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AN EXAMINATION OF THE FEDERAL AVIATION ADMINISTRATION'S SAFETY AND MODERNIZATION PERFORMANCE

HEARING

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

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AN EXAMINATION OF THE FEDERAL AVIATION ADMINISTRATION'S SAFETY AND MODERNIZATION PERFORMANCE

THURSDAY, APRIL 17, 2008

U.S. SENATE,
SUBCOMMITTEE ON TRANSPORTATION AND HOUSING
AND URBAN DEVELOPMENT AND RELATED AGENCIES,
COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:35 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Patty Murray (chairman) presiding.

Present: Senators Murray, Feinstein, Lautenberg, Bond, Specter, and Stevens.

OPENING STATEMENT OF SENATOR PATTY MURRAY

Senator MURRAY. This subcommittee will come to order. These are troubling times for our airline passengers and the entire aviation industry. In the last year, we have seen jet fuel prices climb by almost 70 percent. In the last 2 weeks, three airlines have declared bankruptcy, and 2 days ago, we learned of a planned mega merger to create the Nation's largest U.S. airline and more mergers could be announced soon.

With all of this disruption, the millions of passengers who take to the skies in our country each year need to be sure that the agency in charge of enforcing safety is consistent and effective, but instead the FAA has been inconsistent and erratic and passengers are angry and upset.

I am very concerned. I and the Department of Transportation's Inspector General have been sounding the alarm for years about problems in the FAA's Flight Standards Program, yet we have seen repeated problems. Most recently, we learned that managers at the FAA allowed Southwest Airlines to violate Federal safety regulations and it punished the safety inspector who tried to bring the violations to light.

Some observers inside the Government have tried to blame it all on a few bad apples at one inspection office in Dallas, Texas, but I don't buy it, and I want to know how the FAA will ensure to the flying public that it is meeting its core duty to enforce safety.

For 4 of the last 7 years, this subcommittee has provided more money for safety oversight than the Bush administration or its FAA administrators have requested. It didn't matter if Senator Shelby was chairman, if I was chairman or if Senator Bond was chairman. We all heard the same concerns raised by the Inspector

General, the Government Accountability Office and others, and we responded. We tried to boost the number of safety inspectors and we increased the quality and amount of training and the thoroughness of their work.

That is why, as I reviewed the Inspector General's testimony, I was particularly disturbed by the number of times that the IG's Office discovered the very same problems year after year with the FAA's Flight Standards Program. In other words, despite repeated commitments to fix the problems by the FAA, the problems didn't get fixed.

The Inspector General will testify that in 2002 and again in 2005, his auditors found an inadequate number of inspections, inappropriate targeting of inspections, and safety-critical inspections that just weren't done.

In 2005, the IG found that 26 percent of the necessary inspections identified by the FAA's own safety-targeting system were not done and half those inspections were considered safety critical.

Those audits prompted the Inspector General to recommend that FAA headquarters take a more hands-on supervisory approach to make sure that individual inspection offices were getting the job done. The FAA, of course, said it was committed to fixing the problems.

Well, now it's 2008 and we're finding many of those same problems. One of the most glaring is that the FAA failed to follow its own requirement that every airline be reviewed every 5 years to ensure it was complying with airworthiness directives. Those directives are a critical component of aviation safety.

At Southwest, the U.S. airline with the most domestic flights, this 5-year review has not taken place since 1999, 9 years ago, and the FAA's management structure either didn't know about it or did nothing about it.

We need an FAA that actually fixes problems as they are found rather than one that rushes into a public relations campaign to assure everyone there isn't a problem.

Last year, we discussed the FAA's habit of glossing over problems with its Capital Program. Last year, FAA continually boasted that 100 percent of their projects were on time and on budget, even when they were costing hundreds of millions of dollars more than originally advertised.

This year in the wake of the findings of Southwest Airlines, Acting Administrator Sturgell ordered a complete review of whether airlines were complying with certain airworthiness directives.

When I first heard of this plan, I questioned why the agency needed to doublecheck its work. The taxpayers and this subcommittee paid for full compliance the first time. Since those initial reviews, the FAA is now boasting a 99 percent compliance rate, but I don't think that figure gives much comfort to the people who thought they were getting 100 percent safety compliance the first time around, and it is not going to be much comfort to the thousands of airline customers who found themselves with canceled flights last week, missing business meetings, weddings, or the opportunity to get home to their kids because of this last-minute review.

Last Wednesday, close to 1 in every 10 domestic passengers saw their flights canceled, and it may have affected more than a half a million passengers, but this wasn't just an inconvenience. This incident raised serious concerns in my mind and many others about the FAA.

The FAA had initially given the airlines 18 months to fix the problem with wire bundles and the wheel wells of MD–80s, but after the discoveries at Southwest, the FAA announced that the airlines couldn't wait another day to fix it. This was very troubling to me.

I want to know why, if it wasn't safe enough to fly for one more day, did FAA give the airlines 18 months to fix the problem in the first place.

As someone who flies the country twice a week and who represents many constituents who fly, we want to know how you're going to restore passengers' faith in the FAA. Your number one job is to ensure the airlines are safe for the flying public and that means that safety regulations must be clearly defined and enforced consistently.

FAA inspectors also deserve respect. They are not just your employees, they are stewards of the public safety and they deserve the support of their superiors. The supervisors in the FAA inspection force are supposed to be agents for safety, not the agents of airlines. They are supposed to support the findings of their own employees and make sure those findings are turned into safe operating practices.

One of the IG's most egregious findings was that both Southwest and Northwest Airlines were actually able to concoct phony complaints against safety inspectors they thought were being too aggressive. The result was the inspectors were taken off the case. That must never be allowed to happen.

The airlines deserve clarity and consistency from the FAA. The taxpayers deserve accountability on the part of senior Government officials when those lapses are discovered and left unaddressed; and, they deserve better than empty promises that problems have been fixed or will be fixed when they have not.

And finally, this subcommittee deserves answers about why FAA's management still doesn't get it right, even though this subcommittee continually adds funding and cites these problems year after year.

I hope we will get some answers to those questions this morning, and with that, I will yield to my ranking member, Senator Bond.

OPENING STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Thank you very much, Madam Chair, and thank you, Mr. Sturgell, for your continued service to the Nation and the FAA. I also welcome Inspector General Scovel. I thank the chair for the opportunity to address these important safety issues and modernization issues at the FAA.

Mr. Administrator, first, I echo the chair's deep concern about the state of the Aviation Safety Office within the FAA. I am, however, appreciative of the current safety record of your administration and believe you and your employees are owed a huge thank you from the entire flying public for the accomplishments so far.

I think the current safety record commends itself with zero fatal accidents last year and a fatal accident rate of .022 percent, just over two hundredths of a percent per 100,000 departures over the past 3 years. We're seeing that this is an extremely safe period for air travel, but nearly good is not good enough when you are in the flying public who wants to see 100 percent.

It's now evident there were clearly practices within your AVS Office that exposed passengers to risks over the past few years and, as indicated, the recent Southwest episode and the American Airlines wiring situation raise a number of questions that I hope to address.

Let me be clear. I believe the FAA, regardless of any customer service initiative or any other program, should regulate the aviation industry without second thought about hurting the balance sheets or feelings of any air carrier or certificate holder where safety is at issue.

The FAA can and should do a better job of physically inspecting aircraft to ensure compliance after new airworthiness directives are applied to verify compliance. Merely assuming an airline is in compliance or relying on an airline's own maintenance logs is simply not enough, as has been proven over the past several weeks.

I believe the use of targeted random selected inspections will allow you to determine whether the job is being done and make sure you call out immediately any areas where there are deficiencies and not just waiting for a 5-year general review. I believe these inspections should be made immediately and on an ongoing basis with the available inspectors.

I applaud many of your recent actions to reform the inspection program, such as working with manufacturers and airlines to clarify airworthiness directives to provide more plain language directives and tougher office audits to ensure that collaboration between certificate holders and inspectors is transparent and that it's not "too familiar."

I remain concerned that senior managers at certificate management offices are allowed to stay in place with one carrier indefinitely without rotation. By limiting the time these senior professionals can stay at one location, it seems to me you can avoid any instances or appearances of impropriety.

While I'm concerned about the problems with airline maintenance compliance, there are still many issues facing the FAA's procurement accounts. The committee has been concerned about the Airport Surface Detection Equipment, Model X or ASDE–X, program for several years. I'm glad to see the program is not experiencing further schedule slippages and the final schedule for completion is moving in the right direction. This critical safety technology is far too important to be delayed. I'm concerned, however, that recent decisions in expediting ASDE–X may be impacting the other capital budget procurements as well as the overall cost of the program.

In the area of runway safety, I'm encouraged by recent news of the decision to expedite from 2014 to 2011 the Runway Status Lights program. Mr. Sturgell, for many years, the FAA has needed a capability to warn pilots directly of potential runway incursions.

The NTSB has written about the FAA's deficiencies in this area in great detail for many years.

Runway Status Lights could reach airports even sooner with increased investments, but your budget proposal only provides for a modest increase in the program while providing a massive increase for NextGen funding. Finding the appropriate balance is not easy but it's not impossible either.

Safety programs that have immediate impact, for example, in the area of runway incursions, should receive priority, and I hope to work with you and the chair to move this program forward. In fact, Runway Status Lights are a great example of competing programs within your capital budget that need serious investment and oversight, all while the system is being modernized with increased spending for NextGen.

The administration requests over $600 million for NextGen, the new NextGen modernization technologies for fiscal year 2009, and while I agree that something must be done to modernize the current decrepit system, we cannot neglect maintaining the current system and adding long overdue safety improvements that are of relatively simple technical and monetary costs.

I think a balance is needed to preserve the current system while we implement the needed changes that are part of NextGen, and while we're on the topic of NextGen, I'm concerned about the future of our air traffic system.

While delays last year were the worst on record, the prognostications I see indicate that this summer could be even worse, and if you line up the rhetoric regarding the benefits of NextGen next to the forecasts for passenger and operational growth, there doesn't seem to be any relief any time soon coming.

I'm alarmed to find that none of the planning documents for overall NextGen or any of the specific budget documents for the component programs contain any mention of how each NextGen capability will reduce delays and increase capacity in anything other than generalities.

If the entire goal of NextGen is to expand capacity threefold compared to current levels, why can't you consider the benefits each new expensive program will have on the overall progress toward meeting our goals and specific estimations?

It seems to me that a lot of investment decisions and calculations rely on a lot of luck and hope, two things that really have no place in Federal procurement, especially when related to costly technical systems. Simply knowing that we need three times the current capacity without a current plan that's concrete, that tells us how each investment will get us to the target goal is not going to help us avoid delays, cost escalations in procurements and schedule slippages.

We need to see actual figures and estimations to make our funding decisions, not generalities, and while I have expressed concerns regarding the FAA, I'll reiterate my support for you, Mr. Sturgell. Your experience and approach to this position are uniquely suited to provide the type of leadership that is going to be needed for the modernization challenges ahead.

I know the prospects of your confirmation are somewhat in question, but I have no doubt that you'll be a fine administrator at the

FAA. The challenges before us are great. They are not unsolvable. We need good leadership.

I thank you, Madam Chair.

Senator MURRAY. Thank you, Senator Bond. Senator Lautenberg?

STATEMENT OF SENATOR FRANK R. LAUTENBERG

Senator LAUTENBERG. Thank you, Madam Chairman. It's fairly obvious that the 2 million flyers that enter an airplane each day expect that the flight crews and the mechanics and the air traffic controllers are doing their jobs, but they also expect that the people making top-level decisions, the management of FAA, are making certain that the aviation system is operating carefully and precisely.

They've got to make sure that there are enough safety inspectors deciding what to inspect, getting the right technology and practices to reduce flight delays and preventing the stranding of passengers, watching airline procedures to make sure that airplanes are properly fueled, budgeting for runway safety improvements and hiring enough air traffic controllers.

Now these decisions are being made by the Bush administration's FAA and I've been extremely disappointed by the agency's decisions on these important matters.

Recently, we've seen disturbing reports about safety inspection failures, letting planes filled with passengers take off with cracked hulls and cancellations of thousands of other flights. Meanwhile, FAA continues to focus on its plans to force airports to auction off landing rights or slots. Now not only will this mean higher fares for passengers but this mix-up in priorities is a management failure at the highest level of FAA.

Unfortunately, instead of providing new leadership and changing the way this agency does business, President Bush has opted for the same process that's been existing.

Mr. Sturgell, not to be supercritical, but you've been the second-in-command for the past 5 years and you're nominated to take over the agency. I come from the business world and the way we used to measure an individual or a department's competence was by the results. What did we get from the people that we have in place, and I would say here that it's obvious that senior management has to be held responsible for slipshod leadership again by looking at the results.

On a personal note, I got into an airplane with my wife out West, going from Colorado to California, and as we boarded the plane, we were told that the baggage would not accompany us. This is at 9 o'clock at night. So, whatever you needed, if you carried a portable respirator, if you carried medication, if you carried things that were necessary for presentation that you were making, whatever, instead of reducing the number of paying seats, everyone who could fly should have been accompanied by their baggage.

So, I look forward to your testimony today, Mr. Sturgell, and that as well of Inspector General Scovel. We've got to get to the bottom of these problems to understand what's really happening there.

Thank you, Madam Chair.

Senator MURRAY. Senator Feinstein?

STATEMENT OF SENATOR DIANNE FEINSTEIN

Senator FEINSTEIN. Thank you very much, Mr. Chairman, and welcome, gentlemen.

Like Senator Murray, I'm a cross-continental traveler, generally on United, which I think is one of our great legacy airlines, but I want to talk to you just quickly about three things.

The first is according to a November 2007 GAO report, Los Angeles International Airport had more runway incursions than any other airport in the country during 2001 to 2006. The GAO concluded, and I quote, "Air traffic controller fatigue, which may result from regularly working overtime, continues to be a matter of concern for the National Transportation Safety Board which investigations transportation accidents."

Despite the attention that this report received, incursions continue. In December, Los Angeles International suffered its ninth near-miss of 2007 when controllers failed to prevent two aircraft from entering the same runway. This is a real concern to me.

Second, I'd like to be updated about the funding and staffing situation at southern California's TRACON. Last year, Palm Springs, as you know, was consolidated into its system. I've been concerned about the understaffing of FAA traffic controllers at the facility which is the world's largest TRACON, servicing 62 airports and 2.3 million passengers each year. It services LAX, which I've just mentioned is a real problem.

The next thing is I just read in the International Herald Tribune that the EU is going to sanction the use of cell phones on traffic and I'll tell you I don't know what's going to happen if I have to listen or anybody has to listen to the person next to them talking loudly on their cell phone for 5½ hours as we travel from Washington to San Francisco.

I mean, I'd rather not travel. I mean some people are so painfully loud on their cell phone that you know everything about them by the time they hang up and so I would hope that you would comment on that as well.

Thank you, Madam Chairman.

Senator MURRAY. Thank you, Senator. We will now hear from our witnesses today. I want to thank both of you for coming today to testify, and we'll start with the Honorable Robert Sturgell, the Acting Administrator at the FAA, and then we'll hear from Calvin Scovel, who is with the Office of the Inspector General.

Mr. Sturgell?

STATEMENT OF HON. ROBERT A. STURGELL, ACTING ADMINISTRATOR, FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

Mr. STURGELL. Good morning, Madam Chairman. I'm pleased to testify before you, Senator Bond and members of the subcommittee regarding the budget request as well as our safety and capital programs for fiscal year 2009.

As the operators and regulators of the national air space system, we believe that our 2009 budget request of $14.6 billion will provide adequate funding to support all our critical priorities, the priorities on which the flying public and the taxpayers depend, especially in light of the activity we've all witnessed in the past several

weeks, we take very seriously our role to instill public confidence in the system. I empathize with the public about the delays and the congestion. The sheer inconvenience of an unreliable experience remains a focus for us. I believe that this budget submission will help us address these very needs.

RUNWAY SAFETY

Madam Chairman, this subcommittee has rightly maintained that safety must be FAA's primary concern, and we are being particularly aggressive in doing so on our runways. Last year, and several of you have talked about runway incursions, last year, only eight runway incursions involved commercial aircraft. That's 8 in more than 61 million operations. Even though those numbers are small, we are pushing to make it even smaller. Just 6 months ago, I issued a Call to Action, a challenge to our industry and to us that we needed to step up our actions to make runways safer than they are today. Together, using the partnerships that are critical to the backbone of safety on which this relies, we are answering that call.

We've had an incredibly positive response. The airlines and the airports have really stepped up to the plate in terms of focusing on quick turnaround solutions that have the potential to significantly improve runway safety. The Call to Action starts with things as simple as improving the markings and paint on taxiways at hundreds of airports around the country. That's already taken place at 74 of the 75 large airports that were mandated to do so, with more than 300 other small airports committing voluntarily to make the upgrades.

We are also using technologies, specifically runway status lights, to make a difference as well. We're testing them at Dallas-Fort Worth, San Diego, and we recently added Los Angeles, LAX, and Boston to our current list. The technology is intuitive. A series of lights positioned strategically to tell the pilot and the driver of the ground vehicle that it's safe to proceed. Red means stop. The bottom line: they work. They've already averted one potential tragedy at DFW and they reduced runway incursions where they have been used there by about 70 percent. Our 2009 request includes funding to begin a national rollout and I am hopeful to work with you to support that program going forward.

NEXTGEN

We also are pushing forward with another area that is of special interest to this subcommittee, NextGen, the Next Generation Air Transportation System. In many ways, the linchpin for NextGen is the buy-in from the stakeholders, industry and our employees.

There will be no surprises as new technology and procedures are put in place. To the critics who say, "There is no NextGen," I believe that couldn't be farther from the truth. We have a plan in place. We have participation from stakeholders and at all levels from seven different governmental organizations. We have regular meetings to make sure that participation and collaboration are still in operation.

AIR TRAFFIC CONTROLLER STAFFING

Then to be ready is our workforce. As our controller workforce retires, we have a major recruiting effort underway. Our most recent job postings drew more than 4,500 applications. We hired more than 1,800 controllers in 2007 and will hire over 1,800 more this year as well. The 2009 budget request adds an additional net gain of 306 controllers.

I must also underscore that our 2009 request provides strong support for our staff hiring goals, safety and capital programs and NextGen activities.

AIRPORT IMPROVEMENT PROGRAM

With respect to AIP, I understand the concerns about the funding level, but our program proposal is designed to strategically target Federal dollars to the airports where they will have the most impact. The proposed PFC increase will make another potential revenue source of $1.2 billion available to the airport community.

RECENT EVENTS

I'd also like to take the opportunity to provide the subcommittee with some observations on the activities of the last several weeks. As I said at the outset, the delays that have inconvenienced the flying public are of great concern to me. With that said, critics of the FAA rightfully hold us accountable for safety lapses, as in the case of Southwest Airlines. They also are scolding us for doing our job, as in the case of the grounding of American's MD–80s.

I think what is being lost in the rhetoric is that the system does depend on partnership and collaboration with industry to get the job done. The benefits of partnership between regulatory agencies and those they regulate were pointed out and promoted by the Commission on Aviation Safety and Security, led by then Vice President Al Gore, and Secretary Mineta's NCARC Commission produced the CASTeam, Commercial Aviation Safety Team, probably aviation's most productive and valuable partnership program.

Those who push to abandon partnership and voluntary disclosure programs, I believe, are shortsighted. They can be improved but it is the oversight and partnership approach that has delivered us the safety record we enjoy today. We know the system is not perfect. We are not being complacent about it. Our challenge is to improve continuously upon this record and to do it with industry. If we return to the gotcha approach of decades past, where there were signs in the hangar, "don't talk to the FAA," I think we risk driving these safety issues underground. Hidden data obscures trends. Undiscovered trends are the precursors to accidents and silence breeds catastrophe. I'm not willing to accept that.

I sympathize and apologize for the stress last week's flight cancellations caused the flying public. It's my job to ensure they are safe in the air and that's what our agency did.

PREPARED STATEMENT

That said we are going to look at all aspects of what occurred last week to try and minimize the chances of such disruptions again.

Thank you for your time. Thank you for your support of our safety programs, and I'd be pleased to answer any questions you have.

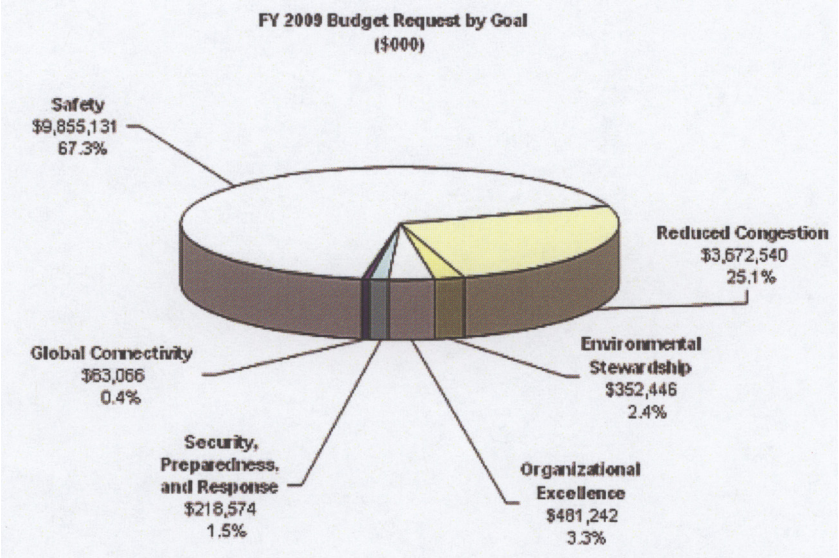
[The statement follows:]

PREPARED STATEMENT OF HON. ROBERT A. STURGELL

Good morning, Chairman Murray, Senator Bond, and members of the subcommittee. Thank you for the opportunity to appear here today to discuss the administration's fiscal year 2009 budget request for the Federal Aviation Administration (FAA).

FISCAL YEAR 2009 BUDGET

Our fiscal year 2009 budget request of $14.6 billion provides funding to support all critical priorities of the FAA. As always, safety is FAA's primary concern, with 67 percent of our budget request dedicated to our safety mission. (See attached chart showing our budget request in terms of agency goals). This request includes $688 million for key research and technologies to enable the transition to the Next Generation Air Transportation System (NextGen), as well as funding to meet our hiring goals for our air traffic controller and safety inspection workforces.



The 2009 budget request assumes adoption of the President's reauthorization proposal for FAA programs and revenue streams, with user fees implemented in 2010. We firmly believe that comprehensive reform of FAA's funding mechanism is necessary, and we will continue working with Congress and our stakeholders toward a successful reauthorization that is consistent with our key principles for a comprehensive cost-based financing structure. That structure must ensure that costs and revenues are better aligned, that all stakeholders are treated fairly, and that our aviation system is ready for the congestion and environmental challenges of the future. With a more efficient revenue structure, we will be able to build on our exemplary safety record while expanding the number of aircraft that the Nation's airspace can safely handle at any given time. Our proposal provides the tools we need to implement NextGen and the modern technology required to handle increased demand for aviation.

For fiscal year 2009, we have proposed a new account structure that aligns FAA's budget accounts with its lines of business. We believe an account structure based upon agency functions makes sense both in terms of how we operate now as well as under our proposed financing reforms. For ease of understanding this approach, we have attached a "crosswalk" chart showing a comparison of our request with the current account structure.

COMPARISON OF BUDGETS—FISCAL YEARS 2007–2009—OLD VERSUS NEW ACCOUNTS

[In millions of dollars]

Accounts	Fiscal Year 2007 Enacted	Fiscal Year 2008 Enacted	Fiscal Year 2009 Request	2008–2009 Change (percent)
Operations	8,374	8,740	8,998	3.0
Facilities and Equipment	2,518	2,514	2,724	8.4
Reseach, Engineering and Development	130	147	171	16.3
Airport Improvement Program (Ob Lim)	3,515	3,515	2,750	−21.8
FAA Total	14,537	14,915	14,643	−1.8
Safety and Operations	1,769	1,893	2,052	8.4
Salaries and Expenses	1,634	1,774	1,920	8.2
Capital Programs	135	119	132	10.9
ATO	9,123	9,361	9,670	3.3
Salaries and Expenses	6,740	6,966	7,079	1.6
Capital Programs	2,383	2,395	2,591	8.2
Research, Engineering and Development	130	147	171	16.3
Airport Improvement Program (Ob Lim)	3,515	3,515	2,750	−21.8
FAA Total	14,537	14,915	14,643	−1.8

SAFETY AND OPERATIONS

The fiscal year 2009 request is $2 billion for Safety and Operations, including $1.2 billion for Aviation Safety (AVS), $14 million for Commercial Space Transportation, and $851 million for Staff Offices. Most of the funds requested support the agency's activities to maintain and increase aviation safety and efficiency. The request will allow AVS to meet its mission of promoting aviation safety in the interest of the American public by regulating and overseeing the civil aviation industry. AVS consists of 8 distinct organizational elements employing approximately 7,000 personnel. These employees are responsible for the oversight of the Air Traffic Organization (ATO); certification, production approval, and continued airworthiness of aircraft; and certification of pilots, mechanics and other safety related positions. The agency recognizes that this subcommittee is particularly interested in our efforts regarding aviation safety inspector staffing. The fiscal year 2009 request maintains recent staffing gains to our aviation safety workforce, providing for 4,110 safety inspectors, and requests an additional 30 safety staff positions for air traffic oversight. I should also note that the $14 million Commercial Space Transportation request includes $270,000 for four additional safety personnel needed to assess the human space flight aspects of the safety evaluations of commercial space license and permit applications.

AIR TRAFFIC ORGANIZATION

The fiscal year 2009 request for FAA's Air Traffic Organization (ATO) is $9.7 billion, of which $7.1 billion is for ATO operating expenses. We recognize that this subcommittee is also very interested in our efforts regarding controller staffing. As with the safety inspector workforce, FAA is aggressively hiring and training controllers to ensure the right number of controllers are in place at the right time to address the well-documented retirement "bubble." FAA began anticipating today's air traffic controller retirement wave 5 years ago, issuing a comprehensive staffing plan that we update annually. Our 2008 plan was just published last month.

The remaining $2.6 billion will support ATO capital projects, formerly in the Facilities & Equipment (F&E) account. This funding will continue to maintain and upgrade the current system, improving the aging infrastructure of our facilities, while laying the foundation for NextGen. This funding will also support important safety and capacity enhancing technology, such as Airport Surface Detection Equipment—Model X (ASDE–X), runway status lights (RWSL), and Automatic Dependence Surveillance Broadcast (ADS–B).

The ATO continues to see cost savings from the Flight Service Station (FSS) contract, which was initiated 2 years ago. We anticipate savings and cost avoidance of approximately $2.1 billion over the 13 year period of the program, with $1.6 billion of these savings achieved over the 10 years of the Lockheed Martin contract. Our network of automated flight service stations, which provide weather guidance and other assistance to the pilots of small airplanes, has been reduced from 58 to 18—15 previously existing facilities and 3 new ones built by Lockheed Martin. The con-

tract not only saves money, it also provides incentives for the vendor to modernize and improve the flight services we provide to general aviation pilots.

GRANTS IN AID FOR AIRPORTS (AIP)

The FAA's reforms for the Airport Improvement Program contained in our reauthorization proposal are designed to target Federal dollars strategically to the airports where they will have the most impact. While large and medium hub airports have a greater ability to finance their own capital requirements with revenue from passenger facility charges and their own rates and charges, small primary and general aviation airports rely more heavily on AIP funding to help meet their capital needs and complete critical projects. We have proposed changes to the Federal funding program which will stabilize and enhance these funding sources for airports. With the proposed programmatic changes, including the increase in the passenger facility charges, the $2.75 billion requested in our budget will be sufficient to finance airports' capital needs and meet national system safety and capacity objectives. Our request also includes $19 million for airport technology research and $15 million for the Airport Cooperative Research program, $5 million of which is for environmental studies.

RESEARCH, ENGINEERING, AND DEVELOPMENT (RE&D)

The fiscal year 2009 request for RE&D is $171 million. The request includes $91 million for continued research on aviation safety issues. The remaining research funding is to address congestion and environmental issues, including $42 million for new NextGen projects such as Self Separation, Weather Technology in the Cockpit, Air-Ground Integration, and the Environmental Research—Aircraft Technology, Fuels and Metrics. The RE&D budget also provides $14.5 million for the Joint Planning and Development Office (JPDO) to coordinate partner agency research and development in support of NextGen, and to continue facilitating the transition to NextGen, bringing this account's total fiscal year 2009 contribution to the NextGen effort to $56.5 million.

CONTROLLER WORKFORCE

Our highly trained air traffic controllers play a critical role in achieving the outstanding level of aviation safety we enjoy in the United States. Looking forward, I am dedicated to maintaining and improving the levels of safety we have achieved thus far while continuing to improve working conditions and expand the diversity of this workforce.

With more than 60 percent of the controller workforce eligible to retire over the next 10 years, FAA plans to hire more than 16,000 controllers over that period. Last year we hired 1,815 controllers, a third of them with previous air traffic control experience from the military, and ended the year with 14,874 controllers on board—67 more than our workforce plan target. Our new plan calls for hiring an additional 1,877 controllers this year and 1,914 more in 2009, bringing the total controller workforce to 15,436 by the end of 2009. Our fiscal year 2009 budget includes the funding necessary to carry out this plan. The last public sector announcement for an air traffic controller position closed on February 15, and generated 4,515 applications. We opened another announcement just this week. The agency is also working aggressively to build up staffing by offering a variety of incentives to recruit and retain controllers, including recruitment and relocation bonuses and repayment of student loans.

Over the next few years, most facilities will be in a period of transition and will be staffed with a combination of certified professional controllers (CPCs), CPCs-In-Training, and developmental controllers. I must stress that developmentals are proficient, or checked-out, in specific sectors or positions, and that handling live traffic is a requirement to maintain proficiency as they progress toward CPC status. While not yet certified on all positions needed to achieve CPC status, these newer controllers are highly skilled, trained, and capable of carrying out the safety mission of FAA.

To accelerate the hiring process for qualified individuals, we have implemented Pre-Employment Processing Centers (PEPCs). Individuals chosen by FAA selection panels are invited to come to the PEPCs, where they are interviewed and undergo pre-hire screenings such as medical examinations, psychological and drug testing, fingerprinting and security clearance application processes. Some recruits may now receive final offer letters from FAA in as little as 1 month after their interview—a process that could otherwise take up to 6 months. Our most recent PEPCs were held in Miami and Atlanta. A total of 200 air traffic control candidates and 40 Tech

Ops candidates participated. The next PEPC will take place in Ft. Worth later this month.

