DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 36 and 91

[Docket No.: FAA–2003–16526]

RIN 2120–AH99

Stage 4 Aircraft Noise Standards

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new noise standard for subsonic jet airplanes and subsonic transport category large airplanes. This noise standard ensures that the latest available noise reduction technology is incorporated into new aircraft designs. This noise standard, Stage 4, applies to any person submitting an application for a new airplane type design on and after January 1, 2006. The standard may be chosen voluntarily prior to that date. This noise standard is intended to provide uniform noise certification standards for Stage 4 airplanes certificated in the United States and those airplanes that meet the new International Civil Aviation Organization Annex 16 Chapter 4 noise standard.

DATES: *Effective Date:* These amendments become effective August 4, 2005. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of August 4, 2005.

FOR FURTHER INFORMATION CONTACT: Laurette Fisher, Office of Environment and Energy (AEE–100), Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–3561; facsimile (202) 267–5594.

SUPPLEMENTARY INFORMATION:

Availability of Rulemaking Documents

You can get an electronic copy using the Internet by:

(1) Searching the Department of Transportation's electronic Docket Management System (DMS) Web page (*http://dms.dot.gov/search*);

(2) Visiting the Office of Rulemaking's Web page at *http://www.faa.gov/avr/arm/index.cfm;* or

(3) Accessing the Government Printing Office's Web page at *http://www.access.gpo.gov/su_docs/aces/aces140.html.*

You can also get a copy by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267–9680. Make sure to identify the amendment number or docket number of this rulemaking.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78) or you may visit *http://dms.dot.gov.*

Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. If you are a small entity and you have a question regarding this document, you may contact its local FAA official, or the person listed under **FOR FURTHER INFORMATION CONTACT**. You can find out more about SBREFA on the Internet at *http://www.faa.gov/avr/arm/sbrefa.htm,* or by e-mailing us at *-AWA-SBREFA@faa.gov.*

Background

On December 1, 2003, the FAA published a Notice of Proposed Rulemaking (NPRM) proposing the Stage 4 noise standard (68 FR 67330). A brief history of the FAA's regulation of aircraft noise since 1969 was presented in the preamble of the NPRM.

The new Stage 4 noise standard will apply to any person filing an application for a new airplane type design on and after January 1, 2006. As stated in the NPRM, the adoption of a new noise standard for new aircraft designs is not intended to signal the start of any rulemaking or other proceeding aimed at phasing out the production or operation of current aircraft models. Currently, there are no Federal regulations restricting the operations of Stage 3 airplanes, and the FAA has made no decision whether to seek such restrictions.

Much of the background for the development of a Stage 4 noise standard has taken place in the international arena and through the work of the International Civil Aviation Organization (ICAO). The environmental activities of the ICAO are largely undertaken through the Committee on Aviation Environmental Protection (CAEP), which was established by the ICAO in 1983, and which superseded the Committee on Aircraft Noise and the Committee on Aircraft Engine Emissions. The CAEP assists the ICAO in formulating new policies and adopting new standards on aircraft noise and aircraft engine emissions. The United States is an active member in the CAEP activities. There is at least one U.S. representative participating on each of the CAEP working groups.

On June 27, 2001, at its 163rd session, the ICAO unanimously approved the adoption of the new Chapter 4 noise standard in Annex 16. The new noise standard will apply to any application for new type designs submitted on or after January 1, 2006, for countries that use Annex 16 as their noise certification basis.

Discussion of Comments

The FAA received 71 comments in response to the NPRM. The scope of the comments indicates that many commenters are unfamiliar with the issues of aircraft noise certification and how noise certification relates to local aircraft operations. These topics will be discussed briefly as part of this disposition of the comments.

Weight Limits

Several commenters state that the new Stage 4 limits should apply to aircraft that weigh less than 75,000 pounds, indicating that these aircraft remain a significant noise problem. Several of these comments were submitted as form letters, or individual letters that used the same blocks of text.

FAA response: The proposed Stage 4 standard does apply to aircraft under 75,000 pounds. The applicability of § 36.1 does not restrict the scope of the Stage 4 standard by aircraft weight. The FAA suspects that the commenters are confusing the certification standards of part 36 with the operational limitations imposed in part 91. The 75,000 pound weight cutoff is used in operating rules as a means of distinguishing aircraft, but it does not apply to the requirement to meet Stage 4 noise levels at the time of certification testing under part 36.

The differences between aircraft certification and aircraft operating requirements are often confusing to the public, but the two represent very different parts of the FAA's regulatory responsibilities. Aircraft *noise certification testing* is conducted when a new aircraft is introduced (type certification), or an existing model aircraft is modified (supplemental type certification) in a manner that would produce an acoustical change, such as changes in size, configuration, engines, etc. Each aircraft model is noise certificated to operate up to its

maximum weight. An aircraft is tested at this maximum weight and must meet the noise standards for an aircraft of its weight according to the formulas adopted in part 36.

Aircraft *operations* are noise-limited under a completely different set of regulations, 14 CFR part 91. For example, when the FAA phased out the operation of Stage 2 airplanes over 75,000 pounds, it was the regulations of part 91 that were amended in 1991 for compliance by 2000. The certification standards of part 36 that determined how much noise a Stage 3 aircraft could produce had been adopted in 1977 and remained consistent as the operational rules got stricter.

