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Analysis of Disclosures, Agency Reports and Whistleblowers' Comments

OSC File Nos. DI-11-2238 and DI-11-2709

(Lund and Mirau, FAA Certificate Management Office, Atlanta, Georgia)

Summary

The Office of Special Counsel (OSC) received allegations from Federal Aviation Administration (FAA) Aviation Safety Inspectors Mark Lund and Daniel Mirau that the FAA failed to provide proper oversight of Delta Air Lines, Inc. (Delta) and failed to address the airline's non-compliance with FAA Airworthiness Directives (ADs)¹ and Federal Aviation Regulations (FARs). Mr. Lund and Mr. Mirau (the whistleblowers) alleged that FAA employees in the Delta Certificate Management Offices in Atlanta, Georgia, and Bloomington, Minnesota, failed to ensure that Delta was in full compliance with the ADs and FARs governing the fuel tank system and electrical wiring interconnection system maintenance programs. They alleged further that the airline's non-compliance presented a substantial and specific danger to public safety through the use and operation of potentially unsafe aircraft.²

The allegations were referred to the Honorable Ray LaHood, Secretary of Transportation, on July 22, 2011. Secretary LaHood delegated responsibility for the investigation to the Department of Transportation's (DOT), Office of Inspector General (OIG). The OIG investigation concluded:

1. When the whistleblowers filed their disclosures with OSC, FAA had not addressed the discrepancies in Delta's fuel tank system and electrical wiring interconnection system maintenance programs. FAA now has an action plan in place to address the discrepancies and the weaknesses identified in FAA's national guidance for implementing and overseeing these maintenance programs.
2. Delta is not required to copy verbatim "Instructions for Continued Airworthiness" tasks into the electrical wiring interconnection system maintenance program. Thus, the OIG did not substantiate the allegation that the Delta Certificate Management Office's

¹Airworthiness Directives (ADs) are legally enforceable rules that apply to aircraft and aircraft engines, propellers and appliances. FAA issues ADs to address an unsafe condition that exists in a product or is likely to exist or develop in other products of the same type design. ADs specify the inspections that must be carried out, conditions and limitations that carriers must comply with, and any actions carriers must take to resolve the unsafe condition. A carrier who operates an aircraft that does not meet the requirements of an applicable AD violates 14 C.F.R. § 39.7. See 14 C.F.R. Part 39.

²Northwest Airlines and Delta merged in January 2010 and the combined aircraft fleets now operate under the Delta certificate. Mr. Lund and Mr. Mirau were previously assigned to the Northwest Certificate Management Office, Bloomington, Minnesota. The Delta Certificate Management Office, located in Atlanta, Georgia, is responsible for the management and oversight of the Delta certificate. Mr. Lund and Mr. Mirau are presently assigned to the Delta Certificate Management Office as Partial Program Managers for the Boeing B757 aircraft fleet.

Supervisory Principal Avionics Inspector Sam Varajon inappropriately approved the program.

3. FAA completed the recommended corrective actions from the OIG's 2009 report regarding Delta's compliance with ADs and fuel tank system maintenance program requirements in June 2010. Therefore, the whistleblowers' allegation that FAA had not implemented the OIG's recommendations was not substantiated. However, the OIG determined that those actions were ineffective and found merit in the whistleblowers' allegations that the non-compliance continued.
4. Delta's failure to comply with fuel tank system and electrical wiring interconnection system requirements constitutes a failure of the airline's Continued Analysis and Surveillance System.
5. FAA's Regional Counsel has not yet finalized its review of the Enforcement Investigation Reports against Delta for non-compliance with a fuel tank system AD.

A brief summary of the disclosures, the agency reports, the whistleblowers' comments, and the Special Counsel's conclusion follows.

Background and Mr. Lund's Previous Disclosure

On November 25, 2008, OSC referred to the Honorable Mary E. Peters, then-Secretary of Transportation, allegations received from Mr. Lund. In his first disclosure, Mr. Lund alleged that the Northwest Certificate Management Office and Great Lakes Regional Office failed to provide effective oversight of Northwest's compliance with ADs, including those related to fuel tank system safety. Mr. Lund further alleged that the oversight failure resulted in the airline's systemic non-compliance with ADs for approximately six years.

