
Office of Inspector General

Audit Report

**FAA ACHIEVED MOST OF THE ANTICIPATED
COST SAVINGS FROM CONTRACTING OUT
FLIGHT SERVICE STATIONS, BUT NEEDS TO
DETERMINE THE FUTURE DIRECTION OF
THE PROGRAM**

Federal Aviation Administration

Report Number: AV-2017-015

Date Issued: November 16, 2016





Memorandum

U.S. Department of
Transportation

Office of the Secretary
of Transportation
Office of Inspector General

Subject: **INFORMATION**: FAA Achieved Most of the Anticipated Cost Savings From Contracting Out Flight Service Stations, but Needs To Determine the Future Direction of the Program
Federal Aviation Administration
Report No. AV-2017-015

Date: November 16, 2016

From: Matthew E. Hampton
Assistant Inspector General
for Aviation Audits

Reply to
Attn. of: JA-10

To: Federal Aviation Administrator

In February 2005, the Federal Aviation Administration (FAA) awarded a contract to Lockheed Martin Services, Inc. (Lockheed Martin) to operate the Agency's 58 flight service stations¹ in the continental US, Puerto Rico, and Hawaii. At that time, the \$1.8 billion contract represented one of the Federal Government's largest efforts to contract out services outside of the Department of Defense. By contracting these services, FAA anticipated cost savings of approximately \$2.2 billion over a 13-year period. In October 2005, Lockheed Martin took responsibility for the stations' operations and approximately 2,000 FAA flight specialists and support staff became Lockheed Martin employees.

In 2001, we recommended² that FAA develop a strategy to consolidate its 61 flight service stations. In 2007, we reported³ on the conversion of flight service stations to contractor operations and testified⁴ on FAA's management controls over the initial transition. We found that FAA had implemented effective controls over the transition of flight service stations to contractor operations but we could

¹ Flight service stations provide general aviation pilots with information such as weather briefings, flight planning assistance, and notices such as airport runway closures and temporary flight restrictions.

² *Automated Flight Service Stations: Significant Benefits Could Be Realized by Consolidating AFSS Sites in Conjunction With Deployment of OASIS*, OIG Report Number AV-2002-064, December 7, 2001. OIG reports are available on our Web site at <http://www.oig.dot.gov>.

³ *Controls Over the Federal Aviation Administration's Conversion Of Flight Service Stations To Contract Operations*, OIG Report Number AV-2007-048, May 18, 2007.

⁴ *The Conversion of Flight Service Stations from FAA to Contract Operations*, OIG Report Number CC-2007-102, October 10, 2007.

not be certain that the controls would be sufficient to maintain the quality of services or that the Agency would achieve the anticipated savings. We recommended that FAA needed to improve controls in key areas, such as monitoring contractor staffing levels and user complaints.

We self-initiated this audit as a follow-up to our 2007 audit. Our objectives were to (1) determine whether FAA achieved the original contract's anticipated cost savings, and (2) assess FAA's oversight of the program. We also reviewed information regarding FAA's future plans for the program. We include our observations on the potential implications of planned changes for airspace users and FAA's oversight in this report.

We conducted our work in accordance with generally accepted Government auditing standards. See exhibit A for a description of our scope and methodology, and exhibit B for a list of the organizations we visited or contacted.

RESULTS IN BRIEF

FAA has realized most of the cost savings that it anticipated from contracting out operations of its flight service stations. The Agency has saved or avoided costs of approximately \$2.13 billion over a 13-year period⁵—only \$59 million less than the initial estimate. The shortfall resulted from: (1) increased contract costs for flight services specialists' pay raises and resolution of contract documentation problems related to software and other technical requirements; and (2) higher-than-expected costs for continued maintenance of some functions, including a system⁶ that allows pilots and other users to obtain weather information, file flight plans, and perform other flight-related activities. However, these increased costs were offset to a large degree by lower-than-expected transition costs—primarily lower employee severance costs. FAA achieved the savings through a reorganization of flight service operations and facility and equipment modernization, including service station consolidation, a new flight service operating system, and reduced staffing levels.

FAA has implemented effective controls for oversight of Lockheed Martin and flight services. These controls include 22 performance measures that evaluate Lockheed Martin's performance on quantifiable metrics related to safety, operational efficiency, and customer service. Lockheed Martin earned \$62.2 million in incentives for achieving acceptable performance levels for the measures. However, early in the contract, FAA penalized Lockheed Martin for not meeting performance levels for some measures. FAA also has several oversight

⁵ The 13 years include the 10-year life of the contract and 3 years of costs FAA avoided by not hiring additional flight specialists and cancelling program-related capital projects starting in fiscal year 2003.

⁶ The Direct User Access Terminal Service (DUATS) is a telephone and Web-based system used primarily by general aviation pilots.

mechanisms that monitor the program's safety and operations, including on-site inspections and data analyses that assess compliance with FAA Orders and contractual requirements. Lastly, pilots and other users have multiple methods available to them to provide input on the program.