When the FAA seeks to decrease noise levels produced by future aircraft, we amend the certification rules to introduce the quieter standard. The initial establishment of a new noise standard allows time for manufacturers to adjust engine and airframe designs to meet it. In reality, manufacturers are constantly adjusting their designs as technology evolves. As a consequence, an aircraft newly certificated this year meets the Stage 3 requirements of part 36, but it may be significantly quieter than an aircraft certificated 15 years ago because of advances in technology. Both aircraft are considered Stage 3 because the requirement is a ''not to exceed'' standard that sets a maximum noise level only. Until the agency lowers the maximum by setting a different certification standard, in this case the proposed Stage 4, no manufacturer can designate its aircraft as quieter than Stage 3.

This method of setting and maintaining certification standards does not allow for the FAA to suddenly lower the Stage 3 maximum to eliminate older aircraft that just meet the standard, whether they were originally manufactured or hushkitted to their Stage 3 level, as was suggested in the comments from the LAX Community Noise Roundtable, the Oakland Airport Community Noise Management Forum, and the San Francisco International Airport/Community Roundtable. Such a change would introduce a different system of aircraft noise certification, and would require a detailed analysis of the costs imposed by such a change.

Some confusion may have arisen with the proposed rule because the FAA did include a change in the operating rules of part 91. The rule change is intended only to allow for the operation of quieter Stage 4 airplanes once they are certificated. As written, the current part 91 regulations are exclusionary; an airplane over 75,000 pounds, may be operated in the contiguous United States only if it is Stage 3. To prevent a misinterpretation that would prohibit the operation of a quieter Stage 4 airplane, the regulation was changed to include Stage 3 or Stage 4 airplanes as eligible for operation in the contiguous United States. The proposed change in the operational rules would not restrict the operating status of any airplane flying today; it was proposed only to allow the operation of quieter airplanes once they are produced and designated as Stage 4.

No change is required to the proposed rules as a result of these comments, and the applicability of the Stage 4 standard remains unchanged in the final rule. Similarly, the proposed changes to the operational rules of Part 91 are adopted as proposed.

Standards for Stage 4

At least a dozen commenters suggest that the 10 decibel (dB) reduction that represents Stage 4 is not enough as a new standard. Commenters variously suggest reductions of 14 to 20dB from Stage 3 as the new Stage 4 standard. Several commenters indicate that the proposed 10dB reduction is a misrepresentation of the ''actual'' decrease in noise that can be expected because the number represents a cumulative reduction over the three phases of flight tested (flyover, lateral, and approach) at certification, and they presume that no more than 3dB will actually be accomplished at any given point. These commenters also indicate that the FAA should be getting input from individuals before new standards are decided upon internationally, in this case, before the U.S. presents its position to the ICAO and an international agreement is reached.

FAA Response: The FAA acknowledges that the proposed 10dB reduction represented by Stage 4 is a cumulative reduction for the three measurements. While this is a new way of expressing the total, the process of noise measurement at the three designated points has not changed, and no changes to this method were proposed.

As discussed above, the United States, as a member of ICAO, agreed to the designation of ICAO Chapter 4 as a 10dB cumulative reduction from Chapter 3 noise levels. The adoption of a new standard by ICAO is neither simple nor brief, includes significant participation by the United States, and included input from a wide cross-section of federal agencies and public interest groups through the long-established Intergovernmental Group on International Aviation (IGIA). The members of ICAO are well qualified to consider the technological possibilities and financial burdens associated with changes of this magnitude. As one commenter noted, one airports group in the United States had suggested a larger reduction to ICAO and it was rejected; the comments that suggest similar reductions here are not new arguments.

Consequently, it is unrealistic to think that the FAA would now propose a domestic standard that exceeds the one it agreed to and was adopted by ICAO, expecting that it could be done without significant financial and international trade impact. The United States helped develop and agreed to adopt the ICAO standard because it recognizes the global impact of aviation. Aircraft noise is a concern of every ICAO member state. The solution, however, is not for the United States to propose an arbitrarily more stringent standard outside of the international process.

In objecting to the Chapter 4 standard as too little, the Alliance of Residents Concerning O'Hare, Inc. (AReCO), suggests a reduction scale that extends to a 23dB reduction for new airplanes produced after 2015. AReCO's proposal is based on an entirely new certification framework. Instead of the ''meets or doesn't meet'' standard that represents current aircraft noise certification worldwide, AReCO's method would impose operational restrictions on aircraft that don't meet certain noise criteria, using a complex formula that considers an aircraft's maximum range and takeoff weight to determine its payload, including the amount of fuel it would be allowed to carry. This proposal is well beyond the scope of the NPRM. While AReCO would like to see a Stage 4 standard with greater reductions, its proposal eradicates the historical distinction between aircraft certification and operations, of which noise is only a minor part. Moreover, AReCO's proposal does not address the practical aspects of aviation operations, the costs inherent in such a change in methodology, the costs imposed by the proposed framework, and the limits on the regulatory authority of the FAA in restricting commercial aircraft operations.

On a related issue, several commenters indicated that a greater reduction is warranted because, as the FAA noted in the NPRM, many of the airplanes in production today can meet the proposed Stage 4 standard with little adjustment. As noted previously, airplanes manufactured today are not required to be as quiet as many of them are; their noise levels at certification are well below Stage 3 but are not allowed to be called anything other than Stage 3. Commenters who suggest that the Stage

4 standard is not strict enough because it fails to place a significant compliance burden on the industry, fail to give credit to manufacturers that have already worked to reduce noise before being required to do so. Noise reduction technology does not come without cost and additional operating expense over the average 30-year life of an airplane. None of the commenters that suggested stricter limits presented any information suggesting how these reductions might be accomplished, how they apply to current technology, how much they would cost, or the amount of benefit that would be generated by stricter limits. The FAA cannot adopt a stricter standard simply based on some generalized idea that the industry should absorb the cost, regardless of what it might be.

