violations.

The final regulatory agency commenter (IV-D-211) recommended against differentiating between shut downs and under-utilization of capacity. According to the commenter if shutdowns are treated more harshly, sources will have an incentive to continue operating more polluting units. The commenter noted that it was is evaluating less work-intensive options to adjust the PAL. The difference between the capacity utilization and the PAL baseline could be evaluated, according to the commenter and if the PAL baseline exceeds the capacity utilization by some specified amount (for example, 100 tpy), the source would be required to submit a plan for use of the PAL within a limited time period (for example, the next permit term), or some portion of the unused PAL (for example, 50 percent) would be reduced. The commenter claimed that this alternative would not provide as much operating cushion, could result in incentives to increase emissions, and could result in higher work load for agencies.

One industry commenter (IV-D-272) suggested leaving the decision to eliminate unused capacity from a PAL by adjusting a PAL downward for the States to decide.

One industry commenter (IV-D-307) stated that the proposed approach is unacceptable, and it would represent an unwarranted confiscation of capacity that might be needed in the future, as the unit may return to high utilization simultaneously with high utilization at the source's other units.

8.9.4 Alternatives for Ensuring an Operating Cushion After an Adjustment for Unused Capacity

Four industry commenters (IV-D-254, 260, 311, 313) provided comments on alternatives for ensuring an operating cushion after an adjustment for unused capacity.

One of the industry commenters (IV-D-254) stated that the safeguards in the NOA are too meager to ensure against the confiscation of substantial emission reductions from PAL sources, and advocated increasing or decreasing the safeguard percentages, as appropriate, by at least a factor of two.

Two industry commenters (IV-D-260, 313) opposed these suggestions because they would compromise important investments in equipment (that is, would not be adequate safeguards). The last industry commenter (IV-D-311) stated that none of the four options suggested by EPA are workable solutions and that the credits generated by a facility operating below its PAL have value and should not be taken without compensation to the facility.

Response:

After considering the comments on this and other potential adjustments, we have decided to go forward with an integrated PAL adjustment system based directly on the level of baseline actual emissions for the entire source during the previous 10 years . We have decided not to finalize an adjustment tied specifically to unused capacity at each emissions unit. At the time of renewal, it may be very difficult for a reviewing authority to distinguish the reason for a decrease in your baseline actual emissions level. It could be because you have a loss of capacity, aggressively applied emissions controls, a decrease in utilization, a desire to maintain a compliance margin, or any of a number of other reasons. Accordingly, we believe that it would be difficult to advise a reviewing authority to calculate adjustments based on unused capacity. Therefore, in the final rules, the reviewing authority may renew the PAL at the same level without consideration of any other factors if the baseline actual emissions of all the emissions units at the source plus the significant level equals to or is greater than 80 % of the PAL level. If this is not the case, then the reviewing authority would consider adjusting the PAL level based on several factors including air quality planning needs, advances in control

technology, etc. However, if the renewed PAL level is higher than the current PAL, the source must comply with the PAL increase provisions in the final rules.

We agree with the commenters who believe that a unit-by-unit review and adjustment based on capacity utilization would be labor intensive and inappropriate. We have opted instead for a simpler and more manageable system based on source-wide baseline actual emissions as the basis for any PAL adjustment.

One commenter suggested that sources should be able to maintain the right to emit at the level of allowable emissions if they use controls that continue to qualify as BACT/LAER. This option is available unit by unit through the Clean Unit provisions elsewhere in the final rules. We have not included it in the PAL rules. We are reserving the issue of allowables PALs for future consideration.

We do not agree with the commenter who suggested that PAL adjustments for unused capacity be based on a 3-month period in the previous 10 years. We believe that baseline actual emissions are the appropriate starting point for evaluating potential PAL adjustments, and that the PAL program should be consistent with the rest of the major NSR program in defining baseline actual emissions. See volume I, 2.2 for the discussion of our reasoning for defining baseline actual emissions based on a consecutive 24-month period in the previous 10 years.

We agree with the commenter who suggested that a single 12-month period is not appropriate for evaluating capacity utilization at a source; we have finalized a 24-month period as discussed above.

As discussed in previous sections, the final PAL rules do not preclude you from taking part in any emissions trading program authorized under your State's SIP. Thus, you may generate ERCs from unused capacity at your source according to your State requirements. However, your PAL will have to be reduced accordingly by the amount of the ERCs.

We do not agree that the overall issue of PAL adjustments for unused capacity should be left to the State, and our final rules effectively require this adjustment as part of the unified adjustment system based on baseline actual emissions. However, as noted above, reviewing authorities are given a great deal of discretion under the final rules to set the renewed PAL at the level that makes sense for your facility after considering a wide range of factors, including business cycles affecting operations at your facility.