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An Analysis of the Phase-Out Provisions of the Airport Noise and Capacity Act of 1990

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NOTES

AN ANALYSIS OF THE PHASE-OUT PROVISIONS OF THE AIRPORT NOISE AND CAPACITY ACT OF 1990

INTRODUCTION

Jet airplanes entered commercial aviation in 1959.¹ Since 1959 the commercial aviation industry has become a large and vital part of the world economy. The expansion of this industry, however, has caused significant environmental repercussions. One impact of increased air travel is noise pollution. On a daily basis, at least fifteen million people endure regular aircraft noise at levels which the EPA has determined affect the public health and welfare.² This daily noise takes a notable toll on both humans and property located near airports. Airport noise may cause hearing loss, high blood pressure, ulcers and a degradation of the body's immune system.³ Aircraft noise also reduces the value of real estate located adjacent to airports or proposed airports.⁴

In response to the negative effect of airport noise pollution on human life and property values, Congress, over the years, has enacted various statutes to combat aircraft noise pollution.⁵ These statutes, however, have been largely unsuccessful in yielding any definite long-term solu-

1. Robert J. Rockett, Comment, *Airport Noise: Did the Airport Safety and Noise Abatement Act of 1979 Solve the Problem?*, 52 J. AIR L. & COM. 499, 499 (1986) (citing 41 Fed. Reg. 51,522-23 (1976)).

2. Alice H. Suter, *Noise Wars: Citizens Are Losing Their Hearing Because the Federal Government's Efforts to Dampen Neighborhood and Workplace Noise Are Dwindling*, TECHNOLOGY REV. Nov.-Dec. 1989, at 47. The EPA's "safe" level is determined by a measure called the "day-night sound level" which is abbreviated as the "DNL". *Id.* at 46. The DNL is calculated by taking the average twenty-four hour noise level, with sounds that occur after 10 p.m. and before 7 a.m. artificially increased by 10db. *Id.* The EPA's noise office has determined that a DNL greater than 55db will affect the public's health and welfare. *Id.*

3. Kate McKenna, *FAA Gets Public Input on National Noise-Reduction Rules*, States News Service, March 5, 1991 available in LEXIS, Legis Library, Alleg File. "A 1982 study by the University of California at Los Angeles found that the incidence of cardiovascular deaths, strokes, suicides, and murders among 200,000 residents of a flight path corridor near LA International Airport was higher than the incidence of these disorders among individuals in the rest of the city." (quoting Susan Staples of UFO Noise). *Id.*

People who live near airports often do not sleep as deeply as they would without the intermittent noise from the airport. See Suter, *supra* note 2, at 46. The noise interferes with normal sleep patterns which can cause fatigue. *Id.* In a 1977 study, Dutch scientists found that individuals residing around Amsterdam's airport used sleep medications and drugs for heart related illnesses more than individuals who were exposed to less noise. *Id.*

4. Rockett, *supra* note 1, at 499. "[N]oise uses up a real resource — quiet. When noise is 'dumped' on property, the productivity of that property is affected in absolute and relative terms. Property affected by noise of high intensity is less productive for virtually any use than comparable quiet property, and its productivity as a housing site may be reduced even more than its productivity as a site for commercial activity." *Id.* at 499-500, n.5.

5. See *infra* Parts I and II for a discussion of statutes controlling noise pollution prior to the 1990 Act.

tions to aircraft noise pollution. As a result, in 1990 Congress passed the Airport Noise and Capacity Act⁶ which is designed to provide a long-term solution to the nations aircraft noise pollution problem.⁷

This paper will provide an overview of the Airport Noise and Capacity Act of 1990. Part I summarizes legislative actions prior to 1979 Part II examines the provisions of the Aviation Safety Noise and Abatement Act of 1979⁸ Part III analyzes the Airport Noise and Capacity Act of 1990 (ANCA), particularly the Act's phaseout requirements for stage 2 aircraft.⁹ Finally, part IV concludes that although the ANCA might provide a short term solution to aircraft noise pollution, further legislative action will be needed to guarantee the continuing diminution of aircraft noise.

I. LEGISLATIVE INITIATIVES IN TARGETING AIRCRAFT NOISE POLLUTION PRIOR TO 1979

In 1958, the Federal Aviation Agency (FAA) was created under the Federal Aviation Act.¹⁰ The FAA succeeded the Civil Aeronautics Authority and took responsibility for aviation safety.¹¹ Under the auspices of the 1958 Act the FAA "has asserted broad authority to control and regulate the use of navigable airspace and aircraft operations."¹² In addition to its many other responsibilities, the FAA regulates landings and departures and maintains control towers in major airports.¹³ The 1958 Act was amended in 1968 by the Control and Abatement of Aircraft Noise and Sonic Boom amendment.¹⁴ This amendment granted the FAA "broad noise abatement authority."¹⁵ Empowered by the 1968 amendment, in 1969 the FAA created part 36 of the Federal Aviation

6. Airport Noise and Capacity Act of 1990, 49 U.S.C.A. app. §§ 2151-2158 (West Supp. 1992).

7. See 49 U.S.C.A. app. § 2152(a) (Act mandates that the Secretary of Transportation establish a national aviation noise policy).

8. 49 U.S.C.A. app. §§ 2101-2108, 2121-2125 (West Supp. 1992).

9. 49 U.S.C.A. app. §§ 2157-2158. Stage 1 airplanes are the noisiest type of aircraft, whereas Stage 2 airplanes are marginally better than Stage 1. Stage 3 airplanes are the quietest and are the current best. A full discussion of these classifications is provided *infra* at notes 25-27 and accompanying text.

10. Federal Aviation Act of 1958, Pub. L. No. 85-726, 72 Stat. 731 (codified as 49 U.S.C. § 1301 (1988)).

11. Joseph C. Sweeney, *Protection of the Environment in the United States*, 1 FORDHAM ENVTL. L. REP. 1, 37 (1989).

12. SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 23 (1979) reprinted in 1980 U.S.C.C.A.N. 89, 93.

13. *Id.*

14. Federal Aviation Act of 1958, 49 U.S.C.A. § 1431 (West Supp. 1992).

15. SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 23 (1979) reprinted in 1980 U.S.C.C.A.N. 89, 92. See also Timothy Mark Bates, Casenotes and Statute Notes, 52 J. AIR L. & COM. 193, 196 (1986-87) (amendment authorized the FAA to prescribe noise control and abatement standards).