FAA is considering making significant changes to the program but has not yet decided what mechanisms it will establish to provide flight services and oversight of the program under its next contract. The original contract expired in September 2015, and FAA awarded Lockheed Martin a series of contract options that could extend the current program through September 2019. Increased use of Web-based and other digital applications has significantly reduced the demand for services that flight service specialists provide. Consequently, for the next contract, FAA is considering phasing out most specialists and relying more on Web-based and other means to deliver services. While consistent with how airspace users are obtaining information, the safety and operations of this change is uncertain and a departure from the past. In its *Standards for Internal Control in the Federal Government*⁷ (Internal Control Standards), the Government Accountability Office calls for agency management to identify, analyze, and respond to changes that could impact the agency's internal control system. However, the Agency has not yet made a final decision regarding these changes or developed corresponding oversight of the contractor and services to reflect the potential changes. As a result, FAA may not have appropriate mechanisms in place to ensure the safety and efficiency of this important program for pilots.

We are making recommendations aimed at making sure that FAA has adequate oversight mechanisms in place to ensure the safety and efficiency of the future Flight Service Station Program.

BACKGROUND

Flight service stations (see figure 1) provide general aviation pilots with information such as pre- and in-flight weather briefings, flight planning assistance, notices on airport runway closures and temporary flight restrictions, and emergency assistance. The stations provide these services at no charge to airspace users and are intended to help promote safe flight operations. Station employees do not control air traffic.

⁷ GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G, September 2014.

Figure 1. Operating Floor at Lockheed Martin's Flight Service Station in Ashburn, VA



Source: Lockheed Martin.

In December 2003, FAA announced that under the guidelines in the Office of Management and Budget's (OMB) Circular A-76, it would conduct a competitive sourcing⁸ for the flight service stations in the continental US, Hawaii, and Puerto Rico. In February 2005, the Agency announced that Lockheed Martin had won the competition and awarded the company a 5-year fixed-price incentive fee contract with 5 option years totaling \$1.8 billion.

In October 2005, Lockheed Martin took over operations at 58 flight service stations. Lockheed Martin's plans for the stations included several changes intended to improve operational efficiency and modernize facilities and equipment, including facility consolidation, deployment of a new operating system, and reductions in the flight service specialist staff.

FAA is currently in the beginning stages of a competitive source selection for awarding the next contract. In the interim, FAA has awarded Lockheed Martin an 18-month contract extension and is incorporating option years to extend the contract through September 2019.

⁸ Circular A-76 establishes the policies and procedures that Executive branch agencies must use to identify commercial-type activities and determine whether the private sector, Government employees, or another agency through a fee-for-service agreement can best complete them. The term typically used to describe this process is "competitive sourcing."

FAA ACHIEVED MOST OF THE ANTICIPATED COST SAVINGS FROM CONTRACTING OUT FLIGHT SERVICE OPERATIONS

FAA has achieved most of the cost savings it expected from contracting out flight service station operations. The Agency initially estimated that contracting out flight service operations to Lockheed Martin would save \$2.19 billion between fiscal years 2003 through 2015. This estimate consisted of \$1.37 billion in savings over the 10-year life of the contract (fiscal years 2006 through 2015) and \$822 million in avoided costs because FAA would not have to hire additional flight specialists and would cancel program-related capital projects starting in fiscal year 2003. As shown in the table 1, FAA saved \$2.13 billion between fiscal years 2003 and 2015—only \$59 million less than its original estimate.

Table 1. Comparison of FAA’s Estimated and Actual Savings From Contracting Flight Service Stations, Dollars in Millions

FAA’s 10-Year Cost Estimate to Continue Operating Flight Service Stations (fiscal years 2006–2015)			
	\$4,135	\$4,135	
Contract/FAA Costs from Outsourcing (fiscal years 2006–2015)	Original Baseline Estimate	Actual Costs/Saving	Difference
Lockheed Martin Contract Costs			
- Original Contract Costs	\$1,770	\$1,672	-\$98
- Wage Increase: Department of Labor Wage Determination	\$0	\$152	\$152
- Alternative Dispute Resolution: Contract Documentation	<u>\$0</u>	<u>\$28</u>	<u>\$28</u>
- Total Lockheed Martin Contract Costs	\$1,770	\$1,852	\$82
FAA’s Post-Contract Costs	\$862	\$878	\$16
Transition Costs*	<u>\$133</u>	<u>\$95</u>	<u>-\$39</u>
Total Contract/FAA Costs from Outsourcing*	\$2,765	\$2,824	\$59
Total 10-Year Savings from Flight Service Station Outsourcing	\$1,370	\$1,311	-\$59
13-Year Cost Avoidances from Outsourcing Activities (fiscal years 2003–2015)			
- Not Hiring Flight Service Specialists	\$494	\$494	\$0
- Cancelling Program-Related Capital Projects	<u>\$328</u>	<u>\$328</u>	<u>\$0</u>
Total Cost Avoidance from Outsourcing Activities	\$822	\$822	\$0
Total 13-Year Program Cost Savings and Avoidances	\$2,192	\$2,133	-\$59

* Numbers may not add up due to rounding.
Source: OIG analysis of FAA data.