The Air Traffic Collegiate Training Initiative (AT–CTI) is becoming a more significant source for hiring, providing controller candidates who have college degrees. CTI schools do not receive Federal funding but are an important pipeline of recruitment for our agency. The number of AT–CTI graduates hired into controller positions has rapidly increased from 38 percent of new hires in fiscal year 2005 to 56 percent in fiscal year 2007. To attract qualified new employees, we are expanding the program again in 2008 to allow new schools to apply. Currently, we have 23 schools in the program—14 original schools and nine new schools added as a result of our fiscal year 2007 expansion, the first expansion in more than a decade. Our goal is to have up to 35 AT–CTI schools in the program graduating 2,000–2,500 students per year by fiscal year 2010.

Veterans' programs are also a valuable source of new controllers. One-third of new controller hires last year had previous military air traffic control experience. In addition, FAA implemented the Veterans Training Program (VTP) for air traffic control specialist (ATCS) and airway transportation system specialist (ATSS) positions last August. Our first two VTP participants are currently in Academy training. One participant will be working in Louisville, and the other will be working in Tulsa, once training is complete. The Department of Veterans Affairs has also recently certified our on-the-job training program for developmentals. This certification allows developmentals with appropriate veteran entitlements under the Montgomery GI bill to receive monetary education benefits for the training they are receiving.

Furthermore, I am focused on improving our facilities and the physical conditions under which our controllers work. Our improvement projects include modernization, sustainment, seismic upgrades, and facility condition lifecycle assessments. Projects are prioritized based on the impact of known problems in the facility, the importance of the facility to the National Airspace System, and the urgency of the sustainment need. For this year and next we will allocate slightly more than $300 million per year for the repair, modernization, and replacement of our air traffic control facilities. These projects will include replacement of obsolete infrastructure, asbestos and mold abatement, repair of roof leaks, and plumbing improvements.

INCREASED SAFETY

Due to the combined efforts of Government and the aviation community, we are fortunate to be living in the safest period in aviation history and the FAA is committed to making it safer still. In the past 10 years, the commercial fatal accident rate has dropped 57 percent, to a rolling 3-year average of 0.022 fatal accidents per 100,000 departures as of the end of fiscal year 2007. In the past 3 years, the United States averaged approximately 2 fatal accidents per year and 28 deaths per year; while any loss of life is tragic, this statistic is remarkable, given that there are roughly 12 million commercial aircraft flights per year. General aviation accidents are down. Air traffic control errors are occurring at a rate lower than in the previous 2 years.

Approximately 67 percent of our budget request, or $9.9 billion, supports the FAA's safety mission to operate and maintain the air traffic control system, inspect aircraft, certify new equipment, ensure the safety of flight procedures, oversee the safety of commercial space transportation, and develop a replacement air traffic data and telecommunications system. For fiscal year 2009, we have adopted a new safety goal: to reduce U.S. commercial airline fatalities per 100 million people (including crew) on board to fewer than 8.31 (an improvement of over 6 percent from our fiscal year 2008 goal) and to reduce the rate of general aviation fatal accidents. Under the old metric, all accidents were counted equally, regardless of how many fatalities occurred. This new metric is more relevant to the flying public, as it better measures the individual risk—as low as it is—to fly.

The request includes an increase of $11.3 million to hire and train sufficient air traffic controllers to achieve our hiring targets noted earlier in my statement. It also includes $800,000 for 30 new positions to support continued development of the Air Traffic Oversight office, which was formed in fiscal year 2004 to ensure continued operational safety throughout the ATO. The fiscal year 2009 budget maintains the staffing gains to our aviation safety workforce during fiscal year 2007–2008, with total aviation safety staffing reaching 7,069 by the end of fiscal year 2009.

In March 2007, Southwest Airlines filed a report under the Voluntary Disclosure Reporting Program (VDRP) notifying FAA of its noncompliance with a structural Airworthiness Directive (AD). The FAA's subsequent investigation revealed that between March 15, 2007, and March 23, 2007, Southwest operated the 46 affected aircraft on 1,451 additional revenue flights when it knew that it had not conducted

the repetitive inspection required by the AD—making the planes not airworthy. These violations were deliberate and led to the initiation of enforcement action against Southwest Airlines resulting in a civil penalty of $10.2 million announced on March 6, 2008.

The on site principal maintenance inspector for Southwest Airlines, an FAA employee, was aware at the time that Southwest was not in compliance with the AD. He had a clear responsibility to act and fell short of that responsibility. He has been reassigned to a different position pending further investigation and personnel action. Additional personnel actions are also in progress.

Since then, AVS has held a Managers Conference and an organization-wide Town Hall meeting to emphasize the importance of open and timely communications about all safety issues. We are undertaking a five point plan to refine our programs and ensure more accountability in our processes. As part of the plan, we will be implementing a Safety Issues Reporting System (SIRS), improving the VDRP to ensure awareness of reports at high levels of management in both FAA and the airlines, and clarifying and upgrading our AD processes. Furthermore, we have initiated a review of AD compliance, with initial results demonstrating 99 percent compliance. We expect to complete this in-depth review in June. While our safety record indicates this is not a systemic problem, we are always open to working with industry and Congress to make our safe system even safer.

Another major component of aviation safety is runway safety. FAA has made runway safety a focus since 1999, and the aviation community has made great progress over the years in improving runway safety. In fiscal year 2007, we met our performance target of 0.530 per million operations for the most serious runway incursions, Category A and B, and ATO's goal is 0.450 per million operations by 2010. Over the past 6 years alone, we have reduced the number of serious runway incursions by more than 50 percent.

Last August, more than 40 representatives from a cross-section of the aviation industry agreed to an ambitious plan focused on solutions in improving cockpit procedures, airport signage and markings, air traffic procedures, and technology. The Call to Action plan committed the group to a list of five short-term actions that could be completed within 60 days. These actions included upgrading runway entrance markings, improved training programs, development of an Air Traffic Safety Action Program (ATSAP) to encourage voluntary reporting, and reviews of surface operations and cockpit procedures. Since then, all of these actions have either been implemented or are on schedule, and the operational reviews have resulted in more than 100 short-term and numerous mid- and long-term initiatives.

The FAA has spent more than $404 million to date to acquire and deploy the next generation of ground surveillance technology, known as Airport Surface Detection Equipment—Model X (ASDE–X). The fiscal year 2009 request for ASDE–X reflects FAA's commitment to accelerate the entire deployment schedule for completion in 2010 instead of 2011. ASDE–X systems at 12 airports are fully operational and all remaining 23 ASDE–X systems are in various phases of the implementation process. Funding for each of the six phases of the ASDE–X implementation process is usually required prior to beginning a new phase. Funding has already been obligated for the system hardware, all planned software development, and system enhancements for all 35 sites.

Runway status lights (RWSL) are another system being deployed to reduce the potential for runway incursions. The RWSL system, which was developed as a result of the NTSB's "Most Wanted" list of safety improvements, integrates airport lighting equipment with approach and surface surveillance systems to provide a visual signal to pilots indicating that it is unsafe to enter, cross, or begin takeoff on a runway. Airport surveillance sensor inputs are processed and command in-pavement lights to illuminate red when there is traffic on or approaching the runway.

The system is currently in operation at Dallas/Fort Worth (DFW) and San Diego airports. Recently, agreements have been signed with two additional airports, Los Angeles and Boston, to provide them with an early RWSL capability. RWSL equipment for the two airports will be installed and operational by March 2009 and December 2009 respectively. Further RWSL test installations are under consideration. At DFW this past February, a plane was cleared for take-off, while at the same time air traffic control cleared another aircraft to cross that same runway on a taxiway. The first plane did not initiate its takeoff roll, because the pilot "saw the red lights" of the RWSL System. In all, DFW has seen a 70 percent reduction in runway incursions since the technology was installed on one of the airport's seven runways. The FAA has already spent nearly $25.8 million on this initiative and will spend another $8.7 million in fiscal year 2008. Our current plan includes $27 million for fiscal year 2009, in line with the administrator's Call to Action goal of program completion by fiscal year 2011.

To further increase runway safety, we are helping airports build end-around taxiways, which allow aircraft to avoid crossing an active runway. The first opened at Atlanta last year and has eliminated 612 runway crossings per day. We anticipate the opening of another taxiway at Dallas/Fort Worth in December. We are also making progress improving Runway Safety Areas (RSAs). RSAs enhance safety in the event of an undershoot, overrun, or excursion from the side of the runway. In fiscal year 2000, FAA started an ambitious program to accelerate RSA improvements for commercial service runways that do not meet standards. We developed a long-term completion plan that will ensure that all practicable improvements are completed by 2015. Significant progress has been made and 63 percent of the RSA improvements have been completed. By the end of 2010, 88 percent of RSA improvements will be complete.

INCREASING CAPACITY

The aviation industry is critical to our Nation's economy. Over 2 million people a day travel on our Nation's airlines and more than one-third of the value of all goods is moved by air. Passenger traffic now exceeds pre-9/11 levels at most of the Nation's top airports, and is expected to grow to over a billion passengers by the middle of the next decade. By 2014, without any changes to the system, we expect to see delays 62 percent higher than they are today.

To achieve an on-time arrival rate of more than 88 percent of flights in fiscal year 2009 and to increase average daily capacity at major airports, FAA requests $3.7 billion. This includes funding to replace obsolete radars and to continue automating terminal control facilities, as well as $21 million for oceanic automation to improve flight route flexibility. Programs that will form the core of NextGen are also part of this request, including $41 million to develop an internet-like System-Wide Information Management network and $300 million to continue implementing the Automatic Dependent Surveillance Broadcast (ADS–B) system. $1.3 billion of the Airport Improvement Program request is aimed at reducing congestion, largely through the construction and maintenance of runways.

In the last 7 years, 13 new runways (more than 20 miles of new runway pavement) have opened at some of the Nation's most capacity-constrained airports. These runways provide the potential to accommodate 1.6 million more annual operations and decreased average delay per operation at these airports by about 5 minutes. Approximately one-third of the $5.3 billion cost of these runways has been covered by Airport Improvement Program funding. Three more runways will open later this year, at Seattle-Tacoma, Washington Dulles, and Chicago O'Hare. In addition, there are five other airfield projects (two airfield reconfigurations, one runway extension, one end-around taxiway, and one centerfield taxiway) under construction. These projects will be commissioned by 2012 and will provide these airports with the potential to accommodate an additional 400,000 annual operations.

Aviation delays escalated in 2007, particularly in the New York area. Demand for air carrier access at LaGuardia and John F. Kennedy airports has historically been managed by the High Density Rule (HDR), which limited the number of operations during peak demand hours. The rule expired at both airports on January 1, 2007. A temporary order is in place to restrict the number of hourly operations at LaGuardia while the FAA works on a final congestion management rule for the airport. LaGuardia, JFK, and Newark airports consistently rank as the Nation's three most delayed airports.

In response to the growing delays in the New York metro 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. On December 19, the Secretary announced a number of steps being taken in New York as a result. These steps include a cap on flights at JFK, planned caps 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 provide additional capacity. To date, we have completed 8 of the 77 identified operational improvements, and we expect to complete an additional 9 by this summer. We are working closely with the Port Authority and our customers 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.

Beginning March 30, as a short-term solution, operations at JFK were capped at either 82 or 83 operations per hour, depending on the time of day. These caps will be in place through 2009 and follow the conclusion of a schedule reduction meeting

we held with the air carriers and airport. Hourly limits are also planned for Newark and will be in place as soon as we have completed our negotiations with the air carriers. In addition, 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.

Our preference is to expand capacity in order to meet demand. 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 find a way 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 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.

NEXTGEN

Key to achieving higher levels of safety, efficiency, and environmental performance is the move to a 21st century National Airspace System. For the flying public, this investment is critical if we are to deploy state-of-the-art NextGen capabilities to safely and efficiently handle dramatic increases in the number and type of aircraft using our skies without being overwhelmed by congestion. Our fiscal year 2009 budget request will provide $688 million—a nearly $500 million increase from 2008—in support of NextGen. In the past year, key NextGen defining documents have matured. Last summer, the Joint Planning and Development Office (JPDO) released public versions of the Enterprise Architecture and Concept of Operations. In July, the initial baseline of the NextGen Integrated Work Plan was completed. The work plan lays out the progression from the present to the future, with activities and responsible agencies identified. As envisioned, the work plan would guide the formulation of future budgets within partner agencies.

The fiscal year 2009 NextGen budget represents strong collaboration between JPDO and the new OEP—formerly the Operational Evolution Plan, and now the Operational Evolution Partnership—to define and estimate the budgetary requirements for fiscal year 2009. That collaboration will provide oversight and track progress to ensure that NextGen objectives are achieved. This NextGen investment portfolio includes programs and activities deemed "transformational," i.e., those that will truly move toward the next generation system. The fiscal year 2009 portfolio consists of $631 million in ATO Capital Programs, $57 million in Research, Engineering & Development, and $704,000 in Safety & Operations, for a total of $688 million. This funding level includes $19.5 million to directly support the JPDO: $5 million from ATO Capital and $14.5 million from RE&D. This represents a significant investment in NextGen programs and reflects the administration's commitment to comprehensively address capacity constraints in the aviation system.

ADS–B is a critical part of developing our initial capabilities in satellite-based control and surveillance. The system allows an aircraft to continuously transmit its location, speed, and altitude to other planes, pilots, and controllers, which provides much more accuracy than today's radar. ADS–B provides an essential capability for reduced separation and allows for greater predictability in departure and arrival times. ADS–B will also give real-time cockpit displays of traffic information, both on the ground and in the air, to equipped users throughout the system. We estimate that ADS–B applications will save $1.7 billion in the terminal environment and another $800 million in the en route environment through 2035. The United Parcel Service (UPS) is already using ADS–B technology in Louisville, Kentucky to enable the use of Continuous Descent Arrivals (CDA), with great success. UPS aims to cut noise and emissions by about 30 percent each and reduce fuel burn by 40–70 gallons for each arrival.

In August 2007, FAA awarded a contract to ITT Corporation to provide ADS–B services. Under the contract, ITT will install, own, and maintain the surveillance ground infrastructure, while FAA pays for the surveillance and broadcast services. Since the contract award, the program is on track; we intend to deploy ADS–B at

key sites by 2010 and will roll out the nationwide infrastructure by 2013. ADS–B is also being implemented in the Gulf of Mexico, where controllers currently operate without radar coverage. Controllers must now track low-flying aircraft using a grid system based on reported—not actual—position and high-flying aircraft using 15 minute procedural separation. To ensure safety, a significant amount of separation must be maintained between aircraft, severely reducing capacity. ADS–B deployment in the Gulf of Mexico could allow us to reduce the amount of separation between aircraft while maintaining safety, and save an estimated $545.6 million through 2035. It will also provide support for an additional 246,400 flights over the gulf between 2017 and 2035.

We are also undertaking efforts that better take advantage of aircraft capability. The area navigation (RNAV) program uses onboard avionics that allow an aircraft to fly more direct and precise flight paths. Improved performance on departure has led to a more efficient traffic flow, reducing departure delays, decreasing taxi times, and reducing fuel burn and associated emissions. RNAV operations have saved operators $8.5 million annually at Dallas/Fort Worth International Airport and a total estimated $34 million at Hartsfield-Jackson Atlanta International Airport. Required Navigation Performance (RNP) builds upon RNAV and allows flights to land with lower minima. Using RNP, in 2006 Alaska Airlines was able to continue 980 approaches that otherwise would have been diverted, largely due to adverse weather conditions. NextGen plans call for continued deployment of RNAV and RNP procedures, and we will begin to couple them with other decision support tools to maximize their capabilities.

ENVIRONMENTAL STEWARDSHIP

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 tripling the capacity of the Nation's airspace while reducing significant environmental impacts. Our fiscal year 2009 budget request includes $352 million, of which $264 million is requested from the AIP program, to address the environmental impacts of aviation. We will ensure that the number of people in the United States who are exposed to significant aircraft noise levels 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.

We will 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 prediction and abatement models and new technologies. We estimate that 20,000 people will see a reduction in aircraft noise from these AIP-supported mitigation efforts at airports. The fiscal year 2009 request includes $16 million in new RE&D funding for the Aircraft Technology, Fuels and Metrics program to accelerate the introduction of quieter and cleaner technology in commercial fleets and to initiate a NextGen Environmental Management System. The request also includes a $5 million increase for the Airport Cooperative Research Program (ACRP) for environmental research to help mitigate aviation environmental impacts in the airport vicinity.

INTERNATIONAL LEADERSHIP

Our fiscal year 2009 request includes $63.1 million to expand FAA's international leadership role and to help improve safety. We will expand training and technical assistance programs that help civil aviation authorities meet international standards, as well as promoting seamless global operations. We will also continue to work with our international partners and the International Civil Aviation Authority (ICAO) to harmonize global technological standards, and to expand the use of global satellite navigation systems.

Our role as an international leader in the air transportation industry also requires us to meet the challenges of global environmental sustainability. Although aviation's overall contribution to global carbon emissions is relatively small, aviation is considered one of the few rapidly growing contributors. To meet this challenge, last June former Administrator Marion Blakey and the Vice President and Transport Minister of the European Commission (EC) announced the creation of the Atlantic Interoperability Initiative to Reduce Emissions (AIRE) Partnership. The partnership will strive to accelerate implementation of environmentally friendly, new air traffic control technology and procedures. On February 18, I further expanded our international environmental leadership role when I signed an agreement in Singa-

pore with Airservices Australia and Airways New Zealand to establish the Asia and South Pacific Initiative to Reduce Emissions (ASPIRE).

We are also working closely with China to promote seamless NextGen operations around the globe. On February 20, FAA signed a memorandum with the Air Traffic Management Bureau (ATMB) of China's General Administration of Civil Aviation in Beijing. The JPDO worked with counterparts in China to outline the framework for achieving the harmonization and interoperability of NextGen and China's NextGen Air Traffic Management System (CNATS). The ATO will be assisting ATMB with key NextGen technologies, including RNAV, Global Positioning System (GPS) technology, and ADS–B.

SECURITY

As you know, responsibility for the security of the aviation system now rests with the Department of Homeland Security. Most of the $218.6 million requested in our budget focuses on enhancing the security of the FAA's own personnel, facilities, and communications. The FAA ensures the operability of the national airspace through the facilities, equipment and personnel of the air traffic control system, which is essential to the rapid recovery of transportation services in the event of a national crisis. Additionally, the budget request includes funding to continue upgrading and accrediting facilities, procure and implement additional security systems, and upgrade our command and control communications equipment.

ORGANIZATIONAL EXCELLENCE

At FAA, "acting more like a business" is not just a slogan. We are actively engaging in a comprehensive pay-for-performance program, consolidating operations, improving internal financial management, and increasing benefits to our customers. Our bottom line is results for our stakeholders, including the taxpayer and traveling public.

We are continuing to make every effort to control our operating costs. Personnel reform for the agency, granted in 1998, is starting to bear fruit, with conversion from the traditional GS-Schedule pay system to pay for performance. This conversion is allowing the agency to flatten pay bands and tie performance incentives to pay increases. Accountability for results is systemic throughout our organization, with 90 percent of our employees on the pay-for-performance system, including our executives. Flight Plan performance targets must be achieved before annual pay raises are calculated. Executives and managers have a good deal of discretion in rewarding high-performing employees, and incentives are present to ensure quality work and innovation are rewarded. Executives are also eligible for short-term incentive increases when specific performance thresholds are met or exceeded.

We know that labor costs drive a significant share of our budget, and we have been working to slow the rate of growth in labor costs. We are also increasing workforce productivity through cutting multiple levels of management and improving oversight of our worker's compensation caseload.

I have already mentioned ATO's success with competitively sourcing its flight service station function. They have also successfully consolidated administrative and staff support functions from nine service areas to three, allowing for better service while saving an estimated $360 to $460 million over the next 10 years. The FAA has also taken steps to consolidate and improve our real property management and information technology (IT) investments.

In a concerted effort to control costs and make smarter capital investment choices, several years ago FAA created a capital investment team to review financial and performance data. The team provides an early warning for potential problems as well as help to develop corrective actions. So far, these business case reviews have identified $460 million in lifecycle savings by restructuring/terminating 10 programs, 6 of them major. To date, over 165 projects were reviewed in various stages of acquisition, capital formulation, and business case development.

Finally, the Strategic Sourcing for the Acquisition of Various Equipment and Supplies (SAVES) initiative is an ambitious effort begun in fiscal year 2006 to implement best practices from the private sector in the procurement of administrative supplies, equipment, and IT hardware. It is expected to achieve $9 million in savings annually.

CONCLUSION

Our fiscal year 2009 request provides strong support for our staff hiring goals, safety and capital programs and NextGen activities. However, to better enable a move to NextGen, we believe comprehensive reform of FAA's programs and revenue streams is necessary. We will continue working with Congress and our stakeholders

toward a successful reauthorization that is consistent with our key principles for a comprehensive cost-based financing structure. Given the vital role aviation plays in the Nation's economy and the need to prepare for the future, our funding request for fiscal year 2009 is designed to support America's growing demand for aviation-related services.

Senator MURRAY. Thank you very much. Mr. Scovel.

STATEMENT OF HON. CALVIN L. SCOVEL III, OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF TRANSPORTATION

Mr. SCOVEL. Chairman Murray, Ranking Member Bond, members of the subcommittee, we appreciate the opportunity to testify today regarding key safety and modernization challenges facing the FAA.

FAA faces challenges in maintaining the current level of safety, operating an increasingly strained system, and developing and transitioning to the next generation of air traffic control, or NextGen.

My statement today will address three points. First: strengthening oversight of the aviation industry. The recent events at Southwest Airlines brought to light serious lapses in FAA's oversight of air carriers. For example, we found that FAA's Southwest Inspection Office developed an overly collaborative relationship with the air carrier and allowed repeatedly self-disclosed airworthiness, or AD, violations without ensuring that the carrier had addressed the underlying problem.

We found that the balance tipped too heavily in favor of collaboration at the expense of effective oversight and appropriate enforcement.

We also found that weaknesses in FAA's national oversight allowed the problems at Southwest to go undetected for several years. As early as 2003, inspectors raised concerns about Southwest's AD compliance and urged FAA to conduct systemwide reviews. However, FAA did not begin these reviews until after details of the March 2007 disclosure became public.

In fact, we found that FAA inspectors had not reviewed Southwest's AD compliance systems since 1999. We have identified problems with FAA's national program for risk-based oversight in the past and recommended greater national oversight in 2002 and again in 2005. This is still needed today.

Additionally, we found serious problems with FAA's processes for conducting internal reviews and ensuring appropriate corrective actions. FAA did not attempt to determine the root cause of the safety issue at Southwest or begin to take enforcement against the carrier until November 2007. Too much attention was focused on the messenger and not on fixing the legitimate safety concerns.

Corrective actions are urgently needed to strengthen FAA's oversight and prevent similar problems from recurring. We recommend that FAA revise its voluntary disclosure guidance to ensure that air carriers take corrective actions to address violations identified through self-disclosure; require second-level review of self-disclosures before accepting and closing them; periodically transfer supervisory inspectors to ensure reliable and objective air carrier oversight; require a post-employment, cooling-off period for inspectors; implement a process to track field office inspections and alert local, regional, and headquarters offices to overdue ATOS inspec-

tions; and establish an independent body to investigate inspector concerns.

Second: the transition to NextGen. FAA is at a crossroads with modernizing the NAS. It must keep existing projects on track and set realistic expectations for NextGen. FAA's capital account must now be in shape to buy NextGen, an enormously complex effort that will cost tens of millions of dollars.

We are not seeing the massive cost growth and schedule slips of the past, but existing efforts must stay on track because 30 projects will serve as platforms for NextGen. Several programs require attention, including ASDE–X—a key technology to improve runway safety. Thus far, 12 of 35 systems have been deployed for operational use.

We are concerned, however, about FAA's ability to complete ASDE–X deployment with all planned capabilities at the more complex airports with less than half of the planned funds remaining.

FAA is exploring ways to accelerate NextGen. However, it remains uncertain how much NextGen will cost or what can be delivered in terms of capacity and delay reduction. A number of actions are needed.

First, FAA must conduct a gap analysis between the current system and the NextGen architecture. FAA's NextGen plans for the 2025 timeframe remain at a high level and do not detail how FAA will complete the transition to NextGen. Until this gap is well understood, it will be difficult to set requirements and reliable cost estimates.

Next, FAA must set expectations and establish NextGen funding priorities. At this point, it is difficult for decisionmakers to determine what to invest in first or what can be accelerated. FAA needs to identify the highest priority improvements and reflect them in its budget requests.

Finally, FAA must develop an interim architecture for what can be accomplished in the 2015 timeframe. This would help FAA determine reasonable goals, establish priorities, and make adjustments to existing systems.

My third point today is addressing attrition in two of FAA's critical workforces: air traffic controllers and aviation safety inspectors. The long-expected surge in controller retirements has begun. FAA expects to hire and train at least 17,000 new controllers through 2017. As a result of the high level of controller attrition, the overall percentage of controllers in training has grown substantially over the past 3 years. New controllers now represent about 25 percent of the workforce, up from 15 percent in 2004.

A key issue is to train new controllers to the fully certified level, a process that currently takes up to 3 years.

FAA also faces challenges to its oversight mission due to attrition in its inspector workforce. Last year, FAA's hiring efforts kept pace with retirements, and the Agency ended the year with 133 additional inspectors over fiscal year 2006 levels. However, FAA must closely oversee this effort since nearly half of the inspector workforce will be eligible to retire over the next 5 years.

PREPARED STATEMENT

That concludes my statement, Madam Chairman. I would be glad to address questions you or other members of the subcommittee might have.

[The statement follows:]

PREPARED STATEMENT OF HON. CALVIN L. SCOVEL III

Chairman Murray, Ranking Member Bond, and members of the subcommittee: We appreciate the opportunity to testify today on the Federal Aviation Administration's (FAA) safety and modernization performance. Ensuring that airlines safely meet the demand for air travel is important to the flying public and the national economy; this will remain a top priority for the Department. FAA is facing the formidable challenge of operating and maintaining an increasingly strained system while transitioning to the next generation of air traffic control. In addition, FAA must concurrently address attrition in two of its most critical workforces—air traffic controllers and aviation safety inspectors.

All of these are key facets of FAA's primary mission—aviation safety oversight. As this subcommittee is aware, safety is a shared responsibility among FAA, aircraft manufacturers, airlines, and airports. Together, all four form a series of overlapping controls to keep the system safe.

The United States has achieved an impressive safety record over the past several years. This is a remarkable accomplishment given the rapidly changing aviation industry. For example, network carriers face considerable uncertainty with a weakening economy, increasing fuel prices, and rising competition from low-cost carriers; these carriers now comprise one-third of the market in terms of available passenger seats.

Network carriers have moved aggressively away from high-cost structures by reducing in-house staff, renegotiating labor agreements, and increasing the use of external repair facilities. Three air carriers recently ceased passenger operations and a fourth just filed for bankruptcy protection. In addition, the recently announced intended merger between Northwest and Delta has generated considerable speculation regarding further consolidation within the industry.

At the same time, demand for air travel has increased, and aircraft load factors are at nearly 80 percent—an all-time high. In 2007, U.S. airlines transported over 700 million passengers, and this number is forecasted to grow to over 1 billion by 2016.

However, several high-profile events, including fundamental breakdowns in FAA oversight at Southwest Airlines (SWA), have raised concerns about whether FAA's overall approach to safety oversight is effective and what changes are needed. These concerns have been amplified by airlines' grounding of nearly 700 aircraft, which caused 4,198 flight cancellations, since FAA began industry-wide assessments of compliance with safety directives. There is an urgent need to identify the root causes of safety problems and proactively examine how to maintain and ultimately enhance the margin of safety.

Madam Chairman, it is against this backdrop that we would like to discuss three key challenges facing FAA and its stakeholders over the next several years:

—Strengthening FAA's oversight of the aviation industry.
—Keeping existing modernization programs on track, reducing risk with NextGen, and setting realistic expectations.
—Addressing attrition within two of FAA's critical workforces.

STRENGTHENING FAA'S OVERSIGHT OF THE AVIATION INDUSTRY

The recent events at SWA drew national attention to serious lapses in FAA's oversight of air carriers. As this subcommittee is aware, FAA's handling of whistleblower concerns regarding SWA's failure to follow a critical FAA airworthiness directive (AD) has had a cascading effect throughout the industry. While these safety lapses indicated problems with the airline's compliance, they are symptomatic of much deeper problems with FAA's oversight in the following areas.

We found FAA's inspection office for SWA developed an overly collaborative relationship with the air carrier, which allowed repeated self-disclosures of AD viola-

tions through FAA's partnership program.[1] These programs are intended to facilitate cooperation between FAA and air carriers to identify and address safety issues. Yet, FAA allowed SWA to repeatedly self-disclose AD violations without ensuring that SWA had developed a comprehensive solution for reported safety problems—which is required for FAA to accept the disclosure and absolve the carrier of any penalty.

We also found that the events at SWA demonstrated weaknesses in FAA's national program for risk-based oversight—the Air Transportation Oversight System (ATOS). This allowed AD compliance issues in SWA's maintenance program to go undetected for several years. As early as 2003, one of the whistleblowers expressed concerns to FAA about SWA's compliance with ADs. In 2006, he began urging FAA to conduct system-wide reviews, but FAA did not begin these reviews until after the details of the March 2007 disclosure became public.

In fact, FAA inspectors had not reviewed SWA's system for compliance with ADs since 1999. At the time of SWA's disclosure, FAA inspectors had not completed 21 key inspections for at least 5 years. While FAA has subsequently completed some of these inspections, as of April 15, 2008, 4 of these 21 inspections were still incomplete; some had not been completed for nearly 8 years.

We previously identified system-wide problems with ATOS. In 2005,[2] we found that inspectors did not complete 26 percent of planned ATOS inspections—half of these were in identified risk areas. We recommended, among other things, that FAA strengthen its national oversight and accountability to ensure consistent and timely ATOS inspections. However, FAA has still not fully implemented our recommendations.

Our work at SWA and Northwest Airlines (NWA)[3] has identified similar weaknesses in FAA's processes for conducting internal reviews and ensuring appropriate corrective actions. In the SWA case, FAA's internal reviews found, as early as April 2007, that the principal maintenance inspector (PMI) was complicit in allowing SWA to continue flying aircraft in violation of the AD. Yet, FAA did not attempt to determine the root cause of the safety issue nor initiate enforcement action against the carrier until November 2007. At NWA, FAA's reviews of an inspector's safety concerns were limited and also overlooked key findings identified by other inspectors. Although FAA found that some of the inspector's safety concerns were valid, FAA informed him that all of his concerns lacked merit.

We also have concerns regarding FAA's failure to protect employees who report safety issues from retaliation by other FAA employees. For example, in the SWA case, after one whistleblower voiced his concerns to FAA, an anonymous hotline complaint was lodged against him. According to the inspection office manager, the PMI indicated that a SWA representative submitted the complaint. The complaint was non-specific and never substantiated, but the whistleblower was removed from oversight duties for 5 months while under investigation. Yet, FAA did not suspend other inspectors who were subjects of similar complaints, including the PMI who admitted that he allowed SWA to continue flying in violation of the AD.