Standards Related to Operational Restrictions

Some commenters suggest both a higher reduction and a retroactive application of it to older airplanes. As noted above, certification standards only become applicable to older airplanes when the operational rules force them to be either modified to meet the new operational rules, or removed from service. The FAA has not proposed the operational phaseout of Stage 3 airplanes over 75,000 pounds.

In several instances, commenters adamantly request that the FAA restrict the operation of aircraft under 75,000 pounds. Such comments are beyond the scope of this rulemaking, which proposes only the establishment of a Stage 4 noise certification standard. The FAA has no current plan to restrict the operation of aircraft under 75,000 pounds.

Incorporation by Reference

Four commenters (and many of the form letters) took issue with the FAA's proposed incorporation by reference (IBR) of the ICAO Chapter 4 noise levels. They criticized the FAA for the limited availability of the ICAO document (because ICAO charges for its publications), indicating that the proposed rule cannot be analyzed fully without it. One commenter refers to IBR as a ''vague status'' that forces legal interpretation of the document to stay with the FAA. AReCO calls IBR a ''questionable practice'' and states that there is ''no good reason'' to use it. AReCO also states that it believes that IBR is used to ''reference a document that is of a changing nature'' to avoid future rule changes when the underlying IBR document changes, but that goal is defeated in the proposed rule since a specific document is identified. AReCO also charges that IBR removes public access to the regulations and leaves them in the hands of only corporate bodies that have the documents in their possession. Two commenters express a general disapproval with IBR that appear to echo the more detailed comments. General comments in the form letters also referred to IBR as inappropriate.

FAA Response: The comments indicate a lack of understanding of the reasons for using incorporation by reference (IBR) generally, and the FAA's goal in using it in this specific instance.

The differences between aircraft certificated to U.S. Stage 3 and those certificated to ICAO Chapter 3 are slight, but they have proved significant. The FAA has been tasked with assisting air carriers that encounter problems when operating overseas that go back to these differences. Further, the FAA has been committed to and has invested significant resources in the international harmonization of aircraft noise certification standards and methods as a means of reducing the burdens and costs associated with certification testing. These goals can be hampered by minor language differences.

The proposed Stage 4 standard represents a new approach by the FAA in noise certification. While the United States agreed to the maximum noise levels that define ICAO Chapter 4, the FAA was faced with balancing the Chapter 4 language with U.S. publication requirements and the framework and technical language of Part 36. The FAA was concerned that as differences accrued, it would again be forced to resolve questions by a foreign authority whether an aircraft meets or is equivalent to Chapter 4.

The FAA proposed the adoption of the Stage 4 standard by incorporating by reference some parts of the actual text of ICAO Annex 16 Chapter 4 to ensure identicality in the noise standard, and to make clear the intent of the United States to recognize the ICAO standard. Incorporation by reference is a time-tested technique for the FAA to adopt technical language and standards that it would otherwise have to restate completely without any benefit and with substantial risk of mistake, conversion errors and misinterpretation.

While adoption of a document that is not readily available could be viewed as problematic, the Chapter 4 standard comprises one printed page, and the FAA did its best to restate the content in the preamble to the NPRM. The FAA concluded that a review of the document by someone not using it for actual noise certification purposes would not reveal anything not stated in the NPRM. In fact, the paucity of the Chapter 4 document led the FAA to include a broader preamble explanation of the proposed standard than a mere reading of the document could provide.

The use of IBR in this instance is entirely appropriate for adopting technical language and standards. When the FAA actually incorporates a document in a final rule, a copy of the incorporated document is included with the rule, and is placed on file permanently and is available for inspection at the Federal Register. This is a requirement for every incorporated document precisely to prevent the situation that regulatory standards be adopted using provisions in documents available to a select few. Use of IBR does not avoid future rule changes. To change a rule that uses an incorporated document, an agency must undertake full rulemaking to introduce a later version, since it adopts a different standard.

To the extent that the commenter believes that incorporation by reference changes the legal status of an incorporated document, the FAA disagrees. The agency knows of no such status granted to incorporated documents other than that the portions incorporated become part of the overall regulation, subject to the same legal review.

A review of the comments did cause the FAA to examine its IBR proposal more closely, however, and we discovered a problem that has to do with the way the Chapter 4 standard is stated. When ICAO adopted Chapter 4 into Annex 16, it did so as an ''add on'' to Chapter 3, using the maximum noise levels stated in Chapter 3 and reducing them. Adoption of the Chapter 4 document alone would not provide a complete regulatory basis for a certification applicant trying to comply with it, since Chapter 3 would be an unincorporated basis. Consequently, the FAA has changed the final rule to more specifically incorporate the noise levels of Annex 16 Chapter 4, Paragraph 4.4, Maximum Noise Levels, and those of Chapter 3, Paragraph 3.4, Maximum Noise Levels, on which they are based.

The FAA has also determined from the comments that proposed § 36.105(a) could be misinterpreted to change the requirements for noise certification for aircraft certificated to Annex 16 in their country of origin. No intent to change the certification requirements of bilateral airworthiness agreements was intended, The regulations seek the recognition of the operational equivalency of Stage 4 and Chapter 4 airplanes, and encourage other certification authorities to make similar

findings. Accordingly, paragraph (a) of the proposed regulation has been eliminated in the final rule.

