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May 9, 2013

The Honorable John D. Rockefeller IV
Chairman
The Honorable John Thune
Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Bill Shuster
Chairman
The Honorable Nick J. Rahall, II
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

Subject: ***Preliminary Results of Work on FAA Facility Conditions and Workplace Safety***

The FAA Modernization and Reform Act of 2012 mandated that GAO study the condition of Federal Aviation Administration (FAA) facilities, FAA employee occupational safety and health issues, and the resources allocated to FAA facility maintenance and renovation.[1] The mandate required us to report to Congress and the FAA Administrator on the results of our study not later than 1 year after the date of enactment of the act.[2] In accordance with the reporting date of the mandate, we briefed the committee staffs on our preliminary results on February 13 and 14, 2013.[3] This letter summarizes and formally transmits the information that we presented at these briefings. We will complete our full study and issue our report in electronic format later this year.

This report provides preliminary results on the following four research questions:

1. What is known about the conditions of FAA facilities?
2. What are the most common types of workplace injuries and illnesses, if any, reported by FAA employees?
3. How has FAA responded to any safety deficiencies identified through its inspections and those conducted by the Occupational Safety and Health Administration (OSHA)?
4. What actions has FAA taken to ensure that its facilities are in good condition?

[1] Section 610 of the FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 610, 126 Stat. 11, 117 (Feb. 14, 2012).

[2] The law was enacted on February 14, 2012.

[3] In addition to briefing the committee staffs, we also emailed the FAA Administrator a summary of our briefing as required by the mandate.

To determine what is known about the conditions of FAA facilities, we collected the most recently available facility condition data from FAA and the General Services Administration (GSA) for facilities that are staffed by FAA employees. The condition of FAA facilities is presented by the type of facility as the most recently available facility condition data are from different periods of time (i.e., 2012, fiscal year 2011, and fiscal year 2010) for each type of facility. To assess the reliability of the FAA data we (1) reviewed existing documentation about the data, (2) interviewed agency officials knowledgeable about the data, and (3) performed electronic testing of the data for obvious errors in accuracy and completeness. Because of limitations with FAA's agency-wide source for data on its facilities, we made use of alternative data sources as discussed below. We found some of the alternate sources to be sufficiently reliable for describing facility condition. To determine whether the inspection methods used by FAA or GSA were reliable indicators of facility condition, we compared those methods with generally accepted industry standards and interviewed FAA and GSA facility officials and FAA's engineering consultants. In our continuing work, we will assess the extent to which the other sources are reliable indicators of facility condition. To assess the reliability of the GSA data we (1) reviewed existing documentation about the data and (2) interviewed agency officials knowledgeable about the data. We found the data to be sufficiently reliable for the purposes of this report. We also interviewed FAA and union officials representing major aviation employee groups about facility conditions. In our analysis of facility conditions, we are focusing on government-owned facilities that FAA or GSA maintain.[4] In addition, to observe conditions and speak with knowledgeable staff to learn about any facility deficiencies and the projects for fixing them, we visited multiple facilities supporting operations and administrative functions in each of FAA's three geographic service areas. To determine the most common types of workplace injuries and illnesses FAA employees have reported, if any, we are reviewing FAA and Department of Labor (Labor) workers' compensation data from 2007 through 2012.[5] To assess the reliability of the data, we (1) reviewed existing documentation about the data, (2) interviewed agency officials knowledgeable about the data, and (3) performed electronic testing of the data for obvious errors in accuracy and completeness. We found the data to be sufficiently reliable for the purposes of this report. Because of the variability of factors contributing to causing reported injuries and illnesses, our study does not attempt to link workers compensation claims to facility conditions. To determine how FAA has responded to any safety deficiencies identified through inspections of its facilities, we are reviewing FAA and OSHA inspection reports and documents pertaining to how FAA has addressed deficiencies. Regarding actions FAA has taken to ensure that its facilities are in good and safe condition, we are reviewing FAA documents, and in our continuing work, we will analyze repair and maintenance data to the extent that they are sufficiently reliable for those analyses.

We conducted this performance audit from July 2012 to May 2013 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[4] To differentiate responsibility for maintaining federal property, we use the phrase "FAA-maintained" or "GSA-maintained."

[5] These data describe any claims submitted by employees for either 1) traumatic injury or 2) occupational disease or illness. In this report, we generally refer to these as claims for injuries and illnesses.