The actual cost of the original contract was \$1.7 billion—approximately \$98 million less than the baseline estimate—but several factors resulted in the \$59 million shortfall in savings, including contract modifications and other cost differences from the original estimate:

- **Higher specialist wages.** In October 2007, the Department of Labor (DOL) approved a new, wage system for flight service station specialists. The change increased specialists' wages and added \$152 million to the 10-year cost of the contract.⁹
- **Contract documentation.** FAA paid Lockheed Martin \$28 million to settle a 2008 alternative dispute resolution regarding contract documentation issues related to software and other technical requirements that were not included in the solicitation.
- **Other cost differences.** Higher than expected costs for maintaining some post contract functions, such as continuation of DUATS totaled \$16 million. However, these costs were offset by \$39 million in lower-than-expected transition costs, mostly the result of lower employee severance costs.

FAA and Lockheed Martin officials stated that problems occurred during the first few years of the contract that also increased costs. Most notably, Lockheed Martin experienced several technical problems while implementing its FS-21 system—a nationwide network that provides preflight, inflight, and other services to pilots—including lost flight plans and system-wide outages that required several software updates. These problems were due to Lockheed Martin beginning to use the system in February 2007 before fully developing and testing it at the same time it was consolidating facilities.

However, the higher than expected costs early in the contract were offset by higher than expected savings in the contract's later years. FAA achieved these savings through a series of changes that reorganized flight service operations and modernized facilities and equipment. These changes included:

- Consolidation of the 58 flight service stations into 5 contractor-operated facilities—3 hub and 2 stand-alone facilities—rather than the 20 facilities originally planned. See exhibit C for a map of continuing and discontinued sites since Lockheed Martin took over flight service operations;
- Deployment of FS-21 which—even though early on it caused costly difficulties—has allowed Lockheed Martin to consolidate facilities and reduce the number of flight specialists. According to Lockheed Martin, it also provides flexibility because specialists at all flight service stations can provide services to pilots anywhere in the country; and

⁹ Lockheed Martin originally requested \$147 million in equitable adjustments to the contract, claiming that actual wage rates for flight service specialists were significantly higher than what FAA instructed contract bidders to assume. The company also appealed the previous specialists' wage rates to DOL, who approved the new wage system.

- Reduction in staff levels from approximately 2,000 employees at the beginning of the contract to about 730 employees, including reduction in approximately 1,000 flight specialists to 469.

FAA IMPLEMENTED EFFECTIVE CONTROLS TO OVERSEE THE FLIGHT SERVICE PROGRAM

FAA has implemented effective controls to oversee the contractor and flight services program. These controls include: (1) contractual provisions that encourage Lockheed Martin to achieve acceptable levels of safety and performance, and to control costs; (2) several oversight mechanisms that monitor the program's safety and operations; and (3) multiple outlets for pilots and other users to comment on the services and other aspects of the program.

Contract Provisions Detail FAA's Monitoring and Financial Incentives for Contractor Performance

FAA's contract with Lockheed Martin includes provisions that allow FAA to monitor contractor performance and provides Lockheed Martin with financial incentives for meeting acceptable safety and performance levels. The contract includes 22 performance measures that evaluate Lockheed Martin's performance on quantifiable metrics related to safety, operational efficiency, and customer service. Lockheed Martin can earn a financial incentive for meeting acceptable performance levels associated with each measure or can be penalized for not meeting them. The contract calls for FAA to track the performance measures and determine Lockheed Martin's level of performance for each measure.

Over the 10-year life of the contract, Lockheed Martin earned \$62.2 million in incentives—92 percent of the available incentive pool, for achieving acceptable performance levels for the measures. FAA penalized the contractor early in the contract for not meeting acceptable performance levels for some measures. For example, during the first award period—October 2005 through March 2007—FAA determined that Lockheed Martin Services, Inc. did not meet acceptable performance for several measures and assessed \$8.9 million in penalties. During the first 3 years of the contract, Lockheed Martin earned less than 62 percent of the award pool but during years 8 through 10, earned 100 percent.

According to Lockheed Martin officials, one reason it did not meet performance measures early in the contract was the learning curve for operating flight service stations. They also noted that the performance measures did not exist when FAA operated the facilities, and that it was a challenge for some flight services specialists that had worked for FAA to meet the measures' more stringent requirements. For example, one performance measure required specialists to give standardized, detailed briefings to pilots rather than abbreviated briefings

commonly used when they worked for FAA. However, specialists would sometimes give the abbreviated briefings, resulting in a failure of the measure.

FAA also changed the performance measures several times during the contract, due in part to some measures not being operationally realistic. See exhibit D for a list of the current measures. For example, one early performance measure required specialists to complete in-flight calls with pilots within 30 seconds of answering them. However, successfully meeting this measure turned out to be operationally unrealistic and it was eventually adjusted.

FAA modified the contract in 2008 to link the performance measures to the cost of the contract. The Agency divided the performance measures into four tiers that link Lockheed Martin's share of cost over- and under-runs to its performance on the measures (see exhibit D). Lockheed Martin can earn up to 60 percent of annual contract cost under-runs or have to absorb as little as 20 percent of cost over-runs as long as it meets the appropriate performance levels for each measure. However, the contractor must meet the acceptable performance level for all measures in each tier before becoming eligible for the next tier.

FAA Uses Various Oversight Mechanisms To Monitor Flight Service Operations

FAA has established several safety oversight mechanisms to monitor the program. For example, FAA's Flight Service Safety and Operations Group conduct safety reviews of flight service stations every other year to ensure compliance with Agency Orders¹⁰ and contractual requirements. These reviews include examining operational errors and deviations,¹¹ service quality, training, and staffing. FAA also monitors the results of annual internal compliance verifications performed by Lockheed Martin, which are similar to FAA's safety reviews.

