

STATEMENT OF ROBERT A. STURGELL, ACTING ADMINISTRATOR, FEDERAL AVIATION ADMINISTRATION, BEFORE THE SENATE COMMITTEE ON APPROPRIATIONS, SUBCOMMITTEE ON TRANSPORTATION, HOUSING AND URBAN DEVELOPMENT, AND RELATED AGENCIES, FIELD HEARING ON AIRSPACE REDESIGN AND FLIGHT SCHEDULING PRACTICES AT PHILADELPHIA INTERNATIONAL AIRPORT. APRIL 25, 2008

Senator Specter and Senator Casey:

Thank you for inviting me to appear here today to discuss the Federal Aviation Administration's (FAA) New York/New Jersey/Philadelphia Metropolitan Area Airspace Redesign (Airspace Redesign Project), a project that is vital to the safety and efficiency of our national airspace system (NAS). My colleague, D.J. Gribbin, the General Counsel of the U.S. Department of Transportation, is also here to discuss airline flight scheduling practices at Philadelphia International Airport (PHL).

Congestion and Delays: Understanding the Problem

Growing congestion and delays in our aviation system are a serious threat to the U.S. economy and our quality of life. Successfully addressing this threat will require us to embrace new solutions and acknowledge that pursuit of *status quo* policies will do little, if anything, to reverse the substantial decline in system performance that we have experienced in recent years. While we are enjoying a record level of safety, we are at a critical point with congestion and delays.

To give you some perspective, let me draw a national and regional framework. According to FAA Air Traffic Operations Network (OPSNET) data, in 2007, there were 46,495,785 total air traffic control center operations in the United States. Approximately one-third of the nation's flights and

one-sixth of the world's flights either start or traverse the airspace that supports the New York/New Jersey/Philadelphia (NY/NJ/PHL) region.

During this same time period, we saw record delays in flights across the country. For calendar year 2007, delays were up approximately 10% nationwide, compared with calendar year 2006. Eighteen of our nation's largest airports, including PHL, have returned to their highest pre-9/11 commercial passenger levels. Throughout all of this, the FAA's primary goal is one of safety, separating aircraft in the airspace so that they can navigate safely. In an airspace that is already operating at, or even beyond, capacity, any disruption, be it weather or equipment difficulties, requires the FAA to institute measures that can often translate into delays. From May 1-August 31, 2007 alone, we saw a total of 210,443 delays totaling 9,808,347 minutes throughout the system. Of those, 77.6% occurred in the NY/NJ/PHL region. OPSNET data indicates that 72% of delays were caused by weather, while 14% were caused by volume, with the remaining delays were due to other causes (e.g., equipment outages, runway construction, etc.). Our aviation system is stretched to the limit.

As we seek solutions to the problem of congestion and delays, we must recognize that aviation is one of the most complex industries in the world, consisting of an extremely intricate web of infrastructure, technology, and people. The FAA is addressing the congestion and delays problem in a variety of ways, with new technologies and procedures immediately, and in the long-term with the Next Generation Air Transportation System (NextGen), which will transform the aviation system and how we control air traffic. We must be able to handle the demands of the future for aviation travel, projected to be one billion passengers by 2015. The Airspace Redesign Project is a crucial piece of the solution to the congestion and delays problem.

Airspace Redesign Overview

The Airspace Redesign Project is the culmination of over nine years of study and evaluation by the FAA to address congestion and delays at some of our nation's busiest airports. The complexity of the airspace in the NY/NJ/PHL area and its importance to the nation cannot be overstated. There are five major airports (John F. Kennedy International Airport, LaGuardia Airport, Newark Liberty International Airport, Teterboro Airport, and Philadelphia International Airport) and 16 other airports in the region that were studied as part of the Airspace Redesign Project. There are approximately 15 other commercial service, general aviation, reliever, or military airports that are located in the region, but were not individually studied as part of the Airspace Redesign Project. From an air traffic control (ATC) perspective, the sky can look like an anthill over each major airport, with hundreds of planes in transit, arriving, or departing at any given moment. For example, only a few miles separates the streams of arrivals at Newark and La Guardia, southbound La Guardia departures are "climbed over" Newark arrivals, and the approach path to La Guardia can depend in part on runway use at Kennedy; this represents only a fraction of the activity. This interdependency means that Philadelphia International Airport (PHL) departures are frequently delayed because of volume in New York. As noted above, one-third of the nation's flights and one-sixth of the world's flights either starts or traverses the airspace, making an already intricately choreographed system even more complex.