Regulations (FARs).¹⁶ These regulations created a system for measuring aircraft noise.¹⁷ Part 36 established noise limits for those aircraft under design in 1969 and built after 1969. The noise limits established in Part 36 did not apply to aircraft already built and certified by 1969.¹⁸

The Federal Aviation Act of 1958 was again amended in 1972 by the Federal Noise Control Act of 1972.¹⁹ This amendment empowered the Environmental Protection Agency (EPA) to propose new aircraft noise regulations for FAA consideration.²⁰ The primary responsibility for the regulation of aircraft noise, however, remained with the FAA. In 1973, part 36 of the FARs was amended again. All aircraft with pre-1969 designs produced after December 31, 1974 were required to meet the 1969, stage one, noise standards.²¹ Part 36 was amended again in 1977. New airplanes manufactured after 1975 were required to meet standards even stricter than the 1969 standards.²²

Part 36 of the Federal Aviation Regulations defines the parameters for the operating noise levels of newly manufactured planes.²³ Part 36 is broken into three noise levels or "stages."²⁴ Stage one consists of jet aircraft type certified or designed prior to 1969 and manufactured prior to January 1, 1975, that were not subject to any noise restrictions at the time of manufacture.²⁵ Stage two consists of aircraft type certified or

16. SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 23 (1979) reprinted in 1980 U.S.C.A.N. 89, 92. Part 36 prescribed noise levels for civil turbojet aircraft heavier than 75,000 pounds. As a result of this regulation, no new aircraft could be produced until meeting part 36 standards. This explains why the next generation of wide bodied jets were significantly quieter than pre-1969 aircraft. *Id.*

17. See Bates, *supra* note 15, at 197 (part 36 regulations set noise restrictions and established measurement system for noise).

18. See *Id.*

19. 42 U.S.C.A. §§ 4901-4918 (West Supp. 1992).

20. See Rockett, *supra* note 1, at 509. The FAA was not required to adopt the EPA's proposals, however, both the EPA's proposals and the FAA's responses had to be published in the Federal Register. *Id.*

21. SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 23 (1979) reprinted in 1980 U.S.C.A.N. 89, 92. See also Bates, *supra* note 15, at 197 (all newly built aircraft, even those of older design, must meet part 36 standards) (citing 38 Fed. Reg. 29569 (1973)).

22. SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 23 (1979) reprinted in 1980 U.S.C.A.N. 89, 93. Under this amendment, aircraft certified after November 5, 1975 or issued amended certificates after May 6, 1976 had to be between 1-9 effective perceived noise decibels lower than the standing requirements, depending upon the aircraft's weight and number of engines. *Id.* See also Bates, *supra* note 15, at 197 (part 36 amended as aircraft design and noise suppression technology developed).

23. 14 C.F.R. § 36 (1991).

24. 14 C.F.R. § 36.201 (1991).

25. *Airmark Corp. v. FAA*, 758 F.2d 685, 687 n.3 (D.C. Cir. 1985). This category of aircraft would include B-707s, many of which were produced during the late 1950s and early 1960s. *Id.*

designed after 1969 or aircraft built after December 31, 1974 utilizing a pre-1969 design.²⁶ Finally, stage three aircraft are any aircraft for which applications for type certificates were made after November 5, 1975.²⁷ Stage three aircraft are subject to the strictest noise regulations.²⁸

Since the part 36 noise regulations only applied to newly manufactured planes, an aircraft owner could effectively bypass the stricter stage two and stage three noise regulations by purchasing only planes manufactured prior to 1974 using pre-1969 designs.²⁹ To combat this, in December 1976, the FAA enacted part 91 of the Federal Aviation Regulations (General Operating and Flight Rules). Part 91 of the Federal Aviation Regulations limits the noise emissions of the *existing* carrier fleet by applying the stage two or three standards retroactively to stage one aircraft.³⁰ Thus, aircraft produced before December 31, 1974 using pre-1969 designs, classified as stage one aircraft, had to meet part 36 noise levels for stage two aircraft by January 1, 1983, in the case of two or three engine aircraft, and January 1, 1985 in the case of four engine aircraft.³¹ Domestic carriers with stage one aircraft had three options: 1) buy new aircraft that complied with the new standards, 2) re-engine the older aircraft with engines that would meet noise requirements, or 3) purchase hush kits if they became available before January 1, 1985.³²

26. *Id.* This category includes B-747s, DC-9s, DC-10s, B-727s and B-737s. *Id.*

27. *Id.* Planes in this category must meet the lowest noise levels that are deemed technologically practicable. B-757s and B-767s would be in this group. *Id.*

28. See Bates, *supra* note 15, at 198 n.39 (reduction in aircraft noise has been substantial). There is a substantial difference between the amount of noise that a stage one aircraft creates versus a stage three aircraft:

The four engine stage one aircraft such as B-707s and DC-8s according to the FAA's standardized measurements, generate approximately 155 effective perceived noise levels in decibels (EPNdB) over three miles from the start of a takeoff roll. The equivalent measurement for stage three commercial aircraft is approximately 87 EPNdB. Since decibels are logarithm units, an increase in 20 EPNdB is perceived as doubling in loudness. Thus, the reduction in measured levels of almost 30 EPNdB represents an eightfold decrease in aircraft generated noise.

Id.

29. See *infra* notes 30-31 and accompanying text. In essence, an operator could purchase an entire fleet of new stage one aircraft rather than building a newer design that would require compliance with the stage two or stage three standards. In addition, existing carriers could merely forgo the purchase of new planes while keeping their noisy, stage one planes, flying.

30. See Bates, *supra* note 15, at 198 (citing 14 C.F.R. § 91.303 (1986)) (on and after January 1, 1985, no person may operate to or from an airport in the United States any subsonic plane covered by this subpart unless shown to comply with Stage two or Stage three noise levels).

31. 14 C.F.R. § 91 (1991). See also SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 23 (1979), reprinted in 1980 U.S.C.C.A.N. 89, 93.

32. Bates, *supra* note 15, at 198. Obviously, buying new aircraft that complied with the regulations required a large amount of capital. However, these newer aircraft possessed the added benefit of being more fuel efficient as well as quieter. *Id.* Some carriers found the second option, re-engining stage one aircraft, simply economically inefficient.

These new standards affected nearly 1600 aircraft, and created much controversy in the carrier industry because of the cost of implementing the new requirements.³³

II. THE AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979

The industry reacted strongly to the FAA's 1976 enactment of the part 91 regulations mandating retroactive application of stage two and three standards, claiming that the new noise restrictions created insurmountable financial obstacles. Congress responded to the industry's concerns by enacting the Aviation Safety and Noise Abatement Act of 1979³⁴ (ASNAA) before the aviation industry was required to meet the compliance deadlines established by the part 91 regulations. The ASNAA adopted most of the technological requirements of the FAA's regulations,³⁵ but added certain financial incentives to induce both airport and aircraft operators to adopt anti-noise pollution policies.³⁶ Most importantly, the

Id. at 198-99. Most smaller carriers were attracted to the third option, hush kits, because of their relatively low cost in comparison to the costs of options one and two. *Id.* at 199.

33. See Rockett, *supra* note 1, at 510-11.

34. Aviation Safety and Noise Abatement Act of 1979, Pub. L. No. 96-193, 94 Stat. 50 (1980) (codified at 49 U.S.C.A. §§ 2101-2108 (West Supp. 1991)). See also Rockett, *supra* note 1, at 511. See also SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 23 (1979) reprinted in 1980 U.S.C.C.A.N. 89 (legislative history of the 1979 Act). Even with the creation of the FAA and the series of statutes and regulations prior to 1979, no definite improvement seemed to be occurring in the area of noise pollution. Both the FAA's and the airline industry's failure to create effective noise prevention or reduction regulations was an underlying concern of the 1979 Act. *Id.* at 93-94. The main focus of the hearings held by the Aviation Subcommittee of the Committee on Commerce Science and Transportation prior to the enactment of ASNAA was to ascertain the best solution to the noise pollution problem. *Id.* at 90.

