



U.S. House of Representatives
Committee on Transportation and Infrastructure

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SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Aviation

FROM: Committee on Transportation and Infrastructure, Oversight and Investigations Staff

SUBJECT: Hearing on "FAA's Aging ATC Facilities: Investigating the Need to Improve Facilities and Worker Conditions"

PURPOSE OF THE HEARING

On Tuesday, July 24, 2007 at 10:00 a.m., 2167 Rayburn House Office Building, the Subcommittee on Aviation will meet to examine the condition of the Federal Aviation Administration's (FAA)'s Air Traffic Control (ATC) facilities. The Transportation and Infrastructure Committee Oversight and Investigations staff has recently conducted an investigation of the FAA's program to maintain the current ATC infrastructure. FAA reports that terminal radar control (TRACON), towers, and en-route ATC facilities are relatively old, on average, and are overall in "fair to poor" condition using General Services Administration (GSA) Facility Condition Index (FCI) criteria.¹ Data collected on facility conditions paints a picture of numerous buildings with severe maintenance problems, and FAA employee reports of health-related complaints are becoming more numerous in various facilities throughout the system.

In the course of this investigation, several FAA managers have openly acknowledged that the agency has a substantial maintenance backlog for repairs at many FAA facilities. According to various documents obtained from FAA, the maintenance backlog estimates ranged between approximately \$250 and \$350 million. Yet, the FAA's annual budget for facility maintenance and improvement for FYs '06 and '07 was less than \$60 million in each year.² At this rate of expenditure for facility maintenance, even the FAA's analyses show an ever increasing maintenance backlog.

¹ The GSA has developed facility rating criteria for use in the evaluating the condition of Federal Buildings. FAA performs its own ratings using these criteria.

² Data from FAA briefing supplied to Oversight and Investigations Staff dated May 2007.

The implications of this growing maintenance backlog are disturbing, since they are not currently included in FAA's Capital Investment Plan (CIP).

The problems identified in this investigation include the types of things expected in aging buildings. These more common types of problems include: roof leaks, mold, animal and insect infestation, poor air-quality/heating, ventilation, and air conditioning (HVAC) problems, presence of asbestos, space limitations, general unsanitary conditions, broken or damaged furniture, etc. According to the National Air Traffic Control Association (NATCA) and the Professional Airways Services Specialists (PASS), reports of employee health problems due to facility conditions are on the rise.

While aviation industry, Congressional, and FAA attention are firmly focused upon the capacity limitations of the current system, and the urgent need to upgrade ATC technology to a state-of-the-art Next Generation Air Transportation System (NextGen), the fact remains that the current system must be able to operate in a reliable manner, while providing a safe and productive working environment for FAA employees, who perform complex and demanding jobs on a daily basis. The earliest estimates for a significant transition to NextGen are a decade away. Thus, FAA and Congress cannot afford to allow the current system to deteriorate to an unacceptable and unsafe condition. FAA and Congress must address these very serious "facility sustainment" issues while developing and implementing NextGen.

BACKGROUND

Overview of ATC Facility Age and Condition

In a 2005 briefing entitled "FY 2005 Business Outlook: Capitol Hill" provided to T&I Committee Staff in 2005, then-FAA Chief Operating Officer (COO), Russell G. Chew summarized facility condition in the following way, "the average en-route facility condition index (FCI) currently is rated *poor* and getting worse each year." In that briefing, the FAA COO provided the following data on the average age of FAA ATC facilities:

Years in Service (2005 numbers provided by FAA)

30	Towers
34	TRACON Facilities
27	Primary En-Route Radars
16	Primary Terminal Radars
26	Secondary Radars
40	En-Route Control Centers
20	Flight Service Stations

Of these, the vast majority of FAA employees perform their duties in towers, TRACONs, and en-route control centers.³ Overall, FAA manages over 22,000 facilities with an FY '08 budget of \$262.2 million. From an analysis of FAA figures, it appears that less than \$60 million per year is

³ Flight Service Stations are now in the process of being transitioned to operation by a private contractor (Lockheed Martin).

dedicated to maintenance and repair of existing facilities, with the vast majority of Facilities and Equipment (F&E) funding allocated to building replacement or expansion.