The goal of the Airspace Redesign Project, then, is to enhance the efficiency and reliability of the airspace structure and the ATC system for pilots, airlines, and the traveling public. The project modernizes the structure of the NY/NJ/PHL air traffic environment in an environmentally

responsible manner, while laying a foundation for NextGen. Moreover, it will accommodate growth while enhancing safety and reducing delays by 20% in the NY/NJ/PHL Metropolitan Area. From an environmental standpoint, by 2011, this project is expected to reduce noise levels for 619,023 people who currently experience noise at or above 45 dB DNL, and reduce fuel burn and, in turn, emissions by the airlines.

The FAA's experience with the 2005 Florida Airspace Redesign emphasizes how these efforts save time and money, by successfully addressing delays. FAA calculates that in its first year, the redesign has reduced delays, reduced reroutes, and reduced foreign fees attributable to reroutes in the amount of \$22.5 million in direct operating costs (e.g., fuel, crew, and hourly maintenance costs) for traffic inbound to South Florida and \$11.7 million for traffic outbound from South Florida. In the Caribbean, a savings of \$400,000 has been realized due to reduced reroutes and international user fees. The benefits of the Florida Airspace Redesign total almost \$35 million annually.

Airspace Redesign Project Implementation

Implementation of the Airspace Redesign Project is estimated to take five years, and will progress along four qualitatively different stages. Overall, the project represents an innovative approach to airspace design in the NY/NJ/PHL area. Air traffic rules differ between the "terminal," or "en route," or "center" environments. For example, "terminal" airspace has three nautical mile separation of aircraft criteria, while "en route" airspace uses five mile criteria. The project expands the terminal airspace over a larger geographical area than is currently designated, and expands it vertically up to 23,000 feet above mean sea level in some areas.

Some airspace sectors that are currently worked in the en route or center environment, upon full implementation of the project, will be worked using terminal rules and terminal equipment.

Expanding the terminal airspace permits ATC to use terminal separation rules as well as the more flexible terminal holding rules over this larger area, providing ATC with more flexibility. This “terminalization” of the airspace also permits ATC to incorporate expanded departure gates and to separate arrival and departure flows in the NY/NJ/PHL metropolitan areas, increasing the efficiency of the airspace. Practically speaking, this means that ATC can sequence aircraft further out from the airports, where there is more space to do so. This makes the flow of air traffic more efficient, even when there’s bad weather.

Reconfiguring the airspace will enable the FAA to take several direct actions to take advantage of improved aircraft performance and emerging ATC technologies. Leveraging these technologies, the FAA can implement new and modified ATC procedures, including dispersal headings, multiple departure gates and simplified arrival procedures by 2011. The FAA will also use these technologies to employ noise mitigation measures, such as use of continuous descent approaches (CDA), and raising arrival altitudes.

Implementation of the Airspace Redesign Project will be able to make use of procedures like Area Navigation (RNAV) and Required Navigation Performance (RNP), which collectively result in improved safety, access, predictability, and operational efficiency, as well as reduced environmental impacts. RNAV operations remove the requirement for a direct link between aircraft navigation and a ground-based navigational aid (i.e. flying only from radar beacon to radar beacon), thereby allowing aircraft greater access to better routes and permitting flexibility of point-to-point

operations. By using more precise routes for take-offs and landings, RNAV enables reductions in fuel burn and emissions and increases in efficiency.

RNP is RNAV with the addition of an onboard monitoring and alerting function. This onboard capability enhances the pilot's situational awareness providing greater access to airports in challenging terrain. RNP takes advantage of an airplane's onboard navigation capability to fly a more precise flight path into an airport. It increases access during marginal weather, thereby reducing diversions to alternate airports. While not all of these benefits may apply to every community affected by the Airspace Redesign Project, RNAV and RNP may prove useful in helping to reduce overall noise and aggregate emissions.

The FAA has explored and will include several mitigation strategies to reduce the impact of the new routings on the underlying communities. We are instituting several measures in response to the concerns raised at the numerous public meeting that we have had for this project in the Philadelphia area. These measures include a reduction in the number of dispersal headings (33% in the east configuration and 50% in the west configuration), as well as time of day restrictions to help minimize the impacts on the surrounding residents. To illustrate, one of the mitigation measures is that during nighttime hours, we return to a one heading departure procedure to minimize the impacts while continuing aviation service to the community.

The Airspace Redesign Project is very large and complex and the implementation will take several years. There will be four stages of the implementation, distinguished by the degree of airspace realignment and facility changes required to support each of the overlying operational

enhancements. As noted above, implementation is estimated to take at least five years, with each stage taking approximately 12-18 months to complete.