Summary

In brief:

- Our preliminary analyses indicates that as of February 2013 FAA staffed facilities are generally in fair to good condition based on their Facility Condition Indices (FCI);[6] however, we found that (1) there is not one reliable source with information on the condition of FAA's entire staffed facility portfolio and (2) the methods to determine facility condition vary so that information about the condition of one type of facility may not be comparable to that of other facility types. In our final report, we intend to discuss in greater depth the variation in methods to determine condition and the extent to which data from the various sources are reliable indicators of facility condition.

- Our initial analysis of the workers' compensation claims filed by FAA employees and accepted by Labor's Office of Workers' Compensation Program (OWCP) from 2007 to 2012[7] indicates that the most common types of injuries and illnesses sustained by FAA employees range from mental, emotional, or nervous conditions to joint pain. In addition, we found that the number of injuries and illnesses resulting in workers' compensation claims filed by FAA employees and accepted by OWCP, from 2007 to 2011, steadily decreased from 1,336 to 907.[8] Our final report will detail the extent to which FAA has complied with established standards for timely processing of workers' compensation claims.

- FAA has mechanisms to track its response to safety deficiencies identified through its annual inspections. In our final report, we plan to further discuss our analysis of the number and types of hazards identified by FAA and OSHA safety and health inspections and describe the extent to which FAA mitigated those hazards.

- In 2012, FAA reorganized its Air Traffic Organization (ATO) to better coordinate facilities management activities to ensure that critical operations facilities—such as terminal facilities—are in good condition. Specifically, ATO uses a project prioritization model with criteria and scoring to evaluate and prioritize maintenance, repair, and restoration projects to ensure that those with the greatest need are addressed first. In our continuing work, we will review and analyze information on ATO's criteria and processes for determining requirements and implementing maintenance, repair, and restoration projects to sustain its operations facilities.

[6] As a formula, FCI is the value of the maintenance, repair, and replacement deficiencies of a facility divided by its current replacement value. The resulting fraction is then subtracted from 1 to express FCI as a percentage. According to FAA, it uses general industry standards, which define a facility with an FCI above 95 percent as in good condition, 90-95 percent to be in fair condition, and below 90 percent to be in poor condition.

[7] OWCP data for 2012 is from January to September.

[8] From January through September 2012, the number of injuries or illnesses resulting in new workers' compensation claims filed by FAA employees and accepted by OWCP is 615.

Background

Responsibility for maintaining the over 1,200 staffed FAA facilities—ranging from administrative buildings to operations buildings such as air traffic control towers—is distributed among FAA organizational elements, GSA, and other entities, as shown in table 1. FAA-maintained facilities include those that support air traffic operations as well as those at its training and research centers. GSA-maintained facilities include administrative offices such as FAA's headquarters in Washington, D.C., and FAA's regional offices. FAA officials also told us that other facilities are owned and maintained by other (non-federal) entities such as airport authorities, but are leased or used by FAA.[9]

Table 1: FAA's Facility Maintenance Responsibilities

Responsible entity	Facility types
FAA ATO	En Route Air Traffic Control Facilities consisting of Air Route Traffic Control Centers and Combined En-Route Radar Approach facilities
	Terminal facilities, including Air Traffic Control Towers and Terminal Radar Approach Control (TRACON) facilities
FAA Mike Monroney Aeronautical Center	Administrative, training, warehouses
FAA William J. Hughes Technical Center	Administrative, laboratory, training
GSA	Administrative
Other (non-federal)	Various

Source: GAO analysis of FAA and GSA data.

Two agencies within Labor administer programs related to safety and health issues in federal facilities: OSHA, which oversees compliance with occupational safety and health standards, and OWCP, which oversees the federal workers' compensation programs. Labor's OSHA sets and enforces workplace standards affecting FAA facilities. As part of its enforcement efforts, OSHA conducts programmed and unprogrammed inspections[10] of worksites to ensure compliance with its health and safety standards. In addition, as required by law, FAA administers an occupational safety and health program that includes inspections aimed at preventing workplace

[9] Both FAA and GSA lease facilities owned by non-federal entities that are used by FAA employees. At some of the facilities it leases, FAA is responsible for maintenance.

[10] OSHA's programmed inspections are scheduled inspections that target specific worksite hazards or high-hazard industries or worksites. OSHA's unprogrammed inspections are conducted for several reasons, including to respond to imminent danger, fatalities, complaints, and referrals, or as follow-up or monitoring of prior inspections.

injuries.[11] FAA staff who sustain employment-related injuries and illnesses may file a workers' compensation claim with FAA for subsequent transmittal to Labor's OWCP.[12]

FAA Facilities' Condition

Quality and Completeness of Data

FAA's Real Estate Management System (REMS)—an agency-wide resource for information on its facilities—contains information on FCI and deferred maintenance,[13] two widely used benchmarks to determine the relative condition of facilities. However, we found that condition data in REMS did not consistently match condition data from other sources. For instance, the REMS FCI data did not always match the FCI data we received directly from ATO and the Mike Monroney Aeronautical Center.