The committee examined two methods for combatting noise pollution: replacement and retrofit. *Id.* at 95-98. Replacement is the "introduction of [complete] new technology aircraft" into the existing carrier fleet, whereas retrofit consists of either fitting existing aircraft with "hush kits" that reduce the amount of noise the old engines produced or re-engining existing aircraft with new second generation engines. *Id.* The committee after much discussion was in favor of the replacement option because it was "the most desirable alternative." *Id.* at 98. The committee explained that "while the noise reduction that results from retrofit of four-engine aircraft is meaningful it should be noted that a Stage 3 aircraft would result comparatively in a 200 percent reduction in noise. In addition to also being 30 percent more fuel efficient replacement would have a number of productivity improvements as well." *Id.* at 95. This strong favoritism toward replacements is reflected in the provisions of the act. *Id.* at 90.

The committee was also concerned with the economic costs to the industry. *Id.* at 98-99. The committee did note that replacement requires large capital investments by the airlines. *Id.* at 98. However, the committee then stated that the airline industry was on an upward trend, which would lead to an improved financial performance. *Id.* As a result of these changes the committee did not question the industry's ability to meet "the challenge of its capital requirements." *Id.*

35. 49 U.S.C.A. app. § 2102 (West Supp. 1992). See Rockett, *supra* note 1, at 511 (ASNAA adopted most of the technological requirements of the 1977 regulations).

36. See *infra* notes 39-44 and accompanying text for a discussion of the incentives that the ASNAA provided.

ASNAA extended the technology implementation deadlines promulgated by the FAA.³⁷

As to airport operators, the ASNAA provided that an airport operator who submitted a noise exposure map³⁸ to the Secretary of Transportation could qualify for grants for airport noise compatibility planning.³⁹ Airport noise compatibility planning is the FAA name for the information gathering process that culminates in the development of a noise exposure map and a noise compatibility program.⁴⁰ Once an operator had undertaken this information gathering process, the operator was then permitted to submit a noise compatibility program to the FAA.⁴¹ Grant monies were also available for airport operators to carry out these programs.⁴² Furthermore, other incentives included an ASNAA provision that prohibiting the use of a noise exposure map by a private litigant against an airport in a suit seeking damages due to airport noise.⁴³ Fi-

37. 49 U.S.C.A. app. §§ 2123-2124 (West Supp. 1992). Non-complying three-engine aircraft could request an extension from the FAA from applicable noise standards if: 1) the operator had a plan for replacement of the aircraft and 2) had entered into a contract by January 1, 1983 for delivery by January 1, 1986 of a replacement aircraft that met the applicable noise standards. *Id.* at § 2123(a).

An owner of a non-complying two-engine aircraft could also request an exemption from applicable noise standards on the same grounds as an owner of a three-engine aircraft could, except the latest delivery date for the replacement plane was extended to January 1, 1986. *Id.* at § 2123(b).

38. *See* Rockett, *supra* note 1, at 511. "Noise exposure maps depict land uses in the airport area that are incompatible with the noise levels generated at the airport." *Id.*

The first step in the preparation of a noise exposure map is performing a study of the noise levels surrounding an airport. 14 C.F.R. § 150.9 (1991). The noise levels are then plotted onto a geographical map of the area and contours are drawn to depict varying intensities. *Id.* The resulting contour map is known as a "noise exposure map" *Id.*

39. 49 U.S.C.A. app. § 2103 (West Supp. 1992). Section 2103(a)(1) establishes that an airport operator may submit a noise exposure map to the Secretary. This section also explains that the Secretary can make grants for airport noise compatibility planning. *Id.* § 2103(b)(1). *See also* 49 U.S.C. app. § 2101 (establishes the definitions of airport, airport operator and Secretary); 49 U.S.C. app. § 2102 (establishes a single system of noise measurement and noise exposure and identification of land use compatible with noise exposures).

40. 49 U.S.C. app. § 2103(b)(2).

41. 49 U.S.C.A. app. § 2104 (West Supp. 1992). A "noise compatibility program" is a program established by an airport operator that describes the steps an operator intends to take to reduce non-compatible land uses due to noise exposure. *Id.* § 2104(a). Some possible steps the operator could take to reduce noise exposure are as follows: 1) implement a new runway system, 2) implement restrictions on the types of aircraft that may use the airport based on their noise characteristics, 3) construct sound barriers, 4) introduce new flight procedures to shift noise exposure to less populated areas and 5) purchase land in the immediate vicinity of the airport. *Id.* § 2104(a)(1)-(5).

42. 49 U.S.C.A. app. § 2104 (West Supp. 1992). This section allows an airport operator who has submitted a noise exposure map to submit a noise compatibility program that sets forth the measures which the operator has taken or proposes to take for the reduction of existing non-compatible uses. *Id.* § 2104(a). This section also sets forth the procedure that the Secretary will use in deciding whether to approve or disapprove a noise compatibility program. *Id.* § 2104(b). This section authorizes the Secretary to make grants to airport operators for a project to carry out a noise compatibility program. *Id.* § 2104(c).

43. 49 U.S.C.A. app. §§ 2106-2107 (West Supp. 1992). Section 2106 prohibits the use

nally, as to aircraft operators, the ASNAA sought to provide an incentive for replacement of aircraft rather than retrofitting existing airframes with newer engines.⁴⁴

III. THE AIRPORT NOISE AND CAPACITY ACT OF 1990

Although the 1979 Act provided incentives for airport operators and aircraft owners to participate in the struggle against aircraft noise pollution, by 1990 the government felt that an all-encompassing and integrated national framework for systematic noise reduction would be more efficient.⁴⁵ In response to this feeling, Congress passed the Airport Noise and Capacity Act of 1990.⁴⁶

The ANCA's provisions were designed to establish a national aviation noise policy.⁴⁷ In establishing this national policy, the statute concen-

of noise exposure maps as evidence in a suit seeking damages for noise pollution from the airport. *Id.* § 2106. Section 2107 limits suits by property owners for noise damage. *Id.* § 2107(a).

44. 49 U.S.C.A. app. § 2123-2124 (West Supp. 1992). Section 2123 provides a new technology aircraft incentive, which directs the Secretary to provide for exceptions from noise standards of noncomplying three-engine aircraft if: 1) the operator has a replacement plan for such aircraft and this plan has been approved by the Secretary or 2) the aircraft operator has entered into a binding contract for delivery prior to January 1, 1985 of a replacement aircraft which meets the new standards. *Id.* § 2123(a). The same conditions for exemption apply for the operation of a non-complying two engine-aircraft. *Id.* § 2123(b). This change is an improvement to the current noise rule which would allow replacement with a stage two aircraft beyond the 1983 or 1985 deadlines. "It is the Committee's belief that providing this alternative to retrofit which has been found to provide efficiency penalties and negligible or imperceptible noise relief will accelerate the development and introduction of a Stage 3 replacement aircraft for the two and three engine jet fleet." SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979, S. REP. NO. 52, 96th Cong., 1st Sess. 17-18 (1979), reprinted in 1980 U.S.C.A.N. 89, 105.