DOT's OIG investigated the allegations and transmitted its report to OSC on December 14, 2009.³ The OIG substantiated most of the allegations and recommended that by March 31, 2010, FAA conduct an independent review of Northwest's AD program to ensure that "the fuel tank programs for all Northwest fleets comply with the ADs for Fuel Tank System Maintenance Program and FAR 121.1113C." The FAA Administrator accepted the OIG's recommendations and FAA planned to establish an Internal Assistance Capability team to oversee the timely completion of the recommended corrective actions.

³The DOT report is available online at OSC's website at www.osc.gov/publicfile1213agencyrpt.htm.

The Whistleblowers' Present Disclosures and Agency's Findings

Delta's Non-Compliance with Fuel Tank System and Electrical Wiring Interconnection System Maintenance Program Requirements

Mr. Lund and Mr. Mirau explained that following the 1996 mid-air explosion of a Boeing 747, most likely due to the ignition of flammable vapors in the fuel tank, and the 1998 crash of an MD-11 over the Atlantic Ocean in 1998, due to an electrical wire fire, FAA put in place additional requirements to address the inspection and maintenance of the fuel tank and electrical wiring interconnection systems. FAA issued a revised AD, Special Federal Aviation Regulation (SFAR) No. 88, Fuel Tank System Fault Tolerance Evaluation Requirements, and FARs, 14 C.F.R. § 121.1113, requiring air carriers to implement the fuel tank system maintenance program by December 16, 2008, and 14 C.F.R. § 121.1111, requiring air carriers to implement the electrical wiring interconnection system maintenance program by March 10, 2011.

The whistleblowers alleged that FAA failed to oversee Delta's compliance with AD requirements, specifically AD 2008-10-11⁴ and 14 C.F.R. § 121.1113, for the fuel tank system maintenance program, and 14 C.F.R. § 121.1111, for the electrical wiring interconnection system maintenance program. Under these requirements, the airline's incorporation of its fuel tank system maintenance program must be based on Instructions for Continued Airworthiness developed by the type certificate holder, i.e., Boeing or Airbus, as required by SFAR No. 88, and as approved by the relevant FAA Oversight Office, in this case, the Seattle Aircraft Certification Office. The airline's incorporation of its electrical wiring interconnection system maintenance program must be based on the electrical wiring interconnection system Instructions for Continued Airworthiness developed by the type certificate holder and as approved by the Seattle Aircraft Certification Office.

Mr. Lund stated that the airlines are required to incorporate the language from the type certificate holder's Instructions for Continued Airworthiness on the inspection and maintenance of the electrical wiring interconnection and fuel tank safety systems, without change, into their Technical Operations Policies and Procedures Manual and their job instruction task cards. Any proposed change in the type certificate holder's instructions must be approved by FAA prior to incorporation into the airline's program. Mr. Lund reported that the language of some Delta task cards did not conform to the manufacturer's specifications and did not comply with FAA Aircraft Certification Office approved instructions. He stated that no alternate language had been approved by FAA.

On April 26 and May 4, 2011, Mr. Lund wrote to the Delta Certificate Management Office Manager regarding his concerns with the compliance of Delta's fuel tank system maintenance program. On May 23, 2011, Mr. Lund met with FAA Flight Standards Directors John Allen and Ray Towles to discuss these same compliance concerns. Mr. Lund identified deficiencies in Delta's maintenance programs that rendered them non-compliant. He cited examples of some

⁴AD 2008-10-11 mandates airworthiness limitation items including critical design configuration control limitations.

Delta fuel tank system and electrical wiring interconnection system maintenance task cards that did not accurately provide the Instructions for Continued Airworthiness developed by the type certificate holder, Boeing. Mr. Lund contended that this systemic non-compliance across aircraft fleets demonstrated FAA's failure to properly oversee the airline and ensure compliance with the safety requirements for the fuel tank system and electrical wiring interconnection system maintenance programs.