According to the Department of Transportation (DOT) Office of Inspector General (OIG), total building replacement costs are uncertain, but they are estimated to be in the \$6.3 billion range. Of this number, the replacement cost of en-route facilities is estimated in the \$2.6 billion range, and terminal replacement costs are estimated at \$3.7 billion, although the DOT OIG has not validated these replacement cost figures.⁴

FAA facilities are managed by three different lines of business under the Air Traffic Organization (ATO). Terminal (both tower and TRACON) facilities are under the management of the Vice President of Terminal Services, en-route facilities are under the Vice President of En-Route and Oceanic Services, and other facilities such as navigational aids, radars, etc., are managed by the Vice President of Technical Operations. One of the findings of this investigation is that there is no overall FAA Facilities “Czar” to coordinate the ATO’s overall maintenance and repair plan. Thus, it appears to be left to each individual executive to compete for the annual F&E funding available for facility maintenance.

En-route Centers: The FAA operates 21 en-route control centers, all constructed at around the same time in the early 1960s and expanded several times since then. The average FCI is 90.3%, which is classified at the cutoff point between “fair” and “poor.” Eleven of the 21 en-route centers have FCI values below 90%, which is indicative of a facility that requires attention. According to the FAA, there are areas within some of these facilities where the index is as low as 57%.

The FAA estimates that it spends \$225,000 annually on improvements at each of the 21 en-route facilities. Additionally, the FAA states that it spends \$500,000 per facility for “smaller sustain needs” and funds 4 or 5 “major sustain projects” per year. FAA estimated the en-route facility maintenance backlog at \$121 million at the end of FY 2006.

Tower and TRACONs (Terminal): By far the FAA’s most challenging facility issue is maintaining its 401 Tower and TRACON facilities. This includes 217 FAA-owned facilities staffed with FAA controllers, 74 “sponsor/airport”-owned facilities staffed with FAA controllers, and 110 FAA-owned facilities staffed with contract controllers.

Of the 401 terminal facilities that FAA is responsible for maintaining, the agency has conducted FCI’s for only 89. The FAA claims that these 89 facilities are representative of the various Tower and TRACON construction types throughout the system. According to FAA statistics, the average FCI of these 89 facilities in 2007 was 93.2% on the GSA scale, which is representative of “fair” condition. Given the large number of facilities, the FCI for various facilities varies greatly from “good” to “very poor,” and the majority of terminal facilities have not been assessed using the FCI methodology, thus the actual average is unknown. FAA estimated the terminal maintenance backlog at the end of FY 2006 at \$124 million.

⁴ May 17, 2007, DOT Office of Inspector General briefing to T&I Oversight and Investigations Staff.

Unstaffed Facilities: The FAA also is responsible for maintaining more than 9,000 smaller buildings and 13,000 structural towers associated with navigational aids, radars, and other components of the ATC infrastructure.

FAA's Facility Replacement, Maintenance, and Improvement Program

Within the FAA's F&E account, approximately \$100 to \$150 million per year is allocated for facility replacement. The average replacement cost is estimated at \$30 million per terminal facility. This equates to approximately 33 replacements every 10 years. With a replacement budget set at \$100 million annually, and assuming that the FAA does not replace the current FAA-owned Federal contract towers (FCT), for the remaining 217 FAA-owned and FAA-staffed towers, a facility commissioned in 2007 would be all replaced by 2094, or 87 years later. At a annual budget of \$120 million, rotational replacement would be every 72 years, and at \$200 million annually, rotational replacement would be every 43 years. These statistics underscore the importance of adequate funding from Congress and an aggressive maintenance and improvement program for FAA ATC facilities.

Between FYs 2000-2006, Congress appropriated approximately \$845 million, or an average of \$121 million per year for 98 terminal facility replacement projects. Forty-four of those sites have been commissioned, 21 sites are under construction, and 33 sites are currently being analyzed to determine their replacement requirements and timing. The time from beginning a facility replacement project through construction and commissioning is a minimum of 5 years.

FAA has completed the GSA FCI assessment process at 89 out of 401 terminal sites, and is planning future assessments at the rate of 12 per year. Since the vast majority of terminal sites have not been formally surveyed, existing problem conditions at all facilities are unknown. At the current FCI survey rate, it would take 25 years for the FAA to complete the formal FCI assessment process. FAA currently budgets between \$30 and \$50 million for terminal facility maintenance and rehabilitation, but at the same time projects that the "one time remediation costs" including the maintenance and repair backlog is \$315,700,000.⁵

The main focus for en-route facilities is upon modernization and upgrade, not replacement. For unstaffed facilities, FAA is in the process of developing a prioritization process.