Section 2124 establishes an exemption from noise standards for a person operating a non-complying two-engine aircraft. *Id.* § 2124(a). This section also provides the dates when an exemption will end. *Id.* § 2124(b) (either January 1, 1983, 1985 or 1988 depending on circumstances). Lastly § 2125 states that the trade-off provisions contained in 14 C.F.R. § 36 app. C. of the federal regulations shall apply in determining whether any aircraft complies with the provisions of 14 C.F.R. § 92(e). *Id.* § 2125.

45. See Transition to an All Stage 3 Fleet Operating in the 48 Contiguous United States and the District of Columbia, 56 Fed. Reg. 48,628 (1991) (in ANCA, Congress recognized a national aviation noise policy was necessary).

46. 49 U.S.C.A. app. §§ 2151-2158 (West Supp. 1992). The Congressional findings list some of the goals that were to be achieved in creating this new national framework. These include, first, creating a noise policy at the national level. *Id.* § 2151(3). In determining the national policy, local interests would be considered. *Id.* § 2154(4). Second, creating a uniform system of imposing restrictions on aviation. *Id.* § 2151(2). This would prevent uncoordinated checks on airlines and airports. *Id.* Third, alleviating community concerns through the use of new technology aircraft for noise management. *Id.* § 2151(5). Fourth, using federally controlled revenues to help resolve noise problems. *Id.* § 2151(6). Last, the issuance by the Secretary of Transportation of a final rule establishing procedures for reviewing airport noise and access restrictions on operations of stage 2 and stage 3 aircraft. *Id.* § 2151(8).

47. 49 U.S.C.A. app. § 2152 (West Supp. 1992). Section 2152 provides that "no later than July 1, 1991 the Secretary of Transportation shall issue regulations establishing a

trates on two separate and distinct goals. The first goal is the national phasing out of stage two aircraft and the eventual creation of an all stage three fleet.⁴⁸ The second goal, is the implementation of a national noise policy to review proposed airport noise and access restrictions on the operations of stage two and stage three aircraft.⁴⁹ This section of the Act is outside the scope of this note and will not be addressed.⁵⁰

A. *The "Phase-Out" Provisions of the Airport Noise and Capacity Act of 1990.*

By 1990, Congress decided that "the phased transition to an all Stage 3 fleet by the end of 1999 [was] in the public interest" and that "the collective public benefits of the phased transition [would] outweigh its costs to the public."⁵¹ Sections 2157 and 2158 of the ANCA provide the final dates for the elimination of stage two aircraft. Section 2157 expressly states that after December 31, 1999, all aircraft that operate to or from an airport in the United States must comply with stage three noise levels, as determined by the Secretary of Transportation.⁵² Under the provisions of section 2157 the Secretary is assigned the task of creating regulations that establish a schedule, including interim compliance dates, for phased-in compliance of the December 31, 1999 deadline.⁵³

An aircraft operator may apply for a waiver of the December 31, 1999 deadline if 85% or more of the aircraft used by the operator comply with

national aviation noise policy which takes into account the findings, determinations, and provisions of this subtitle." *Id.* § 2152(a).

48. 49 U.S.C.A. app. §§ 2157-2158 (West Supp. 1992). These sections are analyzed *infra* Part III(A) of this note.

49. 49 U.S.C.A. app. §§ 2153-2156 (West Supp. 1992).

50. Section 2153 of the Act directs the Secretary of Transportation to develop a national review program. 49 U.S.C.A. app. §§ 2153(a)(1). Limitations on stage three and stage two restrictions are also provided in this section. *Id.* § 2157(2)(a)-(b). Section 2153(d) lists the criteria that the Secretary must follow in deciding whether to approve or disapprove a stage three aircraft restriction. Moreover, one section of the Act specifically states that none of the provisions in the section eliminates, invalidates or supersedes existing law. *Id.* § 2153(h).

Section 2154 assigns the Secretary the task of determining the applicability of the § 2153 standards on local restrictions placed on certain stage two aircraft. *Id.* § 2154. Additionally, § 2155 limits the liability of the federal government for noise damages in situations where noise restrictions are disapproved, and § 2156 provides a financial incentive for airports to comply with the other provisions of the ANCA. An airport will not receive revenues under the provisions of the Airport and Airway Improvement Act of 1982 unless the Secretary is assured that the airport is not violating any noise or access restrictions under the ANCA provisions. *Id.* § 2156.

Sections 161.1-161.505 in the new Federal Aviation Regulations implement the sections of the ANCA described in subpart B. A discussion of these new regulations is outside the scope of this note.

51. See 56 Fed. Reg. 48,649 (1991) (in ANCA, Congress has determined a transition to a total Stage 3 fleet is in the public's interest).

52. 49 U.S.C.A. app. § 2157(a) (West Supp. 1992). The stage three noise levels are set forth in 14 C.F.R. § 36 as in effect November 5, 1990. *Id.* § 2157(h)(2).

53. 49 U.S.C.A. app. § 2157(c). The period of the phase-in shall begin on November 16, 1990 and end before December 31, 1999. *Id.*

stage three noise levels by July 1, 1999.⁵⁴ The waiver application must be filed with the Secretary by January 1, 1999.⁵⁵ The Secretary has the authority to grant the waiver if he deems it to be in the public interest.⁵⁶ In any event, even if the carrier receives a waiver he must comply with stage three noise levels no later than December 31, 2003.⁵⁷ Finally, this section of the statute specifies that violators of the ANCA and regulations adopted pursuant, to it will be subject to the civil penalties of title IX of the Federal Aviation Act of 1958.⁵⁸

Section 2158 of the ANCA is known as the "non-addition" rule.⁵⁹ This rule states that no person may operate a civil subsonic turbojet aircraft with a maximum weight of more than 75,000 pounds which is imported into the United States on or after November 5, 1990 unless it complies with the stage three noise levels⁶⁰ or the aircraft was purchased by the person who imported it into the United States under a written contract executed before November 5, 1990.⁶¹ An exemption from this requirement may be requested from the Secretary only if the purpose of the exemption is to modify an aircraft to meet stage three noise levels.⁶²

1. Federal Aviation Regulations Adopted Pursuant to Sections 2157-2158 of the Airport Noise and Capacity Act of 1990.

As mentioned above, section 2157 of the ANCA required the Secretary to establish a schedule of phased-in compliance with the statutory prohibition of stage two aircraft.⁶³ The Secretary opened a public docket on the phase out and non-addition of stage two airplanes,⁶⁴ and then delegated the authority to promulgate regulations implementing the ANCA to the Administrator of the FAA.⁶⁵ The FAA published a notice of a proposed rulemaking on February 28, 1991.⁶⁶ After the necessary public comment period, the final rules were published on September 25,

54. 49 U.S.C.A. app. § 2157(b)(1).