Our work at NWA found the same problem with FAA's handling of the inspector who reported safety concerns. As with the inspector in the SWA case, FAA managers reassigned an experienced inspector to office duties, after a complaint from the airline, and restricted him from performing oversight on the carrier's premises. Both the SWA and NWA cases demonstrate that FAA must pursue a more reliable internal review process and protect employees who identify important safety issues.

FAA recently announced several actions to address the SWA safety directive violation. These include initiating a review of AD compliance at SWA and other air carriers. FAA also proposed to fine SWA more than $10 million.

While FAA's proposed actions are necessary, albeit long overdue, it must make the following changes to its air carrier oversight to prevent recurrence of these safety issues:

—Ensure that its Voluntary Disclosure Reporting Program (VDRP) requires inspectors to (a) verify that air carriers take comprehensive actions to correct the underlying causes of violations identified through self-disclosure programs and (b) evaluate, before accepting a new report of a previously disclosed violation, whether the carrier developed and implemented a comprehensive solution.

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[1] OIG Testimony Number CC–2008–046, "Actions Needed To Strengthen FAA's Safety Oversight and Use of Partnership Programs," April 3, 2008. OIG reports and testimonies are available on our website: www.oig.dot.gov.

[2] OIG Report Number AV–2005–062, "FAA Safety Oversight of an Air Carrier Industry in Transition," June 3, 2005.

[3] OIG Report Number AV–2007–080, "FAA's Actions Taken To Address Allegations of Unsafe Maintenance Practices at Northwest Airlines," September 28, 2007.

—Implement a process for second-level supervisory review of self-disclosures before they are accepted and closed.
—Periodically rotate supervisory inspectors to ensure reliable and objective air carrier oversight.
—Require that its post-employment guidance include a "cooling-off" period when an FAA inspector is hired at an air carrier he or she previously inspected.
—Implement a process to track field office inspections and alert the local, regional, and Headquarters offices to overdue inspections.
—Establish an independent organization to investigate safety issues identified by its employees.
—Develop a national review team that conducts periodic reviews of FAA's oversight of air carriers.

FAA needs to address these recommendations to demonstrate its commitment to effective oversight. We will continue to examine FAA's oversight of the aviation industry from a national perspective. We will keep this subcommittee apprised of our progress as well as other actions FAA should take to ensure safety.

Our work has also shown that FAA's oversight of repair stations and aircraft manufacturers' suppliers must keep pace with the dynamic changes occurring in those industries. Although outsourcing has increased in recent years, FAA's oversight has focused primarily on carriers' in-house repairs instead of repair stations performing a higher volume of repairs. We have emphasized that the issue is not where maintenance is performed, but that maintenance requires effective oversight.

FAA's system for overseeing manufacturers' suppliers does not fully consider their increased role in the production of aircraft parts. As a result, we found that FAA has not ensured that manufacturers effectively oversee suppliers or that its inspectors perform enough supplier audits to adequately assess manufacturers' quality assurance systems.

KEEPING EXISTING MODERNIZATION PROJECTS ON TRACK, REDUCING RISK WITH NEXTGEN, AND SETTING REALISTIC EXPECTATIONS

A major challenge for FAA over the next 10 years and beyond will be transitioning to the Next Generation Air Transportation System (NextGen). FAA's capital account is now being shaped by NextGen—an enormously complex effort that will cost tens of billions of dollars. FAA is requesting $2.7 billion for its capital account in fiscal year 2009, an increase of over $200 million from the fiscal year 2008 enacted level of $2.5 billion. Over $600 million in the fiscal year 2009 request is dedicated to NextGen efforts, such as the Automatic Dependent Surveillance-Broadcast (ADS–B)—a new satellite-based surveillance system that has the potential to enhance safety and capacity.

It will be important to keep existing modernization efforts on track as 30 projects are expected to serve as platforms for NextGen initiatives. Our recent report[4] on FAA's modernization efforts examined the status of 18 major acquisitions with a combined value of $17.5 billion.

While we are not seeing the massive cost growth or schedule slips that occurred in the past, we are concerned about several projects that continue to experience cost and schedule risks or reduced benefits. For example, FAA has spent about $314 million (57 percent) of planned funding for the Airport Surface Detection Equipment-Model X (ASDE–X) program (a technology to prevent accidents on runways). However, FAA has only deployed 12 of 35 systems for operational use and must now deploy 23 systems at the more complex airports with less than half of the planned funds remaining.

FAA is making progress in developing the NextGen Enterprise Architecture (a technical blueprint), which is planned for implementation by 2025. The agency is also exploring ways to accelerate NextGen. However, costs for NextGen remain uncertain, and FAA needs to establish reasonable expectations for NextGen investments and realistic timeframes for improvements to enhance capacity and reduce delays. At this juncture, FAA needs to pursue the following actions:

—Conduct a gap analysis of the current National Airspace System (NAS) and future NextGen capabilities. Until FAA completes a gap analysis, it will not be able to determine technical requirements that translate into reliable cost and schedule estimates for major acquisitions.

[4]OIG Report Number AV–2008–049, "Air Traffic Control Modernization: FAA Faces Challenges in Managing Ongoing Projects, Sustaining Existing Facilities, and Introducing New Capabilities," April 14, 2008.

—Set expectations and establish NextGen funding priorities. FAA needs to better understand costs and benefits and then identify the high priority improvements for inclusion in its budget requests.
—Develop an interim architecture for what can be accomplished by 2015. This would help FAA to determine reasonable goals, establish priorities, fully identify adjustments to existing projects, refine requirements for new systems, and understand complex transition issues.
—Develop a strategy for acquiring the necessary skill mix to effectively manage and execute NextGen. FAA must anticipate needed skill sets for NextGen to avoid the problems that have hindered its modernization efforts.

ADDRESSING ATTRITION WITHIN TWO OF FAA'S CRITICAL WORKFORCES

Another key issue for FAA for at least the next 10 years is addressing attrition in two of its critical safety workforces—air traffic controllers and aviation safety inspectors. Since 2005, 3,300 controllers have left the agency—23 percent more than projected. FAA has accelerated its hiring efforts and has hired 3,450 new controllers since 2005—25 percent more than projected. Still, FAA faces a major challenge as it must hire and train at least 17,000 new controllers through 2017.

—As a result of the high level of controller attrition, FAA is facing a fundamental transformation in the composition of its controller workforce. The overall percentage of controllers-in-training has grown substantially during the past 3 years. New controllers now represent about 25 percent of the workforce (up from 15 percent in 2004). However, that percentage can vary extensively by location—from as little as 2 percent (e.g., the Boston Terminal Radar Approach Control facility [TRACON]) to as much as 50 percent (e.g., the Las Vegas TRACON).

A major challenge in addressing the attrition surge will be to train new controllers to the Certified Professional Controller (CPC) level at their assigned locations—a process that can take up to 3 years. Training new controllers to the CPC level is important for two reasons: (1) only CPCs are qualified to control traffic at all positions of their assigned area; and (2) only CPCs certified for at least 6 months (at their assigned location) can become on-the-job training (OJT) instructors for other new controllers. FAA must have enough OJT instructors at all locations if it is to achieve its ambitious hiring and training plans for the next 10 years and beyond.

—FAA also is facing challenges to its oversight mission due to attrition in its inspector workforce. FAA has about 4,100 inspectors to oversee a dynamic and rapidly changing industry, which includes 114 commercial air carriers, almost 5,000 foreign and domestic repair stations, more than 700,000 active pilots, and more than 1,600 approved manufacturers. Last year, FAA's hiring efforts kept pace with retirements, and the agency ended the year with 133 additional inspectors compared to fiscal year 2006 levels. However, FAA must continue to closely oversee this effort, since nearly half of the inspector workforce will be eligible to retire in the next 5 years.

To maximize its limited inspector resources, FAA has been working toward risk-based safety oversight systems for air carriers, repair stations, and manufacturers. These systems target inspector resources to areas of greatest risk. However, unless FAA develops a reliable staffing model, it will not be able to effectively use its inspectors.

I would now like to discuss these areas in further detail.

STRENGTHENING FAA'S OVERSIGHT OF THE AVIATION INDUSTRY

Recent Events at Southwest Airlines Underscore System-Wide Weaknesses in FAA's Air Carrier Oversight

The recent events at SWA exposed significant weaknesses in FAA's oversight of air carriers and problems with its partnership programs. The FAA directive[5] in this case required SWA to inspect the fuselages of its Boeing 737s for potential cracks. FAA issued this directive after an Aloha Airlines 737 lost a major portion of its hull while in flight at 24,000 feet in 1988, resulting in 1 fatality and multiple injuries.

According to FAA, when an air carrier determines that it has not implemented an AD, it is required to immediately ground all non-compliant aircraft. FAA inspectors share this responsibility—if an inspector becomes aware that an air carrier has

[5] FAA Airworthiness Directive 2004–18–06 requires that Boeing 737s (series 200, 300, 400, and 500) be inspected for fuselage cracks every 4,500 cycles (1 cycle equals 1 take-off and landing) after they reach 35,000 cycles.

violated the terms of an AD, the inspector is required to ensure that the aircraft are grounded.

To meet this requirement, air carriers need a system to help them perform repetitive inspections of aircraft fuselages in a timely manner. However, we found that SWA did not have an adequate system to ensure it completed these inspections. As a result, SWA operated 46 aircraft that were not inspected for fuselage cracks. These aircraft flew in violation of the AD on more than 60,000 flights for up to 9 months. We estimate that these aircraft carried 6 million passengers during this period.

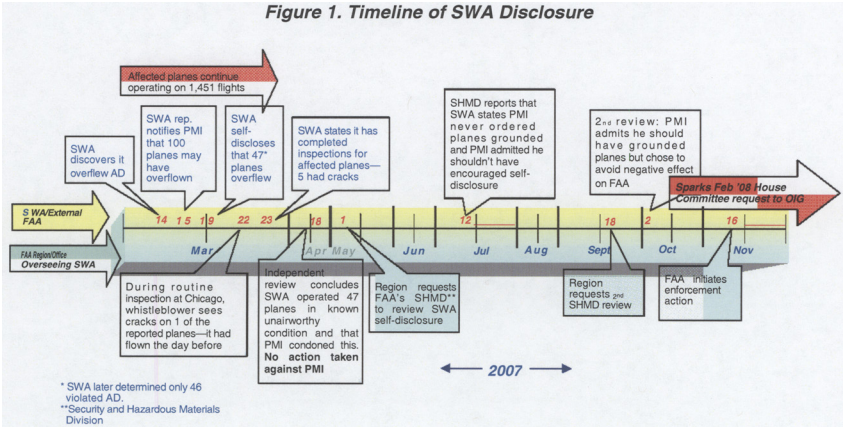
According to SWA, it discovered it had violated this directive on March 14, 2007. SWA notified an FAA principal maintenance inspector the following day. However, the inspector did not direct SWA to ground the affected planes, and SWA continued to operate them on 1,451 flights for 8 more days, carrying an estimated 145,000 passengers.

The PMI permitted—and encouraged—SWA to formally self-disclose the AD violation through its Voluntary Disclosure Reporting Program, which would allow the airline to avoid any penalties. FAA accepted the self-disclosure, even though it had already accepted multiple disclosures on AD violations; this should have prompted FAA to question whether the carrier had corrected underlying problems.

Once it formally self-disclosed the violation on March 19, 2007, SWA stated that it was in compliance with the AD, meaning it had inspected or grounded all affected aircraft. However, two FAA inspectors (the whistleblowers in this case) reported that their supervisor, the PMI, knowingly permitted SWA to continue flying the identified aircraft even after SWA's self-disclosure. SWA officials confirmed this and stated that the PMI gave them verbal permission to continue flying the aircraft.

We found that—after SWA self-disclosed the overflight—several of these aircraft flew into airports multiple times where they could have received the required inspections. When SWA finally inspected the aircraft, it found fuselage cracks in five of them. The AD specifies that these cracks could potentially lead to fuselage separation and rapid aircraft depressurization if left in disrepair.

While these critical safety lapses indicate problems with SWA's ability to comply with safety directives, they are symptomatic of much deeper problems with FAA's oversight (the timeline below shows the events of the SWA disclosure and FAA actions).



Overly Collaborative Relationship With Air Carrier Contributed to Breakdowns in Partnership Program

We found that FAA's inspection office for SWA developed an overly collaborative relationship with the air carrier that allowed repeated self-disclosures of AD violations through its partnership program. Partnership programs are intended to encourage data-sharing between FAA and air carriers to identify and address safety issues. Yet, FAA allowed SWA to repeatedly self-disclose AD violations without ensuring that SWA had developed a comprehensive solution for reported safety problems—which is required for FAA to accept the disclosure and absolve the carrier of any penalty.

However, SWA's proposed solutions, which FAA has repeatedly accepted, have failed to solve AD compliance issues as the carrier has violated four different ADs

eight times since December 2006, including five in 2008. FAA's oversight in this case appears to allow, rather than mitigate, recurring safety violations.

FAA maintains that disclosure programs are valuable, as they can help to identify and correct safety issues that might not otherwise be obtainable. However, we are concerned that FAA relies too heavily on self-disclosures and promotes a pattern of excessive leniency at the expense of effective oversight and appropriate enforcement. Further, a partnership program that does not ensure carriers correct underlying problems is less likely to achieve safety benefits.

Our ongoing work at another carrier has identified concerns with employees using disclosures to avoid penalties for safety violations. FAA must take steps to maintain the safety objective of these programs by actively discouraging improper relationships between inspection offices and carriers so that these programs do not lapse into an amnesty path for perpetual safety violators.

Missed Inspections at SWA Demonstrate Weaknesses in FAA's National Oversight

Our work at SWA and other carriers has found weaknesses in FAA's national program for risk-based oversight—the Air Transportation Oversight System (ATOS). At SWA, multiple, missed ATOS inspections allowed AD compliance issues in SWA's maintenance program to go undetected for several years. As early as 2003, one of the whistleblowers expressed concerns to FAA about SWA's compliance with ADs. In 2006, he began urging FAA to conduct system-wide reviews, but FAA did not begin these reviews until after the details of the March 2007 disclosure became public.

In fact, FAA inspectors had not reviewed SWA's system for compliance with ADs since 1999. At the time of the SWA disclosure, FAA inspectors had not completed 21 key inspections in at least 5 years. While FAA has subsequently completed some of these inspections, as of April 15, 2008, four of these inspections were still incomplete; some had not been completed for nearly 8 years.

We have previously identified system-wide problems with ATOS. For example, in 2002,[6] we found inconsistent inspection methods across FAA field offices for various carriers. As a result, FAA inspectors were confused over how to conduct ATOS inspections and assess risks.

In 2005, we found that inspectors did not complete 26 percent of planned ATOS inspections—half of these were in identified risk areas. We recommended, among other things, that FAA strengthen its national oversight and accountability to ensure consistent and timely ATOS inspections. However, FAA still has not fully addressed our recommendations.

Events at SWA and NWA Demonstrate Weaknesses in FAA's Internal Reviews of Safety Issues and Protection for Employees Who Report Them

Our work at SWA and NWA have identified weaknesses in FAA's processes for conducting internal reviews, ensuring corrective actions, and protecting employees who report safety concerns. In the SWA case, FAA's internal reviews found as early as April 2007 that the PMI was complicit in allowing SWA to continue flying aircraft in violation of the AD. Yet, FAA did not attempt to determine the root cause of the safety issue nor initiate enforcement action against the carrier until November 2007.

At NWA, FAA's reviews of an inspector's safety concerns were limited and overlooked key findings identified by other inspectors. Although some of the inspector's safety concerns were valid, FAA informed him that all of his concerns lacked merit.

We also have concerns regarding FAA's failure to protect employees who report safety issues from retaliation by other FAA employees. For example, in the SWA case, after one whistleblower voiced his concerns to FAA, an anonymous hotline complaint was lodged against him. According to the inspection office manager, the PMI indicated that a SWA representative submitted the complaint.

The complaint was non-specific and never substantiated, but the whistleblower was removed from his oversight duties for 5 months while under investigation. However, FAA did not suspend other inspectors who were subjects of similar complaints, including the PMI who admitted he allowed SWA to continue flying in violation of the AD.

Our work at NWA found the same problem with FAA's handling of the inspector who reported safety concerns. As with the inspector in the SWA case, FAA managers reassigned an experienced inspector to office duties, following a complaint from the airline, and restricted him from performing oversight on the carrier's premises.

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[6] OIG Report Number AV–2002–088, "Air Transportation Oversight System," April 8, 2002.

Both the SWA and NWA cases demonstrate that FAA must pursue a more reliable internal review process and protect employees who identify important safety issues.

FAA Needs To Make Immediate and Comprehensive Changes to Its Air Carrier Oversight Programs

FAA recently announced several actions to address the SWA safety directive violation. These include initiating a review of AD compliance at SWA and other air carriers. FAA also proposed to fine SWA more than $10 million.

While FAA's actions are necessary, albeit long overdue, the issues we have identified will require FAA to make the following changes to its air carrier oversight programs:

—Ensure that its VDRP guidance requires inspectors to (a) verify that air carriers take comprehensive actions to correct the underlying causes of violations identified through self-disclosure programs and (b) evaluate, before accepting a new report of a previously disclosed violation, whether the carrier developed and implemented a comprehensive solution.
—Implement a process for second-level supervisory review of self-disclosures before they are accepted and closed—acceptance should not rest solely with one inspector.
—Periodically rotate supervisory inspectors to ensure reliable and objective air carrier oversight.
—Require that its post-employment guidance include a "cooling-off" period when an FAA inspector is hired at an air carrier he or she previously inspected.
—Implement a process to track field office inspections and alert the local, regional, and Headquarters offices to overdue inspections.
—Establish an independent organization to investigate safety issues identified by its employees.
—Develop a national review team that conducts periodic reviews of FAA's oversight of air carriers.

FAA Must Improve Its Oversight of Repair Stations and Aircraft Manufacturers' Suppliers

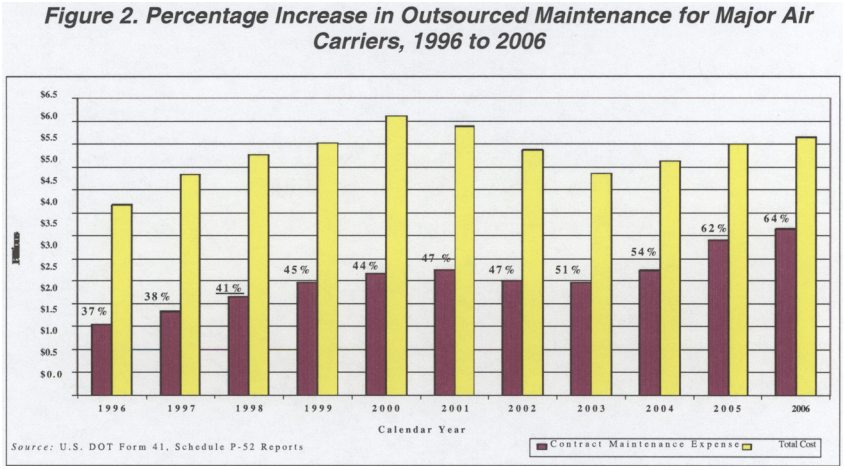
As with its oversight of air carriers, our work has also shown that FAA must make similar improvements to its oversight of repair stations and its risk-based system for overseeing aircraft manufacturers' suppliers. We found that FAA's oversight has not kept pace with the dynamic changes occurring in both of these industries.

FAA Must Closely Monitor Air Carriers' Increased Use of Repair Stations

Air carriers have outsourced maintenance for years to both domestic and foreign repair facilities. These facilities can complete repairs at lower costs and provide services, such as engine repair, that otherwise would require air carriers to have specialized equipment and staff. Many air carriers outsource their engine work to the original equipment manufacturers because they can provide a specific level of expertise as well as warranties for their products. However, in recent years, air carriers' use of external repair facilities has become more prominent.

As we testified in June,[7] from 1996 to 2006, while total maintenance costs fluctuated, air carriers continued to increase the percentage of maintenance dollars spent on outsourced maintenance—from 37 to 64 percent. In 2006, $3.7 billion of the $5.7 billion spent on maintenance was outsourced (see figure 2).

[7] OIG Testimony Number CC–2007–076, "Aviation Safety: FAA Oversight of Foreign Repair Stations," June 20, 2007.



Neither FAA nor the Department maintains information on how much maintenance air carriers outsource to foreign facilities. However, our work shows that the number of foreign FAA-certificated repair stations repairing U.S. aircraft increased from 344 in 1994 to 698 in 2007. We have emphasized that the issue is not where maintenance is performed, but that maintenance requires effective oversight.

We have identified weaknesses in FAA's ability to effectively monitor the increase in outsourcing. For example, in July 2003, we reported[8] that FAA had not shifted its oversight of aircraft maintenance to the locations where the maintenance was performed. Although air carriers were using external repair stations to perform more of their maintenance work, FAA was still focusing most of its inspections on the maintenance work that air carriers performed within their own facilities.

During the past 8 years, FAA has taken important steps to move its safety oversight for air carriers and repair stations to risk-based systems. FAA's new oversight system applies to both domestic and foreign repair stations. However, FAA cannot effectively implement a risk-based system for oversight of aircraft maintenance if it does not know where the maintenance is performed.

In December 2005,[9] we again reported that FAA did not have good systems for determining which repair facilities air carriers were using to perform their most critical maintenance. FAA subsequently developed new inspector guidance and air carrier processes to address this problem, but these efforts still fall short of providing FAA with the information it needs. We have concerns about the new system primarily because it does not require air carriers to report: (1) volume data for repairs performed; and (2) all repair stations that provide critical component repairs. Further, FAA does not validate the information that carriers provide. FAA also does not have specific inspector guidance for identifying the types of non-certificated repair facilities that we found were performing critical maintenance.

FAA has agreed to require air carriers to report overall volume data on repairs, but it has not agreed to require them to report volume data for repair stations providing critical component repairs. In addition, FAA still does not require inspectors to validate the information that carriers provide. If air carrier reports are to be an effective means for FAA to track and accurately target repair facilities that air carriers use the most, a more thorough process will be needed.

FAA Must Improve Its Oversight of Aircraft Manufacturers' Suppliers

In February, we reported[10] that FAA has worked toward a risk-based oversight system for aviation manufacturers since 1998. FAA implemented this system in fiscal year 2003, but it does not take into account the degree to which manufacturers now use suppliers to make aviation products. FAA based the new system on histor-

[8] OIG Report Number AV–2003–047, "Review of Air Carriers' Use of Aircraft Repair Stations," July 8, 2003.

[9] OIG Report Number AV–2006–031, "Review of Air Carriers' Use of Non-Certificated Repair Facilities," December 15, 2005.

[10] OIG Report Number AV–2008–026, "Assessment of FAA's Risk-Based System for Overseeing Aircraft Manufacturers' Suppliers," February 26, 2008.

ical manufacturing business models, in which manufacturers maintained primary control over the production of their aircraft rather than using suppliers to design and manufacture extensive portions of aircraft.

We found weaknesses throughout FAA's oversight system for manufacturers and their suppliers. First, FAA has not ensured that manufacturers are overseeing their suppliers. Manufacturers are the first line of defense in ensuring the products used on their aircraft meet FAA and manufacturer standards. Yet, during the 24 months preceding our review, manufacturers had not audited 6 of the 21 critical parts suppliers we visited.

Second, FAA does not require inspectors to perform enough audits of suppliers to determine how well manufacturers' quality assurance systems are working. FAA's guidance for overseeing manufacturers' quality assurance systems only requires inspectors to perform, at most, four supplier audits, regardless of how many suppliers the manufacturer uses.

Supplier control audits are a primary tool that FAA uses to assess how well manufacturers' oversight systems are working. Equally important, these audits function as a second layer of control for preventing improperly produced parts from entering the market.

However, as shown in table 1 below, in each of the last 4 years, FAA has inspected an average of 1 percent of the total suppliers used by the five manufacturers we reviewed. At FAA's current surveillance rate, it would take inspectors at least 98 years to audit every supplier once. This is particularly troubling because manufacturers are not evaluating these suppliers frequently or comprehensively.

TABLE 1.—NUMBER OF SUPPLIER AUDITS COMPLETED BY FAA FOR FIVE MAJOR MANUFACTURERS

Manufacturer	No. of Supplier Facilities [1]	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005	Fiscal Year 2006	Avg. Percent Per Fiscal Year
A	4,012	2	1	7	4	1
B [2]	2,553	31	26	15	27	1
C	706	5	4	4	6	1
D	489	5	3	1	2	1
E	367	.....	2	3	2	1

[1] Number of supplier facilities based on information obtained for 2004.

[2] This manufacturer operates seven separate manufacturing divisions. As a result, FAA evaluated the seven divisions separately for risk assessment purposes, which resulted in more supplier control audits. Source: FAA's National Supplier Control Audit Schedules, fiscal year 2003–2006.

Third, the systemic deficiencies we identified at the 21 supplier facilities we visited indicate that manufacturers and FAA need to strengthen their oversight of these facilities. For example, nearly half (43 percent) of the suppliers had deficiencies in their tool calibration and employee training programs. Deficiencies in these areas could impact the quality of the parts these suppliers produce.

KEEPING EXISTING MODERNIZATION PROGRAMS ON TRACK, REDUCING RISKS WITH NEXTGEN, AND SETTING REALISTIC EXPECTATIONS

Progress and Problems With FAA Acquisitions

Overall, we are not seeing the significant cost growth and schedule slips with FAA major acquisitions that occurred in the past. This is because FAA has taken a more incremental approach to managing major acquisitions. When comparing revised baselines, only 2 of the 18 projects we reviewed have experienced additional cost growth ($53 million, combined) and delays (5 years, combined) since our last report in 2005.[11] However, from program inception, six programs have experienced cost growth of close to $4.7 billion and schedule delays of 1 to 12 years.

While FAA's incremental approach may reduce risk in the near term, it has left several programs with no clear end-state and less visibility into how much they will ultimately cost. A case in point involves modernizing facilities that manage traffic in the vicinity of airports, commonly referred to as "terminal modernization."

In 2004, faced with cost growth of over $2 billion for the Standard Terminal Automation Replacement (STARS) program, FAA shifted to a phased process, committing STARS to just 47 sites at an estimated cost of $1.46 billion. FAA's original plan was to deploy the system to 172 sites for $940 million. FAA renamed this mod-

[11] OIG Report Number AV–2005–061, "Status of FAA's Major Acquisitions: Cost Growth and Schedule Delays Continue To Stall Air Traffic Modernization," May 26, 2005.

ernization effort the Terminal Automation Modernization-Replacement (TAMR) initiative.

In 2005, FAA approved modernizing displays through the TAMR program (referred to as TAMR Phase 2) by replacing legacy equipment at five additional small sites and replacing the aging displays at four large, complex facilities. However, this leaves over 100 sites still in need of modernization. Although FAA has not decided how it will modernize these sites, its fiscal year 2008 budget submission indicates that the total cost for this effort could be over $1 billion. FAA is requesting $31.2 million for terminal modernization efforts for fiscal year 2009.

There is no defined end-state for terminal modernization, and past problems with developing and deploying STARS leave FAA in a difficult position to begin introducing NextGen capabilities. Future terminal modernization costs will be shaped by: (1) NextGen requirements; (2) the extent of FAA's terminal facilities consolidation; and (3) the need to replace or sustain existing (legacy) systems that have not been modernized.

There are several ongoing acquisition programs that warrant attention because of their importance to NextGen and potential cost increases, schedule slips, or diminishing benefits.

En Route Automation Modernization (ERAM).—This program replaces the hardware and software at facilities that manage high-altitude traffic and is a key platform for NextGen. With an estimated cost of $2.1 billion, ERAM is one of the largest, most complex acquisitions in FAA's modernization portfolio. FAA is requesting $203 million for ERAM for fiscal year 2009, a reduction from the fiscal year 2008 level of $369 million. ERAM is currently on schedule for its first operational use at the Salt Lake En Route Center in October 2008, but considerable testing and integration work lies ahead. Because ERAM is expected to serve as a foundation for NextGen, any program cost increases or schedule delays will affect the pace of introducing new capabilities and could directly impact the overall transition to NextGen.

ASDE–X.—ASDE–X is FAA's latest effort designed to help controllers identify aircraft and vehicle positions on the airport surface, with the ultimate goal of reducing the risks of accidents on runways. It is planned to improve airport safety by operating in all-weather and low-visibility conditions (e.g., fog, rain, and snow) when controllers cannot see surface movement on ramps, runways, and taxiways. In fiscal year 2007, Congress appropriated $70.6 million to FAA for the ASDE–X program. In fiscal year 2008, FAA expects to spend $40.6 million for ASDE–X efforts. For fiscal year 2009, it is requesting $32.7 million.

ASDE–X was initially designed to provide FAA with a low-cost alternative to its ASDE–3 radar systems for small- to medium-sized airports, but it has evolved into a different program. In September 2005, FAA made a major change to the scope of the program, increasing ASDE–X costs from $505.2 million to $549.8 million and extending the completion date from 2007 to 2011. FAA now plans to upgrade ASDE–3 systems with ASDE–X capabilities at 25 large airports and install the system at 10 other airports that have no existing surface surveillance technology. FAA concluded this would yield the greatest return on its investment and maximize safety benefits by deploying ASDE–X capabilities to airports with larger traffic counts or more complex operations.

In October 2007, we reported[12] that the ASDE–X program is at risk of not meeting its goal to commission all 35 ASDE–X systems for $549.8 million by 2011 and may not achieve all planned safety benefits.

—Since the 2005 re-baseline, FAA has increased the cost to acquire and install some ASDE–X activities by $94 million. To stay within the revised baseline, FAA offset this cost by decreasing planned expenditures for seven other program activities, such as construction for later deployment sites.

—We are also concerned that the ASDE–X schedule is not realistic. At the time of our October 2007 report, FAA had commissioned 11 of the 35 ASDE–X sites; however, only 6 of the 11 had all the planned capabilities commissioned for operational use. We note that in April 2008, FAA commissioned the 12th ASDE–X system for operational use. FAA officials told us that all ASDE–X systems have been purchased with spares and test equipment to support each site and that site prep has begun. They also noted that each airport presents unique challenges that must be addressed. We maintain that FAA should not declare ASDE–X as commissioned for operational use until all planned capabilities are fully implemented.

—FAA needs to resolve operational performance issues associated with key ASDE–X safety capabilities. For example, while FAA has commissioned the first

[12] OIG Report Number AV–2008–004, "FAA Needs To Improve ASDE–X Management Controls To Address Cost Growth, Schedule Delays, and Safety Risks," October 31, 2007.

