



THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

November 30, 2011

The Honorable Carolyn Lerner
Special Counsel
U.S. Office of Special Counsel
1730 M Street, NW, Suite 218
Washington, DC 20036

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

Dear Ms. Lerner:

By letter dated July 22, 2011, Associate Special Counsel William Reukauf referred for investigation disclosures from Federal Aviation Administration (FAA) Aviation Safety Inspectors Mark Lund, a Boeing 757 Avionics Partial Program Manager, and Daniel Mirau, a B757 Maintenance Partial Program Manager. Both are assigned to FAA's Certificate Management Office (CMO) for Delta Airlines. The whistleblowers allege that FAA has failed to oversee Delta's compliance with requirements for fuel tank system (FTS) and electrical wiring interconnection system (EWIS) maintenance programs.

I delegated investigative responsibility for this matter to the Office of Inspector General (OIG). Enclosed are OIG's Report of Investigation and FAA's response. Specifically, OIG found:

1. At the time the whistleblowers' complaint was filed with OSC, FAA had not taken action to address discrepancies in Delta's FTS and EWIS maintenance programs. FAA has since prepared an action plan with milestones to address these discrepancies, as well as weaknesses in FAA's national guidance for implementing and overseeing FTS and EWIS maintenance programs.
2. No authority specifically requires Delta to copy, verbatim, "Instructions for Continued Airworthiness" tasks into its EWIS maintenance program. Therefore, OIG was unable to substantiate the allegation that the CMO's Supervisory Principal Avionics Inspector inappropriately approved Delta's program.
3. The FAA has completed recommendations from OIG's December 7, 2009, report regarding Delta's compliance with Airworthiness Directives and FTS maintenance program requirements. However, discrepancies identified during FAA regional and headquarters reviews and a CMO audit demonstrate that FAA's actions have not been effective.
4. The FAA's Regional Counsel has not finalized Enforcement Case No. 2009S0270159 against Delta for non-compliance with an FTS Airworthiness Directive; however, the

5-year statute of limitations has not expired and the Regional Counsel intends to pursue this enforcement action shortly.

5. Delta's failure to comply with FTS and EWIS requirements demonstrates a failure of the airline's Continued Analysis and Surveillance System.

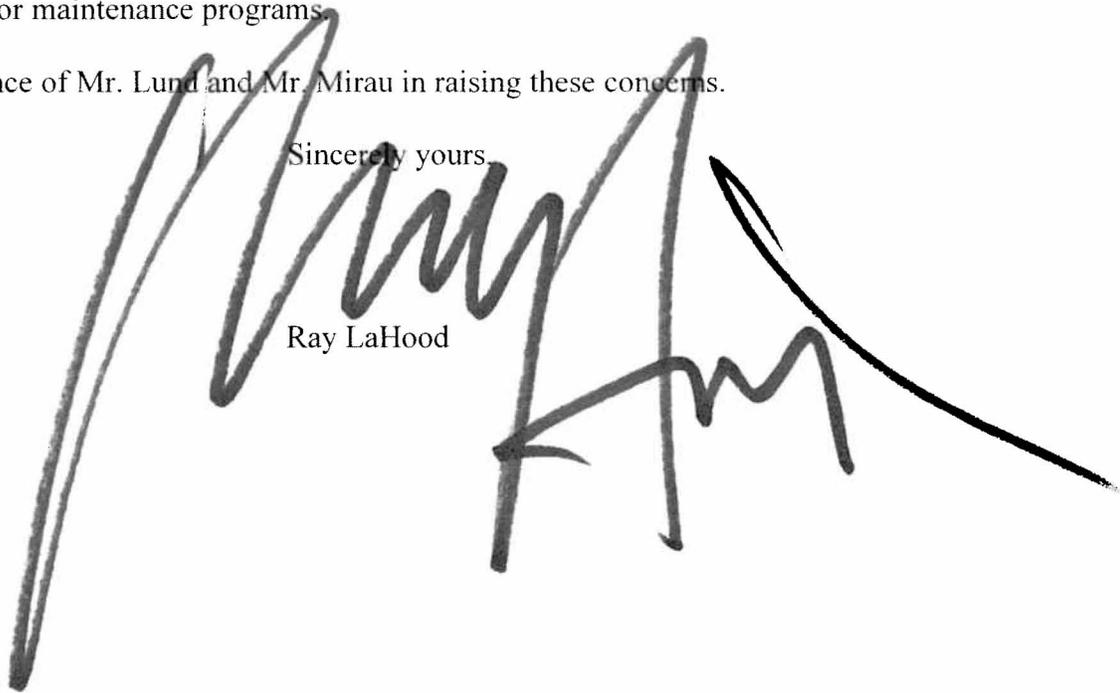
Also enclosed is FAA's response to OIG's report from FAA's Director of Audit and Evaluation, concurring with OIG's findings. As noted in the OIG report, FAA has initiated corrective action to ensure Delta corrects discrepancies in its FTS and EWIS maintenance programs, and set forth additional actions to address systemic issues at the national level. As described in FAA's response, Delta has committed in writing to FAA to address discrepancies in its FTS and EWIS maintenance programs. The FAA will also ensure the airline makes the necessary changes to its Continued Airworthiness and Surveillance System to validate new or major maintenance programs.

I appreciate the diligence of Mr. Lund and Mr. Mirau in raising these concerns.

Sincerely yours,

Ray LaHood

Enclosures

A large, stylized handwritten signature in black ink, which appears to be 'Ray LaHood', is written over the typed name. The signature is fluid and cursive, with a long horizontal stroke at the end.



U.S. Department of Transportation
Office of Inspector General

REPORT OF INVESTIGATION	INVESTIGATION NUMBER I11A004SINV	DATE Nov. 1, 2011
TITLE FAA Oversight of Delta Airlines Fuel Tank Safety and Electrical Wiring Interconnection System Maintenance Programs	PREPARED BY: Mary E. Hanson, Senior Investigator Special Investigations, JI-3	STATUS FINAL
	DISTRIBUTION FAA AVS-1	APPROVED BY: JI-3 <i>RVE</i>

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BACKGROUND

On July 22, 2011, the U.S. Office of Special Counsel (OSC) referred to the Secretary of Transportation concerns raised by two Federal Aviation Administration (FAA) Aviation Safety Inspectors (ASIs). The two whistleblowers, one a Boeing 757 (B757) Avionics Partial Program Manager, the other a B757 Maintenance Partial Program Manager, are assigned to FAA's Certificate Management Office (CMO) for Delta Airlines. (On December 31, 2009, Delta and Northwest Airlines merged their operations into one airline known as Delta Airlines. Delta, however, operates two separate maintenance programs for each airline's fleet. The CMO refers to the aircraft fleets as "legacy Delta" or "legacy Northwest.") In sum, the whistleblowers allege that FAA has failed to oversee Delta's compliance with requirements for fuel tank system (FTS) and electrical wiring interconnection system (EWIS) maintenance programs.

This is the second time one of the whistleblowers has alleged that the CMO for Northwest aircraft has failed to provide effective oversight of compliance with FTS maintenance program requirements. The Office of Inspector General (OIG) investigated that previous disclosure, substantiated it and, in a December 7, 2009, report recommended that FAA review Northwest's FTS maintenance program, among other recommendations.