55. *Id.*

56. *Id.* § 2157(b)(2).

57. *Id.* § 2157(b)(3).

58. *Id.* § 2157(e).

59. *Id.* § 2158.

60. *Id.* § 2158(a)(1).

61. *Id.* § 2158(a)(2). The purpose of this section is to prevent a carrier from operating a non-stage three aircraft in United States airspace unless it is "owned" by the importer and therefore subject to phase-out just like other planes in the carrier's fleet.

62. *Id.* § 2158(b).

63. *Id.* § 2157(c).

64. 56 Fed. Reg. 812 (1991).

65. 56 Fed. Reg. 4560 (1991) (amendment to 49 C.F.R. § 1 delegates authority to the Federal Aviation Administrator to implement certain provisions of the Aviation Safety and Capacity Expansion Act of 1990, including provisions that amend the Federal Aviation Act of 1958 and the Airport and Airway Improvement Act of 1982, and of the Airport Noise and Capacity Act of 1990, Title IX, subtitles B and D, respectively, of the Omnibus Budget Reconciliation Act of 1990).

66. 56 Fed. Reg. 8628 (1991).

1991 in the Federal Register.⁶⁷ The new regulations added to part 91 are sections 91.851 through 91.857. For a better understanding of the ANCA one must examine these new regulations since they implement the ANCA phase-out provisions.⁶⁸

The definition section of these regulations only applies to words used in sections 91.851 through 91.875.⁶⁹ This regulation adopts the stage two and stage three noise level definitions which were effective as of November 5, 1990.⁷⁰ As defined by the regulations, "Contiguous United States" means "the area encompassed by the 48 contiguous United States and the District of Columbia."⁷¹ Import is defined as "a change in ownership of an airplane from a non-U.S. person to a U.S. person when the airplane is brought into the United States for operation."⁷²

Section 91.853 essentially implements section 2157 of the ANCA and provides that, except in the case of a waiver, after December 31, 1999, no person may operate an aircraft to or from an airport in the United States unless it complies with stage three noise levels.⁷³ The statutory non-addition rule is implemented by section 91.855 of the regulations.⁷⁴ A waiver to this non-addition rule is provided in section 91.859 which allows an owner of an aircraft that would normally be prohibited from operating in the contiguous United States by virtue of section 91.855 to apply for a

67. 56 Fed. Reg. 48,628 (1991) (to be codified at 14 C.F.R. § 91). Minor corrections to these rules were published in 56 Fed. Reg. 51,167 (1991).

68. See *infra* notes 69-95 and accompanying text for an explanation of these regulations.

69. 14 C.F.R. § 91.851 (1991).

70. *Id.*

71. *Id.*

72. *Id.*

73. *Id.* § 91.853.

74. *Id.* § 91.855. (This regulation provides that any airplane subject to this subpart may not be operated to or from an airport in the contiguous United States unless one or more of the following applies: the airplane complies with stage three noise levels, § 91.855(a), the airplane complies with stage two noise levels and was owned by a U.S. person on and since November 5, 1990, § 91.855(b), the airplane complies with stage two noise levels, is owned by a non-U.S. person, and is the subject of a binding lease to a U.S. person effective before and on September 25, 1991, § 91.855(c), the airplane complies with stage two noise levels and is operated by a foreign air carrier, § 91.855(d), the airplane complies with stage two noise levels and is operated by a foreign operator other than for the purpose of foreign air commerce, § 91.855(e), the airplane complies with stage two noise levels and (1) on November 5, 1990 was owned by: (i) a corporation, trust, or partnership organized under the laws of the United States or any State, (ii) an individual who is a citizen of the United States, or (iii) an entity owned or controlled by a corporation, trust partnership or individual described above and (2) enters into the United States not later than six months after the expiration of a lease agreement between an owner and a foreign airline, § 91.855(f), or the airplane complies with stage two noise levels and was purchased by the importer under a written contract executed before November 5, 1990, § 91.855(g). Any stage two aircraft described in §§ 91.855(a)-(g) is eligible for operation in the contiguous United States only as provided under 14 C.F.R. § 91.865 or § 91.867).

The result of this regulation is that either an imported aircraft meets the stage three noise level requirement or it meets the stage two noise level requirement and is added to the carrier's base level for future phase-out to stage three noise levels.

special flight authorization to operate in the contiguous United States for the purpose of obtaining modifications to reach stage three noise levels.⁷⁵

Section 91.857 applies to operation of stage two aircraft imported into a non-contiguous State, territory or possession on or after November 5, 1990.⁷⁶ This regulation provides that an operator of such a stage two aircraft must include a statement that it will not operate the plane to provide air transportation to or from airports in the contiguous United States⁷⁷ and it must obtain a special flight authorization to operate that aircraft into the contiguous United States for the purpose of maintenance.⁷⁸

The next sections of the regulations establish the FAA's procedure for converting the national aircraft fleet to stage three noise levels. The key to understanding these sections is tied to understanding the term "base level," as all of the regulations relate directly or indirectly to an operator's base level.⁷⁹ Described simply, an operator's base level at any point in time is equal to: the number of stage two aircraft the operator owns or operates on a given date that the operator selects, plus any stage two aircraft it obtains at a later date, minus any stage two aircraft it subsequently disposes of.⁸⁰ Section 91.861 defines two formulas for calculating base level: one for United States operators and the other for foreign carriers.⁸¹

For United States operators, the operator's base level begins as a number equal to the number of stage two aircraft owned by the carrier and listed on that operator's specifications for operations to or from airports in the contiguous United States on any one day selected by the operator during the period of January 1, 1990 through July 1, 1991.⁸² This number is increased by the number of stage two aircraft returned to service in the United States pursuant to section 91.855(f),⁸³ the number of stage two aircraft purchased pursuant to section 91.855(g),⁸⁴ and any United States operator base level acquired due to a stage two aircraft transfer with another person under section 91.863.⁸⁵ This value is then decreased for every stage two aircraft transferred to a different United States operator under section 91.863.⁸⁶

For foreign carriers, the base level is equal to the number of owned or

75. 14 C.F.R. § 91.859 (1992).

76. *Id.* § 91.857.

77. *Id.* § 91.857(a).

78. *Id.* § 91.857(b).

79. *See id.* § 91.861.

80. 14 C.F.R. § 91.861 (1991).

81. *Id.* § 91.861.

82. *Id.* § 91.861(a).

83. *Id.* § 91.861(a)(1)(i).

84. *Id.* § 91.861(a)(1)(ii).

85. *Id.* at § 91.861(a)(1)(iii). For example, if an operator trades a stage three aircraft for two stage two aircraft, its base level will rise by two, reflecting the addition of two stage two aircraft to its fleet.

