



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Associate Administrator for Airports

800 Independence Ave., SW.  
Washington, DC 20591

OCT 30 2009

Mr. Dan Feger  
Executive Director  
Burbank-Glendale-Pasadena Airport Authority  
2627 Hollywood Way  
Burbank, CA 91505

Dear Mr. Feger:

This letter transmits the Federal Aviation Administration's decision on your application for a full nighttime curfew. Your February 2, 2009, letter sending your application stated you were not seeking any other alternative restriction.

The FAA found your application was complete on May 29, 2009. The FAA evaluated the evidence you filed in support of six statutory conditions that must be met before the FAA can approve your restriction. The FAA found the evidence supported two of the six conditions. However, the regulation requires that an applicant provide substantial evidence supporting all the statutory conditions. On this evidence, the FAA has disapproved your application for a full nighttime curfew. FAA's reasoning is detailed in the attached Decision.

Part 161 stipulates this is a final decision of the Administrator for purposes of judicial review. The FAA will provide public notice of its Decision through the *Federal Register*. Part 161 makes provision for an applicant to revise or amend a restriction previously disapproved by the FAA and resubmit it for approval. Amendments are subject to the same requirements and procedures as initial submissions.

Sincerely,

Catherine M. Lang  
Acting Associate Administrator  
for Airports, ARP-1

## I. INTRODUCTION

This matter is before the Federal Aviation Administration (FAA), Acting Associate Administrator for Airports. The Burbank-Glendale-Pasadena Airport Authority (the “Authority”) proposes to implement a mandatory nighttime curfew of all operations, with limited exceptions, between 10:00 p.m. and 6:59 a.m. at Bob Hope Airport, Burbank, CA (BUR). Because the curfew would restrict the hours of operation by Stage 3 aircraft at BUR, the FAA must determine whether to approve the proposed mandatory nighttime curfew under the Airport Noise and Capacity Act of 1990 (ANCA), 49 U.S.C. §47521 et seq., as implemented by 14 C.F.R. Part 161.

## II. STATUTORY AND REGULATORY FRAMEWORK

### A. ANCA.

In 1990, in response to a proliferation of “uncoordinated and inconsistent” noise and access restrictions at airports, Congress enacted ANCA. Congress made the following findings:

- 1) aviation noise management is crucial to the continued increase in airport capacity;
- 2) community noise concerns have led to uncoordinated and inconsistent restrictions on aviation that could impede the national air transportation system;
- 3) a noise policy must be carried out at the national level;
- 4) local interests in aviation noise management shall be considered in determining the national interest;
- 5) community concerns can be alleviated through the use of new technology aircraft and the use of revenues, including those available from passenger facility fees for noise management;
- 6) revenues controlled by the US Government can help resolve noise problems;
- 7) revenues derived from a passenger facility fee may be applied to noise management and increased airport capacity; and
- 8) a precondition to the establishment and collection of a passenger facility fee is the prescribing by the Secretary of Transportation of a regulation establishing procedures for reviewing airport noise and access restrictions on operations of stage 2 and stage 3 aircraft.

49 U.S.C. § 47521(1) – (8).

ANCA applies to restrictions affecting operations by any Stage 3 aircraft if the restriction was not in effect on October 1, 1990.<sup>1</sup> 49 U.S.C. § 47524(b), (c). After that date, no

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<sup>1</sup> Restrictions on operations of Stage 3 aircraft in effect on October 1, 1990 are “grandfathered” and are not subject to the requirements of ANCA. 49 U.S.C. § 47524(c). Amendments to “grandfathered” restrictions

restriction on Stage 3 aircraft operations can become effective unless it has been approved by the FAA. 49 U.S.C. § 47524. The FAA may approve a Stage 3 restriction only if the six statutory conditions are supported by substantial evidence. 49 U.S.C. § 47524(c)(2). The six statutory conditions are:

- (1) The restriction is reasonable, nonarbitrary, and nondiscriminatory;
- (2) the restriction does not create an undue burden on interstate or foreign commerce;
- (3) the restriction is not inconsistent with maintaining the safe and efficient use of the navigable airspace;
- (4) the restriction does not conflict with a law or regulation of the United States;
- (5) an adequate opportunity has been provided for public comment on the restriction; and
- (6) the restriction does not create an undue burden on the national aviation system.

49 U.S.C. § 47524(c)(2)(A)-(F).

Airport proprietors must be in compliance with ANCA to be eligible to obtain grants under the Airport and Airway Improvement Act (49 U.S.C. §40101 et seq.) and to impose passenger facility charges authorized by 49 U.S.C. §40117. 49 U.S.C. §§ 47524(e); 47526.

#### B. ANCA Implementing Regulations, 14 CFR §§ 161.1 et seq. (Part 161).

Congress directed the FAA to issue regulations to implement the national aviation noise policy, prescribing some elements while leaving others to agency discretion. 49 U.S.C. § 47524(a). The FAA published 14 C.F.R. Part 161 to establish the national program for review of airport noise and access restrictions. The Part 161 regulations outline the information FAA considers essential to demonstrate the substantial evidence required to support the six conditions for approval of a restriction. 14 C.F.R. § 161.305(e)(2). The Part 161 regulations also require the noise level at an airport and surrounding areas, and the exposure of individuals to noise resulting from operations at an airport, to be established in accordance with the specifications and methods, including use of computer models to create noise contours, prescribed under 14 C.F.R. Part 150. See 14 C.F.R. §§ 161.9. Additionally, uses of land that are normally compatible or noncompatible with various noise exposure levels to individuals around airports must be identified in accordance with the criteria prescribed under 14 C.F.R. Part 150 and must be based on

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that further reduce or limit Stage 3 aircraft operations or affect aircraft safety are subject to Part 161. 49 U.S.C. § 47524(d)(4).

professional planning, zoning, and building and site designation information and expertise. 14 C.F.R. § 161.11.

### C. The Aviation Safety and Noise Abatement Act (ASNA) as Implemented by 14 C.F.R. Part 150.

Prior to ANCA the ASNA, as implemented by 14 C.F.R. Part 150, provided the legal framework for FAA review and approval of airport noise and access restrictions. The ASNA established a voluntary program that provides grants to airport sponsors to fund preparation of Noise Exposure Maps (NEMs) and Noise Compatibility Programs (NCPs) consisting of measures such as soundproofing, land acquisition, noise abatement flight procedures, and access restrictions. 49 U.S.C. §§ 47501 et seq. The FAA encourages airport proprietors contemplating restrictions to prepare Part 150 studies to evaluate alternative mitigation measures.

ASNA required the FAA to establish a single system for measuring noise that is to be uniformly applied in measuring noise at airports and the areas surrounding such airports. 49 U.S.C. § 47502(1)(A)(B). ASNA also required the FAA to establish a single system for determining the exposure of individuals to noise which results from the operations of an airport and to identify land uses which are normally compatible with various exposures of individuals to noise. 49 U.S.C. § 47502(2), (3).

The FAA determined that the noise at an airport and surrounding areas covered by a noise exposure map must be measured in A-weighted sound pressure level ( $L_A$ ) in units of decibels (dBA). 14 C.F.R. § 150.9(a). The exposure of individuals to noise resulting from the operation of an airport must be established in terms of yearly day-night average sound level (YDNL or DNL in study documents). 14 C.F.R. § 150.9(b)<sup>2</sup>. Table 1—Land Use Compatibility With Yearly Day-Night Average Sound Levels identifies land uses that are normally compatible with various sound levels.

Generally speaking, residential land uses are considered noncompatible with Yearly Day-Night Average Sound Levels of 65 or more decibels. See 14 C.F.R. Part 150, Appendix A, Table 1. However, the ultimate responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. Thus, FAA utilizes Table 1 to determine compatibility unless local authorities adopt different standards.

### III. BACKGROUND

The issues and history precipitating the proposed noise restriction, including extensive litigation with the City of Burbank, date back almost 40 years when a City of Burbank ordinance imposing a nighttime curfew at BUR was struck down by the Supreme Court. City of Burbank v. Lockheed Air Terminal, 411 U.S. 624 (1973). FAR 161 Application,

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<sup>2</sup> FAA accepts the Community Noise Equivalent Level (CNEL) utilized by the Authority as a methodology to measure the exposure of individuals to noise resulting from the operation of an airport. FAA Order 1050.1E, ¶ 14.1.a.

Chapter 2, pages 2-1, 2-2. Subsequently, Lockheed announced it would sell or close BUR. In order to protect this important community asset, the cities of Burbank Glendale and Pasadena formed the Authority and purchased BUR. Id. at 2-1. The organic statute authorizing creation of the Authority includes prohibitions on the lengthening of runways and mandates the size of the then-existing noise impact area not increase. Id. Between 1995 and 2000, the Authority and the City of Burbank have been involved in approximately 13 lawsuits in state and Federal courts and before administrative agencies. Id.

In City of Burbank, the Supreme Court recognized that Congress singled out airport proprietors and gave them special, although undefined, leeway in controlling the aircraft noise directly at their airport. Id. at 635-36 n. 14. The rationale was based on the Supreme Court case Griggs v. Allegheny, 369 U.S. 84 (1962), where airport proprietors were found to bear liability for excessive aircraft noise. In Santa Monica Airport Association v. City of Santa Monica, 659 F.2d 100 (9<sup>th</sup> Cir. 1981), the 9<sup>th</sup> Circuit Court of Appeals recognized that municipally owned airports qualify for a proprietor exemption from preemption.

For the past several years, the City of Burbank and the Authority were engaged in litigation regarding the Authority's attempt to acquire property within the City of Burbank on which to build a replacement passenger terminal. In 1999, the City of Burbank and the Authority entered into a Settlement Agreement that requires the Authority to initiate a Part 161 Study seeking FAA approval to implement a full nighttime curfew.

Prior to ANCA, the Authority implemented a number of noise restrictions at BUR. See Part 161 Application, Appendix A. The Authority conducted a Part 150 Study and is implementing several noise mitigation measures. FAR 161 Application, pages 5-4 - 5-6. These measures include, among other things, implementation of a voluntary curfew on nighttime air carrier flights and a residential acoustical treatment program. The voluntary nighttime curfew has a high compliance rate, and FAA has approved grants of federal funding and authorized imposition and use of passenger facility charges of almost \$190 million to sound attenuate residences within the 65 CNEL noise contour. These measures have resulted in a demonstrated reduction in the impacted area within the 65 CNEL noise contour since 1982. FAR 161 Application, page 2-5, Figure 2-1. The number of noncompatible dwellings within the 65 CNEL noise contour has decreased from 4,700 in 1985, to less than 400 in 2005. Id. at page 5-1.

On February 3, 2009, the FAA received the Authority's formal application for approval of a full nighttime restriction. The FAA reviewed the application and determined it did not meet the regulatory requirements for a complete application. On May 5, 2009, the FAA received the Authority's supplemented application for an airport noise and access restriction pursuant to 14 C.F.R. Part 161. On May 29, 2009, the FAA determined the

Authority's application to be complete. As noted in its application, the Authority seeks approval to implement a mandatory nighttime curfew at Bob Hope Airport.<sup>3</sup>

On June 22, 2009, the FAA published a Federal Register Notice, announcing that the agency determined the Authority's application for an airport noise and access restriction at Bob Hope Airport (BUR) to be complete. 74 Fed. Reg. 29530-01. The determination of completeness started FAA's 180-day regulatory review period which ends November 1, 2009.

#### IV. ANALYSIS.

To determine whether the airport noise and access restriction at BUR should be approved, the FAA must evaluate each of the following six conditions to determine if substantial evidence exists to support the condition. The FAA recognizes the Authority reasonably used data representative of the conditions as they existed in 2005 and that the forecasts of future operations developed by the Authority at that time were reasonable. FAA analyzed the Authority's application based on those underlying assumptions. Each condition is set out below with a full review of the evidence, analysis and conclusion.

***Condition 1 – The restriction is reasonable, nonarbitrary, and nondiscriminatory. 14 CFR § 161.305(e)(2)(i)***<sup>4</sup>.

Essential information needed to demonstrate this condition includes: (1) evidence that a current or projected noise or access problem exists, and that the proposed action(s) could relieve the problem; (2) evidence that other available remedies are infeasible or would be less cost-effective; and (3) evidence that the noise or access standards are the same for all aviation user classes, or that the differences are justified. 14 C.F.R. § 161.305(e)(2)(i).

- **The Authority's evidence that a current or projected noise problem exists and that the proposal would relieve the noise problem.**

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<sup>3</sup> "Pursuant to FAR Part 161.311(d) the [Authority] is seeking a full, mandatory night-time curfew as described in the attached application. The [Authority] is not seeking any other alternative restriction." (February 2, 2009, letter from the Authority to FAA).