Complementary Solutions: Enhancing Capacity

Rest assured, however, that we are not simply relying upon redesigning the airspace to address the congestion in this region. Our preference is to expand capacity in order to meet demand. Philadelphia currently has two projects underway that would address this issue.

On April 29, 2005, the Record of Decision (ROD) for the Runway 17-35 Extension Project was signed. The ROD provided environmental clearance to extend Runway 17-35 by 640 feet to the north and 400 feet to the south to a new length of 6,500 feet. This project will include standard runway safety areas and will maintain the existing ship notification procedure with regard to ships in the Delaware River. The project also includes extension of the parallel taxiways to the east and west of Runway 17-35, a new high-speed exit taxiway, a new holding apron, and relocation of 1,000 parking spaces.

The Capacity Enhancement Program (CEP) is a major airfield redevelopment project aimed at enhancing airport capacity in order to accommodate current and future aviation demand in the Philadelphia Metropolitan Area during all weather conditions. It is a more comprehensive, long-term solution. Two on-airport construction alternatives have been determined to be reasonable and feasible and will meet the project purpose and need. Both alternatives are in a parallel configuration with an additional southern runway. Each will provide for the capability of simultaneous aircraft arrivals or departures in bad weather conditions. Both alternatives are

being examined as part of the ongoing EIS being prepared by the FAA. A Draft EIS is tentatively scheduled to be released in late Summer 2008.

Complementary Solutions: NextGen

Additionally, our NextGen efforts will help with congestion relief in the long-term. To maximize the benefits as soon as possible, we have expedited implementation of some of the latest air traffic control technology at airports in the Philadelphia and New York region. With Philadelphia and New York airspace so interdependent, technologies deployed in one airport in the region will have a beneficial “cascade” effect on the others. Thus, deployment of technology and other solutions at JFK that reduce congestion means fewer delays at PHL.

Automatic Dependent Surveillance – Broadcast (ADS-B), the backbone of NextGen, is a satellite-based technology that broadcasts aircraft identification, position, and speed with once-per-second updates (as compared to the current five to twelve second refresh from today’s radar). While a time savings of four to eleven seconds may seem brief to some, this savings actually allows for far greater accuracy in determining aircraft position. Philadelphia has been selected as an initial key site for the installation of ADS-B. Philadelphia is scheduled to have coverage both in terminal airspace and on the airport surface by February 2010.

Improvements at PHL can come from NextGen technologies at neighboring airports. At JFK, we have accelerated the installation of the Airport Surface Detection Equipment – Model X (ASDE-X) system, which provides the surface surveillance necessary to reduce runway incursions and can allow airport users and operators collaborative surveillance of aircraft so that everyone has

the same picture of the airport and aircraft. The schedule for ASDE-X has been accelerated by one year, and the additional surface surveillance planned for collaborative decision making is being developed and installed at the same time. It is anticipated that the ASDE-X installation and additional surveillance tools will be operational by August 2008, with PHL scheduled for installation in 2009.

The Traffic Management Advisor (TMA) aids controllers sequencing aircraft through en route airspace into major terminals. This system calculates a specific time for each aircraft to cross a fixed point in the airport landing route and also considers minimum safe distances between aircraft. Appropriate direction to pilots are then provided using that data, allowing arrival streams to take better advantage of available landing slots. The FAA plans to expand deployment of this tool and integrate arrivals and departures in the New York area in July 2008, and plan to include a demonstration of the incorporation of enhanced weather detection and prediction into TMA in 2008.

Complementary Solutions: New York ARC

Further, in response to the growing delays in the NY/NJ/PHL area, the President, Secretary Peters, and I met to discuss the unacceptable impact these delays were having on the Nation's airspace. We formed a New York Aviation Rulemaking Committee (ARC) to work with industry and community stakeholders to come up with a list of potential solutions. My colleague, D.J. Gribbin, will provide more detail on this, but I would like to touch briefly here on some of those results.

On December 19, the Secretary announced a number of steps being taken in New York as a result. These steps include a cap on scheduled operations at JFK, planned caps on scheduled operations at Newark, a list of 77 operational improvements to reduce congestion in the region, and establishment of a New York airspace czar. Many of these solutions can be implemented in the short-term, but longer-term efforts such as airspace redesign and NextGen will also be required in order to address the problems in this congested airspace. To date, we have completed eight of the 77 identified operational improvements, and we expect to complete an additional nine by this summer. We are working closely with the Port Authority of New York and New Jersey and the stakeholders to prioritize the remaining 60 items, which are either long-term projects or items that are under review for feasibility, and expect to finalize the priority list this summer. Because the NY/NJ airports share common routes with Philadelphia, and are in many ways interdependent, there will be direct benefits to Philadelphia as operational improvements are put into place in NY and NJ.