ASDE–X system that can alert controllers of potential collisions on intersecting runways or converging taxiways, under certain circumstances the system does not generate timely alerts for controllers to take appropriate action. Additionally, ASDE–X is susceptible to dropping targets during heavy precipitation. FAA has made progress in addressing these problems. FAA will need to fully test ASDE–X safety capabilities to ensure the system can meet the unique needs of each airport scheduled to receive ASDE–X.

Because of these issues, the program is at risk of not meeting its goals to deliver all 35 ASDE–X systems by 2011. In October 2007, we recommended that FAA develop realistic cost estimates for all activities required to complete ASDE–X implementation. We also recommended that FAA resolve operational performance issues identified during system testing before deploying key ASDE–X safety capabilities at remaining airports. FAA concurred with our recommendations and agreed to address our concerns. We will continue to monitor FAA's efforts to deploy ASDE–X and implement safety capabilities.

FAA Telecommunications Infrastructure (FTI) Program.—FTI is intended to replace seven FAA-owned and -leased telecommunications networks with a single network to provide FAA with services through 2017 and reduce operating costs. In fiscal year 2007, Congress appropriated $28 million in facilities and equipment (F&E) funds to FAA for this program. In fiscal year 2008, FAA expects to spend $8.5 million in F&E funds for FTI efforts. Unlike most acquisitions, however, the vast majority of FTI is funded out of the operations account as opposed to the F&E account.

For fiscal year 2008, FAA estimates it will need $210 million in operations funds to support FTI operations and another $91 million to extend legacy network operations while continuing the FTI transition. For fiscal year 2009, the Agency is planning to spend $186 million to support FTI operations and an additional $19 million for legacy telecommunications systems. The costliest legacy network FTI will replace is the Leased Interfacility National Airspace System Communications System (LINCS), with over $600 million spent for operations from 2002 to 2007. In April 2007, FAA completed negotiations to extend LINCS until April 2008 for a $92 million ceiling price, with three 6-month options. FTI program officials told us they do not intend to extend the contract for LINCS legacy network beyond April 2008. This will help to control telecommunication costs.

In April 2006, we reported[13] that FTI was unlikely to meet its December 2007 transition completion date and recommended that FAA improve FTI management controls and develop a realistic master schedule. FAA agreed and tasked the MITRE Corporation with conducting an independent assessment of the FTI master schedule. The assessment identified several risks associated with FAA meeting its transition deadline. Consequently, in August 2006, FAA's Joint Resource Council approved a second re-baseline of FTI's cost and schedule goals, which extended the completion date to December 2008 and increased the overall cost from $3.3 billion to $3.4 billion. FAA also reduced the total number of NAS services to be transitioned to FTI from 25,294 to 20,033.

Since we last reported, FAA has made significant progress with the FTI transition. As of January 31, 2008, FAA has delivered 18,294 services. However, it is important to note that shifting requirements, eroding cost benefits, and risks to air traffic operations during the transition have impacted the FTI program.

We note that FAA will not replace all networks as originally planned. FAA has decided not to replace digital equipment that supports long-range radars or switching equipment that supports flight data for high-altitude communications, as originally envisioned by the FTI program office. As a result, FAA will have to maintain this existing equipment much longer than expected. The cost of doing so and the impact on potential FTI benefits remain uncertain. Additionally, even though the last baseline significantly reduced the number of services planned for transition, this number has since climbed to 22,545. FAA attributes the increase to "emerging requirements" (requirements for new services). Further, the master schedule does not yet include requirements for moving forward with NextGen efforts. We recognize that these requirements will have to be addressed through adjustments to the FTI program or another effort.

FAA's main goal for FTI was to reduce agency operating costs. Yet, we found that costs for FTI remain uncertain since FAA still has not validated cost and benefit estimates as agreed after our 2006 report. Although FAA reduced the number of services planned, the overall program cost estimate grew by over $100 million through 2017. As costs have escalated, cost savings have eroded. In 2006, when FAA

[13] OIG Report Number AV–2006–0147 "FAA's Telecommunications Infrastructure Program: FAA Needs To Take Steps To Improve Management Controls and Reduce Schedule Risks," April 27, 2006.

re-baselined FTI, we estimated that cost savings decreased from $672 million to $434 million (when including previous investments in FTI). Further, FAA did not achieve any FTI cost savings for fiscal year 2007. Until FAA independently validates FTI cost and benefit information, the cost effectiveness of the investment in FTI will remain questionable.

Finally, because of recurring outages and customer service problems, many FTI services are not meeting availability requirements—9 percent of accepted FTI services in December 2007, as reported by the FTI program office. The contractor also reported that many of these were not being restored to service within contractual timeframes after outages.

Unscheduled outages of both primary and back-up services have led to flight delays and affected air traffic operations. For example, on September 25, 2007, the Memphis En Route Center lost its radar, flight, and voice communications data on its primary and alternate paths, which triggered 566 flight delays. FAA attributed the outage to its third-party telecommunications provider, which was inappropriately routing FAA telecommunications through a single point of failure. According to FAA, this same design is in place at other critical FAA facilities, including the Atlanta and Jacksonville En Route Centers.

Additionally, on November 9, 2007, the Jacksonville En Route Center experienced an FTI equipment failure that caused the loss of radar and communication services, forcing air traffic controllers to implement a ground stop and triggering 85 flight delays. The most recent outage occurred on April 12, 2008, at the Southern California TRACON, where an FTI equipment failure caused the loss of flight data to controllers. We will be reporting on the FTI program again later this year.

Air Traffic Management (ATM).—This program provides FAA with hardware and software tools to manage air traffic, expand system capacity, and reduce the impact of bad weather system-wide. FAA is requesting $90.2 million for ATM for fiscal year 2009. FAA baselined ATM for $454 million in August 2005 and scheduled its deployment for fiscal year 2011. ATM is baselined for two initial segments with plans for additional segments.

Although the ATM effort has not experienced cost increases or schedule delays, we are concerned about risks and the final outcome since FAA and the contractor significantly underestimated the size and complexity of software development. Since then, FAA has modified the contract and adjusted the scope of the work. Although FAA is attempting to adjust the contract, we note that underestimating software development has led to significant problems with other modernization projects.

The challenges FAA faces with ATM include: (1) developing complex software and integrating ATM with other NAS systems; and (2) determining cost and schedule decisions on the additional segments, which are unknown at this time.

Challenges With NextGen Programs

FAA has established initial cost and schedule baselines for the first segments of two key NextGen initiatives: ADS–B and the System-Wide Information Management program (SWIM). Both programs will require enhanced oversight as FAA begins integrating them with existing systems.

ADS–B.—This program provides satellite-based technology that allows aircraft to broadcast their position to other aircraft and ground systems. For fiscal year 2009, FAA is requesting $300 million for ADS–B. In August 2007, FAA awarded a service-based contract for the ADS–B ground infrastructure worth $1.8 billion if all options are exercised. FAA estimates that ADS–B will cost about $1.6 billion in capital costs for initial segments of its implementation through 2014, which include the completion of a nationwide ground system for receiving and broadcasting ADS–B signals.

FAA must address several challenges to realize the benefits of ADS–B. These include: (1) gaining stakeholder acceptance and aircraft equipage; (2) addressing broadcast frequency congestion concerns; (3) integrating with existing systems; (4) implementing procedures for separating aircraft; and (5) assessing potential security vulnerabilities in managing air traffic. As we noted in October 2007,[14] the implementation of ADS–B is a long-term effort that will require significant investment from Government and industry. Given FAA's history with developing new technologies and its approach to ADS–B, in which the Government will not own the ground infrastructure, we believe this program will require a significant level of oversight. We will report on ADS–B later this year.

SWIM.—This program provides FAA with a web-based architecture that allows information sharing among airspace users. For fiscal year 2009, FAA is requesting $41 million for SWIM. In June 2007, FAA baselined the first 2 years of segment

[14] OIG Testimony Number CC–2007–100, "Challenges Facing the Implementation of FAA's Automatic Dependent Surveillance-Broadcast Program," October 17, 2007.

one (planned to occur between fiscal year 2009 and fiscal year 2010) for $96.6 million. FAA's latest Capital Investment Plan cost estimate for SWIM is $285 million. Current challenges include the work to determine requirements and interfaces with other FAA systems, including ERAM and ATM. Moreover, SWIM will require integration with other Federal agencies' operations to realize NextGen benefits and develop a robust cyber security strategy and design. While FAA has begun initial efforts, it still needs to establish the architecture, strategy, and design. FAA still has not determined additional SWIM segments or the cost to fully implement SWIM.

FAA Must Enhance Its Cost and Schedule Metrics To Monitor NextGen Programs

In its fiscal year 2007 Flight Plan and most recent Performance and Accountability Report, FAA reported that, for fiscal year 2006, 100 percent of its critical acquisitions were within 10 percent of budget estimates and 97 percent were on schedule. In fiscal year 2006, FAA tracked about 29 projects, including acquisition of new radars. While FAA cost and schedule performance metrics are worthwhile tools, they have limitations that decisionmakers must understand to properly assess the status of FAA's major acquisitions.

—First, FAA's cost and schedule metrics are "snapshots" in time. They are not designed to address changes in requirements, reductions in procured units, or shortfalls in performance that occur over time.

—Second, FAA's budget metrics compare cost estimates taken during the fiscal year using updated, "re-baselined" cost figures—not estimates from the original baseline. This is why the Wide Area Augmentation System (a satellite-based navigation system) is considered "on budget" even though costs have grown from $892 million to over $3 billion since 1998.

—Finally, FAA's schedule metrics used for assessing progress with several programs in 2006 and 2007 were generally reasonable but focused on interim steps or the completion of tasks instead of whether systems met operational performance goals. For example, ASDE–X metrics focused on the delivery of two systems instead of whether the systems entered service or operated as planned. We also found that there are no written criteria for selecting or reporting the milestones, and FAA needs to develop written criteria for offices to improve milestone reporting.

Although re-baselining a project is important to obtain reliable cost and schedule parameters and is consistent with Office of Management and Budget guidelines, comparisons of revised baselines—absent additional information—do not accurately depict a program's true cost parameters. To sufficiently measure progress with NextGen initiatives, FAA will need to explore a wider range of metrics that focuses on promised capabilities and benefits from bundled procedures and multiple systems. Our report issued earlier this week recommended that FAA develop new metrics to assess progress with NextGen with respect to enhancing capacity, boosting productivity, and reducing Agency operating costs.

Much Work Remains To Determine How To Transition Existing Projects to NextGen

In February 2007, we recommended that FAA examine existing projects to determine if they were still needed and, if so, what adjustments would be required. FAA concurred with our recommendation and stated that it has begun this assessment. To date, however, FAA has not made major adjustments to modernization projects

According to FAA, approximately 30 existing capital programs will serve as "platforms" for NextGen. Over the next 2 years, FAA must make over 20 critical decisions about ongoing programs. These decisions have significant budget implications and affect all major lines of the modernization effort with respect to automation, communications, navigation, and surveillance.

—*Automation.*—FAA will approve a limited number of "candidate capabilities" and enhancements for the second major ERAM software release. In fiscal year 2008, FAA will identify the requirements and cost parameters for new capabilities based on ERAM targeted for the 2012 to 2018 timeframe. FAA will also have to address what changes are needed to modernize its terminal facilities and whether or not it will pursue a "common automation platform" for terminal and en route environments in the future.

—*Communications.*—Between fiscal year 2008 and fiscal year 2009, FAA plans to decide how to move forward with data communications and when to restart a data-link communications program for controllers and pilots. Costs remain uncertain, and FAA faces a myriad of complex questions about its overall technical approach, implementation plans, and rulemaking initiative timeline.

—*Navigation.*—FAA intends to decide how much of the existing ground-based navigation system will be retained. Specifically, in fiscal year 2008, FAA will consider how best to move forward with the next generation precision and ap-

proach landing system and whether to pursue the Local Area Augmentation System—which has been in research and development status since fiscal year 2004.

—*Surveillance.*—As part of the effort to move forward with ADS–B, FAA must decide how to best incorporate "fusion" into existing air traffic control automation systems. Fusion in this context is defined as taking all surveillance data available for an aircraft and using the best data or combination of data to determine aircraft position and intent. Industry groups have asked FAA to accelerate its work on fusion.

FAA Needs To Refine Its Plans To Move Forward With NextGen, Reduce Risks, and Focus Investment Decisions

FAA is making progress toward developing the NextGen Enterprise Architecture (a technical blueprint), which is planned for implementation by 2025. FAA is exploring ways to accelerate NextGen. However, costs for NextGen remain uncertain, and FAA has yet to establish reasonable expectations for mid- and long-term NextGen investments and realistic timeframes for improvements to enhance capacity and reduce delays. At this juncture, FAA needs to pursue the following actions:

—*Conduct a Gap Analysis of the Current NAS and Future NextGen Capabilities.*—FAA's architecture for NextGen does not detail how FAA will transition from the present NAS and the future NextGen architectures, which will have considerably different capabilities and performance parameters. Until FAA completes a gap analysis, it will not be able to determine technical requirements that translate into reliable cost and schedule estimates for major acquisitions.

—*Set Expectations and Establish NextGen Funding Priorities.*—At this point, it is difficult for decisionmakers and FAA to determine what projects to invest in first or what elements can be accelerated. FAA needs to better understand costs and benefits and then identify the high priority improvements and reflect those priorities in budget requests.

—*Develop an Interim Architecture for What Can Be Accomplished by 2015.*—Because of the significant differences between the present system and the NextGen architecture and concept of operations, FAA should develop an interim architecture for the 2012 to 2015 timeframe. This would help FAA to determine reasonable goals, establish priorities, fully identify adjustments to existing projects, refine requirements for new systems, and understand complex transition issues.

—*Develop a Strategy for Acquiring the Necessary Skill Mix to Effectively Manage and Execute NextGen.*—In response to our February 2007 report,[15] FAA contracted with the National Academy of Public Administration to assess the skill sets needed for NextGen. A preliminary report[16] highlighted the need for proficiency in systems integration and systems engineering, particularly with an understanding of the human factors discipline. FAA must anticipate needed skill sets for NextGen to avoid the problems that have hindered its modernization efforts.

ADDRESSING ATTRITION WITHIN FAA'S CRITICAL WORKFORCES

A key challenge for FAA for at least the next 10 years is addressing attrition in two of its critical safety workforces—air traffic controllers and aviation safety inspectors. FAA is currently training more new controllers than it has in the past 15 years. The percentage of new (developmental) controllers within the controller workforce has increased from about 15 percent in 2004 to about 25 percent in 2007.

As a result, FAA is facing a fundamental transformation in the composition of its controller workforce that will require improvements in its facility training program—a critical component in addressing controller attrition. However, we found that FAA's facility training program continues to be extremely decentralized and the efficiency and quality of the training varies extensively from one location to another. We found similar problems in 2004.[17]

FAA also is facing substantial safety oversight challenges due to potential attrition in its inspector workforce. FAA has about 4,100 inspectors to oversee a dynamic and rapidly changing industry, which includes 114 commercial air carriers, almost

[15] OIG Report Number AV–2007–031, "Joint Planning and Development Office: Actions Needed To Reduce Risks With the Next Generation Air Transportation System," February 12, 2007.

[16] Report by a panel of the National Academy of Public Administration, "Workforce Needs Analysis for the Next Generation Air Transportation System (NextGen), Preliminary Findings and Observations," December 2007.

[17] OIG Report Number AV–2004–060, "Opportunities To Improve FAA's Process for Placing and Training Air Traffic Controllers in Light of Pending Retirements," June 2, 2004.

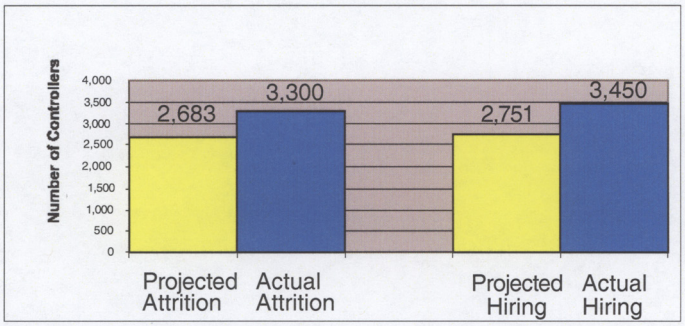
5,000 foreign and domestic repair stations, more than 700,000 active pilots, and more than 1,600 approved manufacturers.

Addressing Controller Attrition by Improving Facility Training

The long expected surge in controller attrition has begun. Since 2005, 3,300 controllers have left the workforce [18]—only 37 of these left because they had reached the mandatory retirement age of 56. The total rate of attrition was 23 percent higher than FAA had projected. However, FAA has accelerated its hiring efforts to fill vacancies. Since 2005, FAA has hired 3,450 new controllers—25 percent more than projected. Still, FAA faces a major challenge as it must hire and train 17,000 new controllers through 2017.

Figure 3 shows FAA's estimates and actual numbers for controller attrition and new controller hiring from fiscal year 2005 through fiscal year 2007.

Figure 3. Controller Attrition and Hiring Projected Versus Actual (FY 2005 to FY 2007)



Source: FAA

The overall percentage of controllers-in-training has grown substantially over the past 3 years. From April 2004 to December 2007, the overall size of the controller workforce remained constant. However, during the same period, the number of controllers-in-training increased by 1,375, or 62 percent, while the total number of CPCs decreased by 1,302, or 11 percent (see table 2). As a result, FAA is now training more new controllers than it has in the past 15 years.

TABLE 2.—TOTAL CONTROLLER WORKFORCE COMPOSITION

Date	CPCs	Controllers In Training [1]	Total
April 2004	12,328	2,209	14,537
December 2007	11,026	3,584	[2] 14,610
Difference	(−1,302)	+1,375	+73

[1] Includes newly hired or developmental controllers and transferred CPCs in training at new locations.
[2] This number does not include new hires in training at the FAA Academy.

Source: FAA.

While the number of controllers in training has increased significantly since 2004, FAA's reports to its stakeholders do not reflect this change. This is because FAA does not differentiate between CPCs and controllers-in-training in its Controller Workforce Plan. FAA only reports the total number of controllers at each location. In our opinion, FAA should report the number of CPCs and the number of controllers-in-training separately for each location. Differentiating those figures by location could provide Congress and the Secretary with a "snapshot" of the controller workforce and provide a benchmark for year-to-year comparisons.

A major challenge in addressing the surge in controller attrition will be to train transferring and developmental controllers to the CPC level at their assigned locations. Facility training can take up to 3 years and is the most expensive part of new

[18] Attrition includes retirements, resignations, promotions to supervisory or non-controller positions, training failures, and deaths.

controller training. Developmental controllers and transferring veteran controllers face a demanding training process at their assigned locations. The training is conducted in stages and consists of a combination of classroom, simulation, and OJT.

After controllers complete classroom and simulation training they begin OJT, which is conducted by a CPC who observes and instructs trainee controllers individually as they work the control position. Controllers in training achieve certification on each position as they move through the various stages. After they have certified on all positions within their assigned area, they are commissioned as a CPC at that facility.

Training new controllers to the CPC level is important for two reasons: (1) only CPCs are qualified to control traffic at all positions of their assigned area; and (2) only CPCs certified for at least 6 months (at their assigned location) can become OJT instructors for other new controllers. FAA must have enough OJT instructors at all locations if it is to achieve its ambitious hiring and training plans for the next 10 years and beyond.

It is important to note that new controllers who have completed portions of training and have been certified on a position can independently staff that position. However, controllers are not qualified CPCs until they have certified on all positions within their assigned area. In addition, using position-qualified controllers extensively to staff positions can lengthen the time required for them to become CPCs since they are not training on other new positions.

We recently completed an audit of FAA's controller facility training program—our second review of this program since 2004. Overall, we found that the program continues to be extremely decentralized and the efficiency and quality of the training varies from one location to another. We found similar problems in 2004. FAA is taking actions at the national level to get this important program on track. For example, FAA increased the use of contractor training support from 53 facilities in 2004 to 190 facilities in November 2007.

However, many of FAA's other efforts are still in the early stages of implementation. To achieve its goals for the controller workforce, FAA will need to take the following actions.

Clarify Responsibilities for Oversight and Direction of the Facility Training Program at the National Level.—Since the creation of the Air Traffic Organization, FAA has assigned national oversight responsibility for facility training to the Air Traffic Organization's Vice President for Terminal Services and the Vice President for En Route Services. However, the Vice President for Acquisition and Business Services oversees new controller hiring and the FAA Academy training program, and the Senior Vice President for Finance oversees the development of the Controller Workforce Plan. Both play key roles in the controller training process.

As a result of these overlapping responsibilities, we found that there is significant confusion at the facility level. During our review, facility managers, training managers, and even Headquarters officials were unable to tell us who or what office was responsible for facility training. In our opinion, FAA needs to clarify responsibility for oversight and direction of the facility training program at the national level and communicate those roles to facility managers.

Establish Realistic Standards for the Level of Developmental Controllers That Facilities Can Accommodate.—FAA plans to increase the number of developmental controllers to over 30 percent of the total controller workforce. This would be the highest percentage of developmental controllers in the past 15 years. In its Controller Workforce Plan, FAA estimates that the controller workforce at each facility can comprise up to 35 percent in developmental controllers and still maintain operations and training.

FAA also estimates that if facilities exceed that amount, training times would significantly increase because the number of developmental controllers would surpass available training capacity. However, we found that many facilities already meet or exceed the 35-percent level. As of December 2007, 70 facilities nationwide (over 22 percent of all FAA air traffic control facilities) exceeded that level, compared to just 22 in April 2004. This represents a 218-percent increase in just 3 years. For example, as of December 2007:

—Teterboro Tower had 12 CPCs and 13 developmental controllers (52 percent developmental).

—Oakland Center had 163 CPCs and 101 developmental controllers (38 percent developmental).

—Las Vegas TRACON had 22 CPCs and 22 developmental controllers (50 percent developmental).

Many facility managers, training officers, and union officials we spoke with disagreed with FAA's estimate of an acceptable level of developmental controllers. They stated that, in order to achieve effective controller training while maintaining daily

operations, the maximum percentage of developmental controllers should be limited to between 20 percent and 25 percent of a facility's total controller workforce.

The difference between these estimates and FAA's maximum percentage is disconcerting, particularly since 70 facilities already exceed the FAA limit. A significant issue is that FAA's 35-percent estimate was originally intended to determine how many developmental controllers could be processed through the FAA Academy—not how many new controllers that could be trained at individual facilities. However, it appears FAA is now using that percentage as a benchmark for all facilities.

FAA Headquarters officials we spoke with agreed that "no one size fits all" when determining how many trainees a facility can accommodate. We agree, given the various sizes and complexities of FAA's more than 300 facilities. In our opinion, FAA needs to re-examine its estimate and identify (by facility) how many developmental controllers facilities can realistically accommodate.

In determining this amount, FAA needs to consider several factors at each location, such as the number of available OJT instructors, available classroom space, the number of available simulators, and the number of recently placed new personnel already in training.

Implement Key Initiatives Proposed in its 2004 Controller Workforce Plan.—FAA has not implemented several key initiatives relating to facility training that it first proposed in its December 2004 Controller Workforce Plan. Those included "developing, implementing and enforcing a policy that assigns facility training as a priority second only to operations." This was to be accomplished by: (1) placing developmental controllers only at facilities that had available training capacity; (2) requiring facility managers to suspend training only for critical operational necessities; and (3) establishing nominal "time-to-certify" metrics and holding managers accountable for achieving those targets. However, FAA never issued this policy.

In addition, FAA has not comprehensively evaluated its facility training program. In its 2004 Controller Workforce Plan, FAA stated it would, "conduct a thorough review of facility training to ensure it begins where the Academy ends. This review will take into consideration other efficiency gains identified in this plan and will result in facility training programs tailored to meet the needs of developmental controllers of the future." FAA intended for this effort to help reduce the time it takes new controllers to become CPCs. However, FAA never conducted the evaluation.

To its credit, FAA has successfully implemented an important initiative—increasing the use of training simulators at towers. Tower simulators were recently installed at four towers: Chicago O'Hare, Miami, Ontario, and Phoenix. The simulators are programmed with scenarios and occurrences exclusive to those airports, using actual aircraft with their respective call signs. By using simulators, controllers gain inherent knowledge of a particular airport, its airspace, and application of air traffic procedures for that specific location. The simulators also have a function that writes software for additional airports; this allows controllers from surrounding facilities to utilize the simulators as well.

Results thus far indicate that simulators at towers are a valuable training tool, and managers of the facilities with simulators are pleased with the results. The National Aeronautics and Space Administration (NASA) Ames Research Center conducted an evaluation and found that it took 60 percent fewer days for developmental controllers to complete ground control training at the Miami tower. Further, at Chicago O'Hare, NASA reported that it took developmental controllers 42 percent fewer days to complete ground control training.

FAA plans to install 12 additional simulators this year (6 at large airports and 6 at the FAA Academy) and 12 next year (at other airports). FAA must ensure that this effort remains on track to capitalize on the significant success that this training has demonstrated.

We plan to issue our final report on controller facility training later this spring. We are also conducting other congressionally requested reviews of related controller issues. At the request of the Chairman of the House Subcommittee on Aviation, we are reviewing controller training failures (developmental controllers who fail training either at the FAA Academy or at their assigned facility). At the request of Senator Durbin of Illinois, we are reviewing factors that could affect controller fatigue. This issue was identified by the National Transportation Safety Board after the crash of Comair 5191 in 2006. We are focusing our current efforts at Chicago O'Hare Tower, Chicago TRACON, and Chicago Center but may review other locations and FAA's national efforts based on the results of our work at Chicago.

Addressing Inspector Attrition and Implementing Staffing Models

FAA and the U.S. aviation industry have experienced one of the safest periods in aviation history. While much of the credit for this impressive safety record is due

to safety systems that air carriers have built into their operations, FAA regulations and inspectors play an important role in providing an added layer of safety oversight. This oversight covers a vast network of operators and functions, which make up the largest, most complex aviation system in the world (see table 3 below).

TABLE 3.—FAA INSPECTORS' WORKLOAD

	Amount
Commercial Air Carriers	114
Repair Stations	4,978
Active Pilots	749,834
Approved Manufacturers	1,647
Flight Instructors	89,396
FAA Designee Representatives	11,292
Aircraft	319,549
FAA-Licensed Mechanics and Repairmen	361,273

Source: FAA.

FAA's approximately 4,100 inspectors must oversee both domestic and foreign aspects of these operations. This task is made more difficult by the rapidly changing aviation environment. We see two issues that warrant attention. FAA must: (1) maximize risk-based oversight programs; and (2) develop and implement a reliable staffing model to ensure it has a sufficient number of inspectors where they are most needed.

To maximize its limited inspector resources, FAA has been working toward risk-based safety oversight systems for air carriers, repair stations, and manufacturers. These systems target inspector resources to areas of greatest risk.

FAA has worked to move its safety oversight for aircraft repair stations to a risk-based system over the past 2 years. However, FAA's new system does not include a process for overseeing critical repairs performed by non-certificated repair facilities. In December 2005, we reported that FAA must understand the full extent and type of work that non-certificated repair facilities perform. These facilities are not licensed or routinely visited by FAA inspectors but perform critical maintenance, such as engine replacements. FAA's efforts to identify which non-certificated repair facilities perform this type of maintenance for air carriers are still underway.

FAA will also need to modify its risk-based system for manufacturers so that inspectors can more effectively oversee manufacturing operations in today's complex aviation environment. FAA's current oversight system does not consider the increasingly prominent role that aircraft parts and component suppliers now play in aviation manufacturing. In the past, manufacturers built the majority of their aircraft within their own manufacturing facilities using their own staff. Now, manufacturers use domestic and foreign part suppliers to build large sections of their aircraft. Given these changes, FAA needs to strengthen its system for overseeing aircraft and aircraft part suppliers so that its oversight is effective and relevant.

In addition to targeting inspector resources through risk-based oversight, FAA must have a reliable staffing model on which to base its inspector assignments. FAA has made at least two attempts to develop a staffing model to determine the number of inspectors needed and the best locations for placement. Neither model, however, provided FAA with an effective approach for allocating inspector resources.

Last year, FAA's hiring efforts kept pace with retirements, and the agency ended the year with 133 additional inspectors over fiscal year 2006 levels. Because of staffing gains in fiscal year 2007 to 2008, FAA's budget request for fiscal year 2009 does not include funding for any additional inspectors over the fiscal year 2008 levels. However, FAA must continue to closely oversee this hiring effort since nearly half of the workforce will be eligible to retire within the next 5 years. FAA will never have an inspection workforce that is large enough to oversee every aspect of aviation operations, but it must develop a reliable staffing model to effectively use its inspector resources.

At the direction of Congress, the National Research Council evaluated FAA's current methods for allocating inspector resources in September 2006. This study reported similar concerns that we identified in past reports—that FAA's current method of allocating inspectors is antiquated and must be redesigned to effectively target inspectors to those areas of higher risk.

The Council also reported that the changing U.S. and global aviation environments will be key drivers of future inspector staffing needs. For example, airlines' outsourcing of aircraft maintenance, FAA's shift to a system safety oversight ap-

proach, and safety inspectors' attrition and retirement are all important factors that must be considered in determining staffing needs.

FAA is still in the early stages of developing a new staffing method and has established an interim target date to assess current staffing methods and begin identifying the elements of the next generation staffing tool by September 2008. FAA recently finalized milestones to develop and implement the new model and plans to begin using it by October 2009. FAA's measurable progress toward a new staffing model is a key watch item, and we will continue to monitor this important initiative.

That concludes my statement, Madam Chairman. I would be happy to address any questions you or other members of the subcommittee may have.

SAFETY

Senator MURRAY. Thank you very much. Mr. Sturgell, the flying public wants to know that there is no question about the safety of the aviation system when they get on a plane, and as a passenger that flies coast to coast every weekend, I and all of the taxpayers in this country believe that they already pay for a safe system.

I want to know how you are doing to reassure the public that safety is not being compromised by the inconsistent inspection and enforcement activities that we've seen on the part of the FAA?

Mr. STURGELL. Madam Chairman, the first thing I would point to is the tremendous safety record and the advances that have been made, especially over the last decade. Today, we have the safest system in the world, but as I said, it is not perfect. Our challenge is to not be complacent about that record and to not rest on that record. It is to make that record better.

AIRWORTHINESS DIRECTIVE

The AD review that we are going through now is designed to check and affirm that what we have been doing in this one area has been proven effective. I think a 99 percent compliance rate of the over 2,400 audits we have done in this area is high. It is the 1 percent that I worry about and that's my job to worry about it.

But in all the areas, again, I think we've made tremendous advances. We made these advances both as a regulator and overseer, as an agency of enforcement, but also as a partner and in collaboration with industry on very important partnership efforts as well, and we're going to continue down this path.

Senator MURRAY. Well, the grounding of the MD–80s this past weekend inconvenienced about a half a million passengers. Do you think that whole entire mess was the fault of American Airlines?