The FAA is sensitive to the concern that too much incorporation by reference potentially weakens its own regulatory standards. In choosing to state the Stage 4 standard by minimal references to Annex 16 Chapters 3 and 4, the agency has not in any manner diluted its regulatory authority or standards. Rather, the FAA is seeking to minimize any perceived differences between aircraft certificated in the United States and elsewhere. This is a significant first step in worldwide acceptability. With the adoption of Chapter 4 noise levels and the addition of statements in aircraft flight manuals, the FAA seeks to lead the call for the worldwide operational acceptance of Stage 4/Chapter 4 aircraft as indistinguishable.

Moreover, the incorporated document will only be used by a handful of aircraft manufacturers worldwide, which makes it even more appropriate for incorporation. The IBR process and access to the document do not change the fact that the United States already agreed to the standard it contains. The same commenters who object to IBR already acknowledge what standard it contains, even if they disagree as to its propriety. Disagreeing with the noise levels represented by the Stage 4 standard should not be confused with the form of its adoption into the regulations.

The FAA concludes that the benefits of incorporating parts of Chapter 4 far outweigh any benefit that could be imagined by restatement of it into part 36. The FAA is choosing to incorporate limited sections of the international standard intact and eliminate the discrepancies that would accompany the agency's having to maintain the part 36 format, serving no purpose in practice.

Annex 16 Amendment Level and References

The Boeing Company comments that it appreciates the FAA's efforts toward adopting uniform noise certification standards. In furtherance of this objective, Boeing requests that the FAA adopt Amendment 8 to Annex 16, rather than Amendment 7 as proposed. A review of Amendment 8 indicates that the changes do not affect the noise levels of Chapter 3 or Chapter 4 that are being incorporated in this final rule. Most of the changes to Amendment 8 are minor technical changes in Appendix 2 (which is also being incorporated as an alternate method of compliance testing), and the rest are more recent revisions to the material that would appear in Advisory Circulars and other guidance material that will be issued after the final rule is adopted.

FAA Response: The FAA agrees that adoption of the later amendment might better serve the purposes of harmonization. However, to use Amendment 8 in our incorporation by reference, we would be forced to wait for ICAO to actually publish that amendment, which is not expected until November 2005. In lieu of waiting for publication of Amendment 8, we are issuing this rule using Amendment 7, as proposed in the NPRM.

The comment from Transport Canada suggests several changes to the references for Annex 16, including elimination of the designation ''Third Edition,'' and only making reference to Amendment 7 once. Transport Canada also suggests that the FAA not include aircraft flight manual (AFM) language in Section 36.105, and proposes changes to the language regarding type certifications applied for before January 1, 2006.

FAA Response: The FAA cannot accept the suggestions of Transport Canada. Regulatory publication requirements dictate that the FAA fully identify a document being incorporated; the FAA must reference the ''Third Edition'' of Annex 16, and its Amendment level, since that is the title on the cover of the current document. Similarly, the FAA's decision to put a date range on optional Stage 4 certification before 2006 is the result of previous dates in the regulations that require more consistency than a simple ''before'' date could supply in this instance.

Finally, the inclusion of AFM language was intentional for Stage 4. The FAA is hoping by its inclusion to avoid future disagreements about the noise level of individual airplanes when they are operating outside the country of original certification. This kind of help has been requested by U.S. air carriers, but was not available as an option until the FAA made the decision to state the equivalency of Stage 4 with Chapter 4, as discussed above. The inclusion of this language is supported by the Air Transport Association in its comment, agreeing that the language ''should minimize the mischief'' that can occur when some ICAO member States fail to recognize the noise certification of some aircraft.

Effective Date for New Certification

The proposed rule states that aircraft certificated after January 1, 2006, must comply with the Stage 4 standard. One commenter indicated that it was an ''unreasonable procrastination'' by the FAA, especially as it relates to the phaseout of Stage 3 airplanes (which the FAA has not proposed). Another commenter states that the date is the ''ICAO imposed * * * requirement on only new engines produced after 2006, with no retroactive actions applied to the existing fleet * * *.''

FAA Response: Comments concerning the proposed effective date for new certification reflect the same misunderstanding of the noise certification framework noted above. This rule deals with aircraft certification and does not change current noise operating rules. Before the FAA would consider any new operational limits, we would examine phasing out the production of noisier airplanes. A new regulatory standard cannot be imposed overnight without significant economic impact; in this case, it will be approximately one year from the date this rule is effective, which would be short in the context of new aircraft design standards if the efforts had not already been the topic of continued international coordination through ICAO. The date proposed for new certification is the same one used in Chapter 4; it applies to new aircraft certification, not simply engines. Aircraft engines do not by themselves receive a noise stage designation; they must be paired and tested with an airframe to undergo noise certification testing. Further, no certification standard has ever been applied retroactively to operating airplanes unless it is mandated through the operating rules.

Derivative Aircraft

Congressman Anthony Weiner comments that the proposed rule fails to close the ''derivative loophole'' that would allow for an aircraft certificated after January 1, 2006, to meet only Stage 3 noise levels.