In consideration of REMS data deficiencies and based on discussion with FAA officials, we supplemented REMS data with data from other sources managed by entities with facility maintenance responsibility. However, because of variation in methods used to determine condition, the condition data for one type of facility may not be comparable to that for another type of facility. Preliminary analysis of FAA facilities condition based on these other data sources is presented below. In our final report, we intend to discuss in greater depth the variation in methods to determine condition and the extent to which data from the various sources are reliable indicators of facility condition.

FAA-Maintained Facilities

En Route Air Traffic Control Facilities

According to fiscal year 2012 data, the aggregated[14] FCI of the 23 En Route facilities is 93.5 percent, or "fair" condition; based on deficiencies totaling approximately $97.9 million and replacement values totaling about $1.5 billion. En Route facility condition information is based on direct inspection of facilities performed by FAA's engineering consultant. Based on interviews with FAA and its engineering consultant, we found the inspection method and its related reporting process results are reliable indicators of facility condition.

[11] See 29 U.S.C. § 668, 29 C.F.R. pt. 1960, and Exec. Order No. 12196, Occupational Safety and Health Programs for Federal Employees, 45 Fed. Reg. 12769 (Feb. 27, 1980).

[12] Federal agencies use their own annual appropriations to reimburse Labor for wage-loss-compensation payments made to their employees, while most of the OWCP's administrative costs are covered by direct appropriations from the Congress.

[13] Deferred maintenance as defined by the Statement of Federal Financial Accounting Standard No. 6 includes maintenance that was not performed when it should have been or scheduled maintenance that was delayed or postponed. Maintenance is the act of keeping fixed assets in acceptable condition, including preventative maintenance, normal repairs, and other activities needed to preserve the assets, so that they can continue to provide acceptable services and achieve their expected life.

[14] The *aggregate* FCI is calculated by dividing (1) the summed value of the maintenance, repair, and replacement deficiencies of the facilities by (2) the summed value of those facilities' current replacement values. The resulting fraction is then subtracted from 1 to express FCI as a percentage.

Terminal Facilities

Since 2007, 128 sites[15]—that contain fewer than one quarter of all terminal facilities—have been inspected to determine their condition. According to analysis conducted by FAA's engineering consultant, the calendar year 2012 aggregated FCI for the 128 sites is 94.9 percent, approximately the transition point from "good" to "fair" condition; based on deficiencies totaling about $81.9 million and replacement values totaling approximately $1.6 billion.[16] The condition data of the inspected facilities are then used to estimate the condition of the remaining terminal facilities.[17] We are currently assessing the quality of the 2012 data and the accuracy of the statistical method used to estimate the condition of the non-inspected facilities and plan to report our final results later this year.

Mike Monroney Aeronautical Center

According to fiscal year 2010 data, the aggregated FCI of the 110 FAA-maintained facilities at the Center is 95.2 percent, or "good" condition, based on deficiencies totaling about $6.4 million and replacement values totaling almost $135 million. Based on interviews with FAA and its engineering consultant, we found the inspection method and its related reporting process results are reliable indicators of facility condition.

William J. Hughes Technical Center

In the final report, we will present facility condition information for the 43 facilities that FAA maintains at the Center.

GSA-Maintained Facilities

According to GSA data,[18] the 8 staffed facilities it maintains for FAA use have FCIs ranging from 46.0 percent to 94.5 percent.[19] GSA-maintained facilities where FAA is the principal occupant are the Hawthorne Federal Building (46.0 percent FCI), Orville Wright Building (82.0 percent FCI), and Wilbur Wright Building (90.0 percent FCI).[20] Based on interviews with GSA officials

[15] Terminal facility sites may include air traffic control towers, TRACONs, or both.

[16] If seismic, codes, and standards deficiencies are included, the aggregated FCI for the 128 sites is 87.9 percent, or poor condition.

[17] FAA develops a linear regression model based on data obtained from the inspected facilities to estimate the condition of facilities that have not yet been inspected. The model uses age as an independent variable to estimate the FCI and deferred maintenance of each facility not inspected.

[18] GSA uses a different convention than FAA in categorizing facilities based on their FCI values. This results in GSA having different FCI thresholds than FAA for determining if a facility is in good, fair, or poor condition.