<sup>4</sup> Under section 47533, the savings clause of ANCA, the law in effect before its enactment shall remain unaffected, "[e]xcept as provided by section 47524." To give effect to the plain meaning of section 47533 and congressional intent, FAA interprets Condition 1 to address 49 U.S.C. §47107(a)(1) as set forth in Grant Assurance 22, *Economic Non-Discrimination*. Both Condition 1 of ANCA (reasonable, nonarbitrary, and nondiscriminatory) and the statutory grant assurance requiring access on fair and reasonable terms, without unjust discrimination articulate the same standard for review of airport noise and access restrictions.. To interpret Condition 4, which deals with other Federal statutes and laws, to require the FAA to address section 47107(a)(1)/Grant Assurance 22 as a separate requirement in addition to ANCA Condition 1 would render Condition 4 superfluous and redundant of Condition 1 with respect to reasonable, nonarbitrary, and nondiscriminatory requirements. See Norman J. Singer, Sutherland's Statutory Construction § 53:01 (6<sup>th</sup> ed. 2000) Volume 2B (an interpretation must seek to harmonize the whole of a statute); Volume 2A, § 46:06 ("A statute should be construed so that effect is given to all of its provisions, so that no part will be inoperative or superfluous, void, or insignificant, so that one section will not destroy another.").

According to the Authority, a nighttime noise problem has existed at BUR for several decades. Beginning as early as 1978, the Authority initiated a program of noise abatement actions that has been strengthened over the years. In 1988, the Authority adopted noise rules and a successful voluntary curfew on nighttime air carrier flights. From a total of 4,700 located within the CNEL 65 contour in 1985, the Authority has achieved a decrease in the number of incompatible dwellings in 2005 to less than 440. FAR 161 Application, page 5-1.

In support of an existing noise problem, the Authority states there were 135,630 operations at BUR in 2005. Table E of Technical Report 1, page xiii. The Authority includes a 2005 Noise Exposure Map (NEM) identifying noncompatible land uses within the 65 CNEL noise contour. However, the Authority notes “[t]he 2005 contour is substantially smaller than those in the previous years.” FAR 161 Application, page 2-5.

The Authority forecasts operations to decrease from 135,630 in 2005 to 132,978 in 2008, and then increase to 146,022 in 2015.<sup>5</sup> The Authority includes 2008 and 2015 NEMs identifying noncompatible land uses within the 65 CNEL noise contour. *Id.* at Figure ES-2. Due to the forecast increase in aviation activity, the area exposed to noise above 65 CNEL is projected to expand. The Authority forecasts an increase in people within the 65 CNEL contour from 3,939 in 2005 to an estimated 4,825<sup>6</sup> people in 2008 and 8,217 in 2015. *Id.* at 5-4. By 2015, the Authority states that the number of incompatible dwellings within 65 CNEL contour will increase to 1,260 units. Consequently, the Authority forecasts a future noise problem. The Authority states that under California law and FAA criteria, those additional dwellings would evidence a continuing noise problem. *Id.* at 5-2.

With the proposed full curfew, the Authority states that the total area within the 65 CNEL contour “would immediately be reduced by 35% and the noise-sensitive area within the contour by 55%.” *Id.* at 5-5. According to the Authority, the studied – but not proposed – departure curfew and noise-based curfew produced slightly less significant noise benefits.

Concerning how the proposed full curfew would relieve the noise problem, the Authority asserts that the full curfew “produces the greatest reduction in noise,” whereby the noise-sensitive area within the 65 CNEL contour would be reduced by 59% in 2008 and 55% in 2015. *Id.* at 5-8. Based on 2008 projections, the population residing within the 65 CNEL contour would be 1,815 with the full curfew compared to 4,825 for baseline conditions. The level of noise reduction for the full curfew ranges from 1.6 to 6.5 decibels. *Id.* at 5-13.

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<sup>5</sup> The Authority forecast a 2.1% annual growth rate for air carrier, 3.4% for military, a 1.7% decrease in commuter/air taxi operations and a 0.3% decrease in general aviation operations. See, Table E of Technical Report 1, page xiii. The annual growth rate for cargo operations is 0.9%. See, Table 16 of the Technical Report, page 33.

<sup>6</sup> Although the Authority forecasts a decrease in operations in 2008, the Authority assumes a growth in the 65 CNEL contour presumably due to changes in factors such as fleet mix and time of operations.

The Authority contends it does not just have a “noise problem”; rather, it specifically argues it has a “nighttime noise problem” at BUR. FAR 161 Application, pages 2-1, 5-1. In support, the Authority points to the curfew litigated in City of Burbank v. Lockheed Air Terminal, 411 U.S. 624 (1973). In addition, the Authority points to frequent complaints by citizens and public concerns as evidenced by public meetings and hearings. See Authority Application Chapters 2 and 5. The Authority relies upon a spring 2007 survey that found airport noise was a substantial problem for many residents. Of the 601 respondents, 40% indicated that airport noise was a problem for someone in their household.

The Authority further contends that the nighttime noise problem would be exacerbated by an increase in nighttime air carrier operations. The Authority’s Application assumes the proportion of nighttime air carrier operations will increase, primarily due to an increased number of evening arrivals delayed into the nighttime period and some of the increase will be caused by the delay of scheduled evening departures until after 10:00 pm. Id. The Authority points out that, although there are no currently scheduled air carrier operations during the voluntary curfew hours, nonetheless, an average of 4.5 air carrier operations per night occurred during curfew hours in 2005. Id. The Application further assumes that “as passenger service demands grow, at least some scheduled flights will be added in evening hours. Id.

The Authority states “despite the past effectiveness of the voluntary nighttime curfew on air carrier operations, the percentage of night passenger operations is expected to increase from 2.5% to 7.5% of total daily passenger aircraft operations, representing an increase from 4.5 to 16.1 nightly operations from 2005 to 2015. Id. at 68.

In addition, the Authority relies on the impact of aircraft noise on sleep to establish a nighttime noise problem. The Authority studied the effect of the full curfew and non-proposed alternatives on the pattern of aircraft noise-induced nighttime awakenings. The Authority concludes that while “there is no scientific consensus as to the best method to predict noise-induced awakenings or to assess the significance of those awakenings,” and while these studies did not reflect specific knowledge about noise-induced awakenings at BUR, the full curfew “would result in a dramatic reduction in awakenings, ranging from 32% to 93%.” Id. at 5-17.

To demonstrate the proposed curfew would relieve the noise problem, the Authority includes NEMs projecting a reduction in future noncompatible land uses.

- **FAA analysis and findings regarding the Authority’s evidence that a current or projected noise problem exists and that the proposal would relieve the noise problem.**

FAA considers residential land uses within the 65 dB noise contour to be noncompatible with aircraft noise. See 14 C.F.R. Part 150, Appendix A, Table 1. Consistent with FAA standards, California law established similar land use compatibility standards utilizing the CNEL 65 dB noise contour. Thus, under Federal and California State standards,

evidence of noncompatible land use within the 65 DNL/CNEL noise contour is evidence of a noise problem.<sup>7</sup>

The Application demonstrates that, based on the 2005 NEM, there is an existing noise problem at BUR.

Regarding future noise problem at BUR, the Authority's conclusion that there is a future noise problem at BUR depends on the assumptions regarding overall growth in operations, growth in nighttime air carrier operations, and the inability of nonrestrictive measures to relieve the noise problem.

As discussed more fully under Condition 2, 2008 tower counts and updated FAA Terminal Area Forecasts reflecting the economic recession indicate that the Authority's forecast growth in overall operations at BUR by 2015, while reasonable when prepared at the start of the 161 study, is now overly optimistic.

Regarding growth in nighttime air carrier operations, the Authority notes that BUR has the lowest percentage of scheduled nighttime air carrier operations among the West Coast airports, likely reflecting the effectiveness of the voluntary nighttime curfew on such operations. FAR 161 Application, TR 1, page 66. Nonetheless, the Authority assumes the effectiveness of the voluntary curfew will be diminished with future increases in operations. Comments received by FAA paint a different picture. The Airline Transport Association commented "[a]fter acknowledging the success of the voluntary curfew, the Part 161 Analysis states, without attribution or reference to any supporting evidence, that "[i]t is reasonable to expect that the percentage of nighttime operations...will increase in the future in response to growing passenger demand and airline service development. There is simply no rationale provided for the assertion that, after decades of complying with the voluntary curfew, passenger airlines would suddenly begin to schedule flight late at night or very early in the morning." FAA -2009-0546-0121.1.pdf, Appendix A.

Based on comments in the docket and our experience, FAA does not believe this critical underlying assumption regarding increases in nighttime air carrier operations is supportable.

Regarding the inability of nonrestrictive measures to relieve the noise problem, as part of its application for a variance to operate the airport under California law the Authority projected that all homes within the NEM can be acoustically treated by 2011, assuming participation of all residences and continued federal funding. See September 26, 2008 Noise Impact Area Reduction Plan (NIARP). At first blush this contradicts the Part 161 Application's conclusion that there will be future noncompatible land uses around the airport through 2015.

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<sup>7</sup> 14 CFR Part 150, table 1. Table 1 also permits local land use jurisdictions to establish different thresholds for compatible and noncompatible land uses. The threshold of noncompatibility in the Authority's application is the CNEL 65 dB noise level.

In addition, the Authority's updated NIARP will consider properties that have not responded, or chosen not to participate in the sound insulation program as being deemed compatible under California law<sup>8</sup>. See pages 2 and 15 of September 26, 2008 NIARP (citing 5014(a)(4) of the Noise standards). Finally, the Authority indicated that it believes, pursuant to Baker v. Burbank-Glendale-Pasadena Airport Authority, 220 Cal. App. 3d 1602 (1990), that the Authority actually possesses avigation easements over substantially all of the land currently located within the Airport's 65 dB CNEL contour. Id. at page 21. All of these statements undermine the Authority's claims regarding current and future noise problems at BUR.

The Application goes to great lengths to establish a "nighttime noise problem" at BUR, in part relying on the impact of aircraft noise on sleep. FAA recognizes that nighttime noise is a component of a noise problem. The FAA's DNL noise metric and California's CNEL metric both take into account the increased sensitivity to noise during nighttime hours by including a 10 decibel penalty on nighttime flights; hence, the size of the 65 noise contour and number of residences within the contour are increased to acknowledge and include the calculation of the nighttime noise problem. However, as the Application notes, the scientific understanding of the impact of aircraft noise on sleep, and methods for assessing and predicting that impact are not fully developed or understood. The application also notes that the findings of the awakenings analysis cannot be taken as conclusive proof of a given number of awakenings caused by the specific noise pattern in the Bob Hope Airport area. For this, and other reasons, FAA gave no weight to the sleep awakenings analysis as an impact that would be in addition to the CNEL 65 noise contour and noncompatible residential data. FAA notes it is currently working, through the noise research roadmap initiative, to further study the relationship of aircraft noise on sleep awakenings. Given the lack of impact criteria, the conclusion drawn in Chapter 4, page 4-38 that "the reduction of awakenings must be considered a significant benefit of a nighttime curfew", in addition to the reduction of noncompatible residences within the 65 CNEL contour, is unsubstantiated.

Also provided in page 5-5 as evidence of the nighttime noise problem are results of the contingent valuation survey to which "Twenty-six percent of the respondents reported having been awakened by aircraft noise, and 19% reported being awakened more than once per month." However, without further specificity in the survey regarding the nature of the sleep disturbance, and given that the Application acknowledges that the scientific understanding of the impact of aircraft noise on sleep is not fully developed or understood, it is difficult to conclude from these survey results that a significant nighttime noise problem exists.

Finally, FAA finds the Authority has demonstrated the proposed curfew would relieve the noise problem. The Authority includes NEMs that demonstrate implementation of a

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<sup>8</sup> 21 CCR § 5014 notes residences, including detached single-family dwellings, multi-family dwellings, high-rise apartments or condominiums, and mobile homes are incompatible with 65 CNEL unless the airport proprietor has made a genuine effort to acoustically treat residences or acquire avigation easements and the property owners have refused to take part in the program.

full nighttime curfew would relieve an existing or future noise problem because it would reduce the size of the CNEL 65 dB noise contour over noncompatible land uses.

- **The Authority’s evidence regarding other available remedies being infeasible or less cost-effective.**

The Authority states that it considered a range of reasonable alternatives to the proposed restriction, including two other operating restrictions, modified flight procedures, and accelerated acoustical treatment of incompatible dwellings. Section 5.4 and Table 5.4 show the various measures explored and applied by the Authority to mitigate noise around BUR over the years. The Authority contends “[n]one of the measures were judged to be feasible or cost-effective alternatives to the full curfew, as they would not produce a comparable reduction of nighttime noise impact in terms of noise levels over neighborhoods or sleep awakenings, or work with comparable speed at comparable cost.” FAR Part 161 Application, page 5-3.

Regarding the alternative restrictions, the Authority evaluated two alternative nighttime restrictions, a Noise Based Restriction and a Departure Curfew.

The Authority contends that throughout the lengthy study process, community concerns indicated a need to address nighttime noise. As a result, the Authority chose to focus on the nighttime component of its stated noise problem. FAR Part 161 Application, Chapter 5. The Authority states the effect of the full curfew on the nighttime noise problem would be immediate and nearly total. The Application relies on a sleep awakenings analysis that estimated that average nightly sleep awakenings caused by aircraft noise would be reduced from over 700 to less than 50 in 2008 and less than 90 in 2015. *Id.* Moreover, according to the Authority, a full curfew would be highly effective in reducing the Airport’s noise problem in terms of its 24-hour impact, as measured by the CNEL metric. With a full curfew, along with continued implementation of the Airport’s acoustical treatment program, the Authority states that the number of incompatible dwellings would be reduced from 1,260 to 300 in 2015.<sup>9</sup> *Id.* at 5-2, 5-3.