86. *Id.* at § 91.861(a)(2).

leased stage two aircraft listed on United States operations specifications on any one day during the period of January 1, 1990 through July 1, 1991.⁸⁷ Like United States operators, this number is increased by the amount of foreign air carrier base level acquired by the transfer of a stage two aircraft from another person under section 91.863.⁸⁸ Finally, this number is reduced when a stage two aircraft is transferred to another person under section 91.863.⁸⁹

The transfer of stage two aircraft with base level is governed by the regulations in section 91.863.⁹⁰ Stage two aircraft may be transferred with or without the corresponding amount of base level, but the base level may not be transferred without the corresponding number of stage two aircraft.⁹¹ The FAA must receive written notification of a transfer of stage two aircraft along with notification of the appropriate base levels.⁹² Sections 91.863(c)(1)-(5) provide the applicable reporting requirements.⁹³

Sections 2157 and 2158 of the regulations adopted pursuant to the ANCA establish the ultimate phase-out date for stage two aircraft. The regulations also specify the method for calculating the number of stage two aircraft that an individual, either foreign or domestic, will be deemed to own for purposes of this phase-out: the base level.⁹⁴ Perhaps the most essential section of the new regulations is the one that establishes the schedules that operators must follow in phasing-out their stage two aircraft.⁹⁵ This section permits the operator to choose from two different phase out schedules, described under section 91.865(b) and section 91.865(d).⁹⁶

87. *Id.* at § 91.861(b).

88. *Id.* at § 91.861(b)(1).

89. *Id.* at § 91.861(b)(2).

90. *Id.* at § 91.863.

91. *Id.* § 91.863(a). United States operator base level and foreign air carrier base level are not interchangeable. *Id.* at § 91.863(b).

92. 14 C.F.R. § 91.863(c) (1991).

93. *Id.* at § 91.863(d). Transactions that ultimately result in no net increase or decrease in the number of stage two aircraft of either the acquiring or transferring party must still be reported to the FAA under this section. *Id.*

94. *See infra* notes 79-89 and accompanying text for a discussion of "base level," which refers to the number of stage two aircraft that will be attributed to an individual or corporation for the purposes of this chapter.

95. *See* 14 C.F.R. § 91.865 (1991). This section does not apply to a new entrant covered by § 91.867 nor does it apply to foreign air carriers not engaged in foreign air commerce. *Id.* § 91.865(a).

96. *Id.* §§ 91.865(b), 91.865(d). Schedule "b" provides that an aircraft owner who chooses this section must reduce the number of stage two aircraft it operates in the contiguous United States to a maximum of: 1) 75% of base level held by operator after December 31, 1994, 2) 50% of base level after December 31, 1996, 3) 25% of base level after December 31, 1998. *Id.* §§ 91.865(b)(1)-(3). Base level is defined as the number of stage two aircraft held by the operator on that compliance date under § 91.861. *Id.* § 91.865(c).

Schedule "d" provides that an aircraft owner who chooses this section must reduce the number of stage two aircraft in operation to a maximum of: 1) not less than 55% of the fleet consisting of stage three aircraft (or no more than 45% base level may be stage two aircraft) by December 31, 1994, 2) not less than 65% of the aircraft be stage three by

The FAA received several comments concerning this provision which it published when announcing the final rules in the Federal Register.⁹⁷ Several commentors expressed the view that the schedules were "too aggressive."⁹⁸ The FAA disagreed. It stated that air carriers are given some flexibility by having the option of complying with either schedule "b" or schedule "d."⁹⁹

Several commentors recommended that instead of the schedule for the phase-out of stage two aircraft that the FAA adopt a schedule for the phase-out of operations of stage two aircraft.¹⁰⁰ These commentors "note[d] that one airplane may conduct a number of operations, thus creating more noise than accounted for as a single event."¹⁰¹ The FAA's response was that it expected that a change from a stage two to a stage three fleet would create a reduction in the number of stage two operations.¹⁰² However, in addressing this comment the FAA did note that if for some reason stage two operations did not decline in the near future further rulemaking might be necessary to address the problem.¹⁰³

The regulations provide a different schedule of compliance for new operators of aircraft,¹⁰⁴ and a further distinction is drawn between United States and foreign air carriers within this group.¹⁰⁵ However, both new United States and new foreign carriers are treated the same in the compliance schedules.¹⁰⁶ Several commentors suggested that new entrants

December 31, 1996, 3) not less than 75% of the aircraft be stage three by December 31, 1998. *Id.* §§ 91.865(d)(1)-(3).

An operator can mix its compliance by choosing to comply with paragraph (b) on one compliance date and paragraph (d) on another.

[However] [a]n operator that switches from one method of compliance to the other at different compliance dates may not exceed the number of Stage two airplanes it was allowed to operate on the previous compliance date.

56 Fed. Reg. 48,647 (1991) (comments to final rule codified at 14 C.F.R. § 91.865).

97. 56 Fed. Reg. 48,633-34 (1991) (comments on proposed rule, final rule codified at 14 C.F.R. § 91.865). The FAA received numerous comments to its proposed regulations regarding the phase-in schedules. Some of these comments were incorporated into the final rules, while others were challenged and not adopted by the FAA. Regardless, the comments that the FAA deemed most significant were published in the Federal Register along with the final rule. The names of the commentors were not provided.

98. *Id.* at 48,634 (comments on proposed rule).

99. *Id.* (comments on proposed rule).

100. *Id.* (comments on proposed rule).

101. *Id.* (comments on proposed rule). For example, one stage three aircraft that was used on eight different routes would produce as much noise in the aggregate as a single stage two aircraft operating on only one route.

102. 56 Fed. Reg. 48,633-34 (1991) (comment on proposed rule, final rule codified at 14 C.F.R. § 91.865).

103. *Id.* at 48,634 (comments on proposed rule).

104. 14 C.F.R. § 91.867 (1991).

105. *Id.* § 91.867(a), (b).

106. *Id.* § 91.867. This regulation provides that a new entrant, either foreign or domestic may begin service in the United States without regard to the percentage of its fleet composed of stage three aircraft, *Id.* § 91.867(a)(1), (b)(1); however after December 31, 1994, at least 25% of the fleet of a new entrant must consist of stage three aircraft, *Id.*

should use the same base level as other operators.¹⁰⁷ The FAA explained that this was not possible because new entrants did not operate stage two aircraft during the base level establishment period.¹⁰⁸

In addition, under the regulations, a compliant operator is given a credit for exceeding the requirements of the compliance schedules established in section 91.865.¹⁰⁹ This section allows an operator who exceeds the requirements of the compliance schedules set in section 91.865 to claim a credit that may be applied at a later compliance date.¹¹⁰ This credit may not be transferred to another operator.¹¹¹

Finally, the regulations incorporate the Airport Noise and Capacity Act of 1990's limited waiver possibilities.¹¹² Section 91.871 establishes the procedure that must be followed in order to receive a waiver from interim compliance requirements.¹¹³ Section 91.873, on the other hand, outlines the procedures for obtaining waivers from the final compliance date.¹¹⁴ Several commentators objected to a provision which allows a

§ 91.867(a)(2), (b)(2). After December 31, 1996, the fleet must consist of at least 50% stage three aircraft, *Id.* § 91.867(a)(3), (b)(3); furthermore after December 31, 1998 any new entrant's fleet must consist of at least 75% stage three aircraft. *Id.* § 91.867(a)(4), (b)(4).