In summary, at the current rate of replacement, maintenance, and improvement funding, it is likely that the maintenance backlog will continue to grow larger without significant funding increases for maintenance, and ATC facility conditions will continue to deteriorate.

FAA Facilities and Equipment Budget Requests

Both chambers of Congress and the aviation community agree that increased capital investment is necessary to increase system capacity and avoid gridlock. These investments are funded by the FAA's F&E program.

For the fourth consecutive year, the President's Budget proposed a level of F&E funding below authorized levels. In 2003, the Administration's reauthorization proposal requested \$3.1

⁵ FAA Terminal Facility Briefing given to T&I Oversight and Investigation Staff.

billion for F&E in FY 2007. This was consistent with the FAA's CIP for FYs 2004-2008, which indicated that the F&E program needed an average annual funding level of \$3 billion over that period. After FY 2003, the Administration significantly cut its F&E requests below authorized levels to approximately \$2.5 billion in every year through FY 2007.

According to CIP estimates, roughly half of the F&E budget is set aside for equipment modernization, and the FAA has not requested additional F&E funding for routine maintenance and repair of aging FAA facilities. While the FAA continues to lay the groundwork for NextGen, it is important that the FAA ensure that the current system can continue to operate in a safe and reliable manner by investing in the maintenance and repair of existing infrastructure.

FAA Proposals for ATC Consolidation

FAA often cites aging facilities and the expense of maintaining such a large number of facilities as a primary justification for consolidating the ATC system into a much smaller number of facilities. The FAA has stated that a plan with an initial list of facilities is being evaluated for possible consolidation and collocation through 2014. Although not mandated by Congress, the FAA has yet to develop or present to Congress a comprehensive ATC facility consolidated plan. Included in the FAA's Reauthorization proposal was a provision establishing a process similar to the Base Realignment and Closure Commission utilized for recommendations on military base closures.

A provision in the Committee's FAA Reauthorization Bill, H.R. 2881, directs the Secretary of Transportation to establish a working group tasked with developing recommendations for the realignment and consolidation of FAA facilities. The Administrator must then report the recommendations to Congress before any facilities or services are realigned or consolidated. However, the provision does not require Congressional approval in the form of an up or down vote, and the agency could choose to ignore the recommendations.

FAA Employee Reports of Facility Condition

NATCA and PASS consistently maintain that the FAA has failed to provide adequate maintenance on the buildings and facilities that accommodate National Airspace System (NAS) equipment and systems. They report that the condition of the infrastructure appears to be a low priority for the agency; problem reports are often ignored, and that employees have been forced to work in conditions that are unsafe. Leaking roofs, deteriorating walls and ceilings, and obsolete air conditioning systems are among the many problems that FAA employees reportedly encounter every day, and it is reported by both organizations that health claims are on the rise. It is also reported that the FAA is in direct violation of safety regulations, including those mandated by the Occupational Safety and Health Administration (OSHA).

NATCA recently conducted a facility condition survey to assess the current state of 314 ATC towers, en-route centers, and TRACONs nationwide. Among the 220 facilities that participated, the most serious commonly-reported problems were: the presence of mold and other harmful contaminants, external leaks, and building ventilation and temperature control issues.

Based upon NATCA and PASS-supplied data, the major facility problems can be grouped into the following categories:

- **Exposure to Mold, Asbestos, Radiation or Other Harmful Conditions:** There are continual reports from facilities across the nation that employees are exposed to dangerous levels of mold, asbestos, leaking radiation or other hazards. FAA employees persistently report working in buildings infested with mold contamination and that respiratory ailments have become common. In other cases, exposure to radiation without the proper safety precautions led PASS to obtain radiation badges for all its members to ensure that they are protected. Exposure to these harmful contaminants has resulted in questionable worker conditions at a number of facilities. In the Detroit ATC tower, over 6,000 square feet of mold contaminated material was identified, which included black toxic mold (*Stachybotrys*), as well as several other toxic mold types in 2005. Remediation was conducted at the facility twice. In one instance, a chemical spray was used, resulting in 9 employees being rushed to the hospital. Employees have reported respiratory infections, asthma-like systems, rashes, nose bleeds, fungus infections, possible nerve damage, and various other issues. The Kansas City ATC tower identified toxic black mold in the facility at least twice; the extent of contamination is unknown. In the San Jose ATC tower, during the replacement of the air unit, potential toxic mold was found, and is conducting tests to determine the type of mold. Grand Rapids ATC tower has experienced several environmental issues in the last 10 years relating to bacteria contamination, water leaks and possible mold contamination.
- **Building Ventilation and Temperature Control:** One of the major findings of the facility survey was that in nearly every building sampled, employees reported poor heating, air conditioning and air quality. Controllers in these environments report frequent respiratory ailments. Unlike employees in other work environments, FAA medical standards for on-duty controllers preclude the use of many over-the-counter medications for respiratory relief.
- **Unstable Building and Infrastructure Conditions:** There are numerous reports of FAA employees (primarily PASS technicians) working in conditions that present a safety hazard, while maintaining facilities such as navigational aids. Employees report often performing this hazardous maintenance work without backup to render assistance in the event of an accident. PASS reports numerous instances where employees have suffered actual injury due to unstable building or other infrastructure conditions, including cases in which employees fell through rotting floors or were expected to climb damaged stairways over 30 feet in height to perform work on a platform. In many cases, NATCA believes that the conditions are in violation of OSHA safety standards.
- **Improperly Housed Equipment:** Many FAA technicians must work directly with high-voltage equipment. It should be expected that high-voltage equipment would be given the utmost attention in terms of being properly housed to avoid endangering the employees working on the equipment. In many FAA facilities, this is not the case. In one example, despite requirements for high-voltage transformers dictating that the equipment should be enclosed in metal enclosures, the transformer is simply surrounded by some wood railing and a plywood cover. In the same facility, another transformer is properly enclosed in a chain metal enclosure, making it blatantly clear that a wood enclosure is not sufficient to protect the employees from the high-voltage equipment.
- **Systems and Equipment Threatened by Infrastructure Issues:** Because of deteriorating building conditions, recently installed new equipment and systems are sometimes exposed to

damage. Employees in the field have reported to PASS several instances in which equipment is covered with plastic or tarps to keep leaking water from damaging the equipment. FAA has been rapidly upgrading NAS systems and equipment, but routinely placing modern, state-of-the-art equipment into facilities not suited to house such equipment.

- **Facility Roof Leaks:** Facility condition reports conducted by NATCA reveal that airport control towers and radar rooms across the nation have serious external leaks. Many of these leaks are into equipment rooms and jeopardize expensive and vital equipment. In many cases these external leaks lead to the development of potentially dangerous mold. NATCA field representatives have relayed that the Atlanta Center has had water issues in the facility for a number of years. In some instances it has been reported that controllers have to hold an umbrella over the radar scope. The Chicago O'Hare ATC tower started having major water leaks in the last couple of months. The extent of water damage and possible mold contamination is unknown at this point. A notable example is the recurrence of condensation accumulating on the windowpanes of tower cabs, causing reduced visibility, which in some cases can be extreme and unsafe. Visually identifying aircraft and vehicles and ensuring that control surfaces stay clear during aircraft operations is the single most effective means of reducing runway incursions and surface accidents.

110TH CONGRESS OVERSIGHT ACTIVITIES

On February 14, 2007, the Subcommittee on Aviation held a hearing on "The President's FY08 Federal Aviation Administration's Budget." One focus of the hearing was the funding given by Congress for FAA's F&E program.

In March 2007, the Subcommittee on Aviation held a series of hearings on FAA Reauthorization. One provision that was examined was the Reauthorization language allowing the Secretary of the Department of Transportation to establish a "Realignment and Consolidation of Aviation Facilities and Services Commission" to assess FAA's recommendations on facility consolidation.

H.R. 2881 – *The FAA Reauthorization Act of 2007* – was ordered reported out of the Transportation and Infrastructure Committee on June 28, 2007 with provisions to supply \$13 billion for the F&E program, which is \$1 billion over the Administration's request. The Congressional Budget Office is still in the process of evaluating the proposal's cost. As such, the Committee report has not yet been filed. The historic funding level attempts to address the backlog of repair and replacement of FAA facilities and equipment, while continuing to provide the resources for timely implementation of NextGen. In looking forward to NextGen transitional needs, the bill directs the establishment of a working group within the FAA to create recommendations for the realignment and consolidation of FAA facilities.

WITNESSES

PANEL I

Mr. David B. Johnson

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Mr. Steven B. Zaidman

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PANEL II

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