FAA also performs reviews of the contractual performance measures that consist of on-site inspections at one to two facilities per year. During these inspections, FAA inspectors listen to recorded service calls and perform over-the-shoulder monitoring of specialists. Furthermore, the Agency conducts statistically-driven data analyses for select performance measures that complement the on-site inspections, such as using customized data points to calculate facility conformity scores. FAA uses the results of these inspections and analyses to score the performance measures and identify safety and operational issues that Lockheed Martin may need to address.

¹⁰ Examples of FAA Orders include Order 7210, which governs flight service operations, and Order 7930, which governs Notices to Airmen (NOTAM).

¹¹ Incorrect or lack of information from a flight service station may result in an operational error or deviation—when a controller fails to maintain standard separation between two aircraft or allows an aircraft to enter airspace managed by another controller without prior coordination and approval.

FAA's reports on on-site inspection that we reviewed disclosed that the Agency found several issues related to improper briefings, specialists' use of incorrect terminology, long user wait times, and FS-21 system outages early in the contract. According to Lockheed Martin officials, these problems were related to technological issues associated with FS-21 and other learning curve issues. Lockheed Martin provided FAA with corrective action plans to correct the deficiencies, and later reports indicated that the issues were resolved.

In 2009, FAA's Air Traffic Safety Oversight Service (AOV) conducted a review of the Air Traffic Organization's oversight of the flight service station program. AOV found deficiencies in Lockheed Martin's training and certification records for specialists, including inaccurate entries and inconsistent tracking.¹² In response, FAA now reviews flight service station training records during on-site inspections. FAA also has a risk assessment team that certifies flight service systems to confirm that they meet Government security requirements.¹³ The team annually tests FS-21 and DUATS and compiles reports to the vendors for review and corrective action.

Users Have Several Options To Provide Feedback on Contractor Performance and Have Expressed Satisfaction With the Services

Users of the services at flight service stations have several options to comment on the services provided by Lockheed Martin. FAA maintains a Website independent of Lockheed Martin where users can lodge complaints. Lockheed Martin has a customer service hotline and Website for users to submit complaints and ask questions. Both FAA and Lockheed Martin communicate regularly with the Aircraft Owners and Pilots Association (AOPA) for feedback on the services, including at FAA's monthly status meetings with Lockheed Martin.

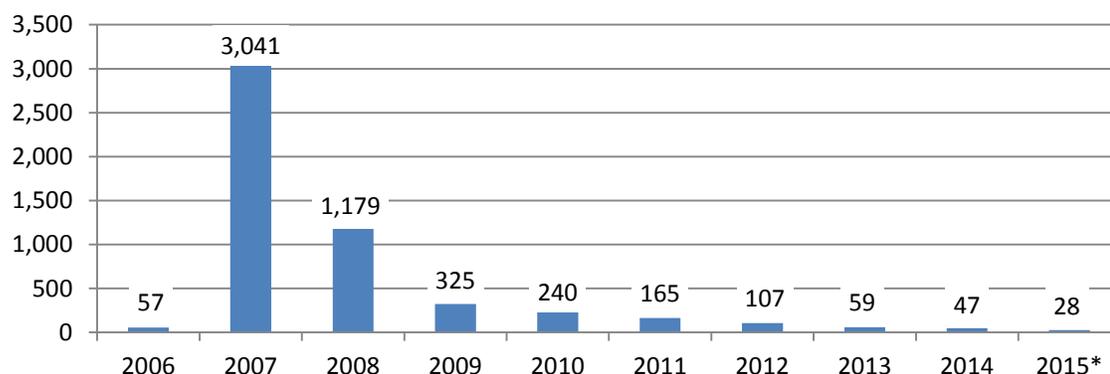
Officials from AOPA, the National Air Traffic Controllers Association, and other users informed us that they had no significant complaints about the safety or quality of the services the stations provide. An AOPA representative noted that there were many complaints regarding the service during the initial transition, including long wait times, dropped phone calls, lost flight plans, and poor briefings. However, the representative also noted that Lockheed Martin had addressed the issues.

The number of complaints lodged against Lockheed Martin indicates an improvement in services over time. As seen in figure 2, the number of customer complaints decreased from over 3,000 in fiscal year 2007 to 28 in fiscal year 2015.

¹² In 2007, we reported that FAA did not have a formal system in place to monitor Lockheed Martin's training procedures.

¹³ Federal Information Security Modernization Act of 2014, Public Law 113-283.