107. 56 Fed. Reg. 48,633 (1991) (comment on proposed rule codified at 14 C.F.R. § 91.861-91.867).

108. *Id.* (comments on proposed rule).

109. 14 C.F.R. § 91.869 (1991). The actual methodology for carry-forward compliance is set out in the regulation.

110. *Id.*

111. 56 Fed. Reg. 48,648 (1991) (comments on proposed rule codified at 14 C.F.R. § 91.869).

Although, some argument could be made that the transfer of credits should be allowed. This could in some circumstances be more economically efficient, overall, for a "good" carrier to sell its compliance credits on the open market to the highest bidder. This is currently done with "pollution credits", where efficiently operating plants "sell" their "pollution credits" to more inefficient plants. The overall societal benefit is a reduction in pollution, even though some particular plants may still be heavy polluters.

112. 14 C.F.R. §§ 91.871, 91.873 (1991). Section 91.871 deals with waivers from interim compliance requirements whereas § 91.873 addresses waivers from the final compliance deadline.

113. *Id.* § 91.871. In order to seek a waiver from an individual compliance requirement, the operator must make application to the Secretary of Transportation, show the waiver is in the public interest, and establish proof of a good faith effort to comply with the requirements. "[W]aivers will be granted only upon a showing by the applicant that compliance with the requirements of §§ 91.865 or 91.867 at a particular interim compliance date is financially onerous, physically impossible, or technologically infeasible, or that it would have an adverse effect on competition or on service to small communities."

114. *Id.* § 91.873. This section establishes that a United States aircraft operator may seek a waiver of the final compliance deadline for its remaining stage two aircraft by achieving the following: 1) establishing that by July 1, 1999, its fleet that will provide service to or from an airport in the contiguous United States consists of at least 85% stage three aircraft, 2) forwarding a written application to the Secretary of Transportation no later than January 1, 1999 and, 3) demonstrating that the granting of the waiver is in the public interest. *See id.* § 91.873(a)-(b), (d). In order for a new entrant to be eligible for this final compliance deadline waiver, it must have begun operations no later than January 1, 1999. *Id.* § 91.873(c). Finally, under no circumstance shall the waiver

waiver from a "final compliance deadline."¹¹⁵ Others stated that a different incentive should be given for the waiver.¹¹⁶ In response the FAA stated that the waiver from the final compliance date is statutory and therefore could not be changed.¹¹⁷

2. Economic Considerations Evaluated By the FAA When Promulgating New Regulations Under the Airport Noise and Capacity Act of 1990.

In directing the Secretary of Transportation to establish regulations for a phase-out schedule, section 2157 of the ANCA required that these regulations be based on detailed economic analysis of the impact of such regulations on the airline industry.¹¹⁸ In the "Regulatory Impact Analysis" the FAA examined the estimated costs versus the benefits of phasing out stage two aircraft.¹¹⁹

The FAA calculated the total cost of compliance with this statute (the "present value of the statute") by summing the present value of the individual carriers compliance costs.¹²⁰ This resulted in a total cost of \$4.2 billion for the replacement of stage two aircraft by stage three aircraft, whereas converting stage two to stage three aircraft by using the least expensive retrofit equipment would only cost \$827 million.¹²¹

Several commentators have disagreed with the FAA's methodology for calculating compliance costs.¹²² One commentator stated that the FAA's assumption that the life cycle of a plane is twenty-five years was not a "realistic representation of an airplane's useful life."¹²³ The FAA refutes this argument by noting that in January, 1991 only four percent of the domestic fleet was older than twenty-five years.¹²⁴ Additionally, other commentators not only included additional compliance costs, but their ac-

permit the operation of any stage two aircraft covered by this subchapter in the contiguous United States after December 31, 2003. *Id.* § 91.873(e).

115. 56 Fed. Reg. 48,639 (1991) (comments on proposed rule, codified at 14 C.F.R. § 91.873).

116. *Id.* (comments on proposed rule).

117. *Id.* (comments on proposed rule).

118. 49 U.S.C.A. app. § 2157(c) (West Supp. 1992).

119. 56 Fed. Reg. 48,649-57 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91). In performing this analysis, the FAA made several assumptions. These assumptions include: airplane life (twenty-five years), interest rate (10%), salvage value of stage two airplanes (\$1-2 million), alternative uses for the airplanes, availability of noise abatement retrofit equipment, types of replacement airplanes along with the price of fuel (\$.65 per gallon), and the cost of a new stage three airplane (\$186,229 to \$198,237 per seat). *See Id.* at 48,650.

120. *Id.* at 48,650.

121. *Id.*

122. *Id.* at 48,641.

123. 56 Fed. Reg. 48,649-57 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

124. *Id.*

tual per item costs differed from the estimates provided by the FAA.¹²⁵ As a result, their estimate of the present value of the cost of compliance exceeded the FAA's. The FAA argued that the commentor's cost estimate did not discount future costs and did not accurately reflect the time of airplane delivery.¹²⁶

Other commentors requested that the FAA allow greater flexibility so that the airlines could deal with the extra costs incurred in trying to meet the compliance schedules.¹²⁷ The FAA agreed with the argument that the entire airline industry was currently in dire economic straits, yet argued that the regulations already were sufficiently flexible to allow carriers to select the compromise approach that best minimizes their costs.¹²⁸

In addition to discussing the cost of implementing the new regulations, the FAA also discussed some of the principal benefits envisioned by the new Act.¹²⁹ The anticipated benefits included reducing the number of people that lived in the sixty-five decibel day-night sound level (DNL) contours surrounding airports,¹³⁰ eliminating stage two aircraft,¹³¹ reducing local phase-out rules as they would probably be more expensive than the Act's nationwide phase-out provisions,¹³² improving health of individuals living and working around airports¹³³ and potentially increasing increase of property values around airports.¹³⁴

The proposed "benefits" of the ANCA were also criticized.¹³⁵ Some commentators argued that the proposed benefits would not outweigh the costs.¹³⁶ The FAA responded that in enacting the ANCA, Congress had determined that, on the whole, the benefits to society would exceed the costs of remodeling fleets with stage three aircraft.¹³⁷

The FAA examined the deteriorating condition of the United States airline industry and concluded that the regulations were flexible enough to ensure that airline carriers were not unreasonably burdened.¹³⁸ The FAA pointed to one air carrier's choice of whether to comply with schedule "b" or "d,"¹³⁹ noting that these options permit airlines to vary

125. *Id.* (commentor asserted that the cost of compliance of the statute would be \$ 90 billion).

126. *Id.*

127. *Id.* at 48,649.

128. 56 Fed. Reg. 48,649-57 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

129. *Id.* at 48,652-53.

130. *Id.* at 48,652.

131. *Id.*

132. *Id.* at 48,653.

133. *Id.*

134. *Id.*

135. 56 Fed. Reg. 48,641-42 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

136. *Id.* at 48,642.