Mr. STURGELL. Madam Chairman, I again regret and empathize with the disruption that that event caused.

It is my job, though, to worry about the safety of the system and to act on the deficiencies we see in the system. With respect to that particular wiring AD, I think it's important to understand the context here, which is that we have learned a lot about wiring and the problems with wiring since the Swiss Air Flight 111 accident from years and years ago. Out of that accident, we have developed directives and requirements now to ensure that wire does not chafe, that it does not come in contact with certain other pieces of the airplane, especially in very critical areas where it is close to fuel tanks and close to things like hydraulic lines.

So, we went through a notice and comment period on this. We then had an 18-month period where we factored in the risks involved and how much time should we give people to comply with

our safety directives. In some cases, our airworthiness directive requirements are much, much shorter. In some cases, they are longer, but it is all about the risks in the system and further improving the system.

Senator MURRAY. Okay, let me ask you about that and the consistency here. You first issued the airworthiness directive affecting this wiring that you're talking about in the MD–80s and you gave them 18 months to fix the problem and after the problems at Southwest came to light a few weeks ago and you conducted some additional audits on all the air carriers, there were questions raised about whether American Airlines had fixed it correctly. The result is that all of these MD–80 aircraft were grounded immediately and as many as a half a million passengers were then inconvenienced.

Now you're the safety expert, I'm not, but can you explain to us why, if you initially thought it was safe to give the airlines who fly these MD–80s with this wiring problem an additional 18 months, all of a sudden everything had to stop in a day?

Mr. STURGELL. Madam Chairman, it is all about accepting a level of risk in the system and that's what our AD compliance time frames are based on.

There was an 18-month period to comply. When we began the audit, and the audit was not a crackdown or, getting tough, it was in response to claims that in light of Southwest and what happened, and that was the failure on our part as well as Southwest's, but in light of that incident, people raised questions about ADs broadly in the system.

So, in order to take a snapshot and get an assessment of it, we decided to conduct audits. The first time around, about the middle of March or so, this particular AD, which had just become effective March 5, at the end of the 18 months, was raised as an issue among all the operators of MD–80s, not just American but Delta, Alaska, and Midwest. We believed people had taken action, alternative means of compliance were issued, and we believed that problem was addressed.

When we came back several weeks later, we found that at American, it had not been addressed.

Senator MURRAY. But just explain to me what the difference between 18 months and 18 months and 2 weeks is.

Mr. STURGELL. The 18 months is based on a level of risk for this particular problem. With any additional time you are increasing your level of risk, and granted it is a low probability in some cases, but in this particular case, it is a high consequence. These are wires that are in the area of the fuel tank and the hydraulic lines.

SOUTHWEST AIRLINES

Senator MURRAY. Okay, let's go to Southwest Airlines and how your agency responded. We know that there was a record $10.2 million civil penalty against Southwest Airlines. That fine was actually announced just days before Chairman Oberstar's planned hearing on Southwest's problems and the FAA's cozy relationship with that airline and it took only a week instead of the usual 60 days for that civil penalty to be forwarded out of your regional counsel and announced.

Should we really believe that the timing of that announcement with the record fine and Chairman Oberstar's planned hearing was just a coincidence?

Mr. STURGELL. Madam Chairman, that process began back in April when the office manager discovered some discrepancies with the voluntary disclosure reporting form. I will grant you that from those investigations and then we have a process where we go through an enforcement action, that it took longer than we would have liked.

Senator MURRAY. You say the timing is just a coincidence?

Mr. STURGELL. That is my belief, yes.

Senator MURRAY. General Scovel, have you found that this finding is consistent with the FAA's previous enforcement?

Mr. SCOVEL. The size of the fine, Madam Chairman? I have not examined it in detail. I have been informed by my staff, however, and through media reports, that this is one of the largest, if not the largest, civil enforcement penalty assessed by FAA.

Senator MURRAY. Mr. Sturgell, the reason that I'm bringing this up is we count on your agency to provide us, as the flying public, the knowledge that what we fly on is a safe airplane. We expect you to make sure that is done safely and consistently.

It just seems weird to us when all of a sudden, somebody was saying, there is going to be a hearing; there's a major fine at Southwest; and, then within days, hundreds of planes are grounded.

What was happening in the last 18 months? Why was this not done consistently? What occurred that all of a sudden there was in the last 3 weeks a huge focus on safety? Shouldn't that have been happening prior to that? That's what the picture looks like to all of us.

Mr. STURGELL. Madam Chairman, a couple points, if I may. The fine with Southwest is large and it is because of the deliberate nature of the activities involved. From my perspective, Southwest should not have flown those airplanes once they found that they were over the inspection requirements and our inspectors should not have permitted them to continue flying knowingly like that.

Your second question about 18 months and why now and the consistency, again there were concerns raised systemwide. The way for me to assess whether it's a systemwide process is to go out and take a snapshot. These are inspections we would otherwise be doing in the normal course of business. We have accelerated that requirement into a defined timeframe.

Senator MURRAY. It appears to us the only reason the FAA acted was because this was going to become public. We as the public want to be assured that it is done because it is the right thing to do.

Mr. STURGELL. Madam Chairman, it was not because of that. We are trying to do the right thing. We are trying to make this system even safer than it is today.

Senator MURRAY. Mr. Scovel, do you have any comment?

Mr. SCOVEL. FAA's action recently is most assuredly the right thing to do. The rush with which it was brought to bear most recently, however, gives rise naturally to questions: What happened before? Why not this attention before? The record for the Southwest case is as follows. The event occurred in March 2007, the ini-

tial investigation was completed in April, the subsequent investigation submitted at the national level in July, and a supplemental investigation was returned to national headquarters in October. I believe, as illustrated by the timeline in our statement, that this begs the question of what level of national review was being conducted once this had been brought to the attention of national authority figures?

Apparently, not until November 2007 when enforcement action was initiated against Southwest, and then most recently when Chairman Oberstar on the House side made public his intent to hold hearings focusing on the Southwest question was the overall issue of FAA's oversight, especially of airworthiness directives, brought to bear. FAA then began to move with dispatch.

Senator MURRAY. I'm way over my time. Senator Bond?

AIRWORTHINESS DIRECTIVES

Senator BOND. Thank you, Madam Chair. Let me follow up on the airworthiness directives. It appears to me that you are assuming, and in most cases with justification, that the ADs are being complied with by the airlines, but when a new airworthiness directive is issued, I'm interested in what your agency does, and I raised in my opening remarks the possibility that there should be random inspections, not systemwide inspections but random inspections in all carriers to ensure compliance—when the airworthiness directive has been issued and it goes into effect.

I understand this wiring directive did not come into effect until early March this year, but when it comes into effect, why do you not, should you do random checks to ensure that the paper reports and the assurances of compliance of airlines are in fact being accomplished?

Mr. STURGELL. Senator Bond, as part of our regular oversight program, our inspectors do conduct random checks of ADs, there's a requirement over a specified period of time to do that.

In the case of this wiring AD, the process involves an airworthiness directive, service bulletins, an engineering change order, and then eventually ends up as a maintenance work card. The airline mechanic has the work cards and those are the instructions they go to work on the airplane to meet the requirements of the airworthiness directives and the airworthiness directives and the documents are generally engineering documents and are very complicated.

We're seeing issues of translation, of human factors, and similar types of issues in this review. One of the things we are doing is we're going to sit down with Boeing and the manufacturers and industry to figure out if we can improve and how to improve upon this process.

Senator BOND. Well, it seems to me that it doesn't do much good, you can have the best engineering document in the world and if the guy or the gal who actually is doing the work can't understand it. I mean somebody from your shop ought to be looking at this, maybe in conjunction with representatives to say, Number one, do you understand it, Number two, are you doing it, and then focus your attention in the short term to make sure that when the deadline for completing these ADs arrives, that they have been ade-

quately observed. I would think that that kind of check would be important.

Let me ask Mr. Scovel his comments and then you, Mr. Sturgell.

Mr. SCOVEL. Good morning again, Senator Bond. I would agree with you that random audits ought to be a part of it, and my understanding is that, to some extent, random audits already are a part of FAA's inspection process.

Another aspect that I would highlight for the subcommittee's attention is the ATOS system, which is FAA's risk-based and data-driven air carrier oversight system.

We know from the Southwest case that the carrier's AD compliance program was first audited, or first inspected, by FAA in 1999. As required, another inspection should have been done within 5 years after that date, by 2004.

As of March 2007, when the incidents occurred at Southwest, the carrier's AD compliance program still had not been inspected some 7 years after that date.

A follow-on point for FAA ought to be not only performing random audits to test compliance with individual ADs, but making sure that certificate management offices inspect each carrier's AD compliance program on at least the 5-year basis that is currently required by the ATOS system. That was not done at Southwest. Had it been done, the March 2007 incidents might have been avoided.

Senator BOND. Mr. Sturgell, two questions. Number one, to respond to the question I asked, Mr. Sturgell, about random audits when an AD goes into effect, and the second one was were there any random audits conducted during the 18-month period that the AD was pending to see that the job was being done prior to the effective date to ensure that airlines could meet the goal of compliance by March 2008.

Mr. STURGELL. Senator Bond, going back to the Southwest Airlines incident first, I want to be very clear. I'm not making any excuses for what happened on behalf of the FAA at that office. It was not appropriate. We're going to take action and we're going to fix it.

To your question about airworthiness directives, the kinds of questions you are asking are the kinds of questions that our task force with industry will address.

During that 18-month compliance period, no, I'm not aware that we went out and checked to see, because compliance is not required until March 5. That is a question, though, that several people have raised. Is there a way to, during that timeframe "check up" and see if the work being performed is appropriate or not.

So those questions we're going to address. I would just caution that my worry would be not to let FAA become the quality control outfit for each individual airline. I want the airlines to have that capability. I want them to be quality controlling their work.

Senator BOND. Granted. I agree with you on that point, but obviously there are times when their quality assurance program has not worked. That's why I suggested it.

On the Southwest issue quickly, one of the IG's recommendations was to rotate the senior certificate management office personnel.

Do you agree with that approach or if that's not the right approach, do you have another approach?

SENIOR PERSONNEL ROTATION

Mr. STURGELL. My initial concerns with that type of an approach go to the funding that would be required to uproot and relocate people, and not just our inspectors, but it would be their families with them and taking folks out of school and everything like that. In effect, what we're talking about is a military type of rotation.

Another concern would be the loss of corporate knowledge about that particular airline. If an inspector has been there and knows that airline's system, I think the inspector can provide more effective oversight. The system depends on people and it depends on people doing the right thing. This is a recommendation that I'm going to continue to talk to the IG about and see if there is some way to address what is being asked, but those are my initial concerns.

Senator BOND. Thank you, Mr. Administrator.

AIRWORTHINESS DIRECTIVES

Senator MURRAY. Just a quick follow-up so that I understand. So, on American Airlines and the MD–80s, there was a directive administered. They were given 18 months and during that 18-month timeframe, the only thing the FAA did was look at paperwork, there were no physical inspections, correct?

Mr. STURGELL. I do not believe there were physical inspections of that particular AD. I am certain there were other types of inspections.

Senator MURRAY. Maybe this question would be better: if there had been physical inspections checking to see if the work had been done right during that 18-month period, would we not have seen everybody grounded at the time?

Mr. STURGELL. That is an assumption that if you look at one airplane and it looks good, then all the other airplanes would have that——

Senator MURRAY. Some of the work was being done wrong.

Mr. STURGELL. I'm sorry?

Senator MURRAY. Somebody could have seen that this was being done wrong a year ago instead of all in one weekend, correct? If there was a physical inspection rather than just paperwork.

Mr. STURGELL. If, during the 18 months, American had done an airplane and an FAA inspector had looked at that particular airplane for the work that was done, then that inspector could have seen whether or not the work was being done in conformity with the airworthiness directive or not.

Senator MURRAY. Senator Feinstein?

AIR TRAFFIC CONTROLLER STAFFING AT LAX

Senator FEINSTEIN. Thank you very much, Madam Chairman. To the FAA Administrator, I want to thank you for your letter of January 18. This was in response to my concern on the air traffic controller situation, and you point out in this letter that you've been on a hiring wave and that this hiring wave created the potential

for a large portion of the controller workforce to reach retirement age at roughly the same time and you say that time is not upon us now.

And at Los Angeles, 50 controllers are anticipated to retire in 2008. I note that in 2005, you hired 438, 2006 1,116, 2007 1,815, 2008 1,877, and in this budget, you have 1,914 controllers.

My question to you specifically with respect to LAX, will these new hires enable LAX to have the sufficient number of air traffic controllers so that they don't have, I think, 18 percent trainees doing the work of the controller?

Mr. STURGELL. Madam Senator, the plan that you described, we have been working from since 2004 in preparation for this retirement wave, which will last about a decade. I suspect we'll be hiring anywhere between 1,800 and 2,000 new controllers for the foreseeable future. We do have facility plans for each individual facility.

Senator FEINSTEIN. Could you—I have limited time. Could you just answer my question because I think LAX is at high risk of catastrophic runway incursion and the GAO report points that out.

In view of this, it seems to me that LAX has to be a high priority and so what I want to know is will these 1,944 people provide enough controllers to Los Angeles International Airport to reduce that high risk of catastrophic runway incursion?

Mr. STURGELL. We will ensure that LAX Tower has the appropriate number of controllers to be staffed safely. We are putting runway status lights into LAX on the north side this year, and I thank the airport for helping to fund that program with us.

Senator FEINSTEIN. So your answer is yes for this year?

Mr. STURGELL. Yes.

Senator FEINSTEIN. Mr. Scovel, how many additional air traffic controllers did you find that LAX would need not to be at catastrophic risk of a runway incursion?

Mr. SCOVEL. Good morning, Senator.

Senator FEINSTEIN. Good morning.

Mr. SCOVEL. I would need more information specifically regarding LAX, but overall it has a sufficient number of controllers. For us, the key question is the composition of that workforce at the facility. Specifically, how many are experienced veteran controllers versus how many are controllers in training. This is a theme that runs consistently across every facility throughout FAA's air traffic control system.

If the mix is too high, that is, if the number of controllers in training is too high, that raises legitimate safety and controller fatigue concerns because it takes up to 3 years for new controllers to complete facility training. Facility training is an intensive process.

Senator FEINSTEIN. Well, you estimate then that LAX will continue to be at high risk of catastrophic runway incursion, even with this hiring plan? I don't know.

Mr. SCOVEL. I do not want to say that because I do not have that data. My office has not had an opportunity to study your facility in that degree of detail.

Senator FEINSTEIN. Is it possible to ask you for that data?

Mr. SCOVEL. Of course.

[The information follows:]

As of December 2008, LAX had 39 certified professional controllers and 10 controllers in training for a total of 49 controllers. The total number of controllers is above the validated staffing range for the facility (between 39 and 47 controllers). Also, the percentage of controllers in training (20 percent) is below FAA's national average of 26 percent. At your request, my office will be issuing a report in March 2009 detailing our findings and recommendations for ensuring appropriate staffing levels at LAX as well as the Southern and Northern California TRACONs."

Senator FEINSTEIN. I'm very concerned. Mr. Sturgell.

Mr. STURGELL. Senator, the issue at LAX and runway incursions goes to the layout of that airfield and the closeness of the parallel runways. They have addressed that on the south side of the airport by moving the runways further apart. I believe they need to do that on the north side of the runway as well. Addressing runway incursions is a very complicated issue that has to be attacked from all angles, staffing, technology, airport layout, as well as procedures, markings and everything that goes along with it.

SAN FRANCISCO INTERNATIONAL AIRPORT

Senator FEINSTEIN. It's just I went to northern California TRACON once and when I saw the number of planes in the sky at a given time, I couldn't believe it. I could imagine what it is in southern California and therefore for me, at the very least, I want to know that the personnel are there and that they're trained and that this is a major public safety factor. So, I'm going to continue this and keep coming at you until this gets done. I think it's important.

Let me quickly go to one other thing and that is San Francisco International. John Martin is one of the best airport directors in the country. I have known him. I have watched him for 20 years. He runs a great airport. He would like to reduce the plane limit in the morning hours to 35 because I believe San Francisco International had the worst on-time performance recently of any airport in the United States.

When it's foggy, one runway goes out. So, the airport operates with one runway only. It is doubtful, in my view as a former mayor, that that is ever going to be remedied. Therefore, the only way San Francisco International can operate relatively on time is to be able to change the number of planes coming in in a given hour.

Mr. Martin has suggested that 35 is that number. Will you be willing to work with him to accommodate that request?

Mr. STURGELL. We have talked to John Martin, and I hold him in great regard as well, about what is going on at his airport. I believe some of the changes in the proposed airport's rates and charges policies will permit him to more evenly distribute traffic throughout the time period that he is concerned about.

Senator FEINSTEIN. So, the answer is yes?

Mr. STURGELL. So, he has——

Senator FEINSTEIN. I need to understand yes or no, I'm afraid.

Mr. STURGELL. So, he has talked to us about——

Senator FEINSTEIN. I know that.

Mr. STURGELL. The policies and what he would like, assuming there are changes to the airport rates and policy charges, which are under comment right now, he'll be able to achieve his desired goals.

CELL PHONES ON PLANES

Senator FEINSTEIN. That's excellent. Thank you very, very much. Let's go back to LAX. I'm really not—as you know, there was a runway accident in 1991 and 34 people lost their lives. So, this isn't something that's conjured up and you were saying, Mr. Sturgell, that airline travel is the safest it's ever been, but I can tell you, I came out this week on a fully loaded 777 with everything stuffed everywhere, including individuals, and that plane had trouble lifting up, it was so heavy, and I felt it as a passenger.

So, I'm really worried. These planes are moving fully loaded, carrying a lot of fuel, a lot of baggage, and I would just like to ask—I didn't get to my cell phone question but perhaps on the next round I can.

Perhaps you can quickly say what you're going to do with cell phones. Are we going to have to live through them cross country?

Mr. STURGELL. Senator, my top priorities are staffing, runway safety, and our oversight. Cell phones is far, far, far, far down the list.

Senator FEINSTEIN. So that means you'll never get to it, which is fine with me. Thank you for that answer.

Senator MURRAY. Senator Lautenberg. Thank you.

AVIATION SAFETY

Senator LAUTENBERG. Thank you, Senator Feinstein, for bringing up that subject. It's a grotesque consideration, especially if phone calls are uninteresting. That didn't get a response.

Anyway, thanks very much for your testimony. Mr. Sturgell, since last month, thousands of flights have been cancelled for safety inspections and repairs, and why were airplanes able to fly that hadn't been inspected?

Suddenly, this discovery that canceled thousands of flights, the conditions existed before the decisions were made by the respective airlines, and we talked, Mr. Scovel, about the fine and what inducement that might have been for them to get on with it before they themselves were being fined.

But did you believe, Mr. Sturgell, that airlines were complying with safety regulations before all the groundings last month?

Mr. STURGELL. Senator Lautenberg, in general, airlines comply with airworthiness directives and the audit has shown that there is a very high compliance rate in the system.

Senator LAUTENBERG. That's challenged by the suddenness of the announcements that these flights were being cancelled all over the place, 2,000 in a single day, I think it was, by American in a couple days.

So, how could that be that—how could you have been satisfied that these—that they were complying if suddenly thousands of flights were canceled?

Mr. STURGELL. Senator, I'm not happy about the cancellations and those disruptions on any level.

Senator LAUTENBERG. Well, does that mean you would have preferred that they kept flying as they were and not have done the cancellations?

Mr. STURGELL. No. That is why they were grounded. That is why the airlines grounded them, because they were not in compliance with the airworthiness directives.

Senator LAUTENBERG. Right. So then that—you'll forgive me—challenges the statement you made just a moment ago that you thought that they were in full compliance. So, where do we go from there?

Mr. STURGELL. Your chart reflects the timeline of this particular event. There were 18 months to achieve compliance. In the first phase of the audit, we identified issues with the wiring with American and Delta and a couple of other airlines as well.

Senator LAUTENBERG. But couldn't——

Mr. STURGELL. We believe they were taken care of and when we came back, we found that American had not complied with the airworthiness directive.

Senator LAUTENBERG. How is it possible over that period of time that someone at your level, someone at FAA didn't say, hey, we noted this and why aren't these airlines forced to make the decisions that protect the flying public against the possibility of a problem?

Mr. STURGELL. The cancellation numbers show that the airlines were taking measures.

LOW FUEL LANDINGS AT NEWARK-LIBERTY AIRPORT

Senator LAUTENBERG. Well, this is a cart and the horse kind of thing because we look at you as the traffic cops to stop the speeding traffic at crossroads and suddenly to discover that it's been taking place is—doesn't make us feel very comfortable, I must tell you.

General Scovel, thank you for the report you did for me on low fuel landings at Newark-Liberty.

With the pressure of ever-higher fuel prices, do you think that FAA is doing its job of monitoring whether airlines are providing sufficient amounts of fuel to their planes on the long overseas trips and other lengthy flights?

Mr. SCOVEL. Good morning, Senator Lautenberg. Thank you for referring that question to us because it brought to light a disturbing situation, at least with regard to Newark-Liberty and Continental Airlines fuel practices and flight practices with Boeing 757s.

As you know from the material that we provided to you, FAA has stringent regulations regarding fuel that must be carried. It has to be sufficient for the flight to the announced destination, plus there must be enough for the nearest alternate airport beyond that, should the necessity arise. There must also be enough fuel for an additional 45 minutes of flight beyond even the alternate destination airport.

Our information regarding Continental is that all of the flights where a low fuel declaration was made carried enough fuel in accordance with FAA regulations.

Senator LAUTENBERG. Did we note any increase in the low flight requests for landing?

Mr. SCOVEL. There was an increase. In fact, our information was that in 2005, there were 44 minimum and emergency fuel declarations declared on flights into Newark-Liberty. In 2007, there were

151 such declarations. The majority of those declarations, 56 percent, occurred on international routes. Continental Airlines accounted for 64 percent of the fuel declarations.

RUNWAY SAFETY

Senator LAUTENBERG. The FAA policy requires the agency to have a national runway safety plan and look at it every 2 to 3 years. But FAA hasn't updated it since 2002 and you as well as the Government Accountability Office recommended that FAA needs to update its national runway safety plan immediately.

What are the dangers of not making these updates?

Mr. SCOVEL. Senator, the NTSB has identified runway safety and specifically runway incursions as its number one safety worry with regard to aviation.

Last week, I testified before the Senate Aviation Subcommittee with a member of the NTSB, Steven Chelander, and he reiterated NTSB's concerns regarding runway incursions.

FAA made great progress in the early part of this decade with regard to runway safety. Runway incursions declined from well over 400 per fiscal year to a range in the neighborhood of in the 320s and 330s per fiscal year, and that was a dramatic improvement.

However, with that improvement, it seemed to us as well as to the GAO that FAA then took its eyes off the ball. A permanent director of its National Runway Safety Office was not appointed for a number of years. Funding and staffing for that office was cut. The national runway safety plan was not updated and reissued for a number of years, as you pointed out.

I give great credit to Mr. Sturgell for his runway safety action plan, which he initiated last summer. It has shown tremendous benefits already. We wish, however, that consistent attention had been paid to runway safety during the years between 2002 and 2007 because, during that time, the overall number of runway incursions increased from roughly 330 to again near 370 in the most recent fiscal year, and that is very discouraging.

Senator LAUTENBERG. Madam Chairman, thanks for your patience for going over time here.

Senator MURRAY. Thank you very much. Senator Specter?

PHILADELPHIA AIRSPACE

Senator SPECTER. Thank you very much. I join my colleagues, Mr. Sturgell and Mr. Scovel, in welcoming you here. You certainly have enormously important jobs as air travel becomes more frequent. There is no issue more on the minds of the traveling public than air safety.

Thank you, Mr. Sturgell, for scheduling a field hearing in Philadelphia on Friday, the 25.

I'd like to take up two issues with you in the brief time I have. One is the scheduling issue and the other is the overflight patterns. I'm advised that airlines are permitted to schedule as they choose in Philadelphia; vast overscheduling from what I've been able to observe in terms of delays on departures, delays on arrivals, especially when there is a weather problem. It looks to me in its sim-

plistic terms very much like a restaurant that has 100 seats and books 175 people.

Mr. Sturgell, why not have some schedule so that we have a reasonable, realistic likelihood that planes can depart and arrive on time?

Mr. STURGELL. Senator, good morning. I think all of us would prefer that the first approach be to address the capacity issues by adopting policies that increase the capacity of the system, and I know Philadelphia——

Senator SPECTER. Oh, I agree with increasing. I've only got 7 minutes. Why not have a schedule which is accommodating to people being able to leave and arrive on time? I want you to come to the point because there's not much time.

Mr. STURGELL. We don't control the airlines' scheduling practices.

Senator SPECTER. You don't control the scheduling but Congress can. Would you recommend that Congress establish a requirement that there be schedules established which are realistic, that travelers can rely upon for departures and arrivals?

Mr. STURGELL. Again, I think we ought to be adopting capacity to improve and where we see problems that affect the national airspace system, like we have in New York and the scheduling there——

Senator SPECTER. Okay. Now focus on my question.

Mr. STURGELL. Should Congress decide to move in that direction, we would obviously want to work with you on it.

Senator SPECTER. Okay. Let's work on it because it seems to me Congress can do that and my instinct is Congress ought to do that, but let's move ahead and work on it together.

Before my time expires and it runs fast, let me move to the question of overflights where you and I have had considerable correspondence, and you confirmed that my understanding was correct, that there was a commitment that if there were more than 10 flights, they wouldn't fly over Delaware County.

We have a very serious concern about overflights over Delaware County and we're trying to see that they're minimized to the maximum extent possible and you have said in your letter to me, dated March 20, and I would ask consent for these letters to be made a part of the record, that "for us to change any of the technical disclosed mitigation strategies as detailed in our record of decision would require a re-evaluation and analysis of both the operational and environmental impacts."

[The information follows:]

LETTER FROM ROBERT A. STURGELL

U.S. DEPARTMENT OF TRANSPORTATION,
FEDERAL AVIATION ADMINISTRATION,
Washington, DC, February 7, 2008.

The Honorable ARLEN SPECTER,
United States Senate,
Washington, DC 20510.

DEAR SENATOR SPECTER: Thank you for your January 31 letter about the implementation of dispersal headings at the Philadelphia International Airport (PHL), more specifically the use of the 268-degree heading from runways 27 L/R. We hope to clarify the differences between the mitigation strategies applied at both the PHI and Newark Liberty International Airports (EWR). I've enclosed a copy of my re-

sponse to your November 29, 2007 letter that you had not yet received when you wrote.

At the briefing of congressional staffers on November 16, 2007, we explained the mitigation measures, and I am pleased to provide further clarification. At PHL, once the project is fully implemented, the three departure headings will be used throughout the daytime hours (7 a.m. to 10 p.m.), while the 255-degree heading, used before the implementation of the project, will be used during nighttime hours (10 p.m. to 7 a.m.). Because all three departure headings for PHL will not be available until later stages of implementation, we became concerned the two available headings (245 degrees and 268 degrees) could create noise impacts that were not modeled as part of our analysis. As a result, the Federal Aviation Administration has elected to use the two available headings only during PHL peak departure hours. Currently, these hours are 9 a.m. through 11 a.m. and 2 p.m. through 7 p.m. These hours will be adjusted in the future to accommodate changes in airline schedules.

Once airspace changes and procedures have been developed to allow full implementation and use of dispersal headings at PHL, these time-of-day restrictions will no longer apply. As a mitigation measure, we did agree to the use of a single heading (255 degrees) down the river between the hours of 10 p.m. and 6 a.m. The mitigation strategy of demand-triggered use of headings, based on numbers of departures waiting, was used at EWR and not at PHL. The mitigation strategies applied at PHL involved a reduction in the number of departure headings used. The original alternative called for six dispersal headings off runways 27 L/R in the Draft Environmental Impact Statement and was reduced to three dispersal headings in the noise mitigation document. In addition, the single heading down the river was also retained as a mitigation strategy. Please note that, as part of the airspace redesign project, we are also using departure dispersal headings for runways 9L/R at PHL. These, like the headings for runways 27 L/R, were modified by reducing the number of headings available for use from seven to four.

While we're currently studying the benefits of the departure dispersal headings, our initial review indicates a reduction in overall departure delays. The FAA is sensitive to the impact this airspace redesign project has on the residents of Delaware County. We will continue to consider Delaware County's concerns when implementing additional elements of the project.

If I can be of further help, please contact me or Ms. Megan Rosia, Assistant Administrator for Government and Industry Affairs, at (202) 267–3277.

Sincerely,

ROBERT A. STURGELL,
Acting Administrator.

LETTER FROM ROBERT A. STURGELL

U.S. DEPARTMENT OF TRANSPORTATION,
FEDERAL AVIATION ADMINISTRATION,
Washington, DC, March 20, 2008.

The Honorable ARLEN SPECTER,
United States Senate,
Washington, DC 20510.

DEAR SENATOR SPECTER: Thank you for your February 15 letter about implementing dispersal headings at the Philadelphia International Airport (PHL) and their use during light periods of traffic.

Your assertion that my representative advised your staff the PHL dispersal headings over Delaware County would initially only be used during peak demand periods, which we define as periods where 10 or more aircraft would be waiting to depart in the absence of the dispersal heading, is correct. As we tried to clarify in our previous correspondence dated February 7, the time-of-day restriction on the use of dispersal headings at PHL was, technically speaking, based on peak demand periods which do correspond to the times when most aircraft are waiting to depart.

Once the project is fully implemented, we will be using three departure headings (for the westbound configuration) throughout the daytime hours (7 a.m. to 10 p.m.). The 255-degree heading, which was used before the implementation of the project, will be used during nighttime hours (10 p.m. to 7 a.m.). Because all three departure headings for PHL will not be available until later stages of implementation, we are limiting the use of the two available headings (245 degrees and 268 degrees) to only PHL peak departure hours. Currently, these hours are from 9 a.m. to 11 a.m. and from 2 p.m. to 7 p.m. We are limiting the use of the 245- and 268-degree headings to avoid creating noise impacts that were not modeled as part of our analysis in the

Environmental Impact Statement. These hours may be adjusted to accommodate changes in airline schedules.

We understand that you are requesting we consider additional mitigation strategies that would restrict the use of the headings based on the number of aircraft waiting to depart. It is important to again clarify that peak demand hours do correspond to the times when the most aircraft are waiting to depart. In practice, air traffic controllers routinely use dispersal headings during the busy periods. For us to change any of the technical disclosed mitigation strategies as detailed in our Record of Decision it would require a reevaluation and analysis of both the operational and environmental impacts.

While we remain sensitive to the concerns of your constituents, we believe the adjustments made to the selected alternative provide a reasonable solution to the noise impacts. The reduction in the number of departures headings from six headings to three headings, on the westbound configuration during the day, was designed to provide optimum noise mitigation. Additionally, a single heading down the river at night was retained as a mitigation strategy. These procedures provided the best options for noise relief for the residents of Delaware County, Pennsylvania, while still meeting the purpose and need of this project.