However, when evaluating the cost effectiveness, the Part 161 application notes:

Based on the additional inquiries and analysis, the Airport Authority’s consultants shared preliminary conclusions in August 2007 with the Airport Authority which indicated that if no benefits outside the projected 65 CNEL contour were included, the only restriction which appeared to have a “reasonable chance that expected benefits ... will equal or exceed expected costs” was the departure curfew. The consultant also informed the Airport Authority that the benefit-cost ratio of the full curfew, while less than 1.0, was higher than for the noise-based limit.” (FAR 161 Application, ES pages 5-6; See also page 4-3).

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<sup>9</sup> Elsewhere (Table 4-2), the Authority states that only 73 homes would remain to be treated by 2015 even with implementation of the full curfew.

The application states the Authority consultant revised its eligibility boundary using FAA Order 5100.38C criteria and that: “Consistent with this FAA guidance, the consultant recalculated the projected monetary savings from the forecasted reduction in residences near the Airport which would be eligible for federally funded acoustical treatment through 2015.” Id.

The Authority notes it calculated benefits to include whole blocks and to follow neighborhood boundaries and taking the net present value of the original acoustical treatment program versus the deferred program. FAR 161 Application, page 4-2. The Authority’s consultants modified the draft Benefit-Cost Analysis “by adjusting the projected boundaries of the acoustical treatment program in each forecast 2015 scenario. . . the treatment area boundaries were adjusted to follow streets and natural neighborhood boundaries to achieve a more equitable set of boundaries from the viewpoint of the local residents.” Id. at 4-3. The Authority concludes, “[b]ased on these revisions, all three curfews produce net benefits. The departure curfew has the highest benefit-cost ratio. The noise-based curfew has the next highest, followed by the full curfew.” Id.

Because both alternative restrictions had a higher benefit-cost ratio, the Authority found them infeasible because they would not produce a comparable reduction of nighttime noise impact in terms of noise levels over neighborhoods or sleep awakenings as the full nighttime curfew. FAR 161 Application, page 5-19.

Regarding sound attenuation, the Authority compared the 2015 forecast NEM without the restriction to the 2015 with the restriction. The Authority calculated what it determined to be the net difference in eligible houses and multiplied that number by the estimated cost to sound attenuate houses (\$43,000). Id. at 4-9 – 4-10. The monetary result was considered a benefit of implementing the curfew. See Table 4-2, Page 4-10.

The Authority rejected sound attenuation as an alternative to the full curfew based on its determination that sound attenuation is less cost-effective than a full curfew. The Authority states it “has determined that it has exhausted the range of non-restrictive noise abatement measures that can move it with adequate speed toward its current goal to eliminate nighttime flight noise.” FAR 161 Application, page 5-19. In support, the Authority provides a Benefit-Cost Analysis (BCA) stating “the benefit-cost analysis indicates that the full curfew is more cost-effective than acoustical treatment in addressing the nighttime noise problem.” Id.

- **FAA analysis and findings regarding the Authority’s evidence that other available remedies are infeasible or would be less cost-effective**

The Authority’s analysis of other available remedies is limited to implementation of alternative nighttime restrictions and continuation of the sound attenuation program.

Alternative Restrictions:

The Authority evaluated two alternative nighttime restrictions, a Noise Based Restriction and a Departure Curfew. Both were found infeasible because they would not produce a comparable reduction of nighttime noise impact in terms of noise levels over neighborhoods or sleep awakenings, or work with comparable speed at comparable cost. FAR 161 Application, pages 5-3, 5-19.

This rationale does not render the alternative restrictions infeasible since the alternative restrictions would produce nighttime noise relief. In addition, the Authority's own BCA indicates the departure curfew is more cost effective than the requested full curfew and the noise based curfew is essentially as cost effective as the full curfew.

Either of the two alternative restrictions would meet the Authority's goal to eliminate or significantly reduce nighttime noise at BUR. See FAR 161 Application, ES-1.

#### Sound Attenuation:

The Authority rejected sound attenuation as an alternative to the full curfew based on its determination that sound attenuation is less cost-effective than a full curfew. As discussed more fully under Condition 2, FAA's evaluation is that the Authority's BCA is flawed in its analysis supporting this conclusion.

However, as the Application makes clear, "if no benefits outside the projected 65 CNEL contour [are] included, the only restriction which appear[s] to have a "reasonable chance that expected benefits ... will equal or exceed expected costs" [is] the departure curfew. The consultant also informed the Airport Authority that the benefit-cost ratio of the full curfew, while less than 1.0, was higher than for the noise-based limit.

Based on this statement, it is clear the Authority's positive BCA is completely dependent on inclusion of homes outside the 65 CNEL using FAA's neighborhood equity program. FAA reviewed the modified sound attenuation eligibility boundaries used in the Part 161 Application and notes they extend well beyond what FAA considers reasonable under the equitable "block rounding" described in FAA Order 5100.38. Even using the forecast assumptions made by the Authority and the Application's average cost for sound attenuation of \$43,000/unit, a reasonable application of FAA's block rounding significantly alters the neighborhood equity boundary and the Authority's BCA (FAA Table 1, below). FAA's adjusted boundaries indicate approximately 693 residences would be eligible, versus the 2,069 residences suggested by the Authority. As a result, the costs for sound attenuation, at \$28.5 million, would be significantly lower than predicted by the Authority, and the benefits fully realized before 2015, making this the most cost-effective alternative.

FAA Table 1

### **RESIDENTIAL DWELLING UNITS IMPACTED**

**2015 65 dB CNEL BASELINE and W/CURFEW  
FAA analysis using proper neighborhood equity protocol**

Residential Dwelling Units	2015 Baseline	2015 W/Curfew	Difference
Single family	Authority 574 (577) FAA 186	Authority 44 FAA 12	Authority -530 (-533) FAA -174
Multi Family	Authority 1495 FAA 507	Authority 29 FAA 18	Authority -1466 FAA -489
Total	Authority 2069 (2072) FAA 693	Authority 73 FAA 30	Authority -1996 (-1999) FAA -663

This analysis assumes the following.

- FAA used BUR 2015 forecast and resulting 65 CNEL and sound insulation treatment boundaries and untreated dwelling units, as noted in Fig. 4-2 as a starting point. (Updated Federal and local forecasts substantially reduce the size of the 2015 65 CNEL contour.)
- FAA numbers in this table represent revised neighborhood equity sound insulation boundary for both the 2015 Base Case and 2015 Curfew 65 dB CNEL using FAA protocol "...to include a reasonable additional number of otherwise ineligible parcels contiguous to the project area, if necessary to achieve equity in the neighborhood. Neighborhood or street lines *may* help determine what is reasonable, *in addition to numbers of properties.*" (emphasis added) See Para 810 b. of Order 5100.38 C.
- FAA notes two instances where units were marked as multi family on Fig. 4-2 but were single family (numbers in parenthesis are corrections to the Authority's numbers).

Furthermore, FAA notes the Authority's September 26, 2008 updated NIARP outlines the accelerated target of eliminating the Noise Impact Area by 2011. A significant aspect of the updated NIARP is the acceleration of the sound insulation program, with the Authority projecting all homes can be acoustically treated by 2011, assuming participation of all residences and continued federal funding. Thus, the Authority clearly believes sound attenuation is a feasible, cost-effective way to address BUR's noise problem. In addition, the updated NIARP will consider properties that have not responded, or chosen not to participate in the sound insulation program as being deemed compatible under California law. See pages 2 and 15 of September 26, 2008 NIARP (citing 5014(a)(4) of the Noise standards). Finally, the Authority indicated that it

believes, pursuant to Baker v. Burbank-Glendale-Pasadena Airport Authority, 220 Cal. App. 3d 1602 (1990), that the Authority actually possesses avigation easements over substantially all of the land currently located within the Airport's 65 dB CNEL contour. Id. at 21. All of these statements indicate there are available remedies that are both feasible and more cost effective than the proposed restriction. FAA notes the Authority, in the state variance hearing, clearly took the position that sound attenuation is feasible and cost effective.

#### Reasonableness of Proposed Restriction:

The Authority argues that the proposed full curfew is reasonable. The authority asserts that airport proprietors are not preempted from adopting noise regulations, "provided such regulations are reasonable, non-arbitrary, and non-discriminatory." The Authority cites National Helicopter Corp. of America v. City of New York, 137 F.3d 81 (2d Cir. 1998); Santa Monica Airport Association v. City of Santa Monica, 659 F.2d 100 (9<sup>th</sup> Cir. 1981); and British Airways Board v. Port Authority of New York and New Jersey, 558 F.2d 75 (2d Cir. 1977), aff'd, as modified, 564 F.2d 1002 (2d Cir. 1977).

Specifically, the Authority argues here that since the court in National Helicopter upheld City of New York restrictions on weekday operations to between 8:00 a.m. and 8:00 p.m. and weekend operations to between 10:00 a.m. and 6:00 p.m., that the FAA should find its full curfew to be reasonable. In addition, the Authority argues again that because "similar curfews [to its full curfew] are in place elsewhere," its full curfew "would comply with Federal law, as would the departure curfew and noise-based curfew." FAR 161 Application, page 8-10. This latter argument has been addressed elsewhere.

However, National Helicopter can be factually distinguished. First, the heliport at issue was neither a significant air carrier airport like BUR, nor was it a federally funded and obligated airport. The heliport catered to local, intrastate sightseeing flights. A question is certainly raised whether a similar restriction would have been upheld at nearby LaGuardia, Newark, or Kennedy International Airport. Second, the District Court's decision does not clearly identify what it considered to be a significant noise impact during peak and average hours of operations.

In addition, the cited cases do not address the criteria for federal approval of restrictions on operations by Stage 3 aircraft proposed under ANCA and Part 161.

Concerning the reasonableness requirement within Condition 1, the FAA finds that the Authority's proposed full curfew is unreasonable for the following reasons.

1. As discussed above, the Authority has not been able to demonstrate that "other available remedies are infeasible or would be less cost-effective."

The Authority studied less restrictive alternatives, including the departure curfew and noise-based curfew. However, it did not present either of these alternatives in conjunction with the full curfew for FAA's consideration. These less restrictive

alternatives were unreasonably rejected since both would provide nighttime noise relief, both in terms of noise levels over neighborhoods and sleep awakenings.

The Authority's own BCA indicates that the departure curfew alternative is more cost-effective than the proposed full curfew, and the noise-curfew alternative is essentially as cost-effective as the full curfew. Both of the alternatives would meet the Authority's goal to eliminate or significantly reduce nighttime noise.

The Authority unreasonably rejected sound attenuation as an alternative to a full curfew on operations.

The Authority concedes that the study's sleep awakenings analysis is flawed and cannot be used to support the full curfew:

“[A]t this time there is no scientific consensus as to the best method to predict noise-induced awakenings or to assess the significance of those awakenings.”

The Authority's Part 161 Study's assessment of sleep awakenings “do[es] not reflect specific knowledge about noise-induced awakenings in the Bob Hope Airport vicinity ... authoritative studies have not been undertaken in the Bob Hope Airport area ....”

Inadequate consideration was given to non-restrictive alternatives, such as continued sound attenuation.

Finally, as the FAA stated in its June 12, 2008 comments on the Authority's proposed full curfew, “BUR, without sufficient rationale, has arbitrarily established a goal to eliminate nighttime aircraft noise. Such a goal could be adopted at any time by any commercial service airport in the national airport system.”

2. Because the Authority has not shown that less onerous restrictions are infeasible, it has not shown by substantial evidence that the full curfew is reasonable.

When combined with the economic impacts on forecast operations at BUR and other factors, the Authority's conclusion that the full curfew is more cost-effective than the sound attenuation program is not supported by substantial evidence. A detailed discussion of forecast operations at BUR is provided in the analysis of Condition 2.

For the reasons stated above, FAA believes sound attenuation, and other non-restrictive measures, are a cost-effective alternative to the full curfew. Therefore, the proposed restriction is unreasonable.

- **The Authority's evidence that noise or access standards are the same for all aviation user classes (or the differences are justified).**

The Authority's analysis at Chapter 5 states the reasons why it applied the curfew uniformly to all user classes. For the passenger, large cargo, and general aviation jet operators, the number of operations is a rough indicator of their relative contribution to nighttime noise, although some caveats deserve mention. In general, most business jets serving the airport tend to be somewhat quieter than most of the air carrier jets serving the airport. The large cargo jets serving the Airport (the A-300, A-310, and B-757) tend to be somewhat louder than many of the air carrier jets serving the Airport (primarily B-737-700, B-737-300, and A-320), although all nighttime cargo operations are arrivals, which tend to be quieter than departures. Ameriflight's fleet, which has nighttime operations and is dominated by multi-engine turboprop and piston aircraft, is considerably quieter than the jet aircraft operated by other user classes. FAR 161 Application, page 5-29.

The Authority contends that since they have demonstrated they have a nighttime noise problem, the proposed full curfew is the appropriate solution. Further, they contend that because the curfew would apply equally to all aviation user classes – air carrier, cargo, corporate, personal--it would not be unjustly discriminatory.

Finally, the Authority argues that “longstanding blanket nighttime restrictions” on aircraft operations are in effect at various other airports and that none have been found to be unjustly discriminatory. *Id.* at 5-28; See also Table 5-5. The Authority makes a similar argument in Section 8.4.1, page 8-3. See also Table 8-1.