137. *Id.*

138. 56 Fed. Reg. 48,653-54 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

139. *Id.* at 48,654.

their fleet according to their progress in the industry.¹⁴⁰ Furthermore, the FAA determined that waivers are useful in situations where an airline is unable to meet a deadline because of financial difficulty or unable to procure the sufficient retrofit equipment in time for interim compliance dates.¹⁴¹ The FAA proposed that further flexibility is achieved by allowing a carrier to carry over credits for extra compliance.¹⁴² The effect of these regulations on competition in the airline industry, was a further concern.¹⁴³ The FAA noted that the cost of complying with the ANCA would drive some carriers out of the business and thereby reduce competition.¹⁴⁴

The FAA also examined the ability of air carriers to achieve growth in passenger carrying capacity consistent with the projected rates of growth for the number of airline passengers.¹⁴⁵ The FAA acknowledged that the new provisions created pursuant to sections 2157 and 2158 of the ANCA might be a bit burdensome in view of the deteriorating airline industry.¹⁴⁶ However, the FAA also stated that the final regulations do accommodate airline growth because they permit airlines to comply with the interim requirements by phasing-in stage three aircraft.¹⁴⁷ Such aircraft would, in the long run, be a beneficial addition to an airline's fleet.¹⁴⁸

Finally, the FAA explained that the new regulations assist new entrants because "the percentage of stage 3 airplanes required for compliance is lower for new entrants than the percentage required for established air carriers for the 1994 and 1996 compliance dates."¹⁴⁹

140. *Id.* at 48,654.

141. *Id.*

142. *Id.*

143. 56 Fed. Reg. 48,642 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

144. 56 Fed. Reg. 48,654 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91). A Department of Transportation task force in early 1990 published an assessment of the health of airline competition. That study concludes that the fundamentally competitive nature of the industry has not changed in recent years. The proliferation of hub-and-spoke systems and their inherent stability have reduced the intensity of price competition in many short-haul local markets, while intensifying the benefits of price competition for the vast majority of travelers. 56 Fed. Reg. 48,643 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

145. 56 Fed. Reg. 48,655 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

146. *Id.* Commentors expressed concern that the regulations "would cripple [the airline industry's] ability to expand and in some cases their ability to maintain low-fare air service." 56 Fed. Reg. 48,643 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

147. 56 Fed. Reg. 48,655 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

148. *Id.*

149. 56 Fed. Reg. 48,656 (1991) (summary of the Regulatory Impact Analysis, codified at 14 C.F.R. § 91).

CONCLUSION

The fact that there exists a national framework for dealing with aircraft noise pollution will begin to ameliorate the existing noise situation. Aircraft and airport operators can no longer ignore the environmental disasters caused by the airline industry. The benefits of transition from a mixed stage two and three fleet to a solely stage three fleet cannot be understated.¹⁵⁰ The FAA calculates that the transition to an all stage three fleet will occur at least ten years earlier than could be expected due to attrition alone.¹⁵¹ Currently 2.7 million people live within the DNL sixty-five db contour surrounding the nation's airports — with the implementation of the stage three phase-out regulations, only 400,000 people will live within this contour by the year 2000.¹⁵² Considered in a vacuum, the ANCA *will* reduce the amount of airplane noise exposure upon the residential communities surrounding the nation's airports. But at what cost will this reduction in noise come?

While proponents of the ANCA predict substantial future benefits, there are problems with the Act. The FAA does not deny that complete conversion to an all stage three fleet will impose significant costs on the nation's already struggling airlines.¹⁵³ Some industry experts place the cost of compliance as high as \$90 billion.¹⁵⁴ Given that there is no sure way to calculate the "costs" of noise on health and land values it is impossible to compare the "cost" of the phase-out to airlines with the "cost" of the noise to the residential communities surrounding the nation's airports (although *both* the airline industry and the FAA attempt to do so).¹⁵⁵ The only definitive statement that can be made is that the "costs" of implementing these phase-outs will ultimately be felt by the average commercial airline ticket purchaser or overnight shipper

150. FAA Background Paper, Noise Benefits of the Airport Noise and Capacity Act of 1990, at 1 (hereinafter "ANCA Benefits"). Currently approximately forty five percent of the United States civil fleet is stage three. *Id.*

151. FAA Internal Memorandum, General Talking Points: Stage 3 Transition, at 2 (hereinafter "Talking Points").

152. ANCA Benefits, *supra* note 150, at 1. The FAA estimates that 1.7 million people will be within the DNL 65 db contour in 1994, dropping to 1.4 million by 1996 and 1.1 million by 1998. *Id.*

153. Talking Points, *supra* note 151, at 2. The FAA estimates that it will cost the airlines an estimated \$4.5 billion above what the airlines would normally spend for replacement aircraft to comply with the statute. *Id.* Using the least expensive retrofit option, the costs of retrofitting stage two aircraft to meet stage three noise levels will cost at least \$882 million.

154. *See supra* note 125 (commentor to ANCA proposed rule asserted that cost of compliance would be \$90 billion).

155. FAA, Final Regulatory Impact Analysis, Final Regulatory Flexibility Determination, and Trade Impact Assessment: Transition To An All Stage 3 Fleet Operating In the 48 Contiguous United States and the District of Columbia (Office of Aviation Policy and Plans Operations Regulatory Analysis Branch, August 16, 1991) at page 94-102. Notwithstanding the variance present in property value models, the FAA calculated the "net present value of the possible benefits associated with the statute of reducing noise to the population exposed to DNL of 65 dB or higher. [at] \$508 million." *Id.* at 101.

notwithstanding that stage three aircraft are more efficient than their stage two counterparts.

One other troubling aspect of the ANCA is that it is, at best, a fifteen or twenty year solution to the nation's airport noise problem. When an all stage three fleet has been achieved, existing noise reduction control technologies will be exhausted.¹⁵⁶ With the continuing growth of the airline industry (both passenger and air cargo) more and more flights will occur, albeit increasingly by stage three aircraft.¹⁵⁷ The increased numbers of flights will eventually begin to enlarge the DNL 65 db contours around the airports — the same contours that shrank by implementing the ANCA and converting to an all stage three fleet.¹⁵⁸ Unless something is done in the future, either by developing quieter airplanes or permitting fewer flights over residential areas, this nation will once again face increasing noise pollution as a consequence of participating in the jet age.

Vicky Tsilas

156. ANCA Benefits, *supra* note 150, at 1. Stage three noise reduction technologies were developed by NASA supported programs ten to twenty-five years ago. As of today, there is no proven technology to achieve substantial aircraft noise reduction beyond stage three. *Id.*

157. FAA Internal Memorandum, Talking Points - Part 91: Transition to Stage 3 and Part 161: Procedures For Review of Noise and Access Restrictions, at page 1. The FAA estimates that annual enplanements which stand at 450-500 million today are expected to reach 700-750 million by the turn of the century. *Id.* The number of large jet aircraft is also expected to increase from approximately 4079 today to well over 5345 by the year 2000. *Id.*

158. ANCA Benefits, *supra* note 150, at 1.