The whistleblowers reported that, in May 2011, FAA convened the Southern Review Team to review the non-compliance issues Mr. Lund raised. The review team confirmed Mr. Lund's findings of non-compliance. FAA also assembled an Internal Assistance Capability team in June 2011 to review Delta's fuel tank system and electrical wiring interconnection system maintenance programs, which also confirmed the non-compliance concerns. Further, the whistleblowers reported that as recently as June 2011, Mr. Varajon directed a review of Delta's fuel tank system maintenance program but limited the scope of the review to the legacy Northwest B757 fleet despite the concerns of non-compliance with other Delta fleets. In summary, the whistleblowers reported to OSC that they repeatedly conveyed their concerns regarding Delta's non-compliance to FAA management officials, but as of OSC's referral on July 22, 2011, corrective action had not been taken and Delta's compliance had not been ensured.

The OIG investigation concluded that, at the time of the OSC referral, the Delta Certificate Management Office had not ensured that Delta corrected the discrepancies in the fuel tank system and electrical wiring interconnection system maintenance programs for the legacy Delta and Northwest fleets. The report notes that the FAA Southern Review Team and the Headquarters review team had identified several discrepancies in these maintenance programs. The findings of the review teams were sent to the Southern Region for review and response at the end of July. On September 29, 2011, FAA responded with a corrective action plan. FAA has implemented a number of corrective measures briefly summarized as follows:

1. The Certificate Management Office and Delta made fuel tank system AD review a priority in the ongoing joint review of all ADs. The goal of this review was to ensure that all AD requirements were accurately stated in work documents, all initial and repetitive requirements were scheduled, and maintenance properly recorded. Delta completed its review of the fuel tank system AD by December 31, 2011, and reported its findings to the Delta Certificate Management Office in January 2012. The review resulted in 51 administrative findings and one voluntary disclosure, which the report states was not a safety-of-flight issue. The voluntary disclosure was handled through FAA's Voluntary Disclosure Reporting Program. The supplemental report describes the corrective actions as varied and notes that they included making corrections to Delta's Technical Operations Policies and Procedures Manual and reporting discrepancies to aircraft manufacturers for correction.

2. The Certificate Management Office has also completed an audit of fuel tank system and electrical wiring interconnection system maintenance task cards for the B757 fleet initiated in April 2011. The audit revealed a sufficient number of deficiencies to warrant an Enforcement

Investigation Report. As a result of these findings, the Certificate Management Office required Delta to evaluate fuel tank system AD deficiencies that may result in a mechanic performing a task incorrectly in all aircraft fleet types to determine if the deficiencies are systemic. As of November 2011, Delta had completed the review and finalized a corrective action plan for revising the task cards. Delta's corrective action plan, Delta Engineering Report 10-100511-20, which is being coordinated with the Delta Certificate Management Office, includes a script to audit the legacy Northwest and legacy Delta B757 fleets. The supplemental report explains that Delta will document the FAA findings and concerns with an approved Corrective Action Plan Compliance Checklist to address specific and systemic findings. The audit was completed on pre-merger Northwest fleets by December 2011, and will be completed on the remaining pre-merger Delta fleets by May 31, 2012. Delta has submitted corrected fuel tank system and electrical wiring interconnection system maintenance task cards to FAA for a 100% card review. The reviews of the DC-9, B747-400, A319/A320, A-330, and legacy Northwest B757 fleet fuel tank system maintenance programs are complete.

3. The Certificate Management Office also required Delta to address fuel tank system and electrical wiring interconnection system administrative errors across all fleet types and prepare a comprehensive corrective action plan. The corrective action plan for this review was completed in November 2011 and is also documented in Delta Engineering Report 10-100511-20. There are two components to the corrective measures: 1) the task cards are being converted from a computer-based program to a pre-merger Northwest maintenance program, and 2) Delta is applying an audit script to the pre-merger Delta fleets' maintenance task cards. The report states that Delta Certificate Management Office Partial Program Managers will conduct a 100% compliance review of these measures.