[19] These facilities include the Orville Wright Building (Washington, D.C.), Wilbur Wright Building (Washington, D.C.), Hawthorne Federal Building (Hawthorne, CA), Senator Paul Simon Federal Building (Carbondale, IL), Prince J. Kuhio Federal Building and U.S. Courthouse (Honolulu, HI), and the Anchorage Federal Building and U.S. Courthouse & Annex (Anchorage, AK). FAA may be the sole tenant or part of a multi-tenant occupancy of these facilities.

[20] FCI information may not reflect current conditions. For example, in January 2013, we visited FAA's Western-Pacific Region in the Hawthorne Federal Building and saw that the roof had been replaced, which should result in a higher FCI for the facility when it is next assessed.

we found the inspection method and its related reporting process are reliable indicators of facility condition.

FAA Workers' Compensation Claims

Our initial analysis of the workers' compensation claims filed by FAA employees and accepted by OWCP from 2007 through 2012[21] indicates that the five most common types of injuries and illnesses sustained by FAA employees ranged from mental, emotional, or nervous conditions to joint pain (see table 2). These claims cite various causes of reported injuries and illnesses including falls, handling tools and materials, fume inhalation, and vehicle accidents. Workers' compensation claims data indicate some of the various hazards to which FAA employees are exposed, but because of the variability of factors contributing to reported injuries and illnesses, this data cannot be linked to facility conditions. The number of workers' compensation claims filed by FAA employees has steadily decreased since 2007.[22] According to OWCP data, in 2011, 907 injuries resulted in workers' compensation claims filed by FAA employees that were accepted by OWCP—a decrease of 32 percent since 2007 (see fig. 1).[23]

Table 2: Top Five Types of Injuries or Illnesses Claimed by FAA Employees, 2007 to 2012

Nature of injury	Number of Claims
Mental, emotional, or nervous condition	928
Back sprain/strain or back pain	826
Sprain/strain of ligament, muscle, tendon (not back)	700
Pain, swelling, redness, stiffness (not in joint)	615
Joint pain/swelling/stiffness/redness	472

Source: GAO analysis of Labor data.

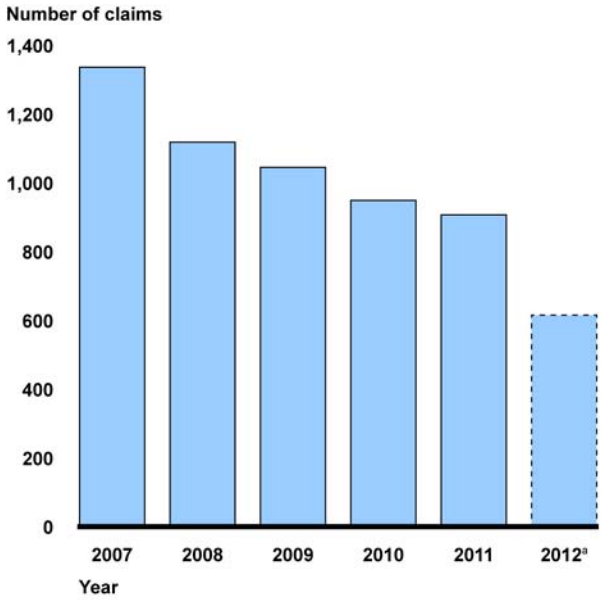
Note: Data are based on the date of injury indicated on workers' compensation claims filed by FAA employees and accepted by OWCP. Data for 2012 are from January through September.

[21] OWCP data for 2012 is from January to September.

[22] The Federal Employees' Compensation Act (FECA) provides that a claim for compensation must be filed within 3 years of the date of injury. For a traumatic injury, the statutory time limitation begins to run from the date of injury. For a latent condition, it begins to run when an injured employee with a compensable disability becomes aware, or reasonably should have been aware, of a possible relationship between the medical condition and the employment.

[23] For this report, we are using the date of injury to track the number of new workers' compensation claims filed by FAA employees and accepted by OWCP each year. These figures do not include workers' compensation claims that were rejected by OWCP or injuries for which an employee did not file a claim.

Figure 1: Number of Workers' Compensation Claims of FAA Employees Accepted by OWCP, 2007 to 2012



Source: GAO analysis of Labor data.

Note: Data are based on the date of injury indicated on workers' compensation claims filed by FAA employees and accepted by OWCP.
[a] Data for 2012 are from January through September.