If I can be of further help, please contact me or Ms. Megan Rosia, Assistant Administrator for Government and Industry Affairs, at (202) 267–3277.

Sincerely,

ROBERT A. STURGELL,
Acting Administrator.

Senator SPECTER. Now your letter, dated February 7, to me notes, "The mitigation strategy of demand for use of headings based on the number of departures waiting was used at Newark and not at Philadelphia."

Now what we have here is a situation where you have scheduling as to time from 9 a.m. to 11 and from 2 p.m. to 7 but not geared to the number of planes waiting.

Now my question, why shouldn't Philadelphia have the same consideration that Newark does to limit the overflights? And I understand in Newark, you're limiting the overflights over residential areas. Why not have the same consideration for Delaware County which Newark has that you don't fly over Delaware County unless there are more than 10 planes waiting?

Mr. STURGELL. Senator, I'll look forward to talking about these issues with you next week at the field hearing.

Senator SPECTER. Let's talk about it now. We have 1 minute and 40 seconds left.

Mr. STURGELL. Those times do also correlate, my recollection is, with the peak departure periods for——

Senator SPECTER. That's not——

Mr. STURGELL [continuing]. There, and in both places, we are limiting the number of dispersal headings.

Senator SPECTER. No, that's not necessarily so. Those times do not correspond with having more than 10 planes waiting. That's the standard you have at Newark but not in Philadelphia.

Mr. STURGELL. Then I don't have the specifics you're asking me today. I'd certainly be glad to go back, study it, get it and either meet with you before next week or discuss it next week.

Senator SPECTER. Okay. You say in your letter, dated March 20, "For us to change any of the technical disclosed mitigation strategies as detailed in our record of decision would require re-evaluation and analysis of both the operational and environmental impacts."

What's the problem with a re-evaluation, Mr. Sturgell? You have the community which is up in arms, really up in arms about the

noise, and they asked me the questions, why does Newark not fly over the neighborhoods unless they have more than 10 waiting and you write back and say require re-evaluation. That's all we hear around here is re-evaluate things from morning till night. Make legislative changes to try to have public policy that accommodates people. Why not a re-evaluation?

Mr. STURGELL. Senator, we went through a very extensive public process with this airspace redesign project. I think we held over 120 meetings. We did mitigations specifically to reduce noise impacts and in fact there is a net noise reduction in this project for tens of thousands of people in that region. There are, I believe, a dozen lawsuits at this point in the process. So, I think these issues will get played out in litigation.

Senator SPECTER. Well, I don't rely on having them played out, but I know you spent a lot of time. Makes me think of the patent bill where we spent a lot of time. We spent more time on the patent bill than you have on this issue, I think, and we're still working on it, but when you say it will take a re-evaluation, I want the re-evaluation, but we'll have some more time in Philadelphia when we won't have this heavy gavel hanging over the proceeding.

Thank you very much, Senator Murray.

RELATIONSHIP BETWEEN INSPECTORS AND AIRLINES

Senator MURRAY. Thank you. Mr. Sturgell, a lot of the controversy surrounding the Southwest incident relates to the overly-cozy relationship between your FAA inspector-in-charge and his former FAA colleagues that now work for Southwest.

The Inspector General has recommended that the FAA include in its term of employment a cooling-off period before an inspector can start working at an airline that he or she previously inspected.

Now the FAA has stated that they're going to adopt this approach to help reduce the risk of conflicts and it sounds like an appealing solution, but I want to understand what that cooling-off period would look like, and I want to know how you envision that. When is it going to go into effect?

Mr. STURGELL. Madam Chairman, we currently have a policy when we hire a person from an airline to be an FAA inspector, we impose a 2-year cooling-off period——

Senator MURRAY. That's the current policy?

Mr. STURGELL. That is incoming into the FAA. So, we limit that person's interaction with their previous employer for 2 years. We have not had a policy when an airline hires an inspector to come to work for them. We're going to institute a policy that's going to require the same 2-year cooling-off period.

Senator MURRAY. When does that go into effect?

Mr. STURGELL. I believe we have to do this with a comment period, but we're going to expedite it as quickly as we can.

Senator MURRAY. So, it would be a 2-year waiting period after they leave the FAA before they can go work for the——

Mr. STURGELL. Before they can go into direct contact with the FAA, yes.

Senator MURRAY. And whom specifically would that apply to?

Mr. STURGELL. It would apply, as we've talked about it, at the inspector level for people that would then be interacting with our inspector workforce.

Senator MURRAY. So supervisors?

Mr. STURGELL. Yes. Offhand, I would say that if a supervisor gets hired and moves to an airline and then interacts with our inspector workforce, we're going to require a 2-year cooling-off period. There are already general Government regulations that I think have pay levels that require this kind of cooling-off period. Our inspector workforce is generally below those pay levels. So, it's my understanding that is why there is not a current policy that applies, but we're going to put one in effect.

Senator MURRAY. Okay. Can we expect to see that soon?

Mr. STURGELL. As soon as we can get the counsel's office acting on it and get the comment period, if that is required.

Senator MURRAY. All right. Now some people are arguing that if an airline wants to make sure that they hire a person with the best knowledge, that this will preclude them from doing so. Should that be a concern?

Mr. STURGELL. Hopefully those kinds of things will be brought out in the comment period and then we'll have to sit down and discuss the balances here.

Senator MURRAY. General Scovel, do you want to comment on that?

Mr. SCOVEL. Senator Murray, we think a cooling-off period is good. It ought to apply to supervisors as well as line inspectors. We think that if it is properly structured, it should not be a problem for an air carrier who wants to hire a former FAA inspector because the cooling-off period should prohibit direct contact between that former FAA employee now working for the carrier and FAA. That is the real essence of the problem; specifically, those personal contacts that we believe contributed to this overly collaborative relationship at Southwest.

Senator MURRAY. If this is a concern and an issue that should be addressed with the FAA, what about Federal Railroad inspectors or pipeline inspectors? Should we be looking at the same policy there?

Mr. SCOVEL. Perhaps. I do not want to speculate because, of course, we have not investigated any cases or instances that would lead us to think that there have been specific problems in those areas, but the fact that those safety inspectors in other modes within DOT may be susceptible to the same problems should prompt the Department to take a look at that question.

INSPECTOR GENERAL RECOMMENDATIONS

Senator MURRAY. Okay. I appreciate that. Mr. Sturgell, many of the issues that were raised by the Inspector General today aren't new. General Scovel's testimony includes at least four instances when the FAA has not fully addressed safety concerns that were found years ago in prior audits by the Inspector General.

Back in 2002, the IG found that implementation of your new approach for risk-based inspection was inconsistent across the FAA field offices and he recommended that the FAA strengthen national

oversight and accountability for your new approach. The FAA agreed to comply.

But when the IG reviewed your efforts in 2005, he found that inspectors had not completed 26 percent of the planned inspections and that half of those missed inspections were considered high risk.

Again the IG recommended that FAA strengthen its national oversight and accountability to ensure consistent and timely inspections. Again FAA agreed to comply but even today some of those inspections haven't been completed.

When the FAA commits to the Inspector General and to this subcommittee that it's going to fix particular problems, why don't they get fixed?

Mr. STURGELL. Senator Murray, I appreciate those concerns. One of my take-aways over the last week has been to have put together all of the various GAO and IG recommendations by our Chief Financial Officer and then to see where we are in terms of addressing those recommendations based on our responses.

SAFETY OVERSIGHT

Senator MURRAY. But you can see how this is hard for us year after year after year after year after year after year. You come before our subcommittee, you report everything will be addressed, I don't want to be back here a year from now looking at the same issue. How do I know that's not going to happen?

Mr. STURGELL. Because I'm committing to you to do that kind of review of the IG recommendations and we will certainly discuss with you in the cases where we don't agree or don't fully comply, the reasons for doing so.

I do want you to know that on the ATOS Program, we have now, as of December 2007, put every 121 carrier into that program and we have just recently released an updated version of ATOS which will permit us to do the kind of national overlook that the IG has been requesting. We are setting up an office in Flight Standards, AFS–900, that's going to be tasked with conducting those types of national reviews.

Senator MURRAY. Well, as you sit here this morning, can you guarantee to us that your agency has conducted a comprehensive audit on every airline that you regulate within those 5-year timeframes?

Mr. STURGELL. We will be using this office to double check on where we are in terms of all of the required audits.

Madam Chairman, the 5-year audit is part of the program. Inspectors can request an additional year delay and written justification is required to delay that program. At Southwest, we do have a team down there now, an evaluation team——

Senator MURRAY. It's been 9 years. Have they gotten a waiver on that?

Mr. STURGELL. Again, I know, from all the testimony and records, there were issues going on at that office for several years that should have been addressed.

Senator MURRAY. Nine years.

Mr. STURGELL. They should have been addressed.

Senator MURRAY. Well, General Scovel, let me ask you. I mean this is frustrating. We sit here every year. We go through the same

questions. We have an FAA director who comes before us and says the same things. What do we need, timelines? I mean, we've had timelines and timelines and that doesn't happen. What is missing?

Mr. SCOVEL. It is frustrating. In response to our 2002 recommendation for greater national oversight, FAA promised that its newly appointed Director of Flight Standards Division would undertake that responsibility. It did not happen.

When we reviewed ATOS again in 2005, we found the same problem. Greater national oversight appeared to be the solution to us. FAA has communicated back to us with a number of proposed solutions. Quite frankly, Madam Chairman, we have declined to close that particular recommendation with the solutions proposed to us by FAA because we did not think that they would solve the problem. The recommendation is still open.

With regard to the Southwest situation specifically, you were talking about required ATOS inspections at Southwest that are still left undone. The latest information I have is, as you read in our statement, in March 2007, 21 key ATOS inspections had not been done within the required 5-year period. Within the last week, we have checked that again. Four of those still remain undone——

Senator MURRAY. Why?

Mr. SCOVEL [continuing]. At Southwest.

Senator MURRAY. Why, Mr. Sturgell?

Mr. STURGELL. It is my belief that the air carrier evaluation team that is down there now will be completing those four. It's a comprehensive review and audit that they are doing of Southwest's programs beginning with airworthiness directives and the maintenance programs.

Senator MURRAY. Lack of personnel? Lack of——

Mr. STURGELL. I will get back to you——

Senator MURRAY [continuing]. Time? Lack of people? What's the reason this isn't being done?

Mr. STURGELL. Again, Madam Chair, it's my belief that this team is going to complete those four audits, in addition to the audit work that it's doing.

Senator MURRAY. What about the other airlines, other than Southwest?

Mr. STURGELL. We will take a look and see whether there are any programs that are required inspections that are outstanding. I am not aware of any at this time, no.

Senator MURRAY. Any that you know of?

Mr. STURGELL. No. We can talk to our CMO offices and we can put together some information for you about these 5-year inspections and get back to you with it.

Senator MURRAY. Well, how long is that going to take?

Mr. STURGELL. I'll know when I get back to the office and I'll give you a call back.

Senator MURRAY. Well, you can understand why the flying public is frustrated here. Mr. Sturgell, it's your job to make sure that everybody who gets on an airplane knows they're flying a safe flight. I know that's a huge responsibility. There's risk involved in it, but it is frustrating to this subcommittee that has oversight over the FAA to hear the same answers year after year, and it is frustrating to this subcommittee to hear that the audits haven't been done, the

reports haven't been filed, and we get an answer from you today sitting in front of us that you'll get back to us. Believe me, I've heard it before.

How do I know that this time it's different? That's what I want to know.

Mr. STURGELL. Madam Chairman, I'm giving you my word that we're going to address this and have a national oversight capability in as timely a manner as possible. That's the best I can do today.

Senator MURRAY. General Scovel, do you have any advice to this subcommittee about how we can get an assurance and some action on this, other than just pleading at every subcommittee hearing that we have?

Mr. SCOVEL. If FAA adopts our specific recommendation—and it sounds like it is headed in that direction with this 900 office to oversee ATOS and incorporate the program alerts at the local, regional, and national levels when a CMO is in danger of missing the required 5-year inspection—that would certainly help.

The data are available, Madam Chairman. My audit staff had it within 6 or 7 weeks regarding the 21 key inspections under ATOS that had not been done at Southwest. I would expect that FAA would be able to find that from every CMO in fairly short order.

Senator MURRAY. Mr. Sturgell?

Mr. STURGELL. I am sure we can. I just cannot give you as we sit here a definitive time to be able to do that, but when we get back, you know, we will sit down and figure out how quickly we can get that.

Senator MURRAY. Can you give me a commitment to have that answer back to me within the week?

Mr. STURGELL. I think I can do that, yes.

[The information follows:]

In response to your request for information on air carrier oversight assessments that have not been completed in 5 year intervals, I provide the following information.

The Air Transportation Oversight System (ATOS) was implemented by the FAA in the late 1990s. At the time of transition, we moved only 10 major air carriers into the system and we accepted that the carriers' existing systems met regulatory requirements. The guidance we provided our inspectors recommended—but did not require—that the system design assessments be completed within 5 years.

For each carrier, there are 106 system design assessments covering areas such as aircraft airworthiness, major repairs and alterations, manual currency, and flight crew training.

A review of our data as of April 21 shows that 8 of the 117 carriers participating in ATOS have a total of 103 system design assessments exceeding the recommended 5-year period. The number of assessments not performed ranges from a high of 30 at one carrier to a low of 2 at another carrier. Twenty-nine of these assessments are in progress and will be completed by June 30, 2008. Over 30 additional assessments are scheduled to be completed before the end of this calendar year. The remainder of assessments are scheduled to be performed over the next several years, depending on the level of risk they pose. Again, these system design assessments were recommended, but not required.

I cannot provide definitive data on why these inspections were deferred because the automated data collection system we used at the time did not require inspectors to document the reasons for delay. However, it is likely these system design assessments were not completed because inspectors were assessing the performance of the systems and the data indicated the system performed properly and therefore was adequately designed. It is also possible that some of the system design assessments were not performed due to inadequate resources. In the early years of implementation of this program resources in the Aviation Safety (AVS) organization fluctuated, In the last several years, due to support from the administration and Congress, AVS

resources have grown substantially, which allows us to better manage our oversight program.

As of December 2007 all part 121 carriers (at the time there were 117) were moved into the ATOS system. With that implementation, we introduced a new version of the ATOS automation that requires the principal inspector to document why an assessment is delayed—even if the reason is a lack of resources. This enhancement will allow senior managers to monitor inspections on a national basis, review the reasons for deferral and, if necessary, change inspection priorities or provide additional resources. In addition, the system will automatically schedule all design assessments every 5 years—although it will permit deferral with a documented reason.

	Last	Risk	Priority	Status
American (26 overdue):				
1.1.1—Aircraft Airworthiness	3/27/2002	117	2	On-going
1.1.2—Appropriate Operational Equipment	10/15/1999	28	40	
1.2.1—Airworthiness Release/Logbook Entry	3/26/2003	60	21	2008
1.2.3—Maintenance Log/Recording Requirements	3/26/2003	56	28	
1.2.6—Aircraft Listing	10/31/2002	28	43	
1.3.1—Maintenance Program	5/14/2002	68	14	On-going
1.3.3—Maintenance Facility/Main Maintenance Base	9/28/2000	66	15	2008
1.3.5—MEL/CDL/Deferred Maintenance	6/13/2001	62	19	2008
1.3.8—Control of Calibrated Tools and Test Equipment	4/18/2002	62	20	2008
1.3.9—Engineering/Major Repairs and Alterations	3/22/2001	93	7	On-going
1.3.10—Parts/Material Control/SUP	5/9/2002	70	12	On-going
1.3.16—Fueling	2/7/2002	64	16	On-going
1.3.17—Weight and Balance Program	2/27/2001	56	30	
1.3.18—De-Icing Program	3/30/2000	64	17	2008
1.3.21—Parts Pooling	4/14/03	28	45	
1.3.22—Parts Borrowing	4/14/03	28	46	
2.1.5—Supplemental Operations Manual Requirements	7/17/2000	56	36	
4.1.2—Maintenance Certificate Requirements	2/14/2003	28	48	
4.2.1—Maintenance Training Program	6/7/2001	60	24	2008
4.2.2—RII Training Requirements	10/29/2002	58	25	
4.4.1—Recency of Experience	2/6/2003	28	49	
4.4.2—Display of Certificate	2/6/2003	28	50	
4.4.3—Privileges Airframe and Powerplant	2/6/2003	28	51	
4.4.4—Privileges and Limitations for Repairmen	2/6/2003	28	52	
7.1.1—Director of Maintenance	3/20/2002	28	53	
7.1.2—Chief Inspector	3/20/2002	29	39	
Alaska (13 overdue):				
1.2.4—MIS Reports	1/31/2003	28	40	
1.3.23—Short-Term Escalations	3/20/2003	56	28	
1.3.24—Coordinating Agencies for Suppliers Evaluation (CASE)	2/28/2003	28	45	
2.1.1—Manual Currency (AW)	1/30/2003	56	29	
2.1.1—Manual Currency (OPS)	1/30/2003	56	15	
2.1.2—Content Consistency Across Manuals	1/30/2003	56	30	
2.1.3—Distribution (Manuals) (AW)	1/30/2003	56	31	
2.1.3—Distribution (Manuals) (OPS)	2/3/2003	54	23	On-going
2.1.4—Availability (Manuals) (AW)	1/30/2003	56	32	
2.1.4—Availability (Manuals) (OPS)	1/30/2003	54	24	
3.1.1—Passenger Handling	3/22/2001	66	8	
3.1.11—Computer Based Record Keeping System	5/22/2002	27	35	
5.1.6—Use of Approved Areas, Routes and Airports	1/4/2000	28	33	
Continental (2 overdue):				
1.3.14—General Maintenance Manual/Equivalent	1/10/2003	28	42	2008
4.3.3—Advanced Qualification Program (AQP)	3/24/2003	54	32	2008
Delta (6 overdue):				
1.1.2—Appropriate Operational Equipment	No date	28	40	
1.2.3—Maintenance Log/Recording Requirements	10/18/2001	68	15	On-going
1.3.10—Parts/Material Control/SUP	8/10/2001	56	9	
1.3.18—De-Icing Program	3/25/2003	56	35	2008
2.1.4—Availability (Manuals)	1/24/2002	56	38	
7.1.4—Director of Operations	7/17/2002	27	22	2008
Northwest (2 overdue):				
3.1.3—Airmen Duties/Flight Deck Procedures	3/31/2003	99	1	On-going
5.1.7—Special Navigation Areas of Operation	6/6/2002	28	33	On-going

	Last	Risk	Priority	Status
Southwest (9 overdue):				
1.2.3—Maintenance Log/Recording Requirements	1/25/2002	170	13	On-going
3.1.1—Passenger Handling	1/15/2003	54	19	On-going
4.1.2—Maintenance Certificate Requirements	6/8/1999	58	35	On-going
4.2.2—RII Training Requirements	4/9/1999	56	42	On-going
4.4.1—Recency of Experience	3/12/2003	58	36	On-going
4.4.3—Privileges Airframe and Powerplant	8/16/1999	33	49	On-going
7.1.1—Director of Maintenance	6/27/2002	58	37	On-going
7.1.2—Chief Inspector	6/28/2002	58	38	On-going
7.1.3—Director of Safety	6/1/1999	83	32	On-going
United (15 overdue):				
1.1.2—Appropriate Operational Equipment	No date	30	34	On-going
1.2.1—Airworthiness Release/Logbook Entry	3/28/2002	56	26	On-going
1.3.1—Maintenance Program	11/8/2000	64	15	On-going
1.3.12—SFAR36	4/22/1999	56	31	2008
1.3.18—De-Icing Program	7/29/1999	56	33	On-going
1.3.19—Lower Landing Minimums (LLM)	8/2/1999	56	34	On-going
1.3.21—Parts Pooling	5/8/2002	28	47	2008
1.3.22—Parts Borrowing	5/8/2002	28	48	2008
3.1.10—Lower Landing Minimums (LLM)	9/8/1999	27	35	On-going
3.1.11—Computer Based Record Keeping System	No date	27	36	2008
4.2.10—Aircrew Designated Examiner (ADE) Program	5/1/2000	27	37	2008
4.3.1—Pilot Operating Limitations/Recent Experience	No date	54	29	On-going
4.3.2—Appropriate Airmen/Crewmember Checks and Qualifications	5/1/2000	54	30	On-going
7.1.1—Director of Maintenance	9/22/1999	30	41	On-going
7.1.2—Chief Inspector	5/13/1999	31	40	2008
US Airways (30 overdue):				
1.1.3—Special Flight Permits	1/30/2002	60	30	On-going
1.3.11—Continuous Analysis and Surveillance (CAS)	2/25/2003	114	9	2008
1.3.13—Designated Alteration Station (DAS)	11/19/1999	56	35	2008
1.3.14—General Maintenance Manual/Equivalent	12/15/1999	31	40	On-going
1.3.20—Engine Condition Monitoring	1/31/2002	62	28	On-going
1.1.2—Appropriate Operational Equipment	No date	28	36	
1.3.21—Parts Pooling	6/6/2002	34	38	2008
1.3.22—Parts Borrowing	5/14/2002	34	39	
1.3.23—Short-Term Escalations	5/30/2002	60	32	2008
1.3.24—Coordinating Agencies for Suppliers Evaluation (CASE)	7/1/2002	28	49	
2.1.1—Manual Currency	2/24/2003	56	36	2008
2.1.3—Distribution (Manuals)	12/16/2002	58	33	On-going
3.1.9—Aircraft Performance Operating Limitations	9/29/1999	54	25	On-going
3.1.10—Lower Landing Minimums (LLM)	5/11/1999	27	40	
4.2.3—Training of Flight Crewmembers	1/25/2001	56	18	On-going
4.2.6—Training of Station Personnel	2/28/2003	56	19	2008
4.3.1—Pilot Operating Limitations/Recent Experience	7/20/1999	54	29	On-going
5.1.6—Use of Approved Areas, Routes and Airports	1/13/2000	27	41	
5.1.7—Special Navigation Areas of Operation	3/25/2002	27	42	
5.1.8—Extended Range Operations with Two-Engine Airplanes (AW)	7/26/2002	84	15	On-going
5.1.8—Extended Range Operations with Two-Engine Airplanes (OPS)	9/9/2002	27	43	
5.1.9—RVSM Authorization	9/9/2002	27	44	2008
6.1.1—Scheduling/Reporting System	8/10/2000	28	39	2008
2.1.5—Supplemental Operations Manual Requirements	No date	56	37	2008
4.2.9—Outsource Crewmember Training	No date	54	28	
7.1.1—Director of Maintenance	11/7/2000	29	43	On-going
7.1.2—Chief Inspector	11/2/2000	30	42	On-going
7.1.3—Director of Safety	9/15/2000	29	44	On-going
7.1.5—Chief Pilot	2/22/1999	27	47	
7.2.1—Safety Program (Ground and Flight)	11/27/2001	54	34	2008

FIGURE 10–6, ATOS SYSTEM/SUBSYSTEM/ELEMENT CHART—AIRWORTHINESS ELEMENTS

1.0 Aircraft Configuration Control

1.1 Aircraft

1.1.1—Aircraft Airworthiness
1.1.2—Appropriate Operational Equipment
1.1.3—Special Flight Permits

1.2 Records and Reporting Systems

1.2.1—Airworthiness Release/Log Book Entry
1.2.2—Major Repairs and Alterations Records
1.2.3—Maintenance Log/Recording Requirements
1.2.4—Mechanical Interruption Summary Reports
1.2.5—Service Difficulty Reports
1.2.6—Aircraft Listing

1.3 Maintenance Organization

1.3.1—Maintenance Program
1.3.2—Inspection Program
1.3.3—Maintenance Facility/Main Maintenance Base
1.3.4—Required Inspection Items
1.3.5—Minimum Equipment List/Configuration Deviation List/Deferred Maintenance
1.3.6—Airworthiness Directive Management
1.3.7—Outsource Organization
1.3.8—Control of Calibrated Tools and Test Equipment
1.3.9—Engineering/Major Repairs and Alterations
1.3.10—Parts/Material Control/Suspected Unapproved Parts
1.3.11—Continuous Analysis and Surveillance
1.3.12—Special Federal Aviation Regulations (SFAR) 36
1.3.13—Designated Alteration Station
1.3.14—General Maintenance Manual or Equivalent
1.3.15—Reliability Program
1.3.16—Fueling
1.3.17—Weight and Balance Program
1.3.18—Deicing Program
1.3.19—Lower Landing Minimums
1.3.20—Engine Condition Monitoring
1.3.21—Parts Pooling
1.3.22—Parts Borrowing
1.3.23—Short-Term Escalations
1.3.24—Coordinating Agencies for Suppliers Evaluation
1.3.25—Cargo Handling Equipment, Systems and Appliances

2.0 Manuals

2.1 Manual Management

2.1.1—Manual Currency
2.1.2—Content Consistency Across Manuals
2.1.3—Distribution (Manuals)
2.1.4—Availability (Manuals)
2.1.5—Supplemental Operations Manual Requirements

4.0 Personnel Training and Qualifications

4.1 Maintenance Personnel Qualifications

4.1.1—Required Inspection Item Personnel
4.1.2—Maintenance Certificate Requirements

4.2 Training Program

4.2.1—Maintenance Training Program
4.2.2—Required Inspection Item Training Requirements
4.2.12—Hazardous Materials Training

4.4 Mechanics and Repairmen Certification

4.4.1—Recency of Experience
4.4.2—Display of Certificate
4.4.3—Privileges Airframe and Powerplant
4.4.4—Privileges and Limitations for Repairmen

5.0 Route Structures

5.1 Approved Routes and Areas

5.1.1—Line Stations (Service and Maintenance)
5.1.2—Weather Reporting/Supplemental Aviation Weather Reporting System
5.1.3—Non-Federal Navigational Aids
5.1.4—Altimeter Setting Sources
5.1.8—Extended Operations
5.1.9—Reduced Vertical Separation Minimum

6.0 Airman and Crew Flight, Rest, and Duty Time

6.2 Maintenance Personnel

6.2.1—Maintenance Duty Time Limitations

7.0 Technical Administration

7.1 Key Personnel

7.1.1—Director of Maintenance
7.1.2—Chief Inspector
7.1.3—Director of Safety
7.1.6—Maintenance Control

FIGURE 10–7, ATOS SYSTEM/SUBSYSTEM/ELEMENT CHART—OPERATIONS AND CABIN SAFETY ELEMENTS

1.0 Aircraft Configuration Control

1.1 Aircraft

1.1.2—Appropriate Operational Equipment

2.0 Manuals

2.1 Manual Management

2.1.1—Manual Currency
2.1.2—Content Consistency Across Manuals
2.1.3—Distribution (Manuals)
2.1.4—Availability (Manuals)
2.1.5—Supplemental Operations Manual Requirements

3.0 Flight Operations

3.1 Air Carrier Programs and Procedures

3.1.1—Passenger Handling
3.1.2—Flight Attendant Duties/Cabin Procedures
3.1.3—Airman Duties/Flight Deck Procedures
3.1.4—Operational Control
3.1.5—Carry-on Baggage Program
3.1.6—Exit Seating Program
3.1.7—Deicing Program
3.1.8—Carriage of Cargo
3.1.9—Aircraft Performance Operating Limits
3.1.10—Lower Landing Minimums
3.1.11—Computer-based Recordkeeping
3.1.12—Hazardous Materials
3.1.13—Other Personnel with Operational Control

3.2 Operational Release

3.2.1—Dispatch or Flight Release
3.2.2—Flight/Load Manifest/Weight and Balance Control
3.2.3—Minimum Equipment List/Configuration Deviation List Procedures

4.0 Personnel Training and Qualifications

4.2 Training Program

4.2.3—Training of Flight Crewmembers
4.2.4—Training of Flight Attendants
4.2.5—Training of Dispatchers
4.2.6—Training of Station Personnel
4.2.7—Training of Check Airman and Instructors
4.2.8—Simulators/Training Devices
4.2.9—Outsource Crewmember Training
4.2.10—Aircrew Designated Examiner Program
4.2.11—Training of Flight Followers
4.2.12—Hazardous Materials Training

4.3 Crewmember and Dispatch Qualifications

4.3.1—Pilot Operating Limitations/Recent Experience
4.3.2—Appropriate Airman/Crewmember Checks and Qualifications
4.3.3—Advanced Qualification Program

5.0 Route Structures

5.1 Approved Routes and Areas

5.1.5—Station Facilities
5.1.6—Use of Approved Routes, Areas and Airports
5.1.7—Special Navigation Areas of Operation
5.1.8—Extended Operations
5.1.9—Reduced Vertical Separation Minimum Authorization

6.0 Airmen and Crewmember Flight, Rest and Duty Time

6.1 Airman and Crewmember Limitations

6.1.1—Scheduling/Reporting System
6.1.2—Flight Crewmember Flight/Duty/Rest Time
6.1.3—Flight Attendant Duty/Rest Time
6.1.4—Dispatcher Duty/Rest Time

7.0 Technical Administration

7.1 Key Personnel

7.1.3—Director of Safety
7.1.4—Director of Operations
7.1.5—Chief Pilot

7.2 Other Programs

7.2.1—Safety Program (Ground and Flight)

RESERVED.—Paragraphs 10–27 through 10–41.

Senator MURRAY. Okay. I would really appreciate it if you could put every effort into that because, you know, it is a concern to all of us.

ADDITIONAL COMMITTEE QUESTIONS

I do have a number of questions on inspections, on a number of the runway incursions, on ASDE–X, and I will submit those for the record. I would hope that we can get those back. I know some other committee members do, too. We have gone over our time. I know Senator Bond has some additional questions, too, and I will submit for the record.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. ROBERT A. STURGELL

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

MAINTENANCE OUTSOURCED OVERSEAS

Question. Why can't the FAA keep on top of these changes in the business practices of the airline industry? This trend of increased outsourcing didn't start last year—it started over a decade ago.

Answer. One of the most notable FAA advancements in air carrier surveillance has been the development of the Air Transportation Oversight System (ATOS). ATOS enables FAA inspectors to keep track of changes in the business practices of the airline industry such as increased outsourcing. If these changes are subject to regulation, air carriers must submit them to FAA for approval or acceptance. ATOS tools and surveillance plans are subsequently modified to incorporate the changes.

There are 97 ATOS inspection elements, each focuses on a different component of an air carrier's operating systems. One of the elements addresses programs for managing outsourced maintenance. If an air carrier outsources some or all of its maintenance, principal inspectors use ATOS tools to determine that the carrier has a system to manage the outsourced maintenance. Then inspectors check the carrier's system semi-annually to determine that it is performing properly by making visits to some of the repair stations where outsourced maintenance occurs. Repair stations are selected based on the type and scope of work they do for the carrier. Additionally, each repair station is inspected at least annually to determine that it remains qualified for a repair station certificate.