4. The Certificate Management Office inspectors were scheduled to evaluate the effectiveness of the fuel tank system and electrical wiring interconnection system maintenance task cards beginning the first quarter of 2012. In the first quarter of 2012, Air Transportation Oversight System Constructed Dynamic Observation Report⁵ (ConDOR) inspections evaluated the effectiveness of the fuel tank system/electrical wiring interconnection system maintenance and repair organizations in Hong Kong, Beijing, and Guadalajara, and domestically in San Antonio, Texas; Dothan, Alabama; and Atlanta, Georgia. In total 18 ConDOR inspections resulted in four findings involving on the spot corrections for technicians but no changes to the program. One Enforcement Investigation Report was issued due to a technician's failure to follow proper procedures. The Delta Certificate Management Office plans 11 additional ConDOR inspections for fuel tank and electrical wiring interconnection system maintenance programs for the third quarter of 2012.

⁵ConDOR is an Air Transportation Oversight System data collection tool used for focused, special inspections where inspectors can record safety observations outside the planned oversight process.

5. Delta conducted a comprehensive review of Enhanced Zonal Analysis Procedures,⁶ part of the electrical wiring interconnection system, and SFAR 88 tasks to ensure they are properly identified. Delta's corrective action plan incorporated the requirements of the Enhanced Zonal Analysis procedures. The Delta Certificate Management Office expects its review of the task items for accuracy to be completed by May 31, 2012.

6. FAA plans to take a number of actions on a national level to address systemic concerns with the fuel tank system and electrical wiring interconnection system maintenance programs that were identified by the Headquarters review team. FAA is in the process of revising FAA Advisory Circular 120-97 to ensure airlines clearly understand the program requirements and that the procedures or references to other manufacturers' procedures are FAA approved and cannot be changed without FAA approval. FAA is also revising related fuel tank system inspector guidance. FAA Air Carrier Maintenance Branch, AFS-330, anticipates publishing the revised Circular in June 2012.

7. FAA plans to revise its data collection tool, Element Performance Inspection⁷ 1.3.1, for fuel tank and electrical wiring interconnection systems to address administrative discrepancies identified in the Headquarters review team report and to ensure that FAA inspectors understand the program requirements. The target release date for the revised Element Performance Inspection is September 2012, after the AFS-300 Policy Division has completed the revision of Advisory Circular 120-97 and the accompanying inspector guidance, FAA Order 8900.1 FSIMS. FAA is also developing a new recurrent training course for inspectors. The focus of the course is ensuring an understanding of fuel tank system and electrical wiring interconnection system maintenance requirements, and consistency of inspection. The course is expected to be completed in the fourth quarter of 2012.

8. FAA will address the Internal Assistance Capability team recommendations on procedures for inspector disclosures and reporting of safety concerns. The team recommended: 1) inspectors should disclose safety concerns as soon as they are identified, 2) if an inspector cannot resolve or is not comfortable working directly with their supervisor, the inspector should use the Safety Issues Reports System; and 3) the Offices of Audit and Evaluation and Aviation Safety should re-familiarize the workforce with the Safety Issues Reports System and its reporting levels. FAA plans to reinforce these procedures as part of a new compliance and enforcement training course under development. The OIG's supplemental report explains that completion of the course has been delayed until August 2012 in order to incorporate the Internal Assistance Capability team recommendations as well as additional changes identified by the course development workgroup.

⁶The analytic process used to develop maintenance and inspection instructions for the electrical wiring interconnection system.

⁷Element Performance Inspection is used by inspectors to collect performance assessment data, which helps ensure operational safety.

Improper Approval of Delta's Electrical Wiring Interconnection System Maintenance Program

The whistleblowers reported that prior to the electrical wiring interconnection system compliance date of March 10, 2011, they informed Mr. Varajon that Delta's program was non-compliant for the B757, B767, MD80, MD90 aircraft fleets, and possibly others. They stated that Aviation Safety Inspector John Tamburi confirmed the compliance concerns and advised Mr. Varajon that Delta had not submitted all electrical wiring interconnection system program documentation for FAA evaluation and approval. Despite notice from Aviation Safety Inspectors that Delta's program was non-compliant, Mr. Varajon advised Delta that the program was approved and directed that an FAA Approved Operations Specification be issued for Delta's electrical wiring interconnection system maintenance program on March 10, 2011.

The OIG investigation did not substantiate this allegation. The report acknowledges that Mr. Varajon was aware of discrepancies in the B757 task cards that the whistleblowers assert is evidence of Delta's non-compliance. However, the report notes that he determined that the discrepancies were administrative, not safety concerns. Thus, Mr. Varajon contended that the discrepancies could be resolved through management of the program. To that end, in April 2011, he directed a 100% audit of B757 electrical wiring interconnection system task cards.

The whistleblowers argued that Delta was required to copy the tasks verbatim from the aircraft manufacturer's Instructions for Continued Airworthiness into its electrical wiring interconnection system and fuel tank system maintenance programs, unless FAA has approved a change in the language. In support of this allegation, Mr. Lund cited three documents: 1) Boeing Maintenance Review Board Report D622N001, dated May 20, 2010, 2) Comments to C.F.R. Final Rule, "Enhanced Airworthiness Program for Airplane Systems/Fuel Tank Safety," Federal Register November 8, 2007, Docket No. FAA-2004-18379, and 3) FAA AC 120-120, "Incorporation of EWIS Instructions for Continued Airworthiness into an Operator's Maintenance Program."

After completion of interviews and review of the documents, the OIG concluded that the written authority relied on by the whistleblowers did not support the assertion that Delta must copy the Instructions for Continued Airworthiness tasks into the maintenance program verbatim. The report explains that in Boeing's source document for the Instructions for Continued Airworthiness electrical wiring interconnection system, FAA approval is required when the type of task is changed. For example, a change from a detailed to a general visual inspection would require approval. However, there is no prohibition against modifying the wording of the task card as long as the task is not changed.

FAA interviewed and consulted four technical experts in the course of the investigation: 1) Fredrick Sobeck, Aviation Safety Inspector—Maintenance, Flight Standards Service, 2) John Flores, Aviation Safety Inspector—Avionics, Flight Standards Service, 3) Massoud Sadeghi, Program Manager/Engineer, Enhanced Airworthiness Program for Airplane Systems, Transport Airplane Directorate, and 4) Steve Slotte, Electrical Wiring Interconnection Systems Specialist,

Transport Airplane Directorate. They agreed that there was no requirement to incorporate tasks without word changes into the maintenance programs as long as the task is carried out and completed as intended. The technical experts agreed that FAA approval is required if a task or procedure is deleted or its meaning or intent is changed.

Further, these experts explained that wording changes are not allowed for the AD requirements for the fuel tank system maintenance programs because ADs address a specific unsafe condition. Therefore, the fuel tank system maintenance procedures cannot be revised without FAA approval. The report states this is particularly true for fuel tank system tasks required by airworthiness limitation items/critical design configuration control limitations. The report notes that the electrical wiring interconnection system maintenance programs are not subject to the same strict requirements because they enhance an already existing inspection program and do not address a specific safety condition.

Deficiencies in Delta's Continuing Analysis and Surveillance System

The whistleblowers further alleged that Delta's failure to comply with 14 C.F.R. §§ 121.1111 and 121.1113 demonstrated a failure of the airline's continuing analysis and surveillance system regulated under 14 C.F.R. § 121.373. Under these regulations, the airline as the certificate holder is required to establish a system for the continuing review of the performance and effectiveness of its maintenance and inspection programs. Delta's systemic non-compliance highlighted the airline's failure to effectively review and correct non-compliance, and the failure of FAA management to properly oversee the airline and ensure compliance.

The investigation substantiated this allegation finding that Delta's failure to comply with fuel tank system and electrical wiring interconnection system maintenance program requirements demonstrates a failure of Delta's continuing analysis and surveillance system. In its supplemental report FAA noted that Delta is revising its Safety Risk Management process to define the thresholds for major program changes to ensure the process is properly functioning. The continuing analysis and surveillance system program is also under review to ensure that sufficient resources are allocated to validate new or major changes to maintenance programs and to ensure the maintenance programs achieve the desired results. The supplemental report also notes that these program enhancements will be added to the existing technical coordination process defined in the Technical Operations Policies and Procedures Manual 50-20-10, which ensures that all affected departments concur with proposed program changes. These corrective measures are expected to be completed by May 31, 2012.

FAA's Failure to Implement Recommendations from December 2009 OIG Report

In OSC's July 22, 2011 referral, the whistleblowers alleged that FAA failed to complete the corrective actions recommended in the December 2009 OIG report and, thus, the safety concerns remained outstanding. The investigation did not substantiate the allegation. The supplemental report explains that the corrective actions recommended in the 2009 OIG report were completed

by June 2010. Specifically, an independent review team assessed the effectiveness of the Safety Attribute Inspection checklist, conducted a review of the legacy Northwest AD program, and used the Air Transportation Oversight System data collection tools, including a design assessment that uses the Safety Attribute Inspection checklist for AD management. The OIG found that while the corrective actions had been completed they were ineffective and the OIG substantiated the whistleblowers' allegations that fuel tank system and AD non-compliance continued.

Status of Enforcement Investigation Reports (EIRs)

Mr. Lund stated that EIR 2009SO270159, for Northwest's fuel tank system safety non-compliance, has not yet been finalized by FAA as a non-compliance action against Delta. He stated that two additional EIRs remain outstanding: 1) EIR 2010SO270173 against Delta Airbus A320 aircraft for failing to comply with fuel tank system safety requirements, and 2) EIR 2011SO275199 against legacy Delta B757 for failing to comply with the fuel tank system requirements of December 2008.

The agency's supplemental report provided the following information on the status of the enforcement actions against Delta:

1. EIR 20090270159, issued in response to Delta's operation of legacy Northwest B757 fleet without complying with AD 2008-10-11, is under review by the Office of Regional Counsel for the Southern Region. The review is expected to be completed by the end of May 2012.
2. EIRs 2011SO275337 and 2011SO275338, issued due to deficiencies identified in the audit of the fuel tank system and electrical wiring interconnection system maintenance programs, are presently under investigation. The review is expected to be completed by June 30, 2012.
3. The Office of Regional Counsel for the Southern Region issued a Civil Penalty letter on November 22, 2011 in response to EIR 2010SO270173 against Delta A320 aircraft for failing to comply with fuel tank system requirements. Delta has requested an informal conference in May 2012.
4. EIR 2011SO275199, issued against legacy Delta B757 for failing to comply with fuel tank requirements of December 2008, is presently under review by the Office of Regional Counsel for the Southern Region. The review is expected to be completed by the end of May 2012.

The Whistleblowers' Comments

In their first set of comments dated January 25, 2012, Mr. Lund and Mr. Mirau emphasize that FAA enacted the Federal Aviation Regulations regarding the fuel tank system and electrical wiring interconnection system maintenance programs to protect the public from another fatal airline accident similar to the TWA Flight 800 or Swiss Air Flight 111, both reportedly the result of electrical wire failure. The whistleblowers contend that these regulations are vital to public safety. This is demonstrated by the requirement that the maintenance instructions be approved by FAA Engineering Offices to ensure that the safe design of aircraft is maintained throughout its operation by the airlines. They question the FAA's conclusion that the errors in Delta's maintenance programs and instructions are administrative rather than safety-of-flight issues. They find this determination disrespects public safety.

The whistleblowers also maintain that Mr. Varajon was notified of Delta's non-compliance before March 10, 2011, the regulatory compliance date for Delta's incorporation of the electrical wiring interconnection system maintenance program. They note that concerns regarding non-compliance persist as indicated in the investigation and evidenced by the enforcement actions issued by FAA. Further, they note that FAA Aircraft Certification Office engineers also concluded that Delta electrical wiring interconnection system maintenance instruction task cards were incomplete.