FAA Response: The term ''derivative'' airplane has no formalized definition, and is not used in Title 14. It is often used colloquially to refer to a later model of an already certificated aircraft. The concept and the practice have existed for the last 50 years; it is the nature of certification standards. Nor is the concept limited to noise certification, and any discussion of limiting still-undefined ''derivatives'' would necessarily involve considerable airworthiness and production certification issues that are not the subject of this rulemaking, which is limited to new type designs.

Further, while it is true that a manufacturer could choose to maintain Stage 3 approval for a newer version

aircraft model after January 1, 2006, it would likely incur a competitive disadvantage. At some point, Stage 3 airplanes will be considered old technology, and given the significant cost of an aircraft, an investment in a Stage 3 derivative will be of lesser value once Stage 4 aircraft are a commercial option. However, it remains the choice of the manufacturer to continue producing already certificated versions of airplanes, and newer versions whose modifications do not cause it to need a new type certificate.

Cessation of Stage 3 Aircraft Production

The Raleigh Durham Airport Authority states that this rulemaking should be expanded to mandate that all subsonic jet and large transport category aircraft produced after January 1, 2006 be required to meet Stage 4 standards, even if type certificated before that date, and cites as precedent a 1973 action by the FAA that required airplanes manufactured after that time to meet Stage 2 noise levels.

FAA Response: The comment illustrates the confusion noted previously, but reiterates a point made earlier. The FAA's actions regarding the establishment of Stage 2 standards cannot be directly compared to its actions now. In the late 1960's, the FAA was authorized to regulate aircraft noise. When part 36 was established, it simply divided the then-current fleet of aircraft into those that met a certain noise standard, and those that exceeded it. These two categories would eventually become known as Stage 1 and Stage 2, but they were not called that at the time. When the FAA proposed new noise limits in 1977, we indicated that the regulations would recognize three categories of aircraft noise, and the Stage 1, 2, and 3 designations came into being. It was at that time that the FAA began the pattern of declaring a limit for a new lower standard, mandating a date for new certification applicants to begin applying the standard (both of which we are accomplishing here), and eventually phasing out the operation of the noisier airplanes.

Commenters criticize the FAA that the process took almost 25 years to eliminate Stage 2 airplanes over 75,000 pounds. Failure to accomplish these tasks in an orderly and time-sensitive fashion would have dramatic economic consequences, and undermine the ability to purchase newer, quieter aircraft, further delaying the benefits of their addition to the U.S. fleet. However, the FAA is required to consider both the costs and benefits of every change to the regulations. Noise regulation can be an extraordinarily expensive burden when forced too fast. As illustrated in the phaseout of Stage 2 airplanes, which was mandated by Congress, even a small change in compliance dates could cause exponential cost increases when airplanes are forced into early retirement. The fact that quieter airplanes are technologically feasible does not translate to a case for rapid disposal of everything currently operating or indeed still being produced. To insist on such an approach is to deny the economic realities of the industry and the regulatory cost-benefit requirements that the FAA must meet when proposing stricter noise standards.

ICAO Economic Analysis

In its comment, AReCO takes issue with the ICAO/CAEP assessment of the costs and benefits associated with the Chapter 4 standard. AReCO states that ICAO accounts only for the airline industry costs, and not the costs to ''airports, noise impacted citizens and taxpayers.'' AReCO claims that reliance on the analysis means ''the decision on Stage 4 noise specifications is inherently flawed,'' and notes that the FAA should abandon the incorporation of any part of Chapter 4 ''because the basis of the costs/benefits of the decision making process were incomplete and inadequate.''

FAA Response: The FAA included the ICAO/CAEP economic analysis of Chapter 4 in the NPRM for this rule simply as background. It was included to show that economic analysis is conducted outside of the U.S. regulatory process and was used in the decision to make the Chapter 4 standard 10dB quieter than Chapter 3. As a member of ICAO/CAEP, the United States participated in the process, but at no time did the FAA ever consider that analysis a replacement for the one required when the agency proposes a rule.

The FAA conducted the economic analyses of the proposed rule as required. Commenters such as AReCO do not appear to understand that the evaluation was limited to what the rule proposed, that is, a consideration of the costs imposed by the adoption of the Stage 4 standard on aircraft type certificated in the United States after January 1, 2006. The only costs of this regulation would be on those who have to comply with it ''the manufacturers of new aircraft that seek new type certificates after that date. There will be a net benefit to airports and citizens in terms of quieter aircraft built to the new, more stringent standard, because the alternative is to leave the current Stage 3 standard in place.

Environmental v. *Economic Analysis*

Several commenters noted that the NPRM devoted considerably more space to the evaluation of the economic impact of the proposed rule than it did for the environmental analysis, and one commenter objects to the Environmental Analysis finding that the proposed rule qualifies for a categorical exclusion.

FAA Response: The FAA conducted all of the economic analyses required. As explained above, the only costs were found to be on the entities that must comply with the rule, manufacturers of aircraft. The type of analysis conducted for the environmental portion occurred because the categorical exclusion applies—the rule is seen as having a positive environmental effect (quieter future airplanes). The adoption of the Stage 4 standard, with its stricter noise requirement, will have no negative effect on the environment, so no further analysis is required. The required Environmental Analysis does not mandate an agency to compare a proposed rule to one or more alternatives that might have a different environmental impact, as the commenters appear to suggest. Rather, similar to the economic analysis, the potential environmental impact of the rule is analyzed only for its differences with the current requirements.

Outside the Scope of the NPRM

Approximately 35 commenters are residents of the area near Santa Monica airport, and sent form letters or letters that used identical blocks of text. Most of these comments take issue with the applicability of the proposed rule on aircraft under 75,000 pounds, the lack of a proposed phaseout of Stage 3 aircraft, and the U.S. negotiations at ICAO, all of which have been addressed above. Many of these commenters also state personal objections to the amount of business aviation air traffic at Santa Monica Airport, and the noise and pollution it generates.

FAA Response: The FAA is aware of the issues raised by the southern California residents and others regarding their local airports, but this rule is not intended to address any of those issues. This rule will apply to aircraft of less than 75,000 pounds when they are type certificated, but it does not affect the operation of any aircraft of any weight. Accordingly, all comments concerning local airport noise and emissions issues and a change in the operating status of airplanes weighing less than 75,000 pounds are considered beyond the scope of the rulemaking and will not be addressed further.

Summary of Changes to the Final Rule

There are no substantive changes being made to the final rule. The following is a summary of the differences between the proposed and final rule.

1. We are specifying that the incorporated parts of Annex 16 are Chapter 3, Paragraph 3.4, Chapter 4, Paragraph 4.4, and Appendix 2, as they appear in Amendment 7.

2. We are splitting the text of § B36.1 into two parts for clarity. The first two sentences of the paragraph are general; the last two are limited to Stage 4 certification. Some confusion arose when this was not immediately recognized. This is a format change only.

3. The definition of ''Chapter 4 Noise Level'' is clarified by including a more specific reference to the incorporated paragraph of Annex 16. The definition proposed in § 91.851 included a statement about equivalency which does not belong in a definition; that sentence was removed so that the definitions in part 36 and part 91 for the term are the same.

4. Section 36.6 (e) and Section A36.1.4 have been updated to include the correct address where docket material may be viewed.

5. Paragraph (a) of proposed § 36.105 has been removed. Confusion was expressed as to whether the inclusion of the equivalency statement in Part 36 changed the methods or requirements for noise certification approval of aircraft certificated under Annex 16. As indicated in the discussion above, no such change was intended to the existing certification procedures in place under current bilateral airworthiness agreements, and the paragraph was removed to eliminate any confusion. The balance of the section is adopted as proposed as a single paragraph.

Except for these editorial changes, the rule is adopted as proposed.

Authority for This Rulemaking

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart III, Section 44715, Controlling aircraft noise and sonic boom. Under that section, the FAA is charged with prescribing regulations to measure and abate aircraft noise. This regulation is within the scope of that authority since it sets a new maximum noise limit for aircraft that are type certificated after January 1, 2006, and represents the FAA's continuing effort to abate the effects of aircraft noise on the public.

Paperwork Reduction Act

There are no current or new requirements for information collection associated with this amendment.

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. We have determined that there is no new information collection associated with this rule.

International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has reviewed the corresponding ICAO Standards and Recommended Practices and has identified no differences with these regulations.

Economic Evaluation

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs each Federal agency proposing or adopting a regulation to proceed only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (19 U.S.C. 2531–2533) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, the Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation.)

However, for regulations with an expected minimal impact the above-specified analyses are not required. The Department of Transportation Order DOT 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If we determine that the expected impact is so minimal that the final regulation does not warrant a full evaluation, a statement to that effect and the basis for it is included in the final regulation.

This final rule will establish a new Stage 4 noise standard for subsonic jet airplanes and subsonic transport category large airplanes. The noise standard will apply to applicants for a new type design submitted on or after January 1, 2006. The noise standard will provide noise certification standards for Stage 4 airplanes certificated in the United States that will be consistent with those airplanes certificated under the International Civil Aviation Organization Annex 16 Chapter 4 noise standards and would ensure that the best available, economically reasonable, and technologically practicable noise reduction technologies will be incorporated into the aircraft design. The final rule was developed by assessing the feasibility and availability of the best noise abatement technologies (*i.e.*, best practices) for turbojet powered and propeller-driven large airplanes. The stringency alternatives were judged against the database of current and projected airplanes that incorporate the best practices. The aviation industry is currently producing airplanes that can meet the Stage 4 standards. All but four aircraft currently being produced are expected to be able to meet the final rule's standards. The FAA found that under current industry practice three of the four airplane configurations that do not meet the Stage 4 noise standard have one or more other configurations that do so. The remaining configuration corresponds to an airplane that was type certified in 1981. In 2006, when the proposed rule becomes effective, all new type designs for subsonic jet airplanes and subsonic transport category large airplanes will be able to incorporate noise reduction technologies to meet the Stage 4 noise standard. Therefore, the expected impact of the final rule will be minimal, if any, cost. The final rule could impose weight and engine constraints on certain aircraft configurations. The FAA called for comments from entities that could be negatively impacted as a result of any weight and engine constraint; however, the FAA received no comments mentioning any negative impact as a result of weight and engine constraints.

The FAA has determined that this rule will impose only minimal costs or other economic impacts on any

individual or entity; consequently, no economic evaluation was prepared.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the business, organizations, and governmental jurisdictions subject to regulation.'' To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The Act covers a wide-range of small entities, including small businesses, not-for-profit organizations and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the determination is that it will, the agency must prepare a regulatory flexibility analysis as described in the Act.

However, if an agency determines that a proposed or final rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the 1980 RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

In view of the minimal cost impact of the final rule, the FAA has determined that this final rule would have no significant economic impact on a substantial number of small entities. Consequently, the FAA certifies that the rule would not have a significant economic impact on a substantial number of small entities.