Figure 2. Number of Flight Service Customer Complaints, Fiscal Years 2006–2015



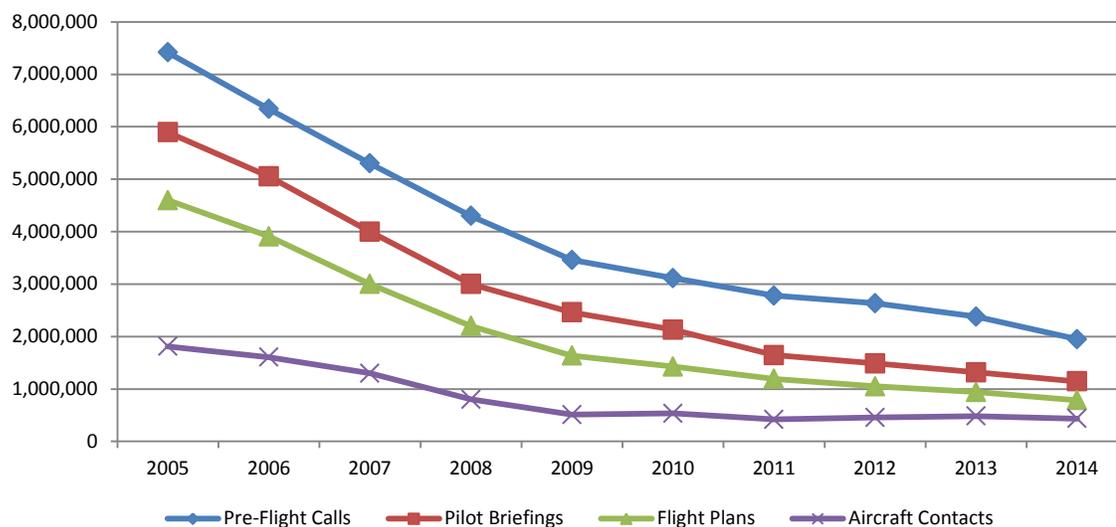
* As of October 4, 2015.

Source: FAA and Lockheed Martin.

FAA HAS NOT DETERMINED HOW IT WILL PROVIDE FLIGHT SERVICES IN THE FUTURE OR HOW IT WILL OVERSEE THE PROGRAM

FAA has not yet decided how it will provide flight services in the future or how it will oversee the program. The original 10-year contract expired in September 2015, and FAA is currently completing a market survey of potential flight service vendors for the next contract. However, the increased use of the internet and digital applications, such as those available on smart phones and tablets that allow pilots to file flight plans and access weather and airport information, has significantly reduced the demand for services provided in the past by flight service specialists. As shown in figure 3, between 2005 and 2014, the number of pre-flight calls handled by flight service specialists decreased by 74 percent, human pilot briefings by 81 percent, flight plans filed with flight service specialists by 83 percent, and aircraft pilot contacts by 76 percent.

Figure 3. Number of Services Provided by Flight Service Specialists



Source: FAA.

As a result, FAA is considering phasing out most flight service specialists when awarding its next contract, but has not yet decided what final changes it will make to the program or identified specific contract requirements. According to FAA officials, the Agency must complete its market survey before it announces the next contract solicitation. In the interim, FAA awarded Lockheed Martin a 6-month contract extension that began on October 1, 2015. The Agency extended that contract for 18 months and is in the process of incorporating one 12-month option period and two 6-month option periods to extend the contract through September 28, 2019. Furthermore, in May 2015, FAA awarded contracts (with 1 base year and 4 option years) to Lockheed Martin and Computer Science Corporation to provide Web-based pre-flight services under the DUATS program. These contracts will act as a bridge as FAA proceeds with awarding the next flight service contract.

FAA has already adjusted some services provided by flight service stations, including consolidation of how in-flight weather information is communicated to and reported by pilots¹⁴ and discontinuation of the remote airport advisory service¹⁵ at 19 airports. The Agency plans to transfer other functions—such as monitoring of emergency frequencies for pilots in distress—from flight service

¹⁴ FAA has consolidated Enroute Flight Advisory Service (EFAS) frequencies into routine inflight frequencies. EFAS was a staffed position at flight service stations that provided in-flight en-route weather updates and collected pilot weather reports.

¹⁵ Remote airport advisory services provided pilots with airport-specific data such as wind direction and speed, favored or designated runway, altimeter setting, information about observed or reported traffic, weather, and appropriate NOTAM information.

stations to air traffic control facilities. See exhibit E for a list of completed and planned flight service changes.

The potential switch to more automated services will result in pilots and other users accessing more flight services without interacting with specialists. However, FAA has not begun to plan the required modifications to its oversight framework of the contractor and services, including adjusting FAA orders and performance measures. In its Internal Control Standards, GAO recommends that agency management identify, analyze, and respond to significant changes that could impact the agency's internal control system, such as agency guidance and contractual requirements. According to a former FAA flight service official, FAA can be slow in adapting its procedures to meet demands of new technologies, as indicated by the fact that some procedures governing flight service stations are from the 1970s.

FAA also has not yet determined how it will consider users' concerns or communicated potential program changes regarding the potential phase out of flight service specialists. Some users noted that they understand that some changes to the program are warranted, but some student and experienced pilots stated that they prefer services from human specialists over Web-based and digital services. They stated further that in some situations, such as marginal weather conditions, pilots may need assistance from specialists for pre-and in-flight decisions. A 2016 FAA/AOPA survey found that approximately 39 percent of the pilots that responded always or frequently called flight service specialists to obtain standard pilot weather briefings during the previous 12 months.

FAA is consulting with AOPA regarding future changes to the program, but an AOPA official noted that in the past, the Agency did not properly consult the organization about changes to the program and its impact on pilots. For example, the official noted that there was resistance on FAA's part for including the organization on an advisory panel that developed the initial FSS contract and related performance measures, though the organization was eventually included. As a result, the Agency may not have appropriate mechanisms in place to ensure the safety and efficiency of this important program for pilots.