Question. If you as a safety regulator can't adequately oversee the foreign maintenance operations, why should airlines you regulate be allowed to use them?

Answer. The certification standards and oversight of a certificated foreign repair station (CFRS) are as stringent as those for a domestic repair station. FAA aviation safety inspectors perform annual inspections of each CFRS to determine that it continues to meet FAA standards. The only exception is those repair stations located in a country with which the United States has a bilateral aviation safety agreement and maintenance implementation procedure (BASA/MIP). In BASA/MIP countries,

the foreign national aviation authority (NAA) conducts the inspection on behalf of the FAA. We would only engage in a BASA/MIP with a country whose NAA has standards and practices commensurate with our own. The FAA also conducts sampling inspections at the CFRSs.

In addition to surveillance conducted by the FAA or an NAA in accordance with a BASA/MIP, U.S. air carriers that contract maintenance work with the CFRS establish a schedule for accomplishing continuing audits (inspections) to determine the maintenance provider's level of compliance with specific work instructions and procedures documented in the air carrier's maintenance manual. The frequency of these audits is dictated by a number of variables, such as the air carrier's level of confidence in the maintenance provider, the complexity, quantity, and quality of the work performed and subsequent documentation.

The FAA has made continual improvements to its own oversight system for all U.S. and non-U.S. repair stations. The FAA uses an enhanced risk-based surveillance system for repair stations—the Repair Station Assessment Tool. This risk-based system improves our ability to analyze data so we can target our resources toward areas of identified risk. For example, using this tool we can easily identify repair stations that outsource work to other maintenance providers.

The FAA has also completed revisions to the Safety Performance Analysis System (SPAS) and implemented the Outsource Oversight Prioritization Tool (OPT). Aviation safety inspectors use the OPT as a part of the enhanced repair station and air carrier oversight system, which includes the oversight of foreign repair stations. The tool assists the FAA in the application of system safety and risk management concepts, assuring that repair stations and air carriers meet their responsibility to accomplish outsourced maintenance in accordance with standards established by the regulations and, in so doing, provide the highest possible level of safety to the traveling public.

INSPECTOR STAFFING

Question. Mr. Sturgell, do you really believe—based on all we have learned recently about the adequacy of your inspection efforts—that we don't need any additional inspectors to get the job done?

Answer. FAA's Flight Standards Service (AFS) ended fiscal year 2007 with 3,780 Aviation Safety Inspectors (ASIs). The fiscal year 2008 budget provides additional resources for a projected end of year total of 3,880 ASIs. As of May 2008, AFS had 3,865 inspectors on-board. The 100 additional positions will support FAA's efforts to increase the effectiveness of safety oversight, including initial certification program approvals/acceptance, approval/acceptance of new programs and program changes and periodic program reviews. In addition, these ASIs will support requests for new certifications, while maintaining surveillance of air carriers in bankruptcy protection in accordance with FAA regulations.

Recent increases in ASI staffing will enable the FAA to better meet the requirements of the system safety oversight process. Changes to FAA's system safety oversight process would require additional safety critical resources.

RETALIATION AND HARASSMENT OF INSPECTORS

Question. Mr. Sturgell, does the FAA have any procedures in place for reviewing a complaint against an inspector before relieving that employee of their duties?

Answer. If we receive an anonymous complaint the employee is usually allowed to continue to perform inspector duties while it is investigated. If we receive a detailed complaint suggesting some wrong-doing on the part of the employee, we take steps to assure such activity could not reoccur while the complaint is investigated. Sometimes that includes assigning the employee to administrative duties or placing the employee on administrative leave.

SENIOR MANAGEMENT

Question. Mr. Sturgell, when did you first learn that Southwest Airlines had not complied with an AD and had violated the rules of the self-disclosure program?

Answer. To the best of my knowledge I first became aware of the issues surrounding Southwest Airlines in February 2008.

Question. When you learned of these matters, why did you choose not to meet with either the authorizing committees or the appropriations committees to discuss the matter and let Members of Congress know what you were doing in response?

Answer. I thought it appropriate to allow the career employees in the FAA handle the matter according to our regulations and policies.

Question. Mr. Sabatini's contract includes the possibility of receiving bonuses based on his performance on the job. Mr. Sturgell, did Mr. Sabatini receive a performance bonus for fiscal year 2007?

Answer. Yes. All eligible career executives and senior professionals covered by the FAA Executive Compensation Plan participate in the Short Term Incentive (STI) program. This program replaced the awarding of executive "bonuses." For leading the accomplishment of organizational goals in fiscal year 2007, Mr. Sabatini earned an STI payment of $19,157.

Question. In testifying before the House Transportation and Infrastructure Committee and the Senate Commerce Committee, Associate Administrator Nicholas Sabatini repeated several times that he is accountable for overseeing aviation safety. He said to the House committee, "I am responsible for my workforce's actions." Mr. Sturgell, do you agree with the sentiments of Mr. Sabatini's testimony? Are you also responsible for the performance of the FAA workforce?

Answer. Aviation safety is a total team effort, from the inspector on the ground to the controller in the tower. Every one of FAA's employees can be proud that the United States, with the largest and most complex national airspace system in the world, is also the safest. This is not about who gets the credit and who gets the blame. Recently, I delivered the message to a gathering of senior FAA executives that when one fails, we all do. This is the safest period in aviation history—not because of any one person but because of the accomplishments of the entire industry. While the Administrator may be the face of the FAA, aviation safety is a team effort.

SELF-REPORTING

Question. How was Southwest able to break all of the rules that the FAA set up to govern the self reporting of safety problems?

Answer. There was a management failure at the Southwest Airlines certificate management office (CMO) and the Flight Standards southwest regional headquarters. The regional management should not have allowed problems at the CMO to persist for several years and should have advised Flight Standards officials in headquarters. The performance of the supervisory principal maintenance inspector should have been corrected at the onset. We are addressing these management failures with personnel actions taken before and after the hearings. We plan to use this management failure as an example in new and recurrent manager and executive training.

Question. What steps are you taking to ensure that the FAA's program for self reporting safety violations is never abused again?

Answer. We have changed the voluntary disclosure reporting policy to require that a specific management official in the airline endorse and submit a voluntary disclosure. On the FAA side, the principal inspector is no longer the sole determiner to accept a voluntary disclosure. The manager of the certificate holding district office has to accept the voluntary disclosure and decide whether the comprehensive fix is appropriate. The FAA manager must then review whether or not the operator has accomplished the comprehensive fix appropriately before closing out the voluntary disclosure.

This new policy went into effect on May 1, 2008.

LOSSES IN CONTROLLER WORKFORCE

Question. What have you done to ensure that these estimates are more realistic?

Answer. We base our loss forecasts on historical behavior. Each year we update our forecasts in the Controller Workforce Plan based on the prior year's data.

Our forecasts have been improving in percentage terms for the past few years, particularly for retirements. See the table below.

	2005	2006	2007	Pace Through April 2008	2008 Plan
Loss Forecast [1]	686	800	1,197	938	1,621
Actual Losses	913	1,038	1,559	1,026	.....
Percent Difference	−33	−30	−30	−9	.....
Retirement Forecast [1]	341	467	700	470	828
Actual Retirements	465	583	828	480	.....
Percent Difference	−36	−25	−18	−2	.....

[1] Forecast from prior year's Controller Workforce Plan.

Question. When is the FAA finally going to get its estimates right so it can hire new trainees and train them at an even pace throughout the year?

Answer. As discussed in the previous question, we base our loss forecasts on historical behavior. Each year we update our forecasts in the Controller Workforce Plan based on the prior year's data. Our forecasts have been improving and through April 2008 we are within 10 percent of our forecast.

On the hiring side, we have effectively integrated our hiring efforts with our Academy training courses. The timing of those courses is driven by many factors to include instructor, classroom, and simulator scheduling. So, hiring efforts match Academy training slots. Two months during the year (March and August this year) have 3 pay periods, allowing for additional classes during these months. This year, hiring has been steady at over 110 per month with some months over 200 based on Academy class schedules.

CONTROLLER EXPERIENCE AND SAFETY

Question. What suddenly triggered the need to retain these controllers with retention bonuses and how many employees are receiving them now?

Answer. No sudden event triggered the need to offer retention bonuses. FAA is using an array of strategies to recruit, train, and retain air traffic controllers. One tool available to FAA for some time is to offer retention incentives. It is being used under limited circumstances; for example, if there is a need to retain a controller to assist in training new hires so they can reach full certification on all positions. Before offering a retention incentive, ATO management carefully considers the specific staffing situation and needs of the facility and other strategies that may be used. The decision to offer a retention incentive requires Vice President approval, and is based on a review of the individual's skills and performance and the criticality of retaining the individual—and his or her specific skills and qualifications—to meet agency needs. To receive the incentive, the employee must have already submitted retirement papers indicating intent to retire, and in exchange for accepting the retention incentive, must sign a service agreement. As of May 30, 44 retention incentives have been offered and accepted, with an additional 26 offers pending.

Question. Are you concerned that this high level of trainees at a facility could impact the safety of operations?

Answer. Absolutely not. We maintain the highest-level of safety regardless of the amount of trainees. Trainees/developmentals do not work alone on positions they are not certified on. Our training program is very lengthy and we ensure the developmental is ready before they are certified to work on their own.

Developmentals must complete classroom and simulation training at both the Academy in Oklahoma City and again when they are assigned to a facility. After they have successfully completed this training, they are assigned to work with their On-The-Job-Training Instructor (OJT–I).

The OJT–I is responsible for the position at all times and is plugged into an override position while the trainee is working. This allows the instructor to override the developmental at any time to ensure proper instructions and control of aircraft is given.

When the developmental is ready for certification the OJT–I recommends them. The front line manager must then monitor the developmental and make the final determination for certification. Regardless of how many trainees/developmentals we have, safety is never compromised.

Question. Who at the FAA should be responsible for the quality of air traffic controller training?

Answer. The newly established Vice President of Technical Training.

Question. The FAA has accelerated its controller training program by adjusting the requirements and introducing simulators at some facilities. Can the FAA demonstrate that its accelerated training program will produce controllers who are as qualified as those who have undergone longer training?

Answer. Despite the changes in some of the training technologies and their efficient reduction on training time, the FAA has not changed the certification standards which developmentals must achieve in order to become certified. Although some of the dynamics of the training have changed to accommodate a much higher volume of new hires than in past years, the standards used to certify controllers are the same.

FAA has performed an analysis of the reduced training time to certification of facilities employing simulators and found a 20–60 percent reduction in training time. The reduction stems from not having to wait for certain levels in traffic, weather conditions, or emergency scenarios in order to create training events—we can program these scenarios dynamically.

Question. Historically, attrition at the academy was fairly high, but most graduates were then able to complete the in-facility training. Now, I am hearing reports

that attrition at the academy has dropped significantly, but in-facility attrition is much higher. What are the respective rates of attrition (specifically, dismissal because of failure to meet competency levels) in the academy and among trainees in FAA facilities for the last 5 years?

Answer. Historical attrition rates at the Academy have varied widely. In the 1970s, there was no Academy screening effort and attrition was very low (1 percent). In the 1980s, the FAA instituted a screening program at the Academy, which resulted in attrition rates as high at 42 percent. In the 1990s, the FAA instituted a "Train to Succeed" program and Academy attrition fell again to 1 percent. In 2005, the FAA fully instituted its pre-hire controller aptitude test, called AT–SAT. The AT–SAT test is an 8 hour exam that assesses a wide variety of skills and knowledge important to controllers. Since the AT–SAT test was implemented in 2005, Academy attrition has held steady between 3–4 percent.

Research has shown that the AT–SAT accurately predicts success as a controller trainee and correlates closely (0.7) with success on the first performance verification (practical examination) at the Academy. Studies continue on how the AT–SAT correlates to success in facility training and performance as a Certified Professional Controller (CPC). The AT–SAT has also been proven to have zero race and ethnic background bias. This is a rare quality in a pre-employment assessment.

Controller candidates spend only 27–53 days at the Academy and receive primarily basic instruction. The vast majority of training (1–3 years) occurs at the facilities under the guidance of qualified CPCs. Since the early 1980s, facility attrition has held steady between 8–11 percent per year. The current facility attrition rate for fiscal year 2008 is just over 8 percent. Currently, the FAA considers this an acceptable training attrition rate.

Question. Can the FAA demonstrate that trainees entering air traffic control facilities have the skill to perform the work required of them?

Answer. When a candidate is hired to go to the Academy for basic training, he or she has already taken the Air Traffic Selection and Training (AT–SAT) exam (unless they have prior military controller experience). This exam indicates a candidate's aptitude in air traffic control skills and it is correlated closely with success at the Academy. In addition, since the agency fully implemented the AT–SAT exam in 2005, training attrition (failure) rates have improved dramatically (as compared to post strike training attrition rates).

The Academy teaches new hires the basics in air traffic control and supplements skills in whichever type of facility they were hired to work in. Once they are finished with their Academy training, they report to their respective facility. Trainees do not begin working independently as controllers when they report to their facility. They undergo customized field training for that facility for several months or years until they are eligible to become certified. Local personnel track and monitor trainees' progress this entire time and certify their skill levels for final qualification as a Certified Professional Controller.

ADS–B

Question. Could you explain why the ADS–B technology offers an important solution to runway incursions?

Answer. Runway incursions could potentially be reduced with ADS–B technology by providing enhanced situational awareness on the airport surface. The FAA is planning to implement the following ADS–B applications:

—*Airport Surface Situational Awareness.*—The objective of this application is to reduce the potential for deviations, errors, and collisions through an increase in flight crew situational awareness while operating an aircraft on the airport movement area. Flight crews will use a cockpit display to increase awareness of other traffic positions on the airport movement area. Additionally, the display may be used to determine the position of ground vehicles, e.g., snow plows, emergency vehicles, tugs, follow-me vehicles, and airport maintenance vehicles.

—*Final Approach Runway Occupancy Awareness.*—The objective of this application is to reduce the likelihood of flight crew errors associated with runway occupancy and to improve the capability of the flight crew to detect Air Traffic Control (ATC) errors. The application involves the use of a cockpit display that depicts the runway environment and displays traffic from the surface up to approximately 1,000 feet above ground level on final approach and will be used by the flight crew to help determine runway occupancy.

—*Enhanced Traffic Situational Awareness on the Airport Surface With Indications and Alerts (ATSA SURF IA).*—The objective of this application is to facilitate pilot awareness by identifying the runway traffic status as relevant to ownship operations under normal operational conditions. ATSA SURF Alerts are in-

tended to attract the attention of the flight crew to a non-normal traffic condition and to facilitate a timely response.

ADS–B IN [1]

Question. Why hasn't the FAA taken a more aggressive stance in terms of pursuing ADS–B technology that allows for the transfer of information among aircraft?

Answer. Currently, the "ADS–B In" requirements that enable the transfer of information among aircraft (air to air applications) are only partially defined. The FAA is working collaboratively with industry through the Aviation Rulemaking Committee (ARC) to decide the appropriate way to move forward with mandating "ADS–B In". Below outlines the options that were discussed:

—"ADS–B Out" compliance in 2020; "ADS–B In" effective in 20XX.

—"ADS–B Out" compliance in 2020; "ADS–B In" voluntary equipage (current FAA strategy).

—"ADS–B Out" and "ADS–B In" effective in 2010.

At the present time, option 1 seems to be the best solution for one of the draft ARC recommendations (final recommendations will be submitted in September 2008). Also as a potential draft recommendation, the committee would like the FAA to make a decision by 2012 as to how to proceed with "ADS–B In".

In summary, the FAA is working collaboratively with industry and various congressional committees to define and move forward with a potential "ADS–B In" mandate. Additionally, the FAA has already been investing in the development of standards to define the symbols for pilot's displays.

NEXTGEN

Question. Is the FAA willing to make a commitment to reach certain specific NextGen milestones by 2015? If so, what are they?

Answer. NextGen is a high priority program for the FAA, and the agency is planning to reach the following NextGen milestones by 2015:

NEXTGEN COMMITMENTS

Commitments are based on planning forecasts for fiscal year 2009-fiscal year 2013 in the President's Budget Submission for fiscal year 2009.

Nextgen Transformational Programs

AUTOMATIC DEPENDENT SURVEILLANCE—BROADCAST (ADS–B) (BASE-LINED PROGRAM)

In service decision for broadcast services (Traffic Information Service—Broadcast and Flight Information Service Broadcast).	November 2008
Louisville Initial Operating Capability of Surveillance Services	October 2009
Gulf of Mexico Initial Operating Capability of Surveillance Services	1st Qtr 2009
Philadelphia Initial Operating Capability of Surveillance Services	2nd Qtr 2010
Juneau Initial Operating Capability of Surveillance Services	3rd Qtr 2010

SYSTEM WIDE INFORMATION MANAGEMENT (SWIM)

Final Investment Decision on segment 1B of SWIM	June 2009
Initial Operating Capability of Automated Special Use Airspace (SUA) Aeronautical Status Exchange in Aeronautical Information Management (AIM) System.	4th Qtr 2010
Final Investment Decision on segment 2 of SWIM	3rd Qtr 2010

DATA COMMUNICATIONS (DATA COMM)

Initial Investment Decision on segment 1 and segment 2	August 2008
Final Investment Decision on segment 1	3rd Qtr 2010

[1] The broadcast services are known as "ADS–B In" and can be defined as receiving traffic and weather information on cockpit displays to give pilots enhanced situational awareness. The surveillance portion is called "ADS–B Out" because it depends on location and heading data transmitted out of the aircraft transponder.

NEXTGEN NETWORKED ENABLED WEATHER (NNEW)

Complete Mission Shortfall	October 2008
Initial Investment Decision	1st Qtr 2009
Final Investment Decision	1st Qtr 2010

NAS VOICE SWITCH (NVS)

Initial Investment Decision	3rd Qtr 2009
Final Investment Decision	3rd Qtr 2010

Nextgen Demonstrations

	Date
Continuous Descent Arrivals for AIRE—Atlanta	May 2008
Continuous Descent Arrivals for AIRE—Miami	May 2008
Oceanic Trajectory Based Operations for AIRE—Demonstration	May 2008
Surface Management Data Information Sharing—JFK	August 2008
Tailored Arrivals for AIRE—Miami	September 2008
Time-based metering with aircraft execution—3D PAM—human in the loop simulation	September 2008
Time-based metering with aircraft execution—3D PAM—field trial Denver	September 2009

Nextgen Solution Sets

Trajectory Based Operations

OPERATIONAL IMPROVEMENTS

	Fiscal Year
Procedures with tailored separation to increase en route efficiency	2014
Oceanic In-trail Climb and Descent to improve aircraft efficiency	2013
Improve Oceanic flight efficiency by providing flexible entry times to oceanic tracks	2013
Provide point-in-space time based metering to congested airspace to improve the execution of the Airspace Flow Program	2013
Provide Area Navigation above flight level 180 and RNP 1 navigation in terminal areas (where needed) by completing the DME network	2013

By 2015 both en route domestic and oceanic airspace will have made strides toward efficient trajectory based operation.

The oceanic airspace has been trajectory based since the implementation of the Advanced Technologies and Oceanic Procedures (ATOP) system. ATOP provides an oceanic conflict probe which allows the controllers to test user requests and allow more fuel efficient flight level changes. By 2015, we are planning three new improvements. The first, the in-trail climb and descent, will allow aircraft to use a reduced separation procedure to safely change flight levels where today the current separation would keep the aircraft at the less optimal fuel and emission altitude. The second improvement is the assignment of flight level at entry into the track system, providing decision support which will optimize entry time and level so the flight can fly a more advantageous level from entry. The third is to provide a reroute capability while on the tracks to provide a more efficient path. In ongoing demonstrations, fuel savings of at least 1 percent have been shown on Atlantic Oceanic tracks. This is a considerable savings given the long haul nature of the flights.

We are also planning to improve capacity and flight efficiency in the domestic en route airspace. Having a full area navigation network in the en route supports reduces between track spacing, allowing for more routes in areas where current airspace restrictions limit the number of available routes. It also supports temporary routings around major weather systems helping to maintain available capacity. Access to congested airspace is enhanced by adding time-base metering to congested or weather impacted airspace. Time based metering assures an even delivery of aircraft to the congested airspace allowing for higher planning capacity and thus requiring fewer reroutes or delays. To support these navigation and flow improvements, controllers working higher altitudes are provided with information support to reduce the amount of special knowledge required to work a volume of airspace. This adds flexibility in the assignment of airspace to controllers and allows for more

dynamic management of airspace to maintain capacity to meet congestion or weather demands.

ENABLING DEVELOPMENT

	Fiscal Year
Develop trajectory model upgrades to support RNP procedures (target Mid-term ERAM—beyond the current 3 releases)	2011
Complete tech transfer of the NASA TSAFE algorithms to improve conflict alert, update algorithms for conflict probe and alert to support procedures with varying separation minima (target mid-term ERAM)	2011
Multi-sensor Processing—Radar extends updates for ADS–B to support the use of terminal procedures through the arrival departure airspace complete the algorithm and requirements development (target Mid-term ERAM)	2012
Develop display requirements, information system requirements and decision support tool changes to expand the flexibility of controllers in the high altitude (target late release of Mid-term ERAM)	2013
Complete tech transfer of NASA algorithms, complete development of requirements for airspace based point-in space metering. (target NextGen Traffic Management Advisor)	2011
Purchase additional Distance Measuring Equipment to complete the DME network providing area navigation everywhere above FL180 and RNP 1 in major terminal areas	2012

Integrated Arrival/Departures At High Density Airports

OPERATIONAL IMPROVEMENTS

	Fiscal Year
Provide Surface Traffic Management at High Density Airports to improve the flow of aircraft on the airport surface assuring the right aircraft gets to the right runway in the right order to maximize throughput	2013
Provide enhanced time-based metering to major metropolitan areas to provide time and fuel efficient entry to the airspace and improve utilization of airport runways	2011
Integrated Arrival Departure Management to move the arrival process into the higher altitudes to increase the efficiency and flexibility of managing arrival and departure flows into major metro-areas	2015

Major metropolitan area airports and airspace are limited by interaction of traffic arriving to and departing from nearby airports. With demand at capacity and limited terminal airspace due to those multiple airports, any disruption in the arrival flow results in large delays. In current operations, the mixing of traffic in the en route airspace, because of larger en route separations and slower display update rates, limits the system's ability to fully utilize each runway. This removes capacity from the system and adds flight delays. On the surface, managing flow to and from the runways is essential. Getting the right aircraft in the right order to depart is essential to meet the demand and reduce delays.

By 2015 we are planning three major improvements in high density arrival departure operations. The first is the delivery of surface traffic management systems (STMS). Using the data provide by the Airport Surface Detection Equipment, Model X (ASDE–X) and/or ADS–B, STSM provide the controller with traffic path advisories and departure lists for runways. This will sequence the flights so that the time between departures can be minimized, reducing overall taxi delays and maximizing capacity used. The second is enhancing traffic management advisor (TMA) to support major metro areas. While TMA is an effective tool and has provided benefits, enhancements which better support the arrival and departure to multiple "interfering" airports on the coasts will improve delivery to runways. Through time-based metering to the metro-area, better assignments of flights to arrival times can be made, minimizing delay and fuel and assuring arrival slots will not go to waste. The third improvement is integrating the arrival and departure airspace of the en route facilities with the terminal airspace in the major metro areas. In the integrated arrival/departure, the reduced separation standard of the terminal is used throughout the airspace. This will allow individual arrival procedures to be developed for each runway.

ENABLING DEVELOPMENT

	Fiscal Year
Complete tech transfer of NASA algorithms, complete development of surface traffic management prototype in Memphis and Louisville, complete requirements, algorithms and display characteristics (target Terminal Flight Data Management (TFDM) System for implementation)	2011
Complete tech transfer of NASA algorithms, complete development of display requirements for time-based metering enhancements for major metro areas—move to investment decision on NextGen TMA	2010
Develop concepts of use for closely spaced parallel runway operations, develop information requirements conduct trials (navigation solution between 4,300 down to 3,000 feet, onboard monitoring below 3,000 feet to ?, wake avoidance procedures or wake monitoring)	2009, 2011, and 2013

Increase Flexibility In The Terminal Environment

OPERATIONAL IMPROVEMENTS

	Fiscal Year
Provide Wind-Base Wake Departure Procedures for Closely Spaced Parallel Runways	2013
Develop and certify a lower cost alternative to provide category II and III—like precision approaches	2012
Use Optimized Profile Descent to Minimize Fuel and Noise on Approach—with Vertical Containment and Required Time of Arrival	2016
Provide optimal arrival throughput to closely spaced parallel runways by mitigating wake and blunder consideration	([1])
Provide Full Surface Situation Information to NAS to support improved flow coordination, and flight plan tracking	2015

[1] Multi-stepped with solutions for various runway spacing.

By 2015 we are planning four operational improvements to airports and one overall improvement to the NAS. The first improvement is to provide wake departure procedures for closely spaced parallel runways in bad weather. There are 10 locations which can be supported by this procedure, increasing throughput in these wind conditions from 30 to 45 operations per hour. Work will also take place on the increased use of closely spaced parallel runways. The ability of aircraft to fly precise paths will allow reduced spacing between aircraft on different closely spaced runways. The earliest phase should increase operations in bad weather from 30 to 45 per hour at five major airports. We are also planning that a low cost ground based augmentation system will be available to provide a low-cost alternative to category II and category III instrument landing systems (ILS), allowing airports to offer improved access and service. This is also a potential replacement over time for end-of-service life ILS. In many locations, continuous decent arrivals (CDA) are limited to off peak times due to the larger airspace protection requirements of the procedure and less precise arrival time. RNP 3D procedures with required time of arrival will provide many of the advantages of CDA's, reduce both lateral and vertical spacing requirements and deliver aircraft to the runway at the required time. This should increase throughput with reduced noise, fuel and emissions.

The NAS improvement is the improved coordination of flight data within the tower/terminal and across the NAS. Terminal and tower flight data management is mostly unchanged since the 1960's. Updating flight data management for the terminal and tower is a key enabler for the integrated arrival/departure improvement of high density arrivals and departures. It also improves the overall tactical and strategic planning across the NAS by increasing the certainty of departure times and trajectory predictions.

ENABLING DEVELOPMENT

	Fiscal Year
Complete implementation alternative analysis for implementation of WTMD, allocate requirements to automation system, complete initial investment decision	2010
Certify LAAS for non-Fed Category I—like capability (4th Qtr 2008), complete algorithm development, develop prototype system, complete set, certify prototype for category II and III-like capability, Publish standard	2012

ENABLING DEVELOPMENT—Continued

	Fiscal Year
Develop RNP 3D with required time of arrival criteria, conduct field trails, develop information requirements for flight data management and decision support tools to support the controller issuing the clearance, prototype and test display requirements (target ERAM mid-term, TFDM and STARS/Common Arts)	2012
Complete concepts of use, develop information requirements, prototype displays, develop system requirements and conduct safety case for full flight data management in terminal and tower	2011
Develop concepts of use for closely spaced parallel runway operations, develop information requirements conduct trials (navigation solution between 4,300 down to 3,000 feet, onboard monitoring below 3,000 feet to ?, wake avoidance procedures or wake monitoring)	2009, 2011, and 2013

Improve Collaborative ATM

OPERATIONAL IMPROVEMENTS

	Fiscal Year
Provide flight specific trajectories for traffic management initiatives	2013
Provide enhanced flight data management by maintaining a trajectory with updates for all flights in NAS	2015
Provide full flight plan constraint evaluation with feedback	2015
Provide On-demand NAS Information	2013

By 2015 we are planning several improvements to collaborative air traffic management which will improve the planning and execution of flight. The first is the implementation of flight specific traffic flow management initiatives. Today when major reroutes are required, since the system is voice and paper based, the plans are "one-size-fits-all." In the future the initiatives can be tailored to individual flights and better utilize available capacity. To do this the reroutes need to be delivered electronically to the sector controllers. This will be done by coupling the conflict probes trial plan function with the Traffic Flow Management-Modernization (TFM–M) system. To improve advisory service and flight planning, all NAS constraints will be managed in a common aeronautical information system and defined in a common way. Access to the necessary information is readily available. This will improve pilot situational awareness and ability to plan. A key improvement is that by moving to common information management any flight plan submission can be analyzed and full feedback on restrictions and advisories provide automatically.

ENABLING DEVELOPMENT

	Fiscal Year
Integrate execution of flow strategies into the NAS by linking the strategic plan to the controller conflict probe and providing the reroutes as trial plans. (target ERAM mid-term, TFM–M work package 2)	2012
Develop enhancements/algorithms to Airspace Flow Program that incorporate the capacity improvement provided by point-in-space time-based delivery to the congested area (target TFM–M work package 2)	2010
Develop a full concept of use for departure flow management enhancements to strategic-flow, develop algorithms, test, and develop implementation requirements (target TFM–M work package 2)	2010
Develop common status and infrastructure data framework for NOTAMS, Flow Constrained Areas, altitude and speed restrictions found in letters of agreements between facilities, temporary flight restrictions—data standard, automated input if data, implementation requirements (target AIM Modernization)	2011

Reduce Weather Impact

OPERATIONAL IMPROVEMENTS

	Initial implementation Fiscal Year
Trajectory Based Weather Impact Evaluation	2013

By 2015 we are planning improvements to convective weather, turbulence and icing "nowcast" and forecasts improving pilot situational awareness and flight planning. We are also planning the first inclusion of direct automated evaluation of

weather impacts on trajectories. By integrating weather information with trajectories, this is intended to improve traffic planning with less variation, thus increasing the use of capacity.

ENABLING DEVELOPMENT

	Fiscal Year
Weather Forecast Processor Improvements complete concept of 4D griddled weather information, initiate work to calibrate weather phenomena to aircraft type, technology assessment for air and ground weather observations, conduct final investment decision	2011

Provide Airspace Security

OPERATIONAL IMPROVEMENTS

	Fiscal Year
Enhance airspace security monitoring	2013

By 2015, we are planning to embed a security monitoring function within the air traffic automation. The system monitors and alerts the controller when action needs to be taken.

ENABLING DEVELOPMENT

	Fiscal Year
Integrate airspace safety classification and aircraft threat assessment into NAS flight data management, aeronautical information management system, and controller conflict probes to automatically monitor flight movements against airspace (target Security Integrated Tool Set (SITS) and Mid-term ERAM)	2010

ASDE–X

Question. Why did the FAA attempt to keep the master ASDE–X schedule from the Inspector General?

Answer. In November 2007, the ASDE–X Program provided internal working schedules to the OIG. These schedules were provided with the following note, "The working schedule is the internal target schedule. The FAA is committed to meeting the dates in the waterfall schedule."

Previously, the FAA provided the Office of the Inspector General (OIG) with the official ASDE–X Waterfall schedule. The waterfall schedule is a public reporting tool that maps to the September 2005 program baseline. It is a risk adjusted schedule that now only reports two high level milestones, equipment delivery and Initial Operating Capability (IOC).[2] Planned Operational Readiness Date (ORD) dates are not included in the waterfall schedule because ORD is determined entirely by the site. Also, at IOC, the ASDE–X system is fully operational; air traffic controllers in the tower are using the ASDE–X system for live operations. (ORD is usually 30 days after IOC.)

To manage the program, the ASDE–X Program uses an internal master integrated working schedule to track all deployment activities including the development test and implementation of change orders (major software builds) and the retrofit of change orders into systems that commissioned with earlier software build. It is a site by site rolling schedule broken down by phase then by activity. The schedule dates in the working schedule are more aggressive to allow for contingencies without missing the baseline schedule dates.

Question. You plan to install ASDE–X at 23 airports in half the time it took for you to complete the first 12. How will this be possible?

Answer. As part of the FAA Acting Administrator's September 2007 "Call to Action", the FAA is expediting the overall ASDE–X deployment schedule. The FAA plans to complete deployment of 20 of the remaining 23 airports by the end of 2010.

[2] After IOC is declared, the system is considered fully operational. The air traffic controllers in the tower cab are using the system in what's known as the Operational Suitability Demonstration (OSD) period prior to "commissioning" the system. OSD is a time period during which the system is operated under intense scrutiny to ensure the system satisfies all operational requirements including: availability, compatibility, interoperability, reliability, maintainability, safety, human factors, and logistics supportability.

The schedules for the last three ASDE–X systems (LaGuardia, Memphis, and Las Vegas) are dependent on or impacted by the airports' new airport traffic control tower schedules.

The accelerated ASDE–X deployment schedule is possible because:

—From fiscal year 2001 to fiscal year 2005, the FAA concentrated ASDE–X program efforts on software development and system enhancements. During this time only four systems achieved Operational Readiness Date (ORD). With the planned software development and system enhancements now complete, the FAA is focusing all program efforts on system deployment.

—ASDE–X systems are not deployed one airport at a time. Even though it takes approximately 3 years for an ASDE–X system to become operational at an airport, many activities are conducted in parallel across all of the remaining airports. The FAA has already started the implementation process for all of the remaining 23 sites. The implementation process includes: site survey, site design, lease approval, completion of environmental requirements, site preparation and construction, equipment installation, system optimization, training, and acceptance and commissioning activities. The remaining 23 airports are in various phases of the implementation process.

QUESTIONS SUBMITTED BY SENATOR FRANK R. LAUTENBERG

SAFETY OVERSIGHT

Question. Do you believe airlines were complying with safety orders and advisories before all the groundings in March/April this year? Are you confident that all airlines are in compliance now?

Answer. Given the results of our special validation of airworthiness directive management by the airlines—99 percent compliance rate for Phase 1 and 98 percent thus far for Phase 2—I am confident that both the airlines and the FAA are fulfilling their responsibilities. Of course, we must deal with any noncompliance within the authority and with the penalties public law and our regulations allow.

RUNWAY SAFETY STRATEGY

Question. When will FAA update its national runway safety strategy, per FAA Order 7050.1?

Answer. The draft National Runway Safety Plan is under review at FAA. We expect to publish the plan in November 2008.

ASDE–X

Question. The cost of the ASDE–X surface radar system has ballooned almost 50 percent to $806 million. Also, I understand it does not work in bad weather and it does not alert controllers of a potential collision. Will FAA have this system properly working in all 35 major airports by 2011 as the FAA has previously promised? When will Newark Airport have it?

ASDE–X Cost

Answer. In September 2001, the total ASDE–X program baseline was $591.6 million to deploy and maintain (for the 30-year lifecycle) 26 operational and 4 support systems. In September 2005, the FAA Joint Resources Council approved a rebaseline of the ASDE–X program. The new total program rebaseline was $806.4 million to deploy and maintain 35 operational and 3 support systems. Additionally, in the rebaseline, the 35 airports selected to receive ASDE–X systems were the airports with larger traffic counts and/or more complex operations (e.g. airports that use the same runways for arrivals and departures). So, once you account for the growth in scope (from 30 to 38 systems), the average cost per system only increased by less than 8 percent, from $19.72 million to $21.22 million.

The current ASDE–X program baseline costs are consistent with the September 2005 rebaseline estimates. In September 2005, the FAA Joint Resources Council (JRC) approved the ASDE–X program baseline at $549.8 million for Facilities and Equipment (F&E) and $256.6 million for Operations and Maintenance (lifecycle), for a total of $806.4 million. (In other words, the FAA will spend $549.8 million to implement ASDE–X systems at 35 airports and $256.6 million in operations costs to maintain the systems through fiscal year 2030.) The table below shows the approved costs since the inception of the program.

[Dollars in millions]

Program Baseline	Number of sites	F&E	Ops	Total
September 5, 2001	26	$424.3	$167.3	$591.6
June 4, 2002	7	80.9	55.5	136.4
Total	33	505.2	222.8	728.0
September 9, 2005	35	549.8	256.6	806.4

ASDE–X System Performance in Bad Weather

The ASDE–X system works in bad weather. The FAA provided the following information in September 2007 to the OIG in response to their draft report on ASDE–X.

"Due to the nature of radar, heavy rains do have the potential to degrade radar performance. This is a fact for all radar systems, not just specifically for ASDE–X. However, because of improved radar processing and the addition of multilateration, the ASDE–X system performs significantly better in all levels of rain as compared to the ASDE–3 system. The ASDE–X Program also implemented a rain configuration system enhancement. Rain configuration was designed to allow the ASDE–X system to operate in full core alerting mode during inclement weather (including moderate to heavy rain). Suspected weather induced false tracks on the runway(s) are eliminated from ASDE–X safety logic processing; however, they remain as unknown icon(s) on the ASDE–X tower display.

"The specific case that the OIG references regarding 'problems with dropped targets and subsequent system outages during heavy rain storms' comes from the FAA's Independent Operational Test & Evaluation's (IOT&E's) ASDE–X Upgrade Assessment Report. This assessment was completed in March/April 2007 at Louisville. Subsequently, the ASDE–X system was adapted to address all Louisville rain events so that a system outage would not occur in the event of heavy precipitation. After IOT&E and prior to commissioning, Louisville had three significant rain events without an outage. The facility was satisfied with the system performance and commissioned on July 19, 2007."

ASDE–X Schedule

Yes, the FAA will have the ASDE–X system deployed and properly working at the 35 airports (in the September 2005 program baseline) by 2011.

As part of the FAA Acting Administrator's September 2007 "Call to Action", the FAA is expediting the overall ASDE–X deployment schedule. The FAA plans to complete deployment of 20 of the remaining 23 airports by the end of 2010. The schedules for the last three ASDE–X systems (LaGuardia, Memphis, and Las Vegas) are dependent on or impacted by the airports' new airport traffic control tower schedules.

ASDE–X Deployment at Newark Airport

At Newark, the FAA is currently completing site preparation/construction and equipment installation. Due to circumstances beyond our control (leases not being signed); work was stopped at the site for a few weeks earlier this year. All leases were completed late February 2008. Newark is scheduled to achieve Initial Operating Capability (IOC) in July 2009.

QUESTIONS SUBMITTED BY SENATOR ROBERT F. BENNETT

SMALL COMMUNITY AIR SERVICE DEVELOPMENT PROGRAM (SCASDP) GRANT FOR LOGAN, UT

Question. Given the fact that the grant was pulled without adequate notice, just as the negotiations with a carrier were about to conclude, do you see an opportunity to restore the rescinded grant funds in the immediate future, possibly in the next 60 to 90 days?

Answer. The Department of Transportation (the Department) entered into a 2-year, $530,000 Grant Agreement with Logan Cache Airport (Logan) on September 17, 2004. The Agreement was scheduled to expire on September 17, 2006. However, the Department granted Logan a 1-year extension of its grant term to provide the community with an additional opportunity to meet its goals, thereby extending its grant term through September 17, 2007.

The community requested a second term extension per a letter dated August 1, 2007, received by the Department on September 5. The Department denied the extension request for several reasons, including:

—The Department has been both flexible and lenient with the community and has allowed it to pursue its goals to secure an agreement with an airline through September 17, 2007. After granting one extension, the Department usually does not grant another extension unless a community has a firm commitment from a certificated carrier that it will begin providing service. In this case, Logan did not provide any formal indication that an agreement had been executed between the community and an airline prior to the expiration of the grant. The Department received a faxed letter of interest from Vision Airlines on September 13 and an unsigned faxed letter from Frontier Lynx on October 12, which was after the grant termination. Neither letter included any clear service detail or start date. Furthermore, at the time, Vision Airlines did not have part 121 certification and did not receive effective authority until April 14, 2008.

—In granting Logan its first extension, the Department provided the community with several conditions that needed to be met if further extensions were to be granted, including: (1) the need to have an operational instrument landing system (ILS) at the airport; (2) to be granted Transportation Safety Administration (TSA) preparedness approval; (3) for Vision Airlines to secure its part 121 certification and for the airline to secure the Dornier aircraft including its delivery for service at the airport; and, (4) a letter of intent by an airline, certificated prior to the expiration of the grant, showing interest in providing service to the community, including service detail and start dates. Although the ILS was installed it was not commissioned and published until after the grant expired, December 20, 2007, and the Department did not receive notification of the delivery of Vision's Dornier aircraft.

—*Section B.3. Special Conditions*.—The Grant Agreement stipulates that "either party may seek to amend or modify this Grant Agreement on 90 days' written notice to the other party. The Grant Agreement will be amended or modified only on mutual agreement by both parties." The Department received Logan's request for a second extension only 2 weeks prior to the termination date and timely written notice was not afforded.

Once the Grant Agreement expires, so does the authority to extend its terms. Thus, at this time there is no further opportunity to restore the terminated grant funds. However, the community may always apply for another grant for a different project.

Question. Clearly this is a priority for me and the 100,000 constituents who live in the Logan Cache Metropolitan area. How would you suggest we resolve this issue?

Answer. Like many small communities, Logan faces both funding and resource challenges in overcoming its air service deficiency and although the community was unable to take full advantage of the Small Community Air Service Development Program (Small Community Program) grant, it does not preclude the community from seeking future funds for a different project from the program. On April 1 the Department released a Request for Proposal providing communities with another opportunity to apply for fiscal year 2008 grant funds from the Small Community Program. The Department understands that Logan has submitted an application for consideration and we believe this is the correct approach by the community to move forward and seek further funding opportunities to resolve its air service issues. Grant proposals for fiscal year 2008 were due June 6. The Department is currently reviewing grant proposals and expects to select this year's recipients by the end of the fiscal year.

Question. Will you work with my office and instruct your staff to identify some potential solutions to this funding crisis?

Answer. The Department assists small communities with implementation of their Small Community Program projects by being a sounding board and providing limited guidance in completing their projects. However, the Department's Office of Aviation Analysis does not provide counseling to communities with regard to finding funds for securing air service at the community.

The General Accountability Office (GAO) and The Office of Inspector General (OIG) have conducted reviews on the Small Community Program and this information may prove helpful to the community. The OIG has provided some information on projects that have proven successful. Both reports are available for communities to review on the Small Community Program's website at http://ostpxweb.dot.gov/aviation/X-50%20Role__files/smallcommunity.htm#Funds.

QUESTIONS SUBMITTED TO HON. CALVIN L. SCOVEL III

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

INSPECTOR STAFFING—INSPECTION FIELD TIME

Question. General Scovel, what are your views on the need to give inspectors more time in the field inspecting aircraft rather than completing paperwork at a desk?

Answer. We think it is important for FAA to ensure there is a good mix of desk top reviews of manuals and procedures, and on-site work to verify that the procedures have actually been implemented and are working properly. FAA has to find out exactly what that mix should be.

We stress that we would not advocate a return to the old compliance-based "kick the tires" approach; but, FAA does need to make sure inspectors use an effective mix of hands-on inspections and paperwork reviews.

If the Air Transportation Oversight System (ATOS) is used properly, FAA inspectors should be conducting "hands-on" inspections to verify whether systems, such as air carrier maintenance programs, are working effectively. In fact, it was during one of these "hands-on" type inspections that one of the whistleblowers discovered Southwest had not grounded aircraft that had not been inspected for fuselage cracks.

The Southwest case clearly shows that FAA cannot rely solely on computer based manual/procedural reviews and must verify that air carriers are meeting all safety requirements.

INSPECTOR STAFFING—FOREIGN MAINTENANCE OVERSIGHT

Question. General Scovel, do you believe the FAA can adequately tackle all these expanded requirements and adequately oversee the foreign maintenance facilities while providing no increase in the number of inspectors in the coming years?

Answer. Currently, FAA has approximately 4,000 safety inspectors. However, they do not have an adequate staffing model to determine the number of inspectors needed and the best locations for placement. Until FAA develops an adequate model, I do not know that any of us can say conclusively whether FAA has enough inspectors.

FAA is working toward developing an improved staffing model in response to recommendations in a September 2006 staffing study conducted by the National Research Council. FAA recently finalized milestones for completing development and implementation of the model, and plans to implement it by October 2009.

It is important for FAA to expedite completion of the model so the agency can reliably determine the number of inspectors needed to carry out its safety oversight mission.

RETALIATION AND HARASSMENT OF INSPECTORS—SENIOR EXECUTIVES ACTIONS

Question. General Scovel, based on your investigations of these incidents, do you believe that these three senior executives in the FAA's safety office did, in fact, eliminate all forms of discrimination, harassment, and retaliation?

Answer. We have not specifically reviewed FAA's overall efforts to eliminate discrimination, harassment, and retaliation. However, as we reported, one of the FAA inspectors in the Southwest case was removed from his oversight duties for 5 months while he was investigated for a vague and non-specific hotline complaint filed against him. Further, this inspector was subjected to harassment for several months, including a veiled death threat. We believe this is a serious problem that FAA needs to ensure does not reoccur.

RETALIATION AND HARASSMENT OF INSPECTORS—SAFETY

Question. General Scovel, do you believe that safety is affected when the FAA relieves these employees from their inspection duties? What kind of signal does it send to the rest of the inspection force?

Answer. In the case of the Southwest Airlines incident, removing an experienced FAA inspector from his oversight duties, particularly during a time when the principal inspector had developed an overly collaborative relationship with the air carrier, was not in the best interest of aviation safety. Because the timing of this action so closely coincided with the filing of the whistleblowers complaint, it sent a negative message to the rest of the inspector workforce regarding the consequences of bringing forward safety concerns.

We saw similar problems when the inspector/complainant was removed from oversight duties during the Northwest Mechanics strike because of a complaint sub-

mitted against him by Northwest Airlines' officials. FAA's actions resulted in removal of an experienced inspector from oversight duties during a period when particularly close safety oversight of maintenance activities was needed at Northwest.

SELF-REPORTING (SAFETY VIOLATIONS)

Question. General Scovel, what do you believe the FAA needs to do in order to run this program (voluntary disclosures) effectively?

Answer. We found several areas in which FAA could improve its implementation of this program.

FAA must implement and enforce a process for second-level supervisory review of self-disclosures before they are accepted and closed. This process should not rest solely with one inspector. Specifically, FAA must ensure that its self disclosure guidance requires inspectors to (a) verify that air carriers take comprehensive actions to correct the underlying causes of violations identified through self disclosure programs and (b) evaluate, before accepting a new report of a previously disclosed violation, whether the air carrier developed and implemented a comprehensive solution.

CONTROLLER EXPERIENCE

Question. General Scovel, do you believe these retention bonuses will be sufficient to make sure that we don't have an experience shortage when it comes to managing the growing amount of air traffic as well as training all the new controller recruits that need to be trained?

Answer. Whether the retention bonuses will be sufficient to maintain an appropriate level of experienced controllers is uncertain. FAA only started offering the bonuses in January of this year, so the results of the effort are not yet known. In our June 5, 2008 report[1] on facility training we recommended that FAA include the results of the Agency's use of retention bonuses in the next update to the Controller Workforce Plan. FAA agreed to provide us with the results of the bonuses to date. We are currently awaiting FAA's response. Once we receive that information, we will be in a better position to determine if the retention bonuses will be sufficient for ensuring we do not have an experience shortage. We will provide this Subcommittee with periodic updates on this important issue.

CONTROLLER EXPERIENCE AND SAFETY—OVERSIGHT

Question. General Scovel, why would a direct line of oversight at headquarters improve the consistency of training at each facility?

Answer. In our June 5, 2008 report on facility training, we found that FAA's facility training program continued to be extremely decentralized and the efficiency and quality of the training varied extensively from location to location. We found similar problems in 2004.

According to FAA Headquarters officials, after FAA created the Air Traffic Organization (ATO), it assigned national oversight responsibility for facility training to the ATO's Vice President for Terminal Services and Vice President for En Route and Oceanic Services. In addition, the ATO's Vice President for Acquisition and Business Services oversees new controller hiring and the FAA Academy training program, and the Senior Vice President for Finance oversees the development of the Controller Workforce Plan. All four offices play key roles in the controller training process.

Because of these overlapping responsibilities, we found significant confusion at the facility level. For example, during our review, facility managers, training managers, and even Headquarters officials were unable to tell us who or what office was ultimately responsible for facility training. In order to maintain consistency in the facility training programs, we recommended that FAA communicate who has the authority and responsibility for oversight and direction of the facility training. FAA agreed with our recommendation and has recently established a new senior position in the Air Traffic Organization that is responsible for training.

AUTOMATIC DEPENDENCE SURVEILLANCE-BROADCAST (ADS–B)—RUNWAY INCURSIONS

Question. Could you explain why the ADS–B technology offers an important solution to runway incursions?

Answer. One key to reducing accidents caused by runway incursions is to provide "shared situational awareness" where both the pilot and controller are viewing a

[1] OIG Report Number AV–2008–055, "Review of the Air Traffic Controller Facility Training Program," June 5, 2008.

common picture of surrounding traffic on runways and taxiways. ADS–B technology can meet these needs by providing critical flight information simultaneously to both pilots and air traffic controllers. In essence, ADS–B can provide a "second set of eyes" in the cockpit in all weather conditions—something that does not exist today.

However, it is important to recognize that FAA plans to only mandate "ADS–B Out," where aircraft will broadcast their position to ground systems for use by air traffic controllers. FAA does not intend to mandate the use of "ADS–B In" and the use of cockpit displays which would allow aircraft and ground vehicles to see each other. We note that the majority of safety and capacity benefits are associated with "ADS–B In".

While most stakeholders agree that ADS–B is a part of the future, there are significant concerns about FAA's approach with regard to costs, requirements, and lack of clearly defined benefits for airspace users. We will issue a report on the risks facing successful implementation of ADS–B later this year.

NEXTGEN

Question. General Scovel, do you think these are the right milestones?

Answer. There is considerable uncertainty about NextGen milestones and what can reasonably be expected from Agency investments in the short- and long-term. Right now, FAA does not have reliable milestones and cost estimates for NextGen. We think much work remains for FAA to establish realistic cost and schedule estimates for key NextGen capabilities, such as data link and the concepts for advanced automation that are expected to boost controller productivity.

The milestones identified in the FAA's fiscal year 2009 budget request focus on research and development activities. They primarily involve NextGen demonstration projects and funding for programs such as the Automatic Dependent Surveillance—Broadcast, for which the agency is requesting $300 million in fiscal year 2009 to support nationwide implementation of the ground-based infrastructure.

As we noted in our April report on FAA's modernization efforts, some progress has been made with the NextGen Enterprise Architecture and Concept of Operations. However, these planning documents remain at a very high level and lack details on requirements that translate into reliable cost and schedule estimates. Also, it is unclear what FAA should invest in first.

Therefore, we recommended that FAA conduct a "gap analysis" between today's system and the NextGen targeted for 2025. We also recommended that FAA develop an interim architecture or "way point" for NextGen in the 2015 timeframe. These reviews will help determine technical requirements that can translate into cost and schedule estimates for NextGen. FAA concurred with our recommendations.

Question. Do you think they will be achievable and affordable by 2015?

Answer. The development of NextGen is important and will shape FAA's capital budget for years to come. However, until FAA provides more clarity with respect to what can be accomplished in the 2015 timeframe, we cannot determine what is achievable and affordable in that timeframe. We understand that FAA is looking at what can be accelerated and what can be done in the mid-term. A clearer picture should emerge later this year.

AIRPORT SURFACE DETECTION EQUIPMENT MODEL-X (ASDE–X)

Question. General Scovel, do you agree that the FAA's ASDE–X timetable is achievable?

Answer. It is aggressive and given the history of this program it is certainly a high-risk timetable. While FAA has decided to accelerate ASDE–X deployment at some sites, we remain concerned whether or not FAA can complete ASDE–X with all planned capabilities within the current cost baseline of $549.8 million.

FAA is planning to accelerate ASDE–X deployment at New York's John F. Kennedy airport by 1 year from 2009 to 2008; and accelerate the overall deployment schedule to 2010. However, FAA has told us that three airports (LaGuardia, Las Vegas, and Memphis) will not be included in the ASDE–X accelerated schedule. ASDE–X deployment at these three airports must be aligned with construction schedules for new airport traffic control towers. Additionally, history shows that each airport is unique—and will require "significant" customization to help controllers get the most benefit from the system.

According to ASDE–X program officials, plans to accelerate the ASDE–X deployment may impact the overall program costs. FAA is planning to shift ASDE–X funds planned for future efforts (e.g., 2010 and 2011) back into 2008 and 2009, to accelerate the program. FAA is currently determining what impact accelerating ASDE–X will have on the cost and schedule parameters. FAA is expecting to complete this review by July 2008.

QUESTIONS SUBMITTED BY SENATOR FRANK R. LAUTENBERG

NATIONAL RUNWAY SAFETY PLAN

Question. FAA policy requires the agency to have a national runway safety plan and look at it every 2 to 3 years. But the FAA hasn't updated it since 2002. You—as well as the Government Accountability Office—have recommended that the FAA needs to update its national runway safety plan immediately. What are the dangers of not making these updates?

Answer. Without a current National Runway Safety Plan, FAA can not be assured that it is focusing it resources in the right places, thus increasing the risk of a runway incursion or even an accident. In addition, without a plan, FAA has no mechanism to hold responsible parties accountable for taking actions to reduce these incidents.

For example, as we reported in our May 2007 report,[2] the 2002 National Plan for Runway Safety, included 11 initiatives assigned to FAA's Flight Standards Office to help reduce runway incursions caused by pilot deviations. However, Aviation Safety (the line of business that includes Flight Standards) did not include any initiatives specific to runway incursions in its fiscal year 2005 through fiscal year 2007 business plans.

This was despite the fact that runway incursions caused by pilot deviations continue to account for over 50 percent of all runway incursions and were at their highest levels in fiscal year 2006 since fiscal year 2002. Also, the most serious pilot deviations experienced a 100-percent increase, rising from 9 in fiscal year 2005 to 18 in fiscal year 2006.

AIRLINE SELF-POLICING ON SAFETY

Question. Do you feel the FAA can rely on the airlines to police themselves on safety to the extent they have been doing?

Answer. The U.S. enjoys an impressive safety record and we are fortunate to have only had a few accidents in the past 7 years. The chain of events that unfolded at Southwest is very troublesome and show signs of complacency on FAA's part. There cannot be any substitute for strong government oversight.

In the case of Southwest, the facts clearly show that the pendulum swung too far away from enforcement and oversight to collaboration and partnership at the office responsible for oversight of Southwest.

Regulatory partnership programs can have value by identifying and correcting safety issues that might not otherwise come to light. However, FAA cannot rely too heavily on self disclosures at the expense of rigorous oversight and enforcement.

CONTROLLER FATIGUE AND CERTIFIED PROFESSIONAL CONTROLLERS

Question. Do you believe that current FAA practices give air traffic controllers enough rest so that they won't be subject to fatigue when managing air traffic?

Answer. At the request of Senator Durbin of Illinois, we are currently reviewing factors that could affect controller fatigue.

Thus far, we have identified several factors that could contribute to controller fatigue, including work schedule and scheduling practices. Specifically, we found that schedules with minimal time between shifts for controller rest may contribute to fatigue.

At the three Chicago air traffic facilities we visited, controllers work a schedule consisting of two consecutive night shifts, followed by two consecutive day shifts, followed by one midnight shift. The schedule is characterized by progressively early start times throughout the workweek and two "quick turn" shifts in which rest periods between shifts are close to the 8-hour legal minimum.

The National Transportation Safety Board (NTSB) has also expressed concerns about the impact of fatigue on the performance of shift-working controllers and its impact on the safety of the National Airspace System. For example, in its investigation of Comair flight 5191, the NTSB expressed concerns that the lone controller on duty at the time of the accident (although he had 8 hours off between shifts) had only slept about 2 hours before his shift. As a result of its investigation at Lexington, the NTSB added controller fatigue to its "Most Wanted List" in 2007.

We are continuing our review and determining (1) the extent with which fatigue factors are occurring and (2) what efforts FAA is taking to address them. We plan to issue our final results later this year.

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[2] OIG Report Number AV–2007–050, "Progress Has Been Made in Reducing Runway Incursions, but Recent Incidents Underscore the Need for Further Proactive Efforts," May 24, 2007. OIG reports can be found on our website at www.oig.dot.gov.

Question. Are there enough certified professional controllers (CPC) in the ranks?

Answer. As a result of increasing controller attrition, FAA is facing a fundamental transformation in the composition of its controller workforce. The overall percentage of developmental controllers in the controller workforce has grown substantially over the past 3 years. From April 2004 to December 2007, the overall size of the controller workforce remained relatively constant; however, during the same period, the number of controllers in training increased by 1,375, or 62 percent, while the total number of CPCs decreased by 1,302. As a result, FAA is now training more new controllers than it has in the past 15 years.

FAA states that the number of controllers in the workforce for fiscal year 2007 was 14,874, more than their projected goal of 14,807. However, FAA does not differentiate between CPCs and controllers in training in these numbers. FAA only reports the total number of controllers at each location. In our report on controller facility training, we recommended that FAA report the number of CPCs and the number of controllers in training separately for each location in its next update to the Controller Workforce Plan. Differentiating those figures by location could provide Congress and the Secretary with critical data on the current composition of the controller workforce and provide a benchmark for year-to-year comparisons.

FAA did not agree with our recommendation and stated that it does not believe that providing a snapshot of this information once a year captures the status of the controller workforce. We strongly believe that periodic comparisons of the controller workforce provide critical data points for the Congress, the Secretary, and other stakeholders who must ensure FAA has enough CPCs to safely operate the National Airspace System. This is particularly important given the length of time required for new controllers to become CPCs. Training new controllers to the CPC level is critical because only CPCs are qualified to control traffic at all positions of their assigned area, and only CPCs can become OJT instructors for other new controllers. Having enough OJT instructors at all locations is a vital part of FAA's plan to hire and train 17,000 new controllers through 2017. We therefore requested that FAA reconsider its position on this recommendation.

LOW-FUEL LANDINGS

Question. Thank you for your recent report to me on low-fuel landings at Newark Liberty International Airport. Given the high fuel prices, do you believe the FAA is doing a adequate job of monitoring whether airlines are providing sufficient amounts of fuel to its planes on these overseas trips and other flights?

Answer. In February 2008, during the same time as our review, FAA conducted a parallel review of low fuel landings at Newark Airport. As a result of this review, FAA initiated action to address issues identified during its review that were similar to those we had identified. For example, FAA issued two bulletins to all air carriers to provide a common reference for the terms minimum and emergency fuel for both pilots and air traffic controllers. FAA has also begun working with airlines throughout the country to gather fuel management information from several different sources. According to FAA, the information it gathers will allow the Agency to undertake a thorough review of the issues and take appropriate action as warranted. We will continue to monitor FAA's actions to ensure they fully address the problems we identified at Newark.

LOW-FUEL ADVISORY VS. ON-TIME PERFORMANCE

Question. Do you believe pilots are claiming to be in low-fuel advisory situations in order to meet on-time performance goals? Are any pilots who operate out of Newark Airport compensated based on on-time performance?

Answer. We collected no evidence that low-fuel declarations are connected to on-time performance goals. We would have to perform additional audit work to make this determination.

AUCTIONING "SLOTS" AT LAGUARDIA

Question. The FAA recently proposed auctioning off landing rights—or "slots"—for flights into and out of LaGuardia Airport, which is operated by the Port Authority of New York and New Jersey. In your opinion, is this proposal likely to result in higher fares for passengers on those flights?

Answer. We have not looked into this in detail but have some observations. The current FAA proposal contemplates extending the hourly cap (75 scheduled operations) on flight operations at New York's La Guardia airport (LGA) and grandfathering a majority of the existing operating authorization or "slots" to the carriers serving that airport today. A slot refers to one scheduled arrival or departure operation during a specific 30-minute period.

Additionally, FAA is proposing that up to 20 percent of the slots awarded to incumbent carriers will revert back to the FAA over a 4-year period. FAA contemplates that these slots will either be retired to relieve congestion at LGA or auctioned to the highest bidder.

We believe that it is unlikely that fares on existing flights will increase as a direct result of the slot auctions proposed by the FAA for two reasons. First, the current FAA proposal does not materially reduce the number of hourly flight operations at LGA. Consequently, to the extent that the limitations on the number of flights would allow for any fare premiums, carriers currently operating at LGA should have already incorporated them into existing fares. Second, we do not expect there to be a significant shift in the mix of carriers serving the airport and, thereby, any change in the degree of competition. Given the limited number of slots to be auctioned, there is little likelihood that any bidder will be able to acquire a sufficient number of the available slots to materially alter the competitive landscape.

FAA's proposal to auction slots at LGA could alter the mix of markets served by LGA. The highest bidder for any available slot will be the carrier who can generate the highest return from it. A carrier can generate a high return from its investment in a slot by using it to service a market for which there is relatively high unmet demand, and a large share of that demand is for business travel. We could see instances where providing service to small communities may not be the most profitable use of a slot. Therefore, implementation of the proposal, absent some form of mechanism to protect small community access, could likely result in a decline or elimination of service to small communities.

Senator MURRAY. Mr. Sturgell, sorry to be so hard on you, but believe me, it is frustrating as the chairman of this subcommittee to have the same conversation year after year and then to see hundreds of thousands of passengers being delayed, inconvenienced, people questioning the safety of the airlines, and I know there's a good record out there in terms of safety and I commend you for that, and I also know there's some great workers at the FAA who go to work every day and really do an excellent job and they are to be commended, but they need to know the direction from the top down, that the passengers are who the FAA considers to be their customer, not someone else.

Mr. STURGELL. I do appreciate that and I particularly appreciate the comments about the employees at the FAA because they do do a great job.

Thanks.

Senator MURRAY. I appreciate that.

CONCLUSION OF HEARING

Thank you and this subcommittee will be recessed subject to the call of the Chair.

Thank you.

[Whereupon, at 12:13 p.m., Thursday, April 17, the hearing was concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

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