International Trade Impact Analysis

The Trade Agreement Act of 1979 prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effect of this final rule and determined that it would accept ICAO standards as the basis for United States regulation.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (the Act) is intended, among other things, to curb the practice of imposing unfunded Federal mandates on State, local, and tribal governments. Title II of the Act requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (adjusted annually for inflation) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a ''significant regulatory action.'' The FAA currently uses an inflation-adjusted value of $120.7 million in lieu of $100 million.

This final rule does not contain such a mandate. The requirements of Title II do not apply.

Environmental Analysis

In accordance with FAA Order 1050.1E, the FAA has determined that this action is categorically excluded from environmental review under section 102(2)(c) of the National Environmental Policy Act (NEPA). This action is categorically excluded under FAA Order 1050.1E, Chapter 3, Paragraph 312f, which covers regulations ''excluding those which if implemented may cause a significant impact on the human environment.'' This rule establishes a new quieter noise standard to be known as Stage 4. To reduce noise at its source, this new noise standard is ten decibels lower than the current Stage 3 standard. The FAA notes that the 10 decibel reduction is cumulative *i.e.*, the arithmetic sum of the reductions at each of the three measurement points at flyover, lateral, and approach. This action would apply to any person filing an application for a new airplane type design on and after January 1, 2006. Finally, this action does not impose a phase-out or any other operating limitations to the current fleet. It qualifies for a categorical exclusion because no significant impacts to the environment are expected to result from its finalization or implementation and no extraordinary circumstances exist as prescribed under Chapter 3, paragraph 304 of Order 1050.1E.

Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA has analyzed this final rule under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). We have determined that it is not a ''significant energy action'' under the executive order because it is not a ''significant regulatory action'' under Executive Order 12866, and it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

List of Subjects in 14 CFR Parts 36 and 91

Aircraft, Incorporation by reference, Noise control, Reporting and recordkeeping requirements.

The Amendment

■ In consideration of the foregoing, the Federal Aviation Administration amends Chapter I of Title 14, Code of Federal Regulations as follows:

PART 36—NOISE STANDARDS: AIRCRAFT TYPE AND AIRWORTHINESS CERTIFICATION

■ 1. The authority citation for part 36 continues to read as follows:

Authority: 42 U.S.C. 4321 *et seq.*; 49 U.S.C. 106(g), 40113, 44701–44702, 44704, 44715; sec. 305, Pub. L. 96–193, 94 Stat. 50, 57; E.O. 11514, 35 FR 4247, 3 CFR, 1966–1970 Comp., p. 902.

§ 36.1 Applicability and definitions.

■ 2. Amend § 36.1 by adding new paragraphs (f)(9), (f)(10), and (f)(11) to read as follows:

* * * * *

(f)(9) A ''Stage 4 noise level'' means a noise level at or below the Stage 4 noise limit prescribed in section B36.5(d) of appendix B of this part.

(f)(10) A ''Stage 4 airplane'' means an airplane that has been shown under this part not to exceed the Stage 4 noise limit prescribed in section B36.5(d) of appendix B of this part.

(f)(11) A ''Chapter 4 noise level'' means a noise level at or below the maximum noise level prescribed in Chapter 4, Paragraph 4.4, Maximum Noise Levels, of the International Civil Aviation Organization (ICAO) Annex 16, Volume I, Amendment 7, effective March 21, 2002. [Incorporated by reference, see § 36.6].

* * * * *

■ 3. Amend § 36.6 by redesignating paragraph (e)(3) as (e)(4), adding paragraphs (c)(3), (d)(3), and (e)(3), and revising paragraph (e)(1) to read as follows:

§ 36.6 Incorporation by reference.

* * * * *

(c) * * *

(3) International Standards and Recommended Practices entitled ''Environmental Protection, Annex 16 to

the Convention on International Civil Aviation, Volume I, Aircraft Noise'', Third Edition, July 1993, Amendment 7, effective March 21, 2002.

(d) * * *

(3) *ICAO publications.* International Civil Aviation Organization (ICAO), Document Sales Unit, 999 University Street, Montreal, Quebec H3C 5H7, Canada.

(e) * * *

(1) U.S. Department of Transportation, Docket Management System, 400 7th Street, SW., Room PL 401, Washington, DC.

(2) * * *

(3) The National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

* * * * *

■ 4. Amend § 36.7 by adding paragraph (e)(4) and (f) to read as follows:

§ 36.7 Acoustical change: Transport category large airplanes and jet airplanes.

* * * * *

(e) * * *

(4) If an airplane is a Stage 3 airplane prior to a change in type design, and becomes a Stage 4 after the change in type design, the airplane must remain a Stage 4 airplane.

(f) *Stage 4 airplanes.* If an airplane is a Stage 4 airplane prior to a change in type design, the airplane must remain a Stage 4 airplane after the change in type design.

■ 5. Amend § 36.103 by revising paragraph (b) and adding a new paragraph (c) to read as follows:

§ 36.103 Noise limits.

* * * * *

(b) Type certification applications between November 5, 1975 and December 31, 2005. If application is made on or after November 5, 1975, and before January 1, 2006, it must be shown that the noise levels of the airplane are no greater than the Stage 3 noise limit prescribed in section B36.5(c) of appendix B of this part.

(c) Type certification applications on or after January 1, 2006. If application is made on or after January 1, 2006, it must be shown that the noise levels of the airplane are no greater than the Stage 4 noise limit prescribed in section B36.5(d) of appendix B of this part. Prior to January 1, 2006, an applicant may seek voluntary certification to Stage 4. If Stage 4 certification is chosen, the requirements of § 36.7(f) of this part will apply.