CONCLUSION

FAA's outsourcing of flight service operations demonstrates that the Agency can safely implement program changes that improve operational efficiency and reduce costs. It also demonstrates that FAA can effectively use its operational, cost, and other information to make business-like decisions regarding its programs and delivery of services to airspace users. However, the potential program changes to a more digital system represent a significant transformation in the way general aviation pilots receive and transmit flight information. Therefore, addressing user

concerns and developing oversight strategies concurrently with identifying program changes will help ensure FAA is well-positioned to mitigate potential risks to safety that its program changes could create.

RECOMMENDATIONS

We recommend that the Federal Aviation Administrator:

1. Communicate to airspace users the potential changes coming to the flight service program, including how future services may be delivered, estimated timeframes for the changes, and steps users can take to prepare for the changes.
2. Develop a list of FAA orders and oversight processes that will require modification due to the planned flight service program changes.
3. Develop an oversight framework that is commensurate with program changes before awarding the next flight services contract and implement the framework shortly after the program changes are put into effect.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided FAA with our draft report on September 29, 2016, and received its response on October 31, 2016, which is included as an appendix to this report. FAA concurred with all three of our recommendations and provided appropriate planned actions and completion dates. Accordingly, we consider all three recommendations resolved but open pending completion of the planned actions.

We appreciate the courtesies and cooperation of FAA representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-0500, or Robin Koch, Program Director, at (404) 562-3770.

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cc: DOT Audit Liaison, M-1
FAA Audit Liaison, AAE-100

EXHIBIT A. SCOPE AND METHODOLOGY

We conducted our work from June 2015 through September 2016 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.

To determine whether FAA achieved the original contract's anticipated cost savings, we examined FAA's contract with Lockheed Martin and compared the original 10-year cost savings estimate with the Agency's most recent cost savings estimate. To validate FAA's figures, we compared payments that FAA made to Lockheed Martin from the previous 5 years to figures reported in the Department's DELPHI accounting system. We also reviewed FAA's financial statements for the previous 10 years to determine whether the internal controls in place were sufficient to ensure that costs and other financial data reported by FAA was accurate. We did not examine the potential savings from utilizing other contract types. We interviewed representatives from FAA's Flight Services Division and Lockheed Martin's program officials regarding the contractual and financial aspects of the program.

To determine whether FAA implemented effective controls to oversee the flight service station program, we examined the contractual performance measures and financial incentives used to measure and evaluate Lockheed Martin's performance. We also reviewed FAA Orders governing the Agency's oversight of the program and FAA's oversight mechanisms, including site inspection reports that presented evaluations of Lockheed Martin's performance measure levels; and compliance verification inspection reports that included determinations of whether Lockheed Martin met safety and operational requirements required in FAA Orders. We also interviewed representatives from the Air Traffic Organization and Flight Service Safety and Operations Group.

We examined the systems Lockheed Martin had implemented to allow pilots and other users to comment on flight services. We reviewed data that FAA and Lockheed Martin had collected on customer complaints and complements and compared it to information from the National Aeronautics and Space Administration's Aviation Safety Reporting System to determine whether similar service trends were observed. To obtain feedback on program services, we interviewed representatives from National Air Traffic Controllers Association, FAA's Flight Standards Service Division, AOPA, Embry-Riddle Aeronautical University, and a former FAA Flight Service official.

To verify third party vendor requirements regarding Websites and applications that pilots use, we interviewed representatives from FAA's Certification and Integrated Risk Management Team and Flight Standards Division regarding how these systems are certified and overseen.

To gain an understanding of how FAA will oversee services under the next contract, we interviewed representatives from the Flight Services Division, Flight Services Safety and Operations Divisions, and Air Traffic Organization, Lockheed Martin, and AOPA.

During the audit, we visited 4 of the 5 facilities Lockheed Martin currently operates in Ashburn, VA; Prescott, AZ; Dallas-Ft. Worth, TX; and Miami, FL.

EXHIBIT B. ORGANIZATIONS VISITED OR CONTACTED

Federal Aviation Administration

Air Traffic Organization (ATO)