- **FAA analysis and findings regarding the Authority's evidence the standards are the same for all user classes or differences are justified**

As noted, the Authority is proposing a “full curfew,” that would prohibit all takeoffs and landings from Bob Hope Airport from 10:00 p.m. through 6:59 a.m. (subject to special exceptions for law enforcement, medical flights, emergencies, etc.). The issue to be analyzed here is whether a *full* curfew, that prohibits all nighttime flights, meets the ANCA/Part 161 nondiscriminatory requirement.

As discussed below, the FAA finds the proposed full curfew to be nondiscriminatory. By its very nature, the term “nondiscriminatory” means having no differential treatment and where persons are treated equally when no reasonable distinction can be found. See, e.g., Blacks Law Dictionary, “discrimination,” (8<sup>th</sup> ed. 2004). That is the case here. The proposed full curfew does not discriminate; no privilege has been conferred on any specific airport user (other than the emergency exceptions which are not an issue). Rather, all operations would be equally excluded between 10:00 p.m. and 6:59 a.m.

City and County of San Francisco v. FAA, 942 F.2d 1391 (9<sup>th</sup> Cir. 1991), offers a case in contrast. Here, the airport adopted an aircraft noise regulation that resulted in the exclusion from the airport of a retrofitted Q707 that met Stage 2. However, 15 other models of aircraft emitting as much or more noise than the Q707 were permitted to use the airport. The court affirmed FAA's administrative determination that the airport regulation was unjustly discriminatory because it allowed aircraft that were equally noisy

or noisier than the aircraft being restricted to operate at the airport and to increase in number without limit while excluding the Q707 based on a characteristic that had no bearing on noise (date of type-certification as meeting Stage 2 requirements). The court noted,

[i]n the present case, as in the Concorde Cases, use of noise control regulations by an airport proprietor to bar aircraft on a basis other than noise, or without a factual basis, was found to be inconsistent with a fair and efficient national air transport system. This test of “unjust discrimination” is a permissible construction of section 2210(a)(1) [now 49 U.S.C. 47107(a)(1)] and the policies it serves.

City of San Francisco, 942 F.2d at 1398.

The Authority lists in Table 5-5 seven airports that have nighttime noise restrictions. The Authority states that none of the restrictions have been found to be unjustly discriminatory. The Authority appears to be suggesting that based upon the seven restrictions at other airports, its full curfew is not unjustly discriminatory. In section 8.4.1, the Authority similarly lists ten airports that have nighttime noise restrictions. It argues that “[c]urfews similar to the three alternatives under consideration in this FAR Part 161 Study are in force at other airports in California and elsewhere around the country.” FAR 161 Application, page 8-3. Table 8-1 lists ten airports and their nighttime curfews. The Authority states that all of the ten airports receive FAA grant funds and that none have been found in violation of the grant assurances relating to public access or unjust discrimination. The Authority adds that “[n]either have these restrictions been judged by the courts to be unjustly discriminatory or otherwise in conflict with Federal law.” The Authority is apparently arguing that the existing nighttime noise restrictions at the ten airports support the legality under Federal law of – and serve as legal precedent for – its proposed full curfew.

In response, first, concerning unjust discrimination, since the FAA finds that the proposed full curfew is not unjustly discriminatory, the agency need not address the Authority’s assertion that other airports’ restrictions suggest that its full curfew is not unjustly discriminatory.

Second, concerning the Authority’s argument in section 8.4.1, it is neither proposing a departure nor a noise-based curfew, so to the extent that some of the ten airports cited by the Authority have departure or noise-based curfews, those examples offer no support whatsoever to the Authority. Under the law, there is a significant difference between a noise-based curfew (i.e., one that sets an actual noise limit (e.g., 85 dB) where aircraft either can meet or cannot meet that limit) and a blanket nighttime curfew.

NBAA points out in its comments with respect to the curfews detailed in Table 5-5,

six of the seven airports have pre-1990 curfews grandfathered by ANCA. Indeed, it is in large part because of those curfews and the likelihood of such local access restrictions spreading that ANCA and Part 161 were enacted. The seventh airport

is Reagan Washington National, which is a unique situation. A curfew first was adopted “voluntarily” by the airlines in the 1960s, later was incorporated into FAA regulations for the airport (since it was owned by the federal government) and then extended when the airport was transferred to the Washington Metropolitan Area Airport Authority. Since the 1980s, the curfew also has permitted departures and arrivals within certain curfew hours by quieter aircraft.

NBAA Comments, July 22, 2009, p. 7.

Below is a review of each of the ten airports’ restrictions cited by the Authority as precedent for its full curfew:

1. John Wayne-Orange County Airport: Nighttime restriction in settlement of extensive litigation. Air carrier access to John Wayne Airport is provided in accordance with a complex “Phase 2 Commercial Airline Access Plan and Regulation (October 1, 1990 – December 31, 2015)” (Access Plan). The County closely coordinated the Access Plan with the FAA and affected airport users including air carriers. The Access Plan was adopted in part to implement mitigation measures identified and adopted under the California Environmental Quality Act in connection with the airport’s master planning process.

Most importantly, the Plan implements projects considered and approved by the County as amendments to a 1985 settlement agreement entered into by and between the County and the City of Newport Beach, Stop Polluting our Newport, and the Airport Working Group of Orange County, Inc. (No. CV-85-1542 TJH, United States District Court, Central District, California, Nov. 1985). Right after the County introduced scheduled commercial service at the airport in 1967, significant litigation was initiated by thousands of nearby residents alleging damages from jet aircraft noise. During the period 1979 to 1985, the County again experienced significant litigation over noise. The County’s master planning efforts were enjoined by the courts.

Under the Access Plan, the County allocates “average daily departures,” or “ADDs,” to specific air carriers. Class A ADDs are allocated to Class A aircraft, which must meet certain SENEL noise levels between 93 dB SENEL and 101.8 dB SENEL. Class E ADDs are allocated to quieter aircraft, those that can operate between 86 dB SENEL and 93.5 dB SENEL. Under the Access Plan, the airport may not serve more than 10.3 million annual passengers (MAP) in any Plan year through December 31, 2010, and 10.8 MAP through December 31, 2015.

The Access Plan, consistent with the 1985 settlement agreement and court-approved stipulation, restricted nighttime air carrier operations. As a result, today commercial departures are permitted Monday through Saturday, 0700 to 2200 hours (Sundays, 0800 to 2200 hours); commercial arrivals are permitted Monday through Saturday, 0700 to 2300 hours (Sundays, 0800 to 2300 hours).

General aviation aircraft producing no more than between 86.0 dB SENEL and 86.8 dB SENEL may operate during nighttime hours.

2. Lake Tahoe: **Noise-based restriction**. Per settlement agreement and coordinated with FAA to ensure compliance with all Federal obligations including grant assurances. The curfew is based on daytime limit of 84 dBA Lmax arrival and 80 dBA Lmax departure, and a nighttime (8:00 p.m. to 8:00 a.m.) limit of 77.1 dBA.

3. Long Beach. **Noise-based restriction**. While certain runways are closed at night, Runway 12/30 (10,000 feet long) remains open 24 hours. Between 11:00 p.m. and 6:00 a.m. on Runway 12/30, departing and arriving aircraft are required to meet a 79 dB SENEL noise limit.<sup>10</sup>

4. San Jose/Mineta International Airport: **Noise-based restriction**. As a result of litigation challenging the validity of its weigh-based nighttime restriction, the City came to FAA to coordinate transformation of its weight-based restriction into a noise-based restriction consistent with ANCA, Part 161, and the grant assurances. City was able to ensure that all aircraft that were currently eligible to operate under the existing weight-based ordinance were able to continue to operate to the same extent. The City ultimately adopted a restriction effective between 11:30 p.m. and 6:30 a.m., which prohibits nighttime aircraft operations that produce more than the 89 EPNdB.

5. San Diego International: **Noise-based restriction**. The airport has a departure curfew that prohibits Stage 3 take-offs between 11:30 p.m. and 6:30 a.m. Non-Stage 3 take-offs are prohibited between 10:00 p.m. and 11:30 p.m., and between 6:30 a.m. and 7:00 a.m. Nighttime arrivals are permitted regardless of noise level.

6. Santa Monica (general aviation airport): Night time departure curfew – no takeoffs permitted 11:00 to 7:00 p.m. Voluntary nighttime curfew for arrivals between 11:00 p.m. and 7:00 a.m.

7. Van Nuys (general aviation airport): **Noise-based restriction**. Partial curfew applies to all Stage 2 fixed-wing jet aircraft that generate a noise level equal to or above 74 decibels (per FAA Advisory Circular 36-3H) from departing the airport between 10:00 p.m. and 7:00 a.m. New Stage 3 aircraft are exempt from curfew.

8. Aspen/Pitkin County Airport: **Safety-based restriction at mountain airport, Congressionally-exempted from ANCA**, as part of airport's *expansion* of nighttime access. Stage 2 and 3 aircraft permitted from 7:00 a.m. to 30 minutes after sunset by County ordinance; Stage 3 aircraft only from 30 minutes after sunset to 11:00 p.m. No departures are permitted after 10:30 p.m. Stage 1

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<sup>10</sup> The 161 Application states that there is an air carrier curfew however the term "curfew" is a misnomer. Air carriers are required to "schedule" all operations between 7 a.m. and 10 p.m. The airport however remains open 24 hours with a stringent nighttime noise limit of 79 dB.

operations are prohibited.

9. Reagan/Washington National: **Noise-based restriction, by Congressional statute.** No person may operate an aircraft at National after 9:59 p.m. and before 7:00 a.m. if the arrival exceeds 85 dBA as generated on approach or 72 dBA as generated on takeoff.

10. Teterboro Airport: **Voluntary nighttime curfew**, for all non-essential operations between 11:00 p.m. and 6:00 a.m. Voluntary ban on Stage 2 aircraft at any time.

None of the ten examples are relevant to the Authority's proposed full curfew. Only one of the ten airports cited by the Authority has a 'full curfew' restricting all nighttime operations. However the Aspen Pitkin County example differs because it was initially the subject of an ANCA enforcement proceeding and then was congressionally exempted from ANCA. In addition, eight of the airports base their nighttime restrictions upon permissible noise limits. John Wayne Orange County has a full curfew for air carriers and a permissible noise limit for nighttime general aviation operations. Again, the Authority's full curfew prohibits all nighttime operations.

When the FAA opines on proposed access restrictions or grandfathering under ANCA, it generally advises that the agency's determination relates only to the applicability of ANCA to the proposed restriction or to the grandfathering, and that the determination does not imply FAA endorsement or approval of the restriction. The FAA also generally states that separate and apart from ANCA, the restriction must still meet standards under pre-existing federal law, including federal grant obligations.<sup>11</sup> The FAA generally advises the airport to thoroughly examine the ability of the proposed restriction to meet these requirements. The FAA also generally makes clear that its determination under ANCA would not prevent an airport user adversely affected by the restriction from challenging any aspect of it, including unjust discrimination.

As the FAA has discussed above, aircraft operating at BUR contribute to the cumulative noise contour, although some much more than others. The FAA agrees the proposal is the same for all aviation user classes and is not unjustly discriminatory, as it would apply at BUR.

### **FAA Finding:**

To satisfy condition 1 all essential elements for that condition must be supported by substantial evidence.

- FAA finds there is substantial evidence that a current or future noise problem exists and that the proposal would relieve the noise problem.

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<sup>11</sup> City of Naples v FAA, 409 F.3d 431 (D.C. Cir. 2005)(Based upon ANCA's savings clause the Court deferred to FAA's determination that FAA retained the power to review substantively restrictions on Stage 2 aircraft operations and withhold grants under 49 U.S.C. § 47107(a)(1)).

- FAA finds there is not substantial evidence that other available remedies are infeasible or would be less cost-effective. Concerning the reasonableness requirement within Condition 1, the FAA finds that the Authority’s proposed full curfew is unreasonable.
- FAA finds there is substantial evidence that the proposal is the same for all aviation uses and is not unjustly discriminatory.

The Authority’s Application does not support by substantial evidence that the restriction is reasonable, nonarbitrary, and nondiscriminatory. 14 CFR Part 161.305(e)(2)(i), and therefore, this condition is not satisfied.

***Condition 2: The restriction does not create an undue burden on interstate or foreign commerce. 14 CFR § 161.305(e)(2)(ii).***

Essential information needed to demonstrate this statutory condition includes evidence, based on a cost-benefit analysis, that the estimated potential benefits of the restriction have a reasonable chance to exceed the estimated potential cost of the adverse effects on interstate and foreign commerce. In preparing the economic analysis required by this section, the applicant shall use currently accepted economic methodology, specify the methods used and assumptions underlying the analysis.

- **The Authority’s evidence submitted to support that the restriction does not create an undue burden on interstate or foreign commerce.**

The Authority submitted a cost-benefit analysis in Chapter 4 of The Application, determining that benefits of the restriction would exceed the costs. FAR Part 161 Application, page 4-41 see also Chapter 6, pages 6-1, 6-2 – 6-3. The Authority used the FAA’s Airport Benefit-Cost Analysis Guidance dated December 15, 1999 in preparing the Benefit-Cost Analysis (BCA). The basic approach to the Authority’s BCA is to establish the current noise situation, forecast the future noise situation based on airport demand forecasts, and to project the effects of the curfew on airport activity and noise exposure. FAR Part 161 Application, page 4-1. The forecast and projected effects provide the basis for both benefits and costs associated with each restriction. Id.