According to FAA, it paid 2,419 workers' compensation cases in fiscal year 2012, with many of the cases having been accepted in and carried over from prior years. From fiscal year 2007 to 2012, FAA's total annual payments for workers' compensation claims remained relatively constant, ranging between $87 and $92 million.

We will discuss in our final report the extent to which FAA has complied with established standards for processing workers' compensation claims and how FAA's workers' compensation costs compare to the government-wide average.

FAA Occupational Safety and Health

FAA has mechanisms to track its response to safety deficiencies identified through its annual inspections. FAA annually conducts a safety and health inspection at each of its staffed facilities under its Environmental, Occupational Safety and Health program. According to FAA, its inspectors enter the results of the inspections in a central database, which management uses to track and ensure that identified safety and health hazards are mitigated. Under this program, FAA employees may also report any hazards they identify to FAA managers at their facility or, as applicable, to their union representative. They may also report hazards directly to OSHA.

OSHA also conducted inspections at 153 FAA facilities from 2007 to 2012. Of these inspections, 57 were unprogrammed, which include those originating from employee complaints among other factors. The 96 other inspections were programmed inspections that target specific worksite hazards or high-hazard worksites. OSHA began one such targeted inspection

program to focus on concerns related to egress and fire safety at federally-owned air traffic control towers operated by FAA. Under OSHA's Airport Traffic Control Tower Monitoring Inspection Program (AIRTRAF), which it conducted from 2008 to 2010, OSHA found deficiencies at 70 of the 75 air traffic control towers it inspected.[24] According to OSHA, as of February 2013, FAA has corrected these deficiencies, and all 75 towers are now in compliance with the applicable egress and fire safety standards.

In our final report, we plan to further discuss our analysis of the number and types of hazards identified by FAA and OSHA safety and health inspections and describe the extent to which FAA mitigated those hazards, including how FAA prioritizes its mitigation efforts.

FAA's Actions to Ensure Good Facility Conditions

FAA officials told us that, in 2012, FAA created a Facilities Group Manager position within ATO to coordinate facilities management activities across all operations facilities (terminal facilities, en route facilities, and unstaffed facilities). When significant repairs are required, ATO uses a project prioritization model with criteria and scoring to evaluate and prioritize the repair and restoration projects to ensure that those with the greatest need are addressed first.[25] In our continuing work, we will review and analyze information on ATO's criteria and processes for determining requirements—such as to address safety hazards, reduce maintenance backlogs, and enable Next Generation Air Transportation System (NextGen) modernization—and implementing maintenance, repair, and restoration projects to sustain its operations facilities.[26] To the extent possible, we will discuss the maintenance, repair, and restoration needs of all FAA-maintained facilities, as informed by our review of deferred maintenance and facility condition data, in the context of FAA's goals for NextGen and future consolidation of facilities.

Agency Comments

We provided the Departments of Transportation (DOT) and Labor and the General Services Administration (GSA) with a draft of this report for review. DOT and Labor provided us with technical comments, which we have incorporated as appropriate. GSA had no comments.

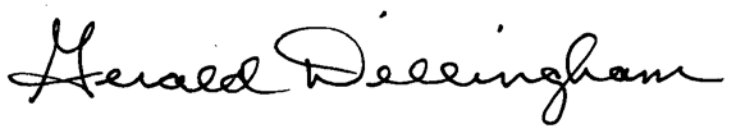
We are sending copies of this report to the Secretaries of DOT and Labor, the Administrator of GSA, and other interested parties. In addition, this report is available at no charge on the GAO website at http://www.gao.gov.

[24] Because the unique design of air traffic control towers poses challenges to meeting standard OSHA egress and fire safety requirements, FAA developed an alternate standard specific to these facilities. Under its AIRTRAF inspection program, OSHA assessed air traffic control towers against this alternate standard.

[25] FAA officials told us that general maintenance, such as caulking, sealing, and painting, is performed by the local facility as required.

[26] NextGen is a complex undertaking that requires acquiring new integrated air traffic control systems; developing new flight procedures, standards, and regulations; and creating and maintaining supporting infrastructure to create a more automated aircraft-centered, satellite-based air transportation system.

If you or your staff have any questions about this report, please contact me at (202) 512-2834, or dillinghamg@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this correspondence. GAO staff who made key contributions to this report are Michael Armes, Assistant Director; Martha Chow; Colin Fallon; James Geibel; Kathleen Gilhooly; Daniel Hoy; Grant Mallie; SaraAnn Moessbauer; and Jeff Tessin.



Gerald L. Dillingham, Ph.D.
Director, Physical Infrastructure Issues

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