Mr. Lund and Mr. Mirau voice concerns about the ability of one manager to thwart the hard work and considerable efforts of the aviation safety inspectors to enforce maintenance requirements put in place to keep the public safe. In addition, they note that the determination that the errors are administrative contradicts FAA's decision to pursue enforcement actions against Delta for non-compliance. They emphasize that it was not aviation safety inspectors who allowed Delta's non-compliance; it was FAA supervisory staff who permitted the non-compliance to persist over the objections of the inspectors. Yet, in response to the OIG's investigative findings in this case, the agency plans to provide training for inspectors, not for supervisors.

The whistleblowers also contend that the failure to resolve the public safety issues identified by aviation safety inspectors within the Delta Certificate Management Office resulted in significant public resources spent on investigating these allegations. These expenditures of taxpayer dollars would have been unnecessary if FAA management had acted upon the safety concerns when they were initially reported.

On April 23, 2012, the whistleblowers provided additional comments on DOT's supplemental report. They disagree with the FAA experts and senior officials who opined that the errors and incomplete work instructions found in Delta's task cards for the electrical wiring interconnection system maintenance program are not safety concerns. They noted that the FAA approval process is detailed and consists of much "paperwork" in the form of maintenance and inspections instructions. The paperwork is created, developed, and produced with FAA's approval to maintain the safety of passenger aircraft. They contend that the accuracy of the

paperwork, and the maintenance instructions contained therein, ensures the safety of the aircraft and the flying public.

In support of their position--and to assist the public's understanding of the requirements of the fuel tank system and electrical wiring interconnection system maintenance programs--Mr. Lund and Mr. Mirau included excerpts from the Code of Federal Regulations Final Rule documenting those requirements. They explain that on page four FAA writes that the current maintenance programs were insufficient to address the maintenance needs for wiring components, and on page five FAA notes the potential for aircraft fires due to short circuits of electrical devices. Throughout their comments the whistleblowers describe the paperwork that makes up the maintenance and inspection requirements designed to ensure and enhance the safety of air travel.

The whistleblowers refute Mr. Varajon's statements regarding his approval of Delta's electrical wiring interconnection system maintenance program. They describe the communications with him that show he was made aware of the concerns with the electrical wiring interconnection system program. They highlight inaccuracies in his testimony and dispute his characterization of Mr. Lund's professional performance.

The whistleblowers assert that when FAA management pressures aviation safety inspectors to not disrupt the airline's operation, and concludes that errors in the required maintenance program are merely administrative, paperwork errors, they put the public's safety at risk. The whistleblowers question whether FAA has ensured the compliance with the fuel tank system and electrical wiring interconnection system requirements of airlines through its other Certificate Management Offices.

In conclusion, Mr. Lund and Mr. Mirau thank the FAA Aircraft Certification Office engineers and the FAA Aircraft Evaluation Group aviation safety inspectors for their diligent work on the fuel tank system and electrical wiring interconnection system program requirements and the guidance they provided to support the aviation safety inspectors. They note their respect for FAA officials Fred Sobeck and John Flores for their work on the programs. They state they will continue to monitor FAA's oversight of Delta's compliance with the corrective actions planned or underway. Given their experience with FAA management, however, Mr. Lund and Mr. Mirau have reservations about FAA's internal disclosure process.

Conclusion

I have reviewed the agency report, supplemental report, and the whistleblowers' comments. Based on that review, I have determined that the agency's reports contain all of the information required by statute and that the findings appear to be reasonable. However, I note in particular that despite the OIG's findings in its 2009 report, concerns with lack of oversight and non-compliance continued resulting in a second whistleblower disclosure. The second investigation again substantiated many of the allegations.

Although at the time of this second referral FAA was reviewing Delta's compliance with Airworthiness Directives, it is troubling that concerns regarding FAA's oversight of the fuel tank system and electrical wiring interconnection system program requirements have persisted. FAA must act to fully resolve the gaps in oversight which have allowed the airline's non-compliance to continue. I intend to request an update from the agency in six months to confirm that the outstanding corrective actions have been completed.