The BCA’s monetized benefits include increases in residential property values and savings from the acoustical treatment obligations with a caveat that there are qualitative benefits that are expressed as aircraft noise-induced awakenings. Id. The Authority points out that “the largest monetary component of the benefits accrues to the Federal government in projected saving in the Airport’s Residential acoustical treatment program and the next largest monetary benefit is received by local residents in the form of increased property values.” Id. at 4-5. The Authority’s findings also suggest that residents also would receive hard to quantify benefits in the form of reduced nighttime awakenings from aircraft noise. Id.

For costing purposes, the Authority included the curfew's cost to commercial, cargo, and GA operators at the airport, as well as the cost to passengers. The BCA accounts for the additional costs of continuing aircraft operations under the restriction. These include costs associated with altered or discontinued aircraft operations, changes in passenger and freight profit margins, and any significant economic effect on parties other than aviation users. The monetized costs highlight the fact that the burden is borne by general aviation and air taxi, followed by cargo, and then passengers and air carriers. *Id.* at 4-14. The costs were distributed based on "professional judgment, information from consultations with affected air carriers, locally based general aviation operators, and major itinerant general aviation operators known to use the airport." *Id.*

The Authority then proceeds to subtract the benefits from the costs to get the net present value of benefits and the benefit-cost ratios. From the results, the Authority determined that the curfew would produce net benefits.

**FAA analysis of the evidence that the restriction does not create an undue burden on interstate or foreign commerce.**

First, as discussed above, the Authority's positive BCA depends heavily on the Authority's application of FAA's neighborhood equity program. Simply correcting for the flaws associated with the Authority's application of the neighborhood equity program results in the BCA no longer supporting the determination that implementation of the proposed curfew would not have an undue burden on interstate or foreign commerce.

Second, as noted below, there are other problems with the Authority's BCA that further reduce the likelihood that implementation of the proposed restriction would not result in an undue burden on interstate or foreign commerce.

The FAA recognizes that while the Authority may have used the FAA's Airport Benefit-Cost Analysis Guidance dated December 15, 1999, the Authority's BCA deviates from FAA guidance in certain key respects and contains shortcomings that affect their results. The problems include but are not limited to the length of the evaluation period, overstated benefits, and underestimated costs to aircraft operators and the surrounding community. The cumulative effect of these flaws alters the benefit-cost ratio making the costs of the restriction outweigh the benefits. In the subparts below the FAA explores these shortcomings in detail.

While FAA did not require the Authority to update the 2005 data used in the application because it was the best available data the year that the analysis was undertaken, FAA notes that use of updated operations data as reflected in the 2008 TAF would further weaken the analysis. FAA has evaluated the Authority's analysis, using both 2005 data and 2008 data. FAA's finding is based on the 2005 data.

- EVALUATION PERIOD:

The evaluation period for this Application is 2008 to 2015. The standard FAA BCA guidance recommends “20 year evaluation periods based on the useful life of the project.”<sup>12</sup> Nonetheless, the Authority deviated from FAA’s BCA guidance regarding the 20 year evaluation period, reasoning that unlike a large infrastructure project “the dynamic nature of the primary components of the costs and benefits – airline activity, acoustical treatment costs, and real estate values” 2008 through 2015 was determined to be a prudent evaluation period. FAR 161 Application, page 4-5. To justify the selection of a shorter time period the Application states that “as a policy action, the proposed curfew would have an indefinite ‘useful life’”. By default, the Authority selected an arbitrary time period to meet one of the essential requirements of a benefit-cost analysis which is “to evaluate benefits and costs over equivalent periods” (citing FAA BCA Guidance, page 7). *Id.* Although, an equivalent evaluation period is a fundamental component of a valid cost benefit analysis, a longer timeframe is more appropriate to account for the indefinite “useful life” suggested by the Authority. The Authority’s selection of an 8 year time period is contrary to FAA’s guidance.

Benefits of the curfews analyzed are one-time benefits associated with an increase in property values and savings from the reduction in acoustic treatment obligations. All of the monetized benefits are captured by 2015. The Authority estimates that residential property values will increase in 2008 and all homes would be treated by 2015, while costs which are wider in scope and include costs to all airport users will continue several more years beyond the range of this analysis. *Id.* at 4-10. Costs, such as those to cargo operators for additional modes of transportation to compensate for grounded planes between 10:00 p.m. and 7 a.m., will impact these users several years beyond 2015. Moreover, a 20 year time period would have been more appropriate because it captures the end of the benefits and give more credence to the costs. The restriction would no longer be cost beneficial if the timeframe was expanded beyond 2015 given the fact that the benefits stop at 2015 while the costs to operator continue into the future.

- BENEFITS:

To estimate property value benefits the Authority’s Application uses a hedonic model. A hedonic model is used when market prices are hard to measure or do not exist. Hedonic price equations are based on a multiple regression analysis of market behavior to simulate market prices for the commodity of interest. In this Application, the model was used to assess changes in property values due to a reduction in noise. Although a hedonic model is a valid estimation technique, transparency issues, problems with double-counting and overstated property value estimates suggest an alternative approach may be more transparent and verifiable. The Authority has been soundproofing homes since 1989, with some of those homes being treated recently. The difference between recently treated homes and their values prior to treatment could be used to estimate changes in property values. This would give a more transparent estimate than the hedonic model and avoid some of the other problems associate with using this type of model.

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<sup>12</sup> FAA Airport Benefit-Cost Analysis Guidance, 64 Fed.Reg. 70107 (December 15, 1999)

There is also an element of double-counting embedded in the hedonic model. Inasmuch as the curfew improves the quality of the environment in the community within the noise contour, property values generally rise to reflect the greater attractiveness of living in a better environment. The greater attractiveness includes both qualitative and quantitative benefits from a reduction in noise. An increase in property values quantifies the improvements in the quality of life as described in the Application, such as the reduction in nighttime annoyance, thereby eliminating the need for the non-quantifiable benefits suggested in this Application. The benefits obtained from increased property values are also linked to the benefits from the reduction in acoustic treatment obligations.

Similarly, the changes in property values can also be considered a transfer value. Increases in property values experienced at Burbank occur at the expense of other residential neighborhoods, whose property incurs the transfer as a decrease in value after receiving the traffic. The Authority mainly emphasized the impacts on property values at Van Nuys and Ontario. The Authority does not properly evaluate changes in property values at these airport communities. The net residential property benefits should include the improvements around Burbank minus the decrement in value around Van Nuys and Ontario. As a result, the Application's estimates of property values are overstated. Instead of estimating net benefits, the Application undertakes a contingent valuation survey of residents' willingness-to-pay for a nighttime curfew at Burbank and Van Nuys. The Application uses this survey to justify their theory that residents residing near Burbank value the reduction in noise and are willing to pay more than residents near Van Nuys. This subjective and limited survey does not properly account for the net effects on property values around the two airports.

It is noted that an earlier August 2007, draft benefit-cost analysis submitted to FAA for review and comment reflected the computation of savings to the acoustical treatment program based on a program area limited to the 65 CNEL contour itself. In that initial analysis, only the departure curfew showed net benefits and a benefit-cost ratio exceeding 1.0. FAR Part 161 Application, page 4-3. The consultant and Airport Authority staff reviewed and refined the analysis by adjusting the projected boundaries of the acoustical treatment program in each forecast 2015 scenario to reflect its current policy and the Authority's application of funding eligibility guidelines (FAA Order 5100.38). Specifically, the treatment area boundaries were adjusted by the Authority to allegedly follow streets and natural neighborhood boundaries to achieve a more equitable set of boundaries from the viewpoint of local residents. Id. Based on the revisions, the Authority contends that all three restrictions that were analyzed produce net benefits. Id. FAA notes that the adjusted neighborhood eligibility boundaries in the Part 161 application extend well beyond those permitted as part of "block rounding" described in FAA Order 5100.38.

FAA has provided corrected cost and benefit estimates using the Authority's optimistic forecast for 2015. Corrections to the estimates include the removal of residential property value increases to correct for double counting/transfer miscalculations, and properly applying the neighborhood equity program boundaries (FAA Table 1, above). The new eligibility boundary would affect 693 residences versus the 2,069 residences

suggested by the Authority. The revised estimates, illustrated in Table 3, indicate that the cost-benefit ratio for the full curfew will only net a value of 0.4 (FAA Table 3) compared to the 1.40 listed on Table 4.18 of the Application. This is why, even under the Authority's optimistic forecasts using 2005 data, the potential benefits of the full nighttime curfew are well below the potential costs.

Table 3

FULL CURFEW NET PRESENT VALUE CALCULATIONS Benefit-Cost Analysis for Burbank Part 161 Bob Hope Airport, Burbank, California										
Calendar Year	Project benefits (millions of 2006 dollars)			Project costs (millions of 2006 dollars)					2006 Present values (millions of 2006 dollars)	
	Residential property value increase	Reduced Acoustical Treatment obligation	Total benefits	Airline costs	Passenger costs	All Cargo carrier costs	General aviation costs	Total project costs	Present value of benefits	Present value of costs
2004	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2005	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2006	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2007	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2008	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 922,322	\$ 1,661,275	\$ 3,400,443	\$ 1,990,552	\$ 7,974,592	\$ 2,092,629	\$ 6,965
2009	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 1,011,167	\$ 1,329,164	\$ 3,152,946	\$ 1,760,067	\$ 7,753,344	\$ 2,691,429	\$ 6,325
2010	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 1,100,012	\$ 1,997,053	\$ 3,182,551	\$ 1,836,584	\$ 8,116,200	\$ 2,702,272	\$ 6,191
2011	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 1,188,856	\$ 2,164,942	\$ 3,212,156	\$ 1,876,099	\$ 8,442,053	\$ 2,825,436	\$ 6,216
2012	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 1,277,701	\$ 2,332,831	\$ 3,241,761	\$ 1,915,613	\$ 8,767,906	\$ 2,362,267	\$ 6,842
2013	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 1,366,546	\$ 2,500,720	\$ 3,237,965	\$ 1,975,031	\$ 9,080,262	\$ 2,205,657	\$ 6,664
2014	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 1,455,390	\$ 2,668,609	\$ 3,312,239	\$ 2,030,311	\$ 9,466,549	\$ 2,061,549	\$ 6,505
2015	\$ -	\$ 3,542,125	\$ 3,542,125	\$ 1,544,235	\$ 2,826,498	\$ 3,386,513	\$ 2,118,994	\$ 9,886,241	\$ 1,926,681	\$ 6,377
2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2021	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2022	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2023	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2024	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2026	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2030	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Salvage value										\$ -
									\$ 19,767,370	\$ 47,889
									<b>NET PRESENT VALUE (millions):</b>	\$ (28,122
									<b>BENEFIT-COST RATIO:</b>	\$

**ASSUMPTIONS**

Discount rate	7%
Opening date	2008

• COSTS:

FAA received comments to the docket stating that costs for aircraft operators are underestimated. UPS provided one of the more detailed comments on how the curfew would impact its operations that were not accounted for in the costs. UPS' comments to the FAA's docket state, in part that "UPS handles more than 16,000 Next Day Air packages each day through the Airport. In addition, nine of UPS's sort centers in the Burbank area are served through the Airport. UPS currently operates one early morning arrival four times a week to the Airport that would be impacted by the proposed curfew. If the FAA approves the proposed curfew, UPS would have to re-route this early morning flight to a different airport (most likely LAX or ONT). UPS would then be required to truck thousands of Burbank destination packages from LAX or ONT. This would cause service delays due to the travel time between LAX/ONT and Burbank. Due to the

increased travel time, UPS would no longer be able to provide its Next Day Air Early A.M. service to customers in the Burbank area. In addition, the proposed curfew would cause significant expense since UPS would be required to relocate the sort centers that currently serve Burbank and truck thousands of Burbank destination packages from other airports. UPS would be required to truck Burbank area destination shipments from alternate more distant airports and be unable to provide its Next Day Air Early A.M. delivery service upon which its customers rely<sup>13</sup>.”

Tables 4-18, 4-19, and 4-20 of the application give cost estimates. The Application estimates costs for airport users who are directly impacted by the curfew: general aviation, freight, commercial operators and passengers. The costs include relocation expenses, cancellations, and diversions. Cost estimates for general aviation and freight rely heavily on surveys or consultations for data. The Application uses the consultations to determine the reaction of freight operators, as far as changes in operations, to the different curfews. For example, the Application states that with a full curfew “based on consultations with the operators, four, accounting for 8 aircraft, would move to Van Nuys and two aircraft, would move to Camarillo.” FAR 161 Application, page 4-15. These surveys and consultations are, however, for the most part undocumented and subjective. There is insufficient information in the Application to substantiate these numbers regarding costs to freight operators. GRA, Inc. conducted a similar survey with General Aviation (GA) operators at BUR, and GA operators claim that their results refute the results used in the analysis.<sup>14</sup> GRA’s study reports that all general aviation operators based at Burbank would consider moving their operations to another airport in response to the curfew. This contradicts the Part 161 Application, which assumes that only six general aviation and air taxi operators, accounting for 8 aircrafts, would relocate to other airports. The GRA survey results and comments from affected aviation users undermine the BCA’s assumptions and provide reasonable indications that the BCA underestimates the cost to general aviation.

The analysis also underestimates the curfew’s cost to the city of Burbank. A 2008 press release states that “Bob Hope Airport is an important engine in the Southern California region, generating \$3.9 billion in total economic output and over 36,000 jobs.”<sup>15</sup> Recognizing that the airport contributes significantly to the economic activity of the region, the Application should consider the impact of a full nighttime curfew on both the airport and the surrounding businesses that support the airport’s activities. The Application accounts for carrier costs but stops short of including the cost to Burbank directly from closing the airport from 10 p.m. to 7 a.m.

- Operations Data

FAA’s analysis demonstrates that even with the larger noise contour based on the Authority’s forecast, the costs of the full curfew would exceed the benefits. More recent

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<sup>13</sup> FAA docket FAA-2009-0546-0127.pdf.

<sup>14</sup> FAA docket FAA-2009-0546-0018[1].1.pdf NBAA submittal of GRA Analysis: Review of Burbank Part 161 Study, pg. 16

<sup>15</sup> [http://www.burbankairport.com/documents/EconStudy6-2-08rel\\_000.pdf](http://www.burbankairport.com/documents/EconStudy6-2-08rel_000.pdf)

data and forecasts suggest that there will be little or no growth in operations at Burbank by 2015. The most recent TAF (Terminal Area Forecast), released in December 2008, reflects the impacts of the global economic slowdown and credit crunch as well as revisions to the procedures for counting operations that affected the operations counts in 2008<sup>16</sup>. The 2008 TAF predicts that operations at Burbank in 2015 will total 121,464. This is 1.1% lower than operations in 2008 (a total of 122,789)<sup>17</sup> and 20.8% below the forecast of operations in 2015 that was submitted with the Application.<sup>18</sup> Forecast operations at BUR for 2015 indicate operations will remain below actual 2005 levels. Lower operational forecasts in the 2008 TAF indicate that the noise contours will continue to get smaller through the period analyzed in the Authority's application. Smaller noise contours will reduce the number of residences within the 65 CNEL and further reduce potential benefits of the full nighttime curfew.

- APPLICABLE CASE LAW

In order to fully complete the FAA's responsibility in reviewing and evaluating the Authority's proposed noise restrictions to determine whether there is an undue burden on interstate and foreign commerce contrary to the sponsor's federal obligations, it is appropriate to review the applicable case law at this point. The case law flows from the Commerce Clause which prohibits state or local government actions that unconstitutionally burden interstate commerce, and includes an airport proprietor's enactment of noise restrictions that impose an undue burden on interstate commerce. Two leading cases addressing an undue burden on interstate and foreign commerce involve the ban of the Concorde's operations at John F. Kennedy International Airport by the Port Authority of New York and New Jersey. In British Airways Board v. Port Authority of New York and New Jersey, et al., 558 F.2d. 75, (2<sup>nd</sup> Cir. 1977), the Court of Appeals held that the Port Authority possessed the power and bore the responsibility to establish fair, even-handed and nondiscriminatory regulations designed to abate the effect of aircraft noise on surrounding communities. The Court noted it "must carefully scrutinize all exercises of local power under this rubric to insure that impermissible parochial considerations do not unconstitutionally burden interstate commerce or inhibit the accomplishment of legitimate national goals. See Douglas v. Seacoast Products, 431 U.S. 265, 97 S.Ct. 1740, 52 L.Ed.2d 304 (1977)." British Airways, 564 F2d at 1011.

In the second British Airways case, British Airways Board v. Port Authority of New York and New Jersey, et al., 564 F.2d. 1002, 1009 (2<sup>nd</sup> Cir. 1977), the Court of Appeals affirmed its prior ruling concerning the limitations of proprietary powers, and upheld the district court's finding that the Port's "total abdication constituted an unreasonable, discriminatory and unfair impingement on commerce." The court affirmed the enjoining of further prohibition of Concorde operations at Kennedy Airport until the Port Authority

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<sup>16</sup> In July, 2008 FAA amended its traffic count reporting at BUR to correct a historical misrepresentation. The change made precluded IFR and VFR overflight traffic from being included in the airport operations count.

<sup>17</sup> Total Operations: Itinerant plus Local Operations

<sup>18</sup> FAA considers airport planning forecasts consistent with the TAF if the forecasts are within 10% of the 5-year period and 15% of the 10-year period. FAA Advisory Circular 150/5070-6B, ¶ 704G.

promulgated a reasonable, nonarbitrary and nondiscriminatory noise regulation that all aircraft were afforded the opportunity to meet.

In U.S. v. Westchester, 571 F. Supp. 786 (S.D.N.Y. 1983), the court found that a blanket nighttime curfew regardless of noise emission had an adverse impact on the flow of air commerce because it interfered with and prevented the efficient use of the navigable airspace, resulting in bunching of flights, delays in flights not only at Westchester County Airport but at LaGuardia and other airports in the metropolitan area, and disruption in the flow of air traffic in the New York City metropolitan area. A California District Court, in National Aviation v. Hayward, 418 F. Supp. 417 (N.D. Cal. 1976), reviewed the constitutionality of an ordinance prohibiting aircraft operation between 11 p.m. and 7 a.m. by aircraft which exceeded a noise level of 75 dBA. The plaintiffs argued that the ordinance burdened interstate commerce by forcing them to make their flights from Oakland Airport rather than Hayward Air Terminal, thereby impairing their ability to deliver mail and newspapers to customers in California and other nearby states. The court upheld the airport's nighttime noise level limitation as a valid exercise of proprietary rights. On application of a balancing test under the Commerce Clause, the court found that the burden imposed on the flow of commerce was incidental and did not overcome the local interest in controlling noise levels at Hayward Air Terminal during late evening and morning hours.

In Alaska Airlines v. City of Long Beach, 951 F.2d 977 (9th Cir. 1991), the City of Long Beach had enacted an ordinance in 1981 which limited air carrier flights to 15 per day and required carriers to use quieter aircraft. The Court of Appeals overruled the district court's findings that the ordinance was preempted by Federal law, impermissibly burdened interstate commerce, violated equal protection principles, and was arbitrary and capricious, or otherwise not rationally related to legitimate governmental concerns. The Court of Appeals found that each of the challenged provisions of the ordinance was sufficiently supported by a reasonable and legitimate justification.

Applying the standards detailed in Westchester, Hayward and Long Beach, the Authority falls short in justifying the burden imposed on the flow of commerce. UPS, as stated above, commented that if the FAA approves the proposed curfew, UPS would have to re-route an early morning flight to a different airport (most likely LAX or ONT) and then be required to truck thousands of Burbank destination packages from LAX or ONT. On balance, the burden the blanket curfew would impose on interstate commerce and UPS and other similar cargo haulers is not incidental and overrides the local interest in controlling noise levels at Burbank in the late evening and morning hours.

The Authority recognized as recently as February 2009 that the burden imposed on the flow of commerce was more than incidental. The Authority in a FAQ published on February 26, 2009, stated it "anticipates that some deliveries of early morning shipments to local businesses will occur later in the day." This intended anticipated consequence has an adverse impact on the flow of interstate air commerce in that it interferes with and prevents the efficient use of the navigable airspace. (See Westchester, 571 F. Supp. at 797.)

Equally telling in determining whether the proposed restriction is supported by a reasonable and legitimate justification for the burden on interstate commerce are the comments submitted by the Los Angeles International Airport Area Advisory Committee (LAXAAC). LAXAAC expressed concern that an undue burden is imposed when passengers and cargo are forced to fly to LAX when an alternative airport, Burbank, is their preferred destination.

As concisely noted by the Westchester court, “flights in and out of other airports are not an adequate substitute for the flexibility provided by flights in and out of the airport.” (Westchester, 571 F. Supp. at 797. Even applying the Long Beach court’s expansive view of an airport sponsor’s proprietary powers, the burden created on interstate commerce is undue and impermissible. This is especially true in light of the fact that the Authority admits that passengers desiring to travel to Columbus, Ohio, will have no direct flight options from Los Angeles area airports if the curfew is imposed. FAR 161 Application, Tables 6-7, 6-8, pages 6-12 – 6-13. Moreover, the Authority elected to except out Hawaiian Airlines from its Benefit-Cost Analysis because Hawaiian Airlines was not anticipated to provide service to the airport until after 2008, the start year for the Benefit-Cost Analysis. FAR 161 Application, Table 6-2, page 6-6. Clearly, it would have been prudent to consider the effects of the curfew on a major interstate carrier and this flaw in the analysis may be inferred to construe that the impact on the flow of commerce is more than incidental.

Based on the above, the Authority has not provided substantial evidence to support the determination that the proposed restriction does not create an undue burden on interstate or foreign commerce<sup>19</sup>.

**FAA Finding:** The Authority’s Application does not support a positive cost-benefit analysis, and accordingly has not shown by substantial evidence that the proposed nighttime curfew at BUR does not create an undue burden on interstate or foreign commerce in accordance with 14 CFR Part 161.305(e)(2)(ii).

***Condition 3: The proposed restriction maintains safe and efficient use of the navigable airspace. 14 CFR § 161.305(e)(2)(iii).***

Essential information needed to demonstrate this statutory condition includes evidence that the proposed restriction maintains safe and efficient use of the navigable airspace in the vicinity of the airport.

- **The Authority’s evidence submitted to support that the proposed restriction maintains safe and efficient use of the navigable airspace.**

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<sup>19</sup> This situation differs from FAA’s approval under 14 C.F.R. Part 150 of a nighttime departure curfew on Stage 1 and Stage 2 aircraft at Palm Beach International Airport in 1986. The evidence supported a determination there was no undue burden on interstate or foreign commerce because only a few flights were affected and the operator was able to utilize another airport in the market area.

The Authority identifies the airspace, focusing on southern California, particularly the Los Angeles Basin. FAR Part 161 Application, page 7-3. The Application notes that the airspace is extremely complex with mountain ranges, predominant winds that vary throughout the region, many airports, and high volumes of air traffic. Id.

The Application further states the traffic flows are managed as a complete system by the Southern California Terminal Radar Approach Control (SOCAL TRACON), and changes at any one of the larger airports can have an impact on the rest of the system. Id. at 7-11.

The Application notes that the proposed restriction would shift traffic from BUR to other airports in the Los Angeles Region. Id. Most of the shift is expected to involve nighttime operations that are distributed through the nighttime hours, and are not clustered during peak periods at other airports. An analysis of the hourly nighttime traffic distribution at BUR for the 2005 calendar year found that 20% of all nighttime operations occurred in the peak hour. The analysis found, in addition to avoiding any adverse impacts on airport congestion or capacity, the projected shift in traffic would have no adverse impacts on airspace use or congestion. Id.

The Application assumes traffic shifted from BUR because of the curfew, would use six other airports (Camarillo, Long Beach, LAX, Ontario, Van Nuys, and Whiteman). Id. The Application concludes that the amount of traffic shifted to Camarillo and Long Beach would be negligible (less than one operation per day in 2008 and less than two per day in 2015). The amount of traffic shifted to Whiteman and LAX would be slightly greater, with 2.64 and 3.14 operations per day in 2008, increasing to 5.14 and 6.24 per day in 2015. Id.

The Application assumes most of the traffic shifted would use either Van Nuys or Ontario. Id. at 7-19. Van Nuys is expected to receive an additional 18.6 operations per day in 2008 and 33.18 per day in 2015 with 70% of these flights occurring at night (between 10 p.m. and 7 a.m.) in 2008, and 50% occurring at night in 2015. Id. Ontario is expected to receive an additional 17.36 operations per day in 2008 and 16.28 in 2015. Eighty to ninety percent of these would occur at night and most would be Ameriflight operations. Id. The Application determined this low level of hourly activity can be accommodated at Ontario without creating problems for air traffic control or other airspace users, and concluded the proposed restriction would maintain the safe and efficient use of the navigable airspace, and therefore meet Condition 3. Id.

Section 10.3 describes the approach and methodology. Briefly, the analysis assesses the distribution of traffic shifted from Bob Hope Airport to other airports in the Los Angeles region. For purposes of comparing these shifted operations with hourly runway and airspace fix capacities, the daytime and evening operations are combined into a single “daytime” category (7:00 a.m. to 10:00 p.m.). Nighttime operations (10:00 p.m. to 7:00 a.m.) are considered without any adjustment. The numbers of shifted day and night operations are compared with the hourly capacities of each receiving airport at its associated arrival fixes. The capacity estimates for the runways and airspace fixes are

made using very conservative operating parameters to ensure that any potential impact on capacity is identified. FAR 161 Application, page 10-2.

Airspace fix capacities were calculated by using an in-trail separation at the airspace fix of 7 nautical miles and aircraft speed of 250 knots. A separation of 7 nautical miles provides for minimum radar traffic spacing plus a safety buffer, while the speed of 250 knots represents the maximum speed limit for aircraft below 10,000 feet. These parameters yield a conservative capacity estimate of 36 arrivals or departures per hour. In comparing shifted operations with airspace fix capacity, either the number of shifted arrivals or departures, whichever is larger, is compared with the fix capacity because airspace fixes nearly always handle either arrivals or departures, but not both. This analysis is based on all shifted traffic being directed to a single fix. This is a conservative approach because multiple fixes are often available at airports to expedite the flow of traffic. Controllers also have the flexibility to separate traffic by altitude to effectively increase the capacity of a fix. Id.

The Application concludes the proposed restriction would involve no changes to airspace structure, air traffic control procedures, or flight routes at BUR or at any other airports in the area. FAR Part 161 Application, page 7-18. Thus, the proposed restriction itself would have no direct effect on the navigable airspace. Id.

- **FAA analysis of the Authority's evidence that the proposed restriction maintains safe and efficient use of the navigable airspace.**

The Authority's analysis is significantly flawed in that it underestimates the potential impact on other southern California airports and the efficient use of the navigable airspace. The southern California airspace is currently highly congested and complex. Under the Authority's assumptions of increased future demand and congestion at BUR that drive additional aircraft operations into nighttime hours, other airports in the region and the airspace would experience similar additional congestion and delay. It is not reasonable for the analysis to predict worse circumstances at BUR and optimum circumstances for the rest of the region. A curfew at BUR would worsen congestion elsewhere. Without considering the factors described below, the Application minimizes the impacts on airspace.

#### Weather:

The Authority chose optimum weather conditions in drawing its conclusions. However, the Pacific coast is subject to extensive marine layer weather. It is generally a weather phenomena factor that the marine layer of stratus clouds will move toward the coast. Commonly, the low stratus layer will encroach upon the coast during the evening hours and remain in place throughout the night into the morning hours, creating Instrument Flight Rules (IFR) and marginal Visual flight Rules (VFR) flight conditions. This frequently causes aircraft destined for San Diego (SAN), Carlsbad Palomar (CRQ), John Wayne (SNA), Long Beach (LGB), Torrance (TOA), Los Angeles International (LAX), Santa Monica (SMO) and Camarillo (CMA) to divert to airports with better weather conditions. For air carrier and air taxi aircraft, the most commonly used weather divert

airport is ONT. Corporate jets, turboprops and General Aviation (GA) piston aircraft would tend to favor VNY as an alternate. These common diverts in and of themselves, cause a negative impact on regional aviation as well as the National Airspace System (NAS).

#### Impacts on the Navigable Airspace:

The Application does not explain how late night arrivals will be accommodated if the curfew takes effect (those that arrive after the beginning of the curfew). A last minute decision has significant impact to ATC operations which may require rerouting the aircraft, changing coordination altitudes and speeds, and may require verbal coordination among various sectors and facilities. If that aircraft diverts to another airport, chances are the airline will need to reposition that aircraft to BUR the next morning. These factors increase complexity and workload. When other operators/air carriers at other airports in the vicinity have to divert flights to other local/regional airports, they also add to the departure rush because they need to restage the diverted aircraft back to the original destination airport. These late arrivals would increase complexity and workload, and negatively impact the efficiency of the navigable airspace.

Due to the already high levels of congestion and complexity in the southern California airspace noted above, implementation of the BUR proposal would have additional impacts not analyzed in the Application. The terrain constraints limit the number of arrival and departure routes that can be utilized by multiple high volume airports. Additionally, many of the airports in Southern California already have restrictions in place which create additional congestion, particularly in the morning beginning at 7:00 a.m.

For example, John Wayne/Orange County Airport (SNA) has approximately 15 or more air carrier jets scheduled for 7:00 a.m. departure. Under ideal conditions, SNA can depart an air carrier jet about every minute and a half. Therefore, the last aircraft slated for a 7:00 a.m. departure becomes airborne at or after 7:28 a.m. If weather becomes a factor, the actual departure exercise may be extended an additional 15 – 20 minutes. Because the SNA curfew compacts departures into the 7:00 a.m. time slot, parking at air carrier gates becomes a problem in the morning. At the start of each morning, all of SNA's gates are occupied and full, while another 15 jets are already staged on the airport awaiting openings at the filled gates. When an air carrier taxis out for departure, one of the 15 staged jets will fill the empty gate.

Ontario International Airport (ONT) would face the same situation if relocated BUR aircraft were moved to ONT's 7:00 a.m. departure time slots. ONT already has numerous air carrier, props and turboprops vying for 7:00 a.m. departures.

ONT also has a noise abatement policy which includes opposite direction operations from 10:00 p.m. to 7:00 a.m. In opposite direction operations, ONT arrivals land on Runway 26, while departures takeoff from Runway 8. Since the arrivals are placed head-on to departures, the airport's capacity is drastically reduced to ensure proper separation

between arrivals and departures. Increasing the number of opposite direction operations to accommodate diverted aircraft from BUR adds complexity. The level of complexity and spacing interval between arriving and departing aircraft further increases when weather conditions are less than ideal. Putting more BUR traffic into this mix, or adding any BUR aircraft to the ONT 7:00 a.m. departure push would further exacerbate throughput and could increase delays. This could result in ATC no longer being able to implement ONT's noise abatement procedures.

The Part 161 Application states some of the operations would move to Whiteman (WHP), but the Application also acknowledges there is a waiting list for new tenant space at WHP (paragraph 10.3.2.1.4). Thus, these aircraft would not be able to relocate to WHP.

Another impact caused by the implementation of a curfew, is the arrival and departure push at these airports each evening, right before the curfew goes into effect. Past experience has shown that many of the carriers or users that are impacted by a curfew change their schedules in an effort to arrive at the airport before the curfew becomes effective each evening. The same thing can be expected with aircraft wanting to depart before the deadline. A situation of this nature has the potential to create a large influx of traffic in a short period of time. Aircraft that experience delays caused by weather, flow control or other factors beyond their control and subsequently arrive at the airport after the curfew time, face the possibility of being diverted to an alternate airport. For air carriers and air taxi aircraft the most commonly used divert airport is ONT. Corporate jets, turboprops and General Aviation aircraft tend to favor VNY as an alternate. Regardless, these diversions would negatively impact regional aviation as well as the National Airspace System (NAS). None of these factors was considered in the Authority's Application.

With a full nighttime curfew at BUR, the aircraft desiring early morning departure must wait until 7:00 a.m. This moves aircraft from a rather sparsely populated early morning queue into the densely populated 7:00 AM departure queue. The southern California airports roll their 7:00 a.m. departures to several exit fix VHF Omni-directional Range (VORs). These include:

- The Gorman (GMN) VOR used for destinations including Seattle (SEA), San Francisco (SFO), and Honolulu (HNL)
- The Palmdale (PMD) VOR used for destinations including Las Vegas (LAS), Salt Lake City (SLC), and Chicago O'Hare (ORD)
- The Thermal (TRM) VOR used for destinations including Phoenix (PHX), Denver (DEN), Dallas (DFW), and Atlanta (ATL)

In general, BUR tends to lead the exodus for GMN & PMD as it is the northernmost airport and closest to these two VORs. BUR departures are quickly followed by Los Angeles International Airport (LAX) and Santa Monica (SMO) departures. Next, aircraft depart from Long Beach (LGB), SNA and ONT. Eventually San Diego Lindbergh (SAN)

aircraft depart. As the various departures climb out of Southern California TRACON (SCT) airspace, they enter Los Angeles Air Route Traffic Control Center (ZLA) airspace.

If more aircraft enter the 7:00 a.m. timeframe, it has significant impact for ZLA, particularly the sectors that work GMN, PMD, and TRM departure flows. ZLA would have to continue Miles-in-Trail (MIT) restrictions and speed restrictions for a greater period of time to properly sequence the stream of departures over the exit fixes. Such actions would directly cause flights at other southern California airports to be delayed as they await release into the active stream of departures. This entire delay scenario adds complexity and difficulty to the entire ATC system. Sector airspace would become more congested as actions are taken for sequencing and spacing. Airport surfaces would be more congested as aircraft absorb departure delays on the ground, and could prevent other aircraft not affected by the spacing delays from reaching the departure runways efficiently. This would prolong the entire morning departure process putting more resource intensive demands on FAA facilities, and impacting connections for delayed aircraft throughout the system.

#### Air Traffic Control Towers Closed at Night:

The Application refers to runway capacity at alternative airports, and demonstrates the shifting of aircraft will not exceed that capacity. However, it does not take into account the difference in ATC procedures used to provide separation between IFR aircraft operating at airports without an operating control tower. Control tower personnel would be able to provide and insure separation between multiple aircraft simultaneously. Any aircraft that are shifted to airports that do not have an operating control tower are subject to different procedures. The towers at VNY and WHP close at night, and the Application suggests many of the diverted operations will go to VNY.

BUR's tower is currently open 24 hours a day. VNY and WHP towers currently close at night. Only one IFR aircraft at a time may operate at an airport without an operating Control Tower. If there are multiple IFR arrivals or departures at one time at such an airport, each subsequent aircraft will be delayed. If the proposed curfew were implemented, and as suggested by the Application, traffic has to be diverted from BUR to these airports, much greater miles-in-trail separation would be required, thereby reducing the efficient utilization of the navigable airspace.

It is doubtful that this could be addressed by keeping the towers at VNY and WHP open at night. The FAA has very specific criteria for adjusting the operating hours of ATC facilities, generally based on the number of operations conducted. The costs associated with tower operation must be balanced with the benefits gained. See FAA Order JO 7232.5G.

Projected 2015 changes with the curfew would adversely affect the air traffic control system and the efficient use of the navigable airspace, particularly in staging morning departures out of BUR. Aircraft that would have to divert due to the restriction would

have to be flown in from a nearby airport to BUR, adding additional traffic to the already congested airspace.

In summary, the Authority's analysis does not consider additional congestion and factors described above that adversely affect the navigable airspace. These variables must be reasonably considered.

**FAA Finding:** The FAA concludes the Authority's Application does not support by substantial evidence that the proposed nighttime curfew at BUR maintains safe and efficient use of the navigable airspace in accordance with 14 CFR Part 161.305(e)(2)(iii).

***Condition 4: The proposed restriction does not conflict with any existing Federal statute or regulation. 14 CFR § 161.305(e)(2)(iv).***

Essential information needed to demonstrate this condition includes evidence demonstrating that no conflict is presented between the proposed restriction and any existing Federal statute or regulation, including those governing exclusive rights, control of aircraft operations, and existing federal grant agreements.

**The Authority's evidence that the proposed restriction does not conflict with any existing Federal statute or regulation:**

The Authority contends the proposed curfew does not conflict with any existing federal statute or regulation. FAR 161 Application, page 8-1. The Authority argues that, since nighttime restrictions similar to the proposed curfew are already in effect at a number of Southern California airports without violating Federal law, the Authority's proposed restriction necessarily can not violate federal law. Id.

Regarding exclusive rights, the Authority argues the proposed curfew does not grant any exclusive right at the airport since it allows competition and no single operator is excepted from the curfew. Id. Additionally, the Authority contends that since the FAA and the pilot in command of the aircraft exercise control of aircraft operations in flight, the proposed curfew does not restrict flight operations. Rather, the curfew purports to limit the times that aircraft may land and take off from the airport. Id. at 8-2, 8-3. Such curfews exist at other commercial airports in Southern California and do not contravene federal laws as to the control of aircraft flight operations. Id. at 8-3.

The Application identifies curfews similar to the proposed restriction at BUR that are in force at John Wayne Orange County Airport, Long Beach, San Diego, and Santa Monica, in addition to other airports. Id. The Application states that all of these airports receive federal Airport Improvement Program grants and none have been found in violation of the grant agreements pertaining to preservation of public access to the airports and the avoidance of unjust discrimination. Id. Neither have these restrictions been judged by the courts to be unjustly discriminatory or otherwise in conflict with federal law. Id.

The Application concludes that, given the Authority is seeking FAA approval of a mandatory full curfew consistent with Part 161 and that similar curfews are in place elsewhere, the proposed curfew would comply with federal law. *Id.* at 8-10.

The Authority identified the 33 Grant Assurances and concluded the proposed restriction does not violate each specified assurance, or concluded that the specific assurance is inapplicable. See FAR Part 161 Application, pages 8-5 – 8-9. The Authority concludes implementation of the full mandatory curfew, following FAA approval, would not conflict with applicable federal law. *Id.* at 8-1.

**FAA analysis of the Authority’s evidence that the proposed restriction does not conflict with any existing Federal statute or regulation:**

The FAA has examined the information submitted in support of this condition. The Part 161 Application supports the Authority’s conclusion that the proposal will not conflict with any existing Federal statute or regulation. Assurances relevant to the proposed curfew are analyzed below.

Grant Assurance 23, *Exclusive Rights*

When performing its analysis for determinations of exclusive rights violations, the FAA generally bases its conclusions on anti-monopoly principles. Both Title 49 U.S.C. §§ 40103(e) and 47107(a) prohibit airports on which government money has been expended from providing or intending to provide an exclusive right to use the airport. The existence of an exclusive right to conduct any aeronautical activity at an airport limits the usefulness of the airport and deprives the public of the benefits of competitive enterprise.

Pursuant to this statutory scheme, the FAA has incorporated written assurances ("Grant Assurances") into its grants. Grant Assurance 23 implements the quoted statutory language, and prohibits such action both directly and indirectly.<sup>20</sup>

The assurance provides that an airport sponsor “will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public.” Aeronautical activities include, but are not limited to air carrier operations and charter flights.

FAA Order 5190.6B, *FAA Airport Compliance Manual* (September 30, 2009), Section 8, "Exclusive Rights at Airports" states:

“An exclusive right is defined as a power, privilege, or other right excluding or debarring another from enjoying or exercising a like power, privilege or right. An exclusive right may be conferred either by express agreement, by imposition of

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<sup>20</sup> An exclusive right can be conferred either by express agreement, by the imposition of unreasonable standards or requirements, or by any other means. Such a right conferred on one or more parties, but excluding others from enjoying or exercising a similar right or rights, would be an exclusive right. See FAA Advisory Circular 5190-6 and FAA Order 5190.6B, Para. 8-2d.

unreasonable standards or requirements or by another means. Such a right conferred on one or more parties, but excluding others from enjoying or exercising a similar right or right, would be an exclusive right.” See Para. 8.2; 30 Fed. Reg. 13661; and AC 150/5190.6, Appendix 1.

“the sponsor may not grant a special privilege or a monopoly to anyone providing aeronautical services on the airport or engaging in an aeronautical use. The intent of this restriction is to promote aeronautical activity and protect fair competition at federally obligated airports.” See Para. 8.1

See also, FAA Advisory Circular, AC 150.5190-6, *Exclusive Rights at Federally-Obligated Airports*, (January 4, 2007) at 1.2.

Thus, to find a violation of grant assurance 23, FAA generally looks for a nexus between the alleged exclusive right and violations of the public's interest in promoting fair competition. The majority of the FAA's Part 16 cases generally involve enforcement actions initiated by aggrieved parties whose ability to freely conduct their specific trade was allegedly denied by an airport sponsor through anti-competitive actions. See, e.g., *Aircraft Owners and Pilots Assoc. v. Port Authority of New York*, 305 F. Supp. 93, 105 (E.D.N.Y. 1969) (Legislative history of §308 suggests "the type of exclusive' right ... forbidden is one of the sort noxious to the anti-trust laws"); *United Aerial Advertising Inc. v. County of Suffolk Board of Commissioners*, FAA Docket No. 16-99-18 (May 8, 2000) (Towed banner company denied use of airport where two other towed banner companies operated).

The Authority's proposed curfew restricts takeoffs and landings for all aircraft between approximately 10:00 p.m. and 7:00 a.m. Here, there is no private intervener alleging harm from anti-competitive behavior. The curfew does not purport to restrict flight operations for limited groups, instead it proposes to limit flight operations for all aeronautical users. The curfew limits the times that aircraft may land and take off from the airport. FAA has consistently interpreted one or more parties to include type and class of aeronautical activity. *United Aerial Advertising Inc. v. County of Suffolk Board of Commissioners*, FAA Docket No. 16-99-18 (May 8, 2000); *Skydive Paris Inc. v. Henry County, Tenn*, FAA Docket No. 16-05-06 (Jan. 20, 2006). An exclusive right arises when an airport sponsor disparately treats similarly situated users. *United Aerial Advertising, Inc. v. County of Suffolk Board of Commissioners*, FAA Docket No. 16-99-18 (May 8, 2000) (denial of access based on unsubstantiated safety and capacity concerns and unreasonable minimum standards.); *William Dean Bardin d/b/a Ultralight of Sacramento v. County of Sacramento, California*, FAA Docket No. 16-00-11 (August 9, 2001) (ban of ultralights created an exclusive right based on equipment used for flight operations).

In the issue at hand, the similarly situated users in the same class in this case are all aeronautical users that land and depart at BUR using fixed-wing aircraft. The Airport's curfew does not make any distinction between aircraft users by aircraft category or type (i.e. passenger, cargo, general aviation, corporate jet), aircraft weight or size. All aircraft operations will bear the brunt of repositioning their business operations to accommodate the curfew's restrictions on takeoffs and landings. Both Passenger and Cargo carriers

will be forced to adjust schedules to the proposed curfew's takeoff and landing limitations.

The proposed curfew does not deny the privilege of using the Airport's runways to any specific user but to all users. Moreover, the curfew does not specifically exclude any aircraft from enjoying and exercising the same rights as any other aircraft utilizing the airport.

As all aircraft users must implement schedule changes, no particular class or user appears to gain a competitive advantage. An assertion that forcing all aircraft users to implement operational schedule changes to accommodate the proposed curfew's restricted hours will impose an economic hardship may be correct, but whether it rises to a level to create a monopolistic environment for some is unlikely. Such speculation, however, is not sufficient to meet the burden of proof. The record as discussed above does not provide a nexus between an alleged violation and the public benefit of competition. Thus, a nexus cannot be drawn based on this record between the Curfew and any actual anti-competitive result. Accordingly, the Curfew does not establish an "exclusive right" that violates Assurance 23.

**Grant Assurance 27, Use by Government Aircraft.**

Although all aircraft are prohibited from access to the airport during the hours of approximately 10:00 p.m. through 7:00 a.m., the proposed curfew excepts access for Government Aircraft. Accordingly, the Authority correctly concludes that it does not violate the grant assurance.

**Grant Assurance 22, Economic Non-Discrimination.**

Concerning Grant Assurance 22, *Economic Non-Discrimination*, because the standards under this assurance are the same as those under Condition 1, FAA has interpreted this Assurance to be covered by Condition 1. For these reasons, FAA responded to the Authority's arguments regarding this Grant Assurance under Condition 1. Alternatively, if this Grant Assurance were addressed under Condition 4, the full curfew would conflict with Grant Assurance, and accordingly there would not be substantial evidence to support Condition 4.

**FAA Finding:** The Authority's Application supports by substantial evidence that the proposed nighttime curfew at BUR does not conflict with any existing Federal statute or regulation in accordance with 14 CFR Part 161.305(e)(2)(iv).

***Condition 5: The applicant has provided adequate opportunity for public comment on the proposed restriction. 14 CFR § 161.305(e)(2)(v).***

Essential information needed to demonstrate this condition includes evidence that there has been adequate opportunity for public comment on the restriction.

Although some of the meetings and notices are old (dating to 2002) considering the application was not submitted until 2009, the documentation indicates sufficient public notice and opportunity to comment were provided, and that contact with the public also occurred in the months prior to completing the cost-benefit analysis and application.

Public notice and consultation were carried out in accordance with Part 161.303. A public docket was established. This airport docket must remain open and available for public review for as long as any approved restriction is in effect (161.307).

The comment period allowed by the airport operator exceeded the minimum regulatory requirements. Comments received have been made available on line and via compact disk to commenting and consulted parties. The airport operator has chosen to submit only one restriction to the FAA for final approval and, after its docket comment period closed, did not propose changes to its originally proposed restriction. No new notice or comment opportunity is required. (161.303 and 161.309).

**FAA Finding:** The Authority's Application supports by substantial evidence that the applicant has provided adequate opportunity for public comment on the proposed restriction in accordance with 14 CFR Part 161.305(e)(2)(v).

***Condition 6: The proposed restriction does not create an undue burden on the national aviation system. 14 CFR § 161.305(e)(2)(vi).***

Essential information needed to demonstrate this condition includes (A) evidence that the proposed restriction does not have a substantial adverse effect on existing or planned airport system capacity, on observed or forecast airport system congestion and aircraft delay, and on airspace system capacity or workload; (B) analysis demonstrating nonaircraft alternative measures to achieve the same goals are inappropriate; (C) absence of comments with respect to imposition of an undue burden on the national aviation system.

**The Authority's evidence that the proposed restriction does not create an undue burden on the national aviation system.**

The Authority argues the proposed restriction does not have a substantial adverse effect on existing or planned airport system capacity, on observed or forecast airport system congestion and aircraft delay, or on airspace system capacity or workload.

The Application states one consequence of implementing a curfew at Bob Hope Airport would be that aircraft operators would shift some flights to other airports in the LA region. FAR Part 161 Application, page 10-1. The shift is not a mandated feature of the proposed curfew. Id. In fact, some aircraft operators are likely to adjust to the curfew and keep all operations at Bob Hope Airport. For some operators, however, nighttime flights are an imperative part of their business. They will have to shift their nighttime operations to other airports. Id. at 10-2.

The assumptions regarding how operations would shift is contained in Appendices AA, BB and CC of Technical Report 1.

An important measure of airspace capacity is the volume of air traffic that can be accommodated through the various arrival and departure fixes established throughout the regional airspace system. Id. Because air traffic must flow through a small number of fixes and be widely separated for safety, the fixes are the choke points for air traffic in the regional airspace. Id.

The Application compares the numbers of shifted day and night operations with the hourly capacities of each receiving airport at its associated arrival fixes. Id. For all airports except LAX, runway capacity estimates were obtained from FAA Advisory Circular AC 150/5060-5, Airport Capacity and Delay. For LAX, hourly runway capacities were taken from the FAA 2004 Airport Benchmark Capacity Report. Id. The Application compared the number of operations shifted to each receiving airport with the hourly runway capacity in terms of total operations (landings and takeoffs). In addition, the number of shifted operations was compared only with the IFR hourly capacity of each airport. Id. The Application contends that this is a conservative approach that tends to overstate the potential capacity impact of the shifted operations because IFR capacity at most airports is substantially lower than VFR capacity. Id.

The Application calculated airspace fix capacities using an in-trail separation at the fix of 7 nautical miles and aircraft speed of 250 knots. Id. at 10-3. Thus, the analysis purports to show a worst case assessment of the impact of shifted traffic on airspace capacity. Id. The Application assumes flights shifted at night would be spread over 9 nighttime hours and flights shifted during the day would be spread over 15 daytime hours. Id.

The flights shifted from BUR were compared with the 2008 and 2015 forecast operations at the receiving airports. FAR Part 161 Application, page 10-11. The 2008 and 2015 forecasts for the alternate airports were derived from the FAA Terminal Area Forecasts (TAF)<sup>21</sup>. Id. Time-of-day distributions were derived from FAA's Air Traffic Activity System data for 2006, and were project to remain constant through the forecast period. For selected airports, time-of-day distributions were available from Master Plans and Part 150 Studies. Id.

The Application concludes that operations shifted from BUR to other airports in the LA Region would have no substantial adverse effect on existing or planned airport system capacity or on observed or forecast airport system congestion and aircraft delay. FAR Part 161 Application, page 10-37. There would not be significant increases in noise at airports to which operations would shift. Id.

Regarding effect on airspace capacity or workload, the Application states the overall volume of affected air traffic is relatively small and the shift on operations would not be great enough to impose capacity constraints on airspace fixes serving these alternate airports. Id. at 10-40. The Application specifies that congested airspace and the heavy

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<sup>21</sup> It is assumed the most recent TAF was not used but rather the 2006 TAF with higher forecasts.

7:00 a.m. departure push at the region's air carrier airports would not create a substantial workload increases for controllers and cause flight delays. Id.

The Application identified acquisition (relocation, and removal of housing from high noise areas) and acoustical treatment of housing as the only nonaircraft alternatives that could potentially be used to address the nighttime noise issues at Bob Hope Airport. Id. at 10-41. The Application states acquisition is infeasible in the Bob Hope Airport Area because California Government Code Section 6546.1 bars airports from acquiring land through condemnation, and Public Utilities Code 21661.6 prohibits California airports from acquiring land through negotiated transactions without the approval of the local jurisdiction within which the land is located. Id. at 10-42.

The Application states that comments were received directly expressing concern about the potential burden on the national aviation system that a curfew could cause. Id. Other comments expressed concern relating indirectly to the national aviation system, including concerns about aviation safety and the need for a regional approach to aviation system issues and concerns. Id. The Authority responded to these comments in chapter 10 of the FAR Part 161 Application and concluded they were without merit.

**FAA analysis and finding regarding the Authority's evidence that the proposed restriction does not create an undue burden on the national aviation system.**

FAA has addressed impacts of the curfew to the navigable airspace in its analysis of evidence submitted in support of Condition 3. Adverse impacts in the complex and congested Southern California area ripple throughout the national aviation system. A mandatory nighttime curfew will create an undue burden on the national aviation system.

With respect to nonaircraft alternatives, the FAA has determined that sound attenuation is a viable nonaircraft alternative measure that will address the noise problem of incompatible land uses located within the CNEL 65 dB noise contour<sup>22</sup>. (See FAA discussion in Conditions 1 and 2.) Based on FAA corrections to the BCA assumptions, FAA concluded sound attenuation is the most cost-effective alternative evaluated by the Authority to mitigating noise within the CNEL 65 dB noise contour.

The FAA docket at FAA-2009-0546 also includes comments from users and user groups (e.g., Air Transport Association, National Business Aviation Association, Cargo Airline Association, International Cargo Association, United Parcel Service, FedEx) that the proposal would generate an undue burden on the national aviation system.

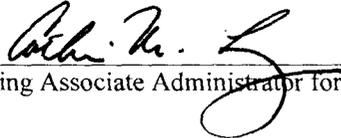
**FAA Finding:** The Authority's Application does not support by substantial evidence that the proposed restriction does not create an undue burden on the national aviation system in accordance with 14 CFR Part 161.305(e)(2)(vi).

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<sup>22</sup> The FAA does not accept sleep awakenings as evidence of a nighttime noise problem.

**VII. FAA DETERMINATION.**

ANCA requires an airport proprietor proposing a noise or access restriction affecting Stage 3 aircraft operations to meet all six statutory criteria, supported by substantial evidence, in order for the FAA to approve the restriction. The Authority's Application does not provide substantial evidence required to support an FAA determination that the proposed nighttime curfew at BUR meets all six statutory conditions for approval under 49 U.S.C. 47524(c)(2) and 14 C.F.R. Part 161. THEREFORE, the application for a full nighttime curfew at BUR is DISAPPROVED.

  
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Acting Associate Administrator for Airports, ARP-1

10/30/09  
Date