■ 6. Add new § 36.105 to read as follows:

§ 36.105 Flight Manual Statement of Chapter 4 equivalency.

For each airplane that meets the requirements for Stage 4 certification, the Airplane Flight Manual or operations manual must include the following statement: ''The following noise levels comply with part 36, Appendix B, Stage 4 maximum noise level requirements and were obtained by analysis of approved data from noise tests conducted under the provisions of part 36 Amendment (insert part 36 amendment number). The noise measurement and evaluation procedures used to obtain these noise levels are considered by the FAA to be equivalent to the Chapter 4 noise level required by the International Civil Aviation Organization (ICAO) in Annex 16, Volume I, Appendix 2, Amendment 7, effective March 21, 2002.'' [Incorporated by reference, see § 36.6].

Appendix A to Part 36—[Amended]

■ 7. Amend § A36.1 by adding paragraph A36.1.4 to read as follows:

§ A36.1 Introduction.

* * * * *

A36.1.4 For Stage 4 airplanes, an acceptable alternate for noise measurement and evaluation is Appendix 2 to the International Civil Aviation Organization (ICAO) Annex 16, Environmental Protection, Volume I, Aircraft Noise, Third Edition, July 1993, Amendment 7, effective March 21, 2002. [Incorporated by reference, see § 36.6].

* * * * *

Appendix B to Part 36—[Amended]

■ 8. Revise § B36.1 to read as follows:

§ B36.1 Noise measurement and evaluation.

(a) The procedures of Appendix A of this part, or approved equivalent procedures, must be used to determine noise levels of an airplane. These noise levels must be used to show compliance with the requirements of this appendix.

(b) For Stage 4 airplanes, an acceptable alternative for noise measurement and evaluation is Appendix 2 to the International Civil Aviation Organization (ICAO) Annex 16, Environmental Protection, Volume I, Aircraft Noise, Third Edition, July 1993, Amendment 7, effective March 21, 2002. [Incorporated by reference, see § 36.6].

■ 9. Amend § B36.5 by adding paragraph (d) to read as follows:

§ B36.5 Maximum noise levels.

* * * * *

(d) For any Stage 4 airplane, the flyover, lateral, and approach maximum noise levels are prescribed in Chapter 4, Paragraph 4.4, Maximum Noise Levels, and Chapter 3, Paragraph 3.4, Maximum Noise Levels, of the International Civil Aviation Organization (ICAO) Annex 16, Environmental Protection, Volume I, Aircraft Noise, Third Edition, July 1993, Amendment 7, effective March 21, 2002. [Incorporated by reference, see § 36.6].

PART 91—GENERAL OPERATING AND FLIGHT RULES

■ 10. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. 106(g), 1155, 40103, 40113, 40120, 44101, 44111, 44701, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46504, 46506, 46507, 47122, 47508, 47528–47531, articles 12 and 29 of the Convention on International Civil Aviation (61 stat 1180).

■ 11. Amend § 91.851 by adding new definitions for ''Stage 4 noise level'', ''Stage 4 airplane,'' and ''Chapter 4 noise level,'' in alphabetical order to read as follows:

§ 91.851 Definitions.

* * * * *

Chapter 4 noise level means a noise level at or below the maximum noise level prescribed in Chapter 4, Paragraph 4.4, Maximum Noise Levels, of the International Civil Aviation Organization (ICAO) Annex 16, Volume I, Amendment 7, effective March 21, 2002. The Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 approved the incorporation by reference of this document, which can be obtained from the International Civil Aviation Organization (ICAO), Document Sales Unit, 999 University Street, Montreal, Quebec H3C 5H7, Canada. Also, you may obtain documents on the Internet at *http://www.ICAO.int/eshop/index.cfm.* Copies may be reviewed at the U.S. Department of Transportation, Docket Management System, 400 7th Street, SW., Room PL 401, Washington, DC or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

Stage 4 noise level means a noise level at or below the Stage 4 noise limit prescribed in part 36 of this chapter.

Stage 4 airplane means an airplane that has been shown not to exceed the Stage 4 noise limit prescribed in part 36 of this chapter. A Stage 4 airplane complies with all of the noise operating rules of this part.

■ 12. Revise § 91.853 to read as follows:

§ 91.853 Final compliance: Civil subsonic airplanes.

Except as provided in § 91.873, after December 31, 1999, no person shall operate to or from any airport in the contiguous United States any airplane subject to § 91.801(c) of this subpart, unless that airplane has been shown to comply with Stage 3 or Stage 4 noise levels.

■ 13. Amend § 91.855 by revising paragraph (a) to read as follows:

§ 91.855 Entry and nonaddition rule.

* * * * *

(a) The airplane complies with Stage 3 or Stage 4 noise levels.

* * * * *

■ 14. Section 91.859 is added to read as follows:

§ 91.859 Modification to meet Stage 3 or Stage 4 noise levels.

For an airplane subject to § 91.801(c) of this subpart and otherwise prohibited from operation to or from an airport in the contiguous United States by § 91.855, any person may apply for a special flight authorization for that airplane to operate in the contiguous United States for the purpose of obtaining modifications to meet Stage 3 or Stage 4 noise levels.

Issued in Washington, DC, on May 27, 2005.

Marion Blakey,

Administrator.

[FR Doc. 05–13076 Filed 7–1–05; 8:45 am]

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