- Office of Flight Services Program Operations

Office of Air Traffic Safety Oversight Service

- Office of Flight Standards Services

Certification and Integrated Risk Management Team

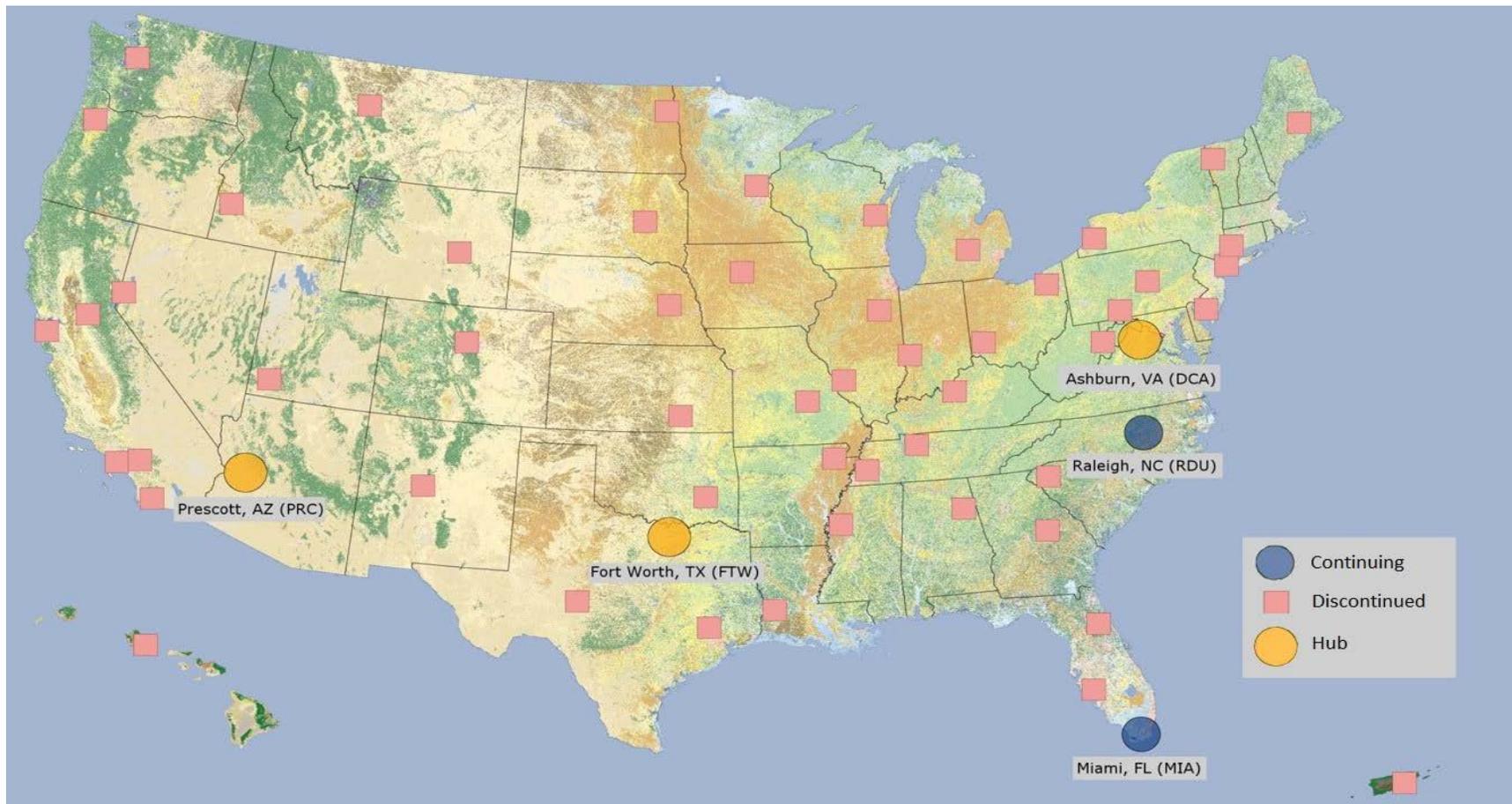
Lockheed Martin Flight Service Stations

- Ashburn, VA
- Prescott, AZ
- Dallas-Fort Worth, TX
- Miami, FL

Industry Groups/Outside Organizations

- National Air Traffic Controllers Association (NATCA) Headquarters Office, Washington, DC
- Aircraft Owners And Pilots Association (AOPA) Headquarters Office, Washington DC
- International Association of Machinist and Aerospace Workers (IAMAW)
- Embry–Riddle Aeronautical University, Prescott, AZ
- The Aviation Research And Consultant (ARC) Group, Prescott, AZ
- National Aeronautics and Space Administration, Washington, DC

EXHIBIT C. FLIGHT SERVICES STATIONS OPERATING OR DISCONTINUED SINCE CONVERSION TO CONTRACTOR OPERATIONS



Source: FAA.

EXHIBIT D. CONTRACTUAL PERFORMANCE MEASURES AND COST SHARE CRITERIA

		Underrun				Overrun		
		Performance Measure	Weighted Factor	LM Share	Sharing Criteria	Weighted Factor	FAA Share	Sharing Criteria
Tier 1	4	Number of Operational Errors		40%	All or nothing. If all APLs for PMs are met for the year, LM will share 40% of Underrun.		60%	All or nothing. If all APLs for PMs are met for the year, FAA will share 60% of Overrun up to annual Price Ceiling.
	5	Number of Operational Deviations						
	17	Completion of Search and Rescue Procedures						
	19	Availability of All Services (National and Site)						
Tier 2	2a	Customized Conformity Information Services Index Score	2.00%	50%	If Tier 1 Threshold is passed, LM shares additionally for each PM passed in Tier 2.	0.00%	60%	If Tier 1 Threshold is passed, FAA will share 60% of Overrun, subject to annual Price Ceiling.
	9	Customized In-flight Services Conformity Index Score	2.00%					
	18	Percentage of Error-Free NOTAMs Processed	2.00%					
	2	Conformity Index Score	2.00%					
	15	Percentage of Accurate PIREPs Filed	2.00%					
Tier 3	18a	Percentage of NOTAMs Processed w/n Established Timeframe	0.71%	55%	If Tier 2 Threshold is passed, LM shares additionally for each PM passed in Tier 3.	1.43%	70%	If Tier 2 Threshold is passed, FAA will share more for each PM passed in Tier 3, subject to annual Price Ceiling.
	11	Flight Plan Accuracy	0.71%					
	14	Percentage of PIREPs Processed w/in 180 Seconds (Urgent) or 300 Seconds (Routine)	0.71%					
	1	Customer Satisfaction Rating	0.71%					
	6	Number of Customer Complaints	0.71%					
	6a	Number of Customer Complaints Resolved	0.71%					
10	Service Initiated w/n 15 Seconds (First Aircraft)	0.71%						
Tier 4	7*	7a. Average Speed to Answer Calls not to Exceed 30 Seconds 7b. Percentage of Calls Handled Exceeding 2 Minute Wait	0.83%	60%	If Tier 3 Threshold is passed, LM shares additionally for each PM passed in Tier 4 up to 60% maximum sharing.	1.67%	80%	If Tier 3 Threshold is passed, FAA will share more for each PM passed in Tier 4, subject to annual Price Ceiling.
	8	Percentage of Dropped Calls/hr Exceeding 30 Second Wait Time	0.83%					
	12	Percentage of Flight Plans Filed w/in 5 Minutes of Termination of Call	0.83%					
	16	Emergency Services Evaluation Index Score	0.83%					
	3	Employee Evaluation Index Score	0.83%					
	13	General Processing and Reporting	0.83%					

Source: FAA.

EXHIBIT E. COMPLETED AND PLANNED CHANGES IN FLIGHT SERVICES AS OF MARCH 2016

Completed Changes	
En-Route Flight Advisory Service (EFAS)	Effective October 1, 2015 EFAS is provided on routine inflight frequencies rather than dedicated flight watch frequencies.
Hazardous Area Reporting Service	Effective October 1, 2015, service discontinued.
Search and Rescue	Enhanced search and rescue services offered by Flight Services through use of personal GPS monitoring.
Security Flight Plans – Special Flight Rules Area (SFRA)	SFRA flight plans filed via web-based technologies.
Remote Airport Advisory Service	Service discontinued at 19 airports; pilots can receive airport traffic information on the Common Traffic Advisory Frequency.
Planned Changes: Near-Term	
Flight Plan Filing – International Flight Plan Format	Requires use of international flight plan format for instrument flight rules (IFR) and visual flight rules (VFR) civil domestic flights. Transition to new flight plans began in 2012 with proposed date for completion on or around October 1, 2016.
Planned Changes: Long-Term (No Dates Provided)	
Realignment of Emergency Services Frequencies	Air traffic control specialists will respond to pilots in distress and using an emergency frequency.
Automated Flight Plan Filing	Increased automation in flight plan filing, modification, activation, and closure using DUATS and other Web-based vendors.
Inflight Services – Routine Radio Contacts	Proposal to eliminate duplicate and obsolete frequencies at the inflight position .
Relaying IFR Clearances	Developing alternatives for pilots to talk directly to an air traffic control facility when requesting an IFR clearance.
Security Flight Plans	Human interaction required for Flight Restricted Zone and Air Defense Identification Zone flight plan processing. FAA looking at options to automate parts of process.

Source: FAA.

EXHIBIT F. MAJOR CONTRIBUTORS TO THIS REPORT

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APPENDIX. AGENCY COMMENTS

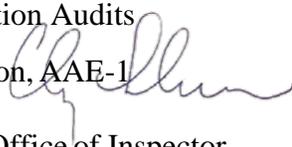


Federal Aviation Administration

Memorandum

Date: October 31, 2016

To: Matthew E. Hampton, Assistant Inspector General for Aviation Audits

From: H. Clayton Foushee, Director, Office of Audit and Evaluation, AAE-1 

Subject: Federal Aviation Administration's (FAA) Response to the Office of Inspector General (OIG) Flight Service Stations Draft Audit Report

The FAA achieved most of its anticipated cost savings from outsourcing the operations of its flight service stations. The Agency has saved or avoided the cost of approximately \$2.13 billion over a 13-year period; only \$59 million less than the initial estimated funds, in full compliance with applicable laws and regulations. The Agency adhered to stringent monitoring and oversight standards and did everything possible to provide exceptional stewardship of taxpayer dollars, including:

- Consolidating of facilities and reducing staffing levels.
- Modernizing facilities and equipment.
- Deploying a new flight service operating system.
- Implementing effective oversight controls through performance evaluation based on quantifiable metrics related to safety, operational efficiency, and customer service.
- Providing pilots and other users multiple methods to provide input on the program.
- Increasing services provided through automation in response to users' desires.
- Offsetting the higher than expected costs in the contract by higher than expected savings in the contract's later years.
- Increasing customer satisfaction levels—officials from Aircraft Owners and Pilots Association (AOPA), National Air Traffic Controllers Association (NATCA), and other users stated that they had no significant complaints about the safety or the quality of the current services provided.

The FAA concurs with the recommendations as written. The FAA plans to complete recommendation 2 by March 31, 2017, and recommendation 3 by June 30, 2017. For recommendation 1, we will establish an ongoing dialog with the general aviation community regarding possible changes in the Flight Service System by September 30, 2017.

We appreciate this opportunity to offer additional perspective on the OIG draft report. Please contact me at (202) 267-9000 if you have any questions or require additional information about these comments.