Beginning March 30, as a short-term solution, airlines agreed to cap operations at JFK at either 82 or 83 operations per hour, depending on the time of day. These caps will be in place through October 2009 and follow the conclusion of a schedule reduction meeting we held with the air carriers and airport authority. Hourly limits are also planned for Newark. On March 18, FAA published a proposed order limiting total operations at that airport at an average of 83 per hour. We propose to implement those caps on June 1. Additionally, on April 16 the Secretary announced a Supplemental Notice of Proposed Rulemaking (SNPRM) for LaGuardia Airport. This proposed rule follows the FAA's original congestion management proposal, dated August 29, 2006. Like the NPRM, the SNPRM would maintain an hourly cap at the airport and

“grandfather” a majority of the existing Operating Authorizations to the carriers serving the airport today. However, we have decided to withdraw that part of the proposal that would require aircraft upgauging, which was not favorably received by most commenters.

The SNPRM incorporates the use of auctions at the airport. Under the proposal, up to 36 slots would be auctioned each year, for the first five years of the rule. We believe that auctioning off a portion of the existing capacity will create a monetary value for this scarce resource, which will encourage carriers to use the limited number of slots in the most productive manner. The FAA is inviting the public to comment on the proposal. The comment period will be open for 60-days. In addition to the regulatory initiatives proposed and in place for the New York metro area, implementation of the latest air traffic control technology at airports in the Philadelphia and New York region is being expedited, and a permanent aviation “czar” has been appointed to serve as director of the newly-created New York Integration Office.

Nevertheless, expanding capacity is not always possible; neither is it an immediate solution, nor can physical expansion be limitless. As I have noted, the aviation industry is a major economic engine, providing support and jobs both for the country as a whole and for local communities. We need to continue to find ways to address congestion and allocate limited space efficiently and fairly. We believe that a market-based approach provides the best outcome because it sets the right incentives for efficient use of the system. That is why we are also looking at market-based measures for solutions to congestion.

On January 14, Secretary Peters announced one of these solutions--a proposal for comprehensive market-based changes to the FAA's Policy on Airport Rates and Charges. The amendments, if adopted, will provide airports with more tools to finance projects that reduce congestion and to encourage more efficient use of existing facilities. The amendments will allow a congested airport to raise the price of using its runways. This in turn could provide a financial incentive to aircraft operators to consider alternatives, such as scheduling flights outside of peak demand times, increasing aircraft size to use the congested runways more efficiently, or meeting regional air service needs through alternative, less congested facilities.

Environmental Stewardship

The FAA is ever-mindful of our environmental responsibilities. NextGen must be more efficient than the current system, but it must also be quieter and cleaner. Our goal for NextGen is to meet growing demand by developing a system capable of handling two to three times the operations in the nation's airspace while reducing significant environmental impacts. We want to ensure that the number of people in the United States who are exposed to aircraft noise continues to decline, and that we are reducing air and water quality impacts, addressing the impact of aviation's greenhouse gas emissions on the global climate, and supporting the development of alternative aviation fuels. Additionally, it is our goal to provide expertise and funding to assist in abating the impacts of aircraft noise in neighborhoods surrounding airports by purchasing land, relocating persons and businesses, soundproofing residential homes or buildings used for educational and medical purposes, purchasing noise barriers and monitors, and researching new noise projection and abatement models and new technologies.

For example, the City of Philadelphia has an approved noise compatibility program for PHL that includes residential sound insulation. The city is just beginning to update that program, which is based upon a study completed in 2002. In the meantime, the city can continue to mitigate in areas that are known to be still impacted by significant noise levels and for which mitigation was approved. The FAA intends to support this program to the extent possible.

Conclusion

Congestion and delays throughout our aviation system are at a critical point. The FAA has spent years considering the alternatives and determining the most effective solutions to relieving the problems in the NY/NJ/PHL airspace, without compromising our environmental stewardship. The Airspace Redesign Project is one which will enhance efficiency and reliability of the airspace, while also accommodating the projected growth. The project plays a crucial role in our overall solutions in the region, which include upgrades in technology and other short-term scheduling solutions.

Senator Specter, Senator Casey, this concludes my prepared remarks. Thank you again for this opportunity to testify. I will be pleased to answer any questions you may have.