FTS maintenance programs

Prompted by the July 1996 Trans World Airlines (TWA) Flight 800 crash caused by a fuel tank explosion after take-off from New York's John F. Kennedy Airport, FAA implemented new rules for fuel tank safety. Specifically, Special Federal Aviation Regulation 88 (SFAR 88) required aircraft manufacturers to develop Instructions for Continued Airworthiness (ICAs) to mitigate risks associated with ignition sources and flammability conditions in fuel tanks.

FTS ICAs include inspection tasks, intervals, methods and procedures. These ICAs also include airworthiness limitations, which are identified in maintenance programs as an airworthiness limitation item (ALI) or a critical design configuration control limitation (CDCCL). An ALI is a specific inspection that must be conducted at an assigned interval or time. A CDCCL is information for maintenance personnel to protect the critical design features of the FTS. There is, for example, a CDCCL regarding maintaining separation between fuel quantity indicator system wiring and other high power electrical circuits.

Title 14 CFR 121.1113 and Airworthiness Directives (ADs) required aircraft operators to incorporate ICAs into their FTS maintenance and inspection programs, and obtain FAA approval of the programs, by December 16, 2008. FAA approves incorporation of an

FTS ICA into an operator's maintenance program using Operations Specification (OpSpec) D097, "Aging Aircraft Programs."

EWIS maintenance programs

Investigation of the TWA Flight 800 accident and the September 1998 SwissAir Flight 111 accident (attributed to an in-flight fire related to wiring) and subsequent examinations of other airplanes showed that deteriorated wiring, corrosion, and improper wire installation and repairs were common EWIS conditions. FAA determined that existing EWIS ICAs lacked sufficient detail regarding, for example, when and how inspections must be done. To correct this deficiency, FAA required aircraft manufacturers to include inspection or restoration tasks, methods, processes, procedures and intervals in existing ICAs.

Title 14 CFR 121.1111 required aircraft operators to incorporate these ICA requirements into their EWIS maintenance program, and obtain FAA approval of the program, by March 10, 2011. FAA approves incorporation of an EWIS ICA into an operator's maintenance program using OpSpec D097.

Whistleblowers' disclosures

Regarding FAA's failure to provide effective oversight of Delta's FTS and EWIS maintenance programs, the whistleblowers specifically allege:

1. Despite identification by FAA review teams of numerous discrepancies in Delta's FTS and EWIS maintenance programs, FAA has not taken corrective action;
2. Because Delta failed to incorporate manufacturer's ICAs into its EWIS maintenance program without changes or FAA approval of its changes, the SPAI's approval of Delta's program was inappropriate;
3. FAA has not fully implemented recommendations from the OIG's December 7, 2009, report regarding FAA's failure to oversee Northwest's compliance with ADs and FTS maintenance program requirements.
4. FAA regional counsel has not finalized Enforcement Case No. 2009S0270159 regarding Delta non-compliance with an FTS AD.

In addition, the whistleblowers raised a related concern against Delta:

5. Delta's failure to comply with FTS and EWIS maintenance program requirements demonstrates a failure of the airline's Continuing Analysis and Surveillance System (CASS).

The Secretary delegated investigative responsibility of these allegations to the OIG. **Attachment 1** describes the methodology of our investigation.

SYNOPSIS

1. We substantiated the allegation that, at the time the whistleblowers' complaint was filed with OSC, FAA had not taken action to address discrepancies in Delta's FTS and EWIS maintenance programs. FAA has since prepared an action plan with milestones (dated September 29, 2011) to address these discrepancies, as well as weaknesses in FAA's national guidance for implementing and overseeing FTS and EWIS maintenance programs.
2. We found no authority that requires Delta copy, verbatim, ICA tasks into its maintenance program. Therefore, we were unable to substantiate the allegation that the SPAI inappropriately approved Delta's program.
3. We were unable to substantiate the allegation that FAA has not completed recommendations from the OIG's December 7, 2009, report regarding Delta's compliance with ADs and FTS maintenance program requirements. However, discrepancies identified during FAA regional and headquarters reviews and a CMO audit demonstrate that FAA's actions have not been effective.
4. We substantiated the allegation that FAA regional counsel has not finalized Enforcement Case No. 2009S0270159 against Delta for non-compliance with an FTS AD; however, the 5-year statute of limitations has not expired and regional counsel intends to pursue this enforcement action.
5. We substantiated the allegation that Delta's failure to comply with FTS and EWIS requirements demonstrates a failure of the airline's CASS.

Below are the details of our investigation.

DETAILS:

Allegation 1: Despite identification by FAA review teams of numerous discrepancies in Delta's fuel tank system (FTS) and electrical wiring interconnection system (EWIS) maintenance programs, FAA has not taken corrective action.

FINDINGS

We found that at the time the whistleblowers' complaint (**Attachment 2**) was referred by OSC, the CMO had not taken action to ensure Delta corrected discrepancies in its FTS and EWIS maintenance programs throughout its legacy Delta and legacy Northwest fleets.

Previously, FAA regional and headquarters review teams identified the following discrepancies regarding Delta's FTS maintenance program:

- Revisions to the program were made without FAA approval.
- CDCCL's on B767 maintenance task cards were improperly modified or omitted.
- For the B757 fleet, AD 2008-10-11 related task cards:
 - were missing AD and ALI references,
 - omitted information or did not comply with Boeing ICA instructions,
 - lacked directive steps in instructions, and
 - did not contain standardized instructions between legacy Delta and legacy Northwest maintenance programs, even though the Boeing ICA is identical.
- The SFAR 88 "flag" used to alert maintenance personnel was missing from Delta's program project management database for FTS task descriptions.

Regarding Delta's *EWIS* maintenance program, the review teams found, among other things:

- A maintenance task card for the B767 fleet was missing a required "Caution" note.

The regional team completed its review on May 26, 2011. Around that time, the headquarters team began its review. According to the Southern Region Flight Standards Division Manager (the person who requested the regional review), corrective action for

Delta was postponed until the headquarters review was completed. FAA officials, however, did not forward the headquarters review team's June 13, 2011, report to the Region until seven weeks after its report date. By that time, the whistleblowers' July 22, 2011, complaint was referred by OSC to the Secretary.

On September 29, 2011, FAA responded to the review teams' discrepancy findings by presenting an action plan with milestones. **(Attachment 3)** FAA has initiated the following corrective actions:

- The CMO and Delta will make FTS ADs a priority as part of an on-going joint review of all ADs. The review will ensure that all AD requirements are accurately transcribed in work documents, all initial and repetitive requirements are scheduled, and all maintenance properly recorded. FAA projects the review will be completed by December 31, 2011.
- Prior to the whistleblowers' OSC complaint, in April 2011, the CMO began an audit of FTS and EWIS maintenance task cards for the B757 fleet. The audit was completed on August 18, 2011, and uncovered enough deficiencies to warrant initiation of an Enforcement Investigation Report. As a result, the CMO has initiated the following:
 - For FTS AD deficiencies that may result in a mechanic performing a task incorrectly, the CMO has required Delta to evaluate these deficiencies against all fleet types to determine if they are systemic. Delta has committed to completing this review by December 31, 2011.
 - For FTS and EWIS administrative errors, Delta will address them across all fleet types and prepare a comprehensive corrective action plan by December 31, 2011.
 - CMO inspectors will evaluate the effectiveness of the FTS and EWIS maintenance task cards beginning first quarter FY 2012.
- Delta is conducting a comprehensive review of all Enhanced Zonal Analysis Procedures (part of EWIS) and SFAR 88 driven tasks in its records to ensure they are properly identified. FAA projects this task will be completed by December 31, 2011.

In addition, FAA plans to address at a national level systemic issues involving FTS and EWIS maintenance programs identified by the headquarters review team. The following is a summary of those actions planned by FAA:

- FAA will revise FAA Advisory Circular (AC) 120-97 ("Incorporation of Fuel Tank System Instructions for Continued Airworthiness into Operator Maintenance or Inspection Programs") to ensure airlines have a clear understanding of the program requirements. For example, the AC will remind operators to clearly identify AD-mandated ALI numbers in their maintenance program and job/work cards. It will also clarify that these procedures or references to other manufacturer procedures are FAA approved and cannot be changed without FAA approval. FAA will also revise related inspector FTS guidance. FAA expects to complete these revisions by March 2012.
- FAA will revise its inspection data collection tool (EPI 1.3.1) for FTS and EWIS to address the administrative concerns (e.g., errors in the maintenance task cards) identified in the headquarters review team report and to ensure FAA inspectors have a clear understanding of the program requirements. FAA expects to complete this revision by September 2012.
- FAA will complete the development of a new recurrent training course for inspectors to ensure consistency and understanding of FTS and EWIS maintenance program requirements. FAA expects completion in the 4th quarter of FY 2012.
- To address three review team recommendations relating to procedures for inspector disclosures and reporting of safety concerns, FAA will reinforce these procedures as part of a new recurrent advanced compliance and enforcement training course already under development. The release of the course prototype is projected for May 31, 2012.

Allegation 2: Because Delta failed to incorporate manufacturer's ICAs into its EWIS maintenance program without changes or FAA approval of its changes, the Supervisory Principal Avionics Inspector's (SPAI's) approval of the program was inappropriate.

FINDINGS

We were unable to substantiate this allegation.

Prior to the SPAI's approval of Delta's EWIS maintenance program, one of the whistleblowers identified discrepancies in the B757 task cards, which he believed represented Delta's non-compliance with EWIS requirements. The SPAI believed the discrepancies were administrative in nature, did not impact the safe implementation of the EWIS program, and could be addressed through subsequent management of the program. To address the administrative concerns, in April 2011, the SPAI requested a 100 percent audit of all B757 EWIS task cards. This review identified that 63 percent of

the legacy Northwest and 7 percent of the legacy Delta task cards contained discrepancies when compared to the Boeing ICA documents. For example, the task card might instruct the mechanic to the proper area, but perform a "General Visual Inspection" instead of "Internal General Visual Inspection." Also, some task cards failed to identify the zone number where the inspection was to be performed (e.g., "Zone 711"), although the card may include the name of the specific zone (e.g., "nose landing gear").

One of the whistleblowers asserts these discrepancies were non-compliant because:

[A]irlines are required to incorporate the language from the type certificate holder's developed ICA on the inspection and maintenance of the EWIS and FTS 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. (*See, Attachment 2*)

During his OIG interview, the whistleblower told investigators this means Delta must copy, "verbatim," tasks from the aircraft manufacturer's ICA into its EWIS and FTS maintenance programs unless it receives FAA approval to change the task instructions. The whistleblower provided the following authority to support this assertion:

- Boeing Maintenance Review Board Report D622N001, dated May 20, 2010, states, "For Operators under U.S. FAA Jurisdiction only: Operators requesting revisions to the baseline EWIS task or description must submit their request through the cognizant Flight Standards District Office . . . to the manager of the appropriate FAA Aircraft Certification Office or . . . for concurrence prior to approval."
- Comments to CFR Final Rule, Federal Register, November 8, 2007, [Docket No. FAA-2004-18379] "Enhanced Airworthiness Program for Airplane Systems/Fuel Tank Safety," Section F, Operating Requirements for EWIS (parts 121 and 129), paragraph 2 recite the expectation that operators will incorporate the ICAs, but can develop their own ICAs provided they meet applicable requirements and are approved by the Principal Inspector and coordinated with the FAA Oversight Office.
- FAA AC 120-102 ("Incorporation of EWIS Instructions for Continued Airworthiness into an Operator's Maintenance Program") states:
 - "FAA determined that EWIS ICA must be approved by the cognizant FAA Oversight Office[.] . . . Approval will help ensure standardized application . . . and that data delivered to operators will be standardized." (Paragraph 2-3)

- "Operators must incorporate . . . EWIS ICA approved by the FAA Oversight Office into their maintenance program[.]" (Paragraph 2-5b)
- Operators that propose to change protection and caution instructions/information or develop their own instructions/information, must get FAA Oversight Office approval. (Paragraph 2-5c. (2) and (3))
- "If an operator proposes to delete or change an EWIS task, it must request approval from the FAA Oversight Office." (Paragraph 3-2)

We find that the written authority provided by the whistleblower does not support the whistleblower's assertion that Delta must copy, "verbatim," ICA tasks into its maintenance programs. The program rules in Boeing's ICA EWIS source document (D6-84438) require FAA approval if the *type* of task is changed (e.g., from a detailed to general visual inspection), but there is no provision within the source document that prohibits operators from modifying the wording of task instructions. Further, according to four FAA technical experts involved in the development and review of EWIS and FTS regulations and related documents, including those cited above by the whistleblower, there is no requirement that EWIS tasks be incorporated "without any word changes," as long as the task is completed as intended. They agreed that if a task or procedure is deleted or its meaning or intent changed, FAA approval is required.

For AD requirements for FTS maintenance programs, wording changes are not allowed. According to the technical experts, ADs address a specific unsafe condition; therefore, maintenance procedures cannot be revised without FAA approval, especially for FTS tasks required by ALI/CDCCLs. EWIS maintenance programs, however, are not subject to the same strict compliance standards resulting from ADs because they enhance an already existing inspection program for continuing airworthiness and do not address a specific unsafe condition.

Allegation 3: FAA has not fully implemented recommendations from the OIG's December 7, 2009, report regarding FAA's failure to oversee Northwest's compliance with ADs and FTS maintenance program requirements.

FINDINGS

We did not substantiate this allegation. As documented in **Attachment 4**, FAA implemented all three recommendations from OIG's December 7, 2009, report regarding the failure to oversee Northwest's compliance with FTS maintenance program requirements, and so notified OIG in June 2010. However, during our interview with one of the whistleblowers, he claimed that FAA's actions implementing the recommendations have not been effective because Delta continues to have FTS and AD compliance issues.

Given the results of the region and headquarters reviews, and the CMO's audit (as disclosed in the Tables 1 and 2 below), the whistleblower's claim has merit.

**Table 1. Results of CMO Detail Audit of FTS (non-AD)
B757 Task Card Compliance**

B757 Fleet type	Total FTS Tasks Reviewed	Total Tasks with Discrepancy	Percentage Tasks with Discrepancy
Legacy NWA	26	17	65%
Legacy Delta		6	23%

**Table 2. Results of CMO Detail Audit of FTS AD 2008-10-11
B757 Task Card Compliance**

B757 Fleet type	Total FTS AD Tasks* Reviewed	Total Tasks with Discrepancy	Percentage Tasks with Discrepancy
Legacy NWA	26	9	35%
Legacy Delta		6	23%

*ALI and CDCCL's which require strict compliance.

The type of discrepancies identified included missing or incorrect ALI/CDCCL information, steps, maintenance manual references, and caution/warning statements. Some required work steps are shown as "notes," which are not mandatory. Moreover, instead of instructing mechanics to perform a task "in accordance with" a required manual, the task merely identified the manual as a reference document. In addition, the whistleblowers provided examples of B767 and B747 task cards with similar discrepancies which demonstrate that compliance issues exist in other Delta fleet types.

As discussed in Allegation 1, the CMO and Delta are conducting a review of all ADs, with a priority on FTS ADs, and also reviewing all fleet types to ensure compliance to other FTS program requirements. FAA's initiation of this review supports the whistleblowers' assertion that AD compliance issues have not been resolved since the OIG last reported on this issue in December 2009. Further, the headquarters review team concluded that airline personnel did not have a clear understanding of the FTS program requirements. For example, Delta personnel made changes to previously FAA approved FTS AD task cards without further FAA approval. For this reason, the headquarters review team made the recommendation to amend AC 120-97 to clarify the operators responsibilities related to fuel tank safety.

Allegation 4: FAA regional counsel has not finalized Enforcement Case No. 2009S0270159 regarding Delta non-compliance with an FTS AD.

FINDINGS

We substantiated this allegation.

Enforcement Case No. 2009S0270159 relates to Delta's operation of the legacy Northwest B757 fleet without complying with AD 2008-10-11. That AD required the airline to revise its B757 ICAs to incorporate FTS airworthiness limitations developed by Boeing and perform related inspection tasks.

The responsible regional FAA attorney confirmed that the case has not been finalized as an enforcement action against Delta. The attorney and the regional FAA technician responsible for reviewing the enforcement case file identified the following causes for the delay: the narrative was difficult to understand due to the technical nature of the case and required meetings to clarify it, the case file included irrelevant information and errors in need of correction, and other cases (e.g., emergency certificate revocations) within the regional counsel's office have a higher priority. Nonetheless, because the 5-year statute of limitations has not expired, regional counsel intends to pursue this enforcement action.

Allegation 5: Delta's failure to comply with FTS and EWIS maintenance program requirements demonstrates a failure of the airline's Continuing Analysis and Surveillance System (CASS).

FINDINGS

We substantiated this allegation.

Air carrier personnel enter data into CASS to monitor the effectiveness of inspection and maintenance programs. CASS data includes results from internal audits. The headquarters review team reported that Delta did not ensure compliance with FTS AD requirements and did not ensure audit results and deficiencies were accounted for in its CASS. The headquarters review team's finding was echoed by the CMO's own audit of Delta's EWIS and FTS task cards, which found a significant number of discrepancies (as disclosed in the findings for allegations 2 and 3) that should have been identified by the airline's internal audits. In our interview with the CMO's SPAI, he agreed these discrepancies represented a failure of Delta's CASS.

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ATTACHMENT 1: METHODOLOGY OF INVESTIGATION

We analyzed FAA correspondence, orders, and inspection records; Federal Aviation Regulations; Airworthiness Directives; Delta maintenance documents, including task cards and policies; Delta correspondence with the CMO; and aircraft manufacturer maintenance documents. We also interviewed and obtained information from various witnesses, including:

FAA CMO for Delta Airlines (Bloomington, MN and Hapeville, GA)

- Aviation Safety Inspector, Partial Program Manager-Avionics Boeing 757, Legacy Northwest Airlines Fleet
- Aviation Safety Inspector, Partial Program Manager-Maintenance Boeing 757, Legacy Northwest Airlines Fleet
- Manager
- Acting Office Manager
- Acting Supervisory Principal Avionics Inspector
- Frontline Manager-Avionics
- Aviation Safety Inspector, Partial Program Manager-Avionics Boeing 757, Legacy Delta Airlines Fleet
- Aviation Safety Inspector, Partial Program Manager-Avionics Airbus 330
- Aviation Safety Inspector, Partial Program Manager-Avionics, McDonnell Douglas (MD) 88/90

FAA Southern Region, College Park, GA

- Manager, Regional Flight Standards Division, ASO-200
- Regional Specialist-Air Carrier Maintenance, Flight Standards Division, Technical Branch, ASO-320
- Attorney, Regional Counsel, ASO-007

FAA Southern Region Review Team

- Team Leader, Front Line Manager-Maintenance, Flight Standards District Office-Southern Florida, Miami, FL
- Principal Avionics Inspector, AirTran CMO, Orlando, FL
- Partial Program Manager-Avionics, MD80, American Airlines CMO, Ft. Worth, TX
- NextGen/AWO, Avionics (formerly a regional specialist in ASO-320), Southern Region Flight Standards Division, College Park, GA

FAA Headquarters Review Team

- Team Leader, Senior Technical Advisor, Flight Standards Service Field Operations, AFS-003F, Washington, DC
- Aviation Safety Inspector-Maintenance, Flight Standards Service-Aircraft Maintenance Division, AFS-300, Washington, DC
- Aviation Safety Inspector-Avionics, Flight Standards Service-Seattle Aircraft Evaluation Group, SEA-AEG, Renton, WA
- Program Manager/Engineer, Enhanced Airworthiness Program for Airplane Systems (EAPAS), Transport Airplane Directorate, Transport Standards Staff-Airplane and Flight Crew Interface Branch, ANM-111, Renton, WA
- Aviation Safety Inspector-Avionics/Maintenance, Flight Standards Service-Flight Standards National Field Office, AFS-900, Kansas City, MO
- Electrical Wiring Interconnection Systems Specialist, Transport Airplane Directorate, Transport Standards Staff-Airplane and Flight Crew Interface Branch, ANM-111, Renton, WA

Other FAA Personnel

- Acting Manager/Deputy Division Manager, Aircraft Maintenance Division, AFS-300, Washington, DC
- Deputy Division Manager, Flight Standards Service-Flight Standards National Field Office, AFS-900, Dulles, VA
- Manager, Flights Standards Service-Executive Office, AFS-10, Washington, DC

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ATTACHMENT 2: OSC COMPLAINT



The Special Counsel

U.S. OFFICE OF SPECIAL COUNSEL
1720 M Street, N.W. Suite 300
Washington, D.C. 20036-4505

July 22, 2011

The Honorable Ray LaHood
Secretary of Transportation
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

Re: OSC File Nos. DL-11-2238 and DL-11-2709

Dear Mr. Secretary:

The Office of Special Counsel (OSC) has received allegations that the Federal Aviation Administration (FAA) has 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. FAA Aviation Safety Inspectors Mark Lund and Daniel Mirau (also referred to as the whistleblowers) allege that FAA employees in the Delta Certificate Management Offices (CMO) in Atlanta, Georgia, and Bloomington, Minnesota, are engaging in conduct that constitutes a violation of law, rule, or regulation, gross mismanagement, and an abuse of authority, all of which contribute to a substantial and specific danger to public safety. Accordingly, I am referring these allegations to you for an investigation and a report of your findings.

OSC is authorized by law to receive disclosures of information from federal employees alleging violations of law, rule, or regulation, gross mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety. 5 U.S.C. § 1213(a) and (b). As Special Counsel, if I find, on the basis of the information disclosed, that there is a substantial likelihood that one of these conditions exists, I am required to advise the appropriate agency head of my findings, and the agency head is required to conduct an investigation of the allegations and prepare a report within 90 days of notification of the allegations. 5 U.S.C. § 1213(c) and (g).

Mr. Lund is an FAA Aviation Safety Inspector and has served as an Avionics Partial Program Manager on the former Northwest Airlines, Inc. (Northwest) aircraft fleets for approximately 20 years. Mr. Mirau is an FAA Aviation Safety Inspector and Partial Program Manager and has been employed at FAA for 17 years. The whistleblowers were previously

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 meet the requirements of an applicable AD violates 14 C.F.R. § 39.7. See 14 C.F.R. Part 39.

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ATTACHMENT 2: OSC COMPLAINT

The Special Counsel

The Honorable Ray LaHood

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assigned to the Northwest CMO, Bloomington, Minnesota. Northwest and Delta merged in January 2010 and the combined aircraft fleets now operate under the Delta certificate. The Delta CMO 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 CMO as Partial Program Managers for the Boeing B757 aircraft fleet. They have consented to the release of their names.

Mr. Lund and Mr. Mirau explain that following the mid-air explosion of a Boeing 747 in 1996, most likely due to the ignition of flammable vapors in the fuel tank, and the crash of an MD-11 over the Atlantic Ocean in 1998, due to an electrical wire fire, FAA issued ADs and Federal Aviation Regulations (FARs), 14 C.F.R. § 121.1113, requiring air carriers to implement an aircraft Fuel Tank System (FTS) maintenance program by December 16, 2008, and 14 C.F.R. § 121.1111 requiring that air carriers implement an aircraft Electrical Wiring Interconnection System (EWIS) maintenance program by March 10, 2011. These regulatory requirements, including ADs on fuel tank safety, were put in place to address the inspection and maintenance of these aircraft systems to prevent similar catastrophes in the future.

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 CMO and Great Lakes Regional Office failed to provide effective oversight of Northwest's compliance with ADs, including FTS safety. Mr. Lund further alleged that the oversight failure resulted in the airline's systemic non-compliance with ADs for approximately six years. See OSC File No. DI-08-2971.

The Department of Transportation's (DOT) Office of Inspector General (OIG) investigated the allegations and transmitted its report to OSC on December 14, 2009. The investigation substantiated most of the allegations and included a series of recommended corrective actions. The OIG 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."² See Enclosure A. The recommendations were accepted by FAA's Administrator. FAA responded that it would establish an Internal Assistance Capability (IAC) team no later than December 11, 2009, to oversee the timely completion of the recommendations. FAA also noted that it would update the OIG on the status of the agency's corrective actions on a bimonthly basis until they were completed.

The Whistleblowers' Present Allegations

Mr. Lund and Mr. Mirau allege that FAA officials have failed to ensure that Delta is in full compliance with the ADs and FARs governing FTS and EWIS maintenance programs. They contend that the airline's non-compliance presents a substantial and specific danger to public

²The DOT report is available online at OSC's website at www.osc.gov/publicfile1213agencyrpt.htm

ATTACHMENT 2: OSC COMPLAINT

The Special Counsel

The Honorable Ray LaHood

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safety through the use and operation of potentially unsafe aircraft. They state the danger to public safety is exemplified by an incident in January 2011 when a legacy Delta B757, N653DL, Ship 653, experienced an in-flight electrical wire failure that burned the aircraft's fuel tank system electrical wiring bundle. The airplane landed safely but the whistleblowers emphasize this incident demonstrates the importance of full compliance with the FTS and EWIS maintenance program requirements.

The whistleblowers allege specifically that FAA has failed to oversee Delta's compliance with AD requirements and 14 C.F.R. § 121.1113, for the FTS maintenance program, and 14 C.F.R. § 121.1111 for the EWIS maintenance program. Under 14 C.F.R. § 121.1111 the airline's incorporation of its EWIS maintenance program must be based on the EWIS Instructions for Continued Airworthiness (ICA) developed by the type certificate holder, i.e., Boeing or Airbus, as approved by the FAA Oversight Office, in this case, the Seattle Aircraft Certification Office (ACO). Similarly, under 14 C.F.R. § 121.1113 and 14 C.F.R. § 39.7, the airline's incorporation of its FTS maintenance program must be based on ICA developed by the type certificate holder, as required by Special Federal Aviation Regulation No. 38, and as approved by the Seattle ACO. The whistleblowers maintain that neither the EWIS nor the FTS maintenance programs comply with the ICA as discussed below. The whistleblowers state that they repeatedly conveyed their concerns regarding Delta's non-compliance with these requirements to FAA management officials, but, to date, corrective action has not been taken and Delta's compliance has not been ensured.

The whistleblowers allege that there is systemic non-compliance with Delta's EWIS and FTS maintenance programs across the fleet of Delta Boeing and Airbus aircraft. Mr. Lund states that the airlines are required to incorporate the language from the type certificate holder's developed ICA on the inspection and maintenance of the EWIS and FTS 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 reports that the language of some of the task cards presently used by Delta does not conform to the manufacturer's specifications and does not comply with FAA Aircraft Certification Office approved instructions. He states that no alternate language has been approved by FAA.

The whistleblowers report that in early March, prior to the EWIS compliance date of March 10, 2011, they informed Delta Supervisory Principal Avionics Inspector (SPAI) Sam Varajon that Delta's EWIS program was non-compliant for the B757, B767, MD80, MD90 aircraft fleets, and possibly other fleets. They report that Aviation Safety Inspector John Tamburi confirmed Mr. Lund's concerns and advised SPAI Varajon that Delta had not submitted all EWIS program documentation for FAA evaluation and approval. Mr. Lund was present for this conversation in SPAI Varajon's office. Despite notice from Aviation Safety Inspectors that Delta's EWIS program was non-compliant, SPAI Varajon sent a letter advising Delta that its EWIS programs was approved and instructed Keith Frable, Principal Maintenance Inspector, to issue an FAA Approved Operations Specification approving Delta's EWIS maintenance program on March 10, 2011.

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On April 26 and May 4, 2011, Mr. Lund wrote to Mr. David Gerken, Manager, Delta CMO, regarding his concerns with Delta's FTS compliance. On May 23, 2011, Mr. Lund met with FAA Flight Standards Directors John Allen and Ray Towles to discuss these same compliance concerns. At that meeting, Mr. Lund provided Mr. Allen with a draft document that identified deficiencies in Delta's FTS maintenance program that rendered the program non-compliant. For example, Mr. Lund stated that the language of some Delta FTS and EWIS maintenance task cards did not accurately provide the instructions for the ICAs developed by the type certificate holder, Boeing. A copy of the document Mr. Lund provided to Mr. Allen is enclosed. See Enclosure B. Mr. Lund contends that this systemic non-compliance across aircraft fleets demonstrates FAA's failure to properly oversee the airline's programs and ensure compliance with the safety requirements mandated for the FTS and EWIS programs.

In response to Mr. Lund's concerns, FAA convened the Southern Review Team in May 2011 to review the non-compliance issues he raised. Mr. Lund met with the review team on May 24, 2011. According to the information provided, this review confirmed Mr. Lund's findings of non-compliance. FAA also assembled an IAC team in June 2011 to review Delta's FTS and EWIS compliance issues. The IAC team confirmed Mr. Lund's non-compliance concerns. Despite these findings, Mr. Lund notes that no corrective action has yet been taken.³ Furthermore, the whistleblowers reported that as recently as June 2011, SPAI Varajon directed a review of Delta's FTS program but limited the scope of the review to the legacy Northwest B757 fleet despite the concerns that other Delta fleets were non-compliant.

Mr. Lund also contends that Delta's failure to comply with 14 C.F.R. §§ 121.1111 and 121.1113 demonstrates a failure of the airline's Continuing Analysis and Surveillance System (CASS) regulated under 14 C.F.R. § 121.373. Under the CASS 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. Mr. Lund asserts that Delta's systemic non-compliance highlights the airline's failure to effectively review and correct non-compliance and the failure of FAA mismanagement to properly oversee the airline and ensure compliance.

Finally, the whistleblowers allege that FAA has failed to complete OIG recommendations 1-3 of the OIG report dated December 7, 2009. Thus, these previously investigated and substantiated safety concerns remain outstanding. See Enclosure A. Mr. Lund also states that FAA Enforcement File No. 2009SO270159 for Northwest's FTS safety non-compliance has not yet been finalized through FAA as a non-compliance action against Delta. Further, he maintains

³Mr. Lund notes that he was invited to participate in the IAC team but asked to be removed, because his supervisor, SPAI Varajon, who had approved Delta's FTS and EWIS programs even though he knew they were non-compliant, was also on the team. Mr. Lund also noted that the FAA Memorandum to the IAC team setting forth the methodology noted that one of the IAC's tasks was to make recommendations on "matters of special interest to AFS top leadership regarding matters that, if unattended, may adversely impact the reputation of AFS management." Mr. Lund found the goal of protecting the reputation of management officials incompatible with a focus on safety necessary to ensure airline compliance.

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that despite the efforts of safety inspectors and the documented non-compliance in FAA Enforcement File No. 2010SO270173 against Delta Airbus A320 aircraft for failing to comply with FTS safety requirements, and FAA Enforcement File No. 2011SO275199 against legacy Delta B757 for failing to comply with the FTS requirements of December 2008, corrective measures have not been implemented and the airline remains non-compliant.

Copies of the documents provided by Mr. Lund are enclosed. See Enclosure C. The whistleblowers are available to provide additional information including examples of non-compliance as well as documentation for investigators.

As noted above, FAA is aware of the whistleblowers' safety concerns and has conducted some investigation and review into these issues. The whistleblowers also note that FAA is in the process of conducting a review of Delta's AD compliance and an audit of the EWIS program. In light of the whistleblowers' allegations and FAA's prior assurance that it would implement the recommendations made by the OIG, OSC contacted the DOJ's Office of General Counsel for information on the status of FAA's corrective actions and status and scope of FAA's review of Delta's AD compliance. Although the Office of General Counsel has referred OSC's inquiry to FAA, in view of the safety implications and the continuing non-compliance, I am referring these allegations.

I have concluded that there is a substantial likelihood that the information the whistleblowers provided to OSC discloses a violation of law, rule, or regulation, gross mismanagement, an abuse of authority, and a substantial and specific danger to public safety. As previously stated, I am referring this information to you for an investigation of the whistleblower's allegations and a report of your findings within 60 days of your receipt of this letter. By law, the report must be reviewed and signed by you personally. Nevertheless, should you delegate your authority to review and sign the report to the Inspector General, or any other official, the delegation must be specifically stated and must include the authority to take the actions necessary under 5 U.S.C. § 1213(d)(5). The requirements of the report are set forth at 5 U.S.C. § 1213(c) and (d). A summary of § 1213(d) is enclosed.

As a matter of policy, OSC also requires that your investigators interview the whistleblower as part of the agency investigation when, as in this case, the whistleblowers have consented to the release of their names. Where specific violations of law, rule, or regulation are identified, these references are not intended to be exclusive. Further, in some cases, whistleblowers who have made disclosures to OSC that are referred for investigation pursuant to 5 U.S.C. § 1213 also allege retaliation for whistleblowing once the agency is on notice of their claims. I urge you to take all appropriate measures to ensure that those reporting wrongdoing are protected from such retaliation and other prohibited personnel practices, including informing those charged with investigating the whistleblower's allegations that retaliation is unlawful and will not be tolerated.

As required by 5 U.S.C. § 1213(e)(2), I will send copies of the report, along with any comments on the report from the whistleblowers and any comments or recommendations from

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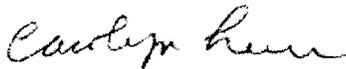
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me. to the President and the appropriate oversight committees in the Senate and House of Representatives. 5 U.S.C. § 1217(e)(3). Unless classified or prohibited from release by law or by Executive Order requiring that information be kept secret in the interest of national defense or the conduct of foreign affairs, OSC will place a copy of the report and any comments in a public file in accordance with 5 U.S.C. § 1219(a). To prevent public disclosure of personally identifiable information (PII), OSC requests that you ensure that the report does not contain any sensitive PII, such as Social Security numbers, home addresses and telephone numbers, personal e-mail addresses, dates and places of birth, and personal financial information. OSC does not consider names and titles to be sensitive PII requiring redaction. Agencies are requested not to redact such information in reports provided to OSC for the public file.

Please refer to our file number in any correspondence on this matter. If you need further information, please contact Catherine A. McMullen, Chief, Disclosure Unit, at (202) 354-3694. I am also available for any questions you may have.

Sincerely,



Carolyn N. Lemer

Enclosures

ATTACHMENT 3: FAA ACTION PLAN


**Federal Aviation
Administration**

Memorandum

Date: **SEP 29 2011**

To: Ronald Engler, Director, Special Investigations, JI-3

From: Clay Foushee, Director, Audit and Evaluation, AAE-1 *[Signature]*

Prepared by: Ron Katana, AFS-10, x77220

Subject: **High Standards Service (AFS) Plan of Action for Recommendations in the Internal Assistance Capability (IAC) Team Report (June 2-9, 2011)¹; Aviation Maintenance Safety Allegations – Delta Air Lines, Inc.**

This memorandum is provided for your further consideration and in support of your pending reply to the July 22, 2011, U. S. Office of Special Counsel (OSC) referral letter.² Your Office is already analyzing and assessing much of this information recently obtained during individual interviews and data collection efforts with staffs from the affected AFS certificate management office (CMO), regional division, and headquarters policy divisions. Since that time, the Executive Officer consolidated and supplemented that information for review and validation by the AFS management team. Below is a summary of those specific plans of actions identified, taken, or underway corresponding to each of the IAC team's findings and recommendations.

Allegation 1: The reporting aviation safety inspector (ASI) alleged the operator is not in compliance with Airworthiness Directive (AD) 2008-10-11, which mandates airworthiness limitations to include critical design configuration control limitation (CDCCL).

IAC Team Recommendation: The Certificate Management Office (CMO) should ensure the operator reviews their Technical Operations Policies and Procedures (TOPP) manuals associated with Enhanced Airworthiness Program for Airplane Systems (EAPAS)/Fuel Tank safety FTS program implementation, including all Airworthiness Limitation Items (ALI)/CDCCL requirements.

AFS Response and Action: The CMO has taken the following actions in response to the administrative concerns identified by the IAC team:³

- Established an Air Transportation Oversight System (ATOS), System Analysis Team (SAT) to determine the operator's administrative compliance with all FTS AD's that have been

¹ See Attachment 1. Comprised of aviation safety experts from AFS and the Aircraft Certification Service (ACS) and conducted an on-site review of the operator's compliance with Airworthiness Directives (AD), with emphasis on the operator's fuel tank safety programs and its B-757 series fleet. The team used a problem-solving, risk-based approach, framing the underlying concerns into five distinct allegations, and resulting in team findings and corresponding recommendations.

² OSC File Nos. DI-11-2238 and DI-11-2709.

³ See Attachment 2. Contains information from the affected regional division and CMO, dated September 19 and 26.

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issued for the current fleets. This review of all FTS AD requirements will ensure and demonstrate all FTS requirements, including ALI/CDCCL requirements, have been appropriately documented. The review is projected to be completed by December 31, 2011.

- Conducted an audit of the operator's task cards for one representative aircraft series of the current fleet. As a result of this audit, enforcement action was initiated for the operator's apparent violations involving the FTS and Electrical Wiring Interconnection Systems (EWIS) maintenance programs.⁴ The audit findings represent administrative concerns involving operator transcription errors between the source document and the task cards. None of the findings represent a safety of flight hazard. Following the completion of the audit and initiation of enforcement action, the CMO directed the operator to replicate the audit for all remaining fleet types, report the results, and provide a comprehensive corrective action plan to prevent recurrence. The operator committed to completing these actions by December 31, 2011.
- Decided to issue Constructive Dynamic Observation Reports (ConDOR) for CMO ASIs to evaluate the effectiveness of the FTS and EWIS maintenance program task cards. This review will begin during first quarter of FY 2012.

Allegation 2: The reporting ASI alleged the Federal Aviation Administration (FAA) issued Operations Specification (OPSS) D097 for the operator EWIS with known deficiencies.

IAC Team Recommendation #1: Inspectors should disclose safety concerns as soon as they are identified.

IAC Team Recommendation #2: If an inspector can not resolve or is not comfortable working directly with their supervisor, the inspector should utilize the Safety Issues Reporting System (SIRS).

IAC Team Recommendation #3: The Office of Audit and Evaluation (AAE) and Aviation Safety (AVS) should re-familiarize the workforce with SIRS and its three reporting levels.

AFS Response and Action: Disclosing and reporting of safety concerns, to include the use of the SIRS process to raise a potential yet unresolved safety issue to management, will be further reinforced and enhanced as part of a new inspector course. In this regard, the concerns contained in these recommendations will be integrated into the new recurrent advanced compliance and enforcement training course for experienced inspectors already under development by the AFS Training Division (AFS-500) and co-sponsored by the Office of Chief Counsel, Enforcement Division (AGC-300). AFS-500 will partner with AAE to ensure this training material fully reflects and builds upon the existing SIRS program policy and guidance, and the existing SIRS Overview training course.⁵ AFS-500 anticipates completing all course material and conducting the course walk through beginning November 29, 2011. The release of the course prototype is projected for May 31, 2012.

⁴ Enforcement Investigative reports (EIR) 2011SQ275337 and 2011SQ275338, dated August 19, 2011.

⁵ Course FAA2700002 - the Department of Transportation electronic learning management system (eLMS)

ATTACHMENT 3: FAA ACTION PLAN

IAC Team Recommendation #4: AAF and AVS should encourage the importance of communication between the ASIs and the Aircraft Certification (AIR) safety engineers as soon as safety concerns are suspected.

AFS Response and Action: The Aircraft Maintenance Division (AFS-300) provided some recent examples demonstrating how the communication network between ASIs and AIR Safety Engineers has been strengthened and encouraged:

- During March and June 2010, the FAA conducted briefings with AFS inspectors and AIR engineers regarding the implementation of the AIR Transport Airplane Directorate's "24-7" availability. The "24-7" process: (1) Assists AFS inspectors in responding to urgent requests for alternative methods of compliance (AMOC) for ADs; (2) Identifies personnel available from both the AFS Aircraft Evaluation Group (AEG*) and AIR Aircraft Certification Office (ACO) to communicate with inspectors outside normal business hours and when there is an urgent need for an AMOC affecting multiple aircraft; (3) Reinforces the importance of early communication between inspectors and their respective AEG counterparts when a technical issue first arises from an AD and/or requires an AMOC; and (4) Allows for coordinated communication between inspectors in the field, the AEG, and the ACO.
- Inspector guidance (FAA Order 8900.1 - Flight Standards Information Management System (FSIMS)), has been created and/or updated to specifically address and emphasize the importance of strengthened communication, regarding AEG roles, responsibilities and outreach, as well as related guidance to aid inspector decision making. These include:
 - **AEG Roles and Responsibilities:** Volume 8 - General Technical Functions, Chapter 2 - Technical Groups, Boards, and National Resources, Section 2 - Aircraft Evaluation Groups.
 - **AEG Outreach:** Volume 8 - General Technical Functions, Chapter 2 - Technical Groups, Boards, and National Resources, Section 9 - Aircraft Evaluation Group Outreach in the Airworthiness Directives Process.
 - **ASI Decision Making:** Volume 3 - General Technical Administration, Chapter 60 - Process Procedures For Aviation Safety Inspector Decision Making Regarding Airworthiness Directive Compliance, Section 1 Aviation Safety Inspector Decision Making. This inspector guidance was published in April 2011, and is currently being updated to further support inspectors.

Allegation 3: The reporting ASI alleged the Air Transportation Oversight System (ATOS) ConDOR, developed from Element Performance Inspection (EPI) 1.3.1 (Maintenance Program) and assigned from May 2010 through October 2010 was not the appropriate FAA process to obtain a complete evaluation (recertification) of the operator's compliance with FTS ADs and 14 CFR Part 121.1113.

IAC Team Recommendation: The Flight Standards National Field Office (AFS-900) should review the data collection tools (DCTs) for element 1.3.1 to determine if they need to be revised based on the administrative concerns noted above about the FTS.

* The AEG is the designated AFS liaison with the ACO to determine if an AMOC is necessary.

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AFS Response and Action: AFS-900 determined: (1) The DCTs, as required, conform to existing policy and inspector guidance; however (2) The DCTs will require revisions once the in-progress updates of Advisory Circular (AC) 120-97 and the accompanying inspector guidance (FAA Order 8900.1 FSIMS) are published. AFS-900 anticipates publishing the related revised DCTs by September 2012, following the projected March 2012 release of the amended AC and inspector guidance (See AFS Action for Allegation 4 Recommendations).

Allegation 4: The reporting ASI alleged the operator's (North's) Engineering Mandatory (EM 2821-01075) document does not account for all AD 2008-10-11 requirements even though it states it does.

IAC Team Recommendation #1: The FAA should provide recurrent training on the Enhanced Airworthiness Program for Airplane System/Fuel Tank Safety (EAPAS/FTS) rule to ASIs in certificate management offices (CMOs) to ensure consistency and understanding;

AFS Response and Action: AFS-300 confirmed the need to revise the existing ASI training course on the EAPAS/FTS rule. In this regard, AFS-300: (1) Submitted the training request (course sponsor) for development with the AFS Training Division (AFS-500); and (2) Elevated and formally designated the training request as its top division priority to receive the necessary AFS-500 resources to best ensure the course is completed and available for recurrent training during the 4th quarter of 2012. The development and completion of the course revision is dependent upon the completion of the guidance described below (See AFS Action for Allegation 4- IAC Team Recommendation #2).

IAC Team Recommendation #2: The FAA should amend AC 120-97 (*Incorporation of FTS Instructions for Continued Airworthiness into the Operator maintenance or Inspection program*) to clarify operators incorporate all maintenance planning document (MPD) AWL section 9 fuel system program requirements into their maintenance program.

AFS Response and Action: AFS-300's review concurred with the IAC team's recommendation. In this regard, AFS-300 is revising AC-120-97 on *Incorporation of Fuel Tank System Instructions for Continued Airworthiness into Operator Maintenance or Inspection Programs* and the accompanying inspector guidance in FAA Order 8900.1 (FSIMS). AFS-300 anticipates completing and published both documents by March 2012.

Allegation 5: The operator failed to follow program rules for implementing EWIS SFAR 88 program rules as required by 14 CFR §§121.1111 and 121.1113, and listed in Boeing 757 Maintenance Review Board Report (MRBR):

IAC Team Recommendation #1: The CMO should ensure the operator adds SFAR 88 identification to the applicable ATA 28 tasks as required by MRBR SFAR 88 program rules.

AFS Response and Actions: The operator's Maintenance Programs department is conducting a comprehensive review of all Enhanced Zonal Analysis Procedures (EZAP) and SFAR 88 driven tasks recorded in the PMDB in order to identify those required tasks missing this identification. The operator committed to completing this review by December 31, 2011.

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IAC Team Recommendation #2: The CMO should ensure the operator's tasks and job cards contain all of the information required by AD 2008-10-11.

AFS Response and Action: The CMO obtained the operator's commitment to revise the applicable TOPP sections and to ensure the revision and escalation procedures are complete. In this regard, the AD SAT review will ensure the task cards include all the information required by the FTS AD applicable to each fleet. Both actions are projected to be completed by December 31, 2011.

Attachments

ATTACHMENT 3: FAA ACTION PLAN


**Federal Aviation
Administration**

Memorandum

Date: September 19, 2011
 To: Ray Towles, Deputy Director, Flight Standards, AFS-2F
 Thru: Thomas A. Winston, Manager, Flight Standards Division, ASO-200
 From: Manager, DAL-CMO
 Subject: Clarification of findings from the Joint Internal Assistance Capability Onsite Review (IAC), conducted June 2-9, 2011

The Delta CMO submits the following clarifications to our August 26, 2011 Memorandum; specifically IAC team recommendations numbers 1 and 5.

IAC Team finding for Allegation #1:

Technical Aviation Safety Matters – the Team did not substantiate this allegation.
Administrative Concerns – several administrative discrepancies were identified; however, the Team determined that none represented a safety of flight concern.
IAC Team Recommendation – The CMO should ensure Delta reviews their TOPP manuals associated with Enhanced Airworthiness Program for Airplane Systems (EAPAS)/Fuel Tank Safety (FTS) program implementation, including all Airworthiness Limitation Items (ALI)/Critical Design Configuration Control (CDCCL) requirements.

Delta CMO action plan with milestones and deadlines:

To affect a ground up review of all FTS AD requirements, the DALA / CMO has joined with Delta Air Lines Inc. (DALA) in a Air Transportation Oversight System (ATOS), System Analysis Team (SAT) to review the applicable DALA Engineering and other supporting documents to determine administrative compliance with all AD's that have been issued against the current DALA fleets. This action will ensure all FTS requirements, including ALI/CDCCL requirements have been appropriately documented.
 The projected completion date for the FTS AD's is December 31, 2011.

An audit of DALA's maintenance task cards was conducted by this office. The audit resulted in the initiation of two (2) Enforcement Investigation Reports (2011SO275337 for FTS, and 2011SO275338 for EWIS). Identified administrative concerns include instances where the operator made transcription errors between the source document and their task cards. Most of the errors involve the operator not using the exact language from the source documents, but none of

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these concerns pose a safety of flight hazard. Since this review was done against one representative fleet, this office is requiring DALA to evaluate these concerns against all fleet types, to determine if they are systemic, and provide a comprehensive corrective action plan to prevent recurrence. DALA has committed to addressing these concerns across all fleets by December 31, 2011.

This office will issue Constructive Dynamic Observation Reports (ConDOR) for our Inspectors to evaluate the performance of the FTS/EWIS maintenance program task cards beginning in the first quarter of FY 2012.

IAC Team finding for Allegation #5:

Technical Aviation Safety Matters - None.

Administrative Concerns - the Team substantiated 2 of the 4 issues raised; however, the Team determined that none represented a safety of flight concern.

The substantiated concerns were allegation numbers:

- 5(1) Delta did not seek FAA approval to remove the SFAR 88 and Enhanced Zonal Analysis Procedure (EZAP) identification from the time control Program Management Data Base (PMDB) Air Transport Association Fuel Systems (ATA) 28 task description.
- 5(3) Delta's Technical Operations Policy and Procedure manual (TOPP) does not appropriately address EWIS task revision or the Escalation Procedures.

IAC Team Recommendation - The CMO should ensure:

- (1) Delta adds SFAR 88 identification to the applicable ATA 28 tasks as required by MRBR SFAR 88 program rules; and
- (2) Delta's tasks/job cards contain all of the information required by AD 2008-10-11.

Delta CMO action plan with milestones and deadlines:

(1) DALA Maintenance Programs department is conducting a comprehensive review of all Enhanced Zonal Analysis Procedures (EZAP) and SFAR 88 driven tasks recorded in the PMDB to ascertain which required tasks are missing this identification. DALA has stated that the regulatory basis for these tasks (14 CFR 121.1111/121.1113) has to date always been recorded with in the PMDB even in the examples where the EZAP/SFAR 88 tags were missing. The projected completion date for this activity is December 31, 2011.

(2) DALA has committed to revising the applicable TOPP sections to ensure the revision and escalation procedures are complete. The AD SAT project will ensure DALA's task cards include all the information required by the FTS AD applicable to each fleet. Both commitments are projected to be completed by December 31, 2011.

ATTACHMENT 3: FAA ACTION PLAN


**Federal Aviation
Administration**

Memorandum

Date: August 26, 2011

To: Thomas Winston, ASO-200

From: Thomas Stachiw, Manager DAL CMU-27

Prepared by: Sam Varajon, Supervisory Principal Avionics Inspector (DAL CMU-27)

Subject: Actions taken to address allegations of Non-Compliance with the Fuel Tank Safety (FTS) and Electrical Wiring Interconnection Systems (EWIS) program.

The Delta Air Lines Inc. Certificate Management Office (DALA / CMU) has conducted a thorough assessment of the substantiated findings from the two investigative bodies, the Southern Region (ASO) Investigation Team and the Joint Internal Assistance Capability Onsite Review team (IAC). The findings cover both the Fuel Tank Safety (FTS) requirements mandated by Airworthiness Directive (AD)¹, and the Electrical Wiring Interconnection Systems (EWIS) required by rule². To affect a comprehensive corrective action plan, this office has engaged two major review initiatives. The outcome of these initiatives will result in a clear picture of DALA's compliance status. Enforcement Investigative Reports (EIR) were generated, when warranted, to require DALA to correct any instances of non-compliance. A summary of the ASO and IAC findings can be found in attachment #1 and #2 of this memorandum with footnote references to the defined corrective action plan that follows.

1. To affect a ground up review of all FTS AD requirements, the DALA / CMU has joined with Delta Air Lines Inc. (DALA) in a Air Transportation Oversight System (ATOS), System Analysis Team (SAT) to review the applicable DALA Engineering and other supporting documents to determine administrative compliance with all AD's that have been issued against the current DALA fleets.

The SAT will conduct an in-depth comprehensive AD review that will include the FTS program AD's for each fleet that were not previously reviewed³. The SAT Team has positioned the FTS AD's ahead of their schedule for immediate review to accommodate

¹ Airworthiness Directives that affect the DALA fleet are: 2007-15-06(r1), 2007-14-01, 2008-11-01, 2008-11-13, 2008-10-06(r1), 2008-10-10(r1), 2008-10-11, 2008-11-13.

² 14CFR part 121.1113, Electrical Wiring Interconnection Systems (EWIS) Maintenance Program.

³ The AD SAT addendum, dated February 23, 2011 exempted the FTS AD's that had previously been reviewed by the 2010 ACEP inspection and/or the Legacy NWA/DAL Engineering Mandatory Review Board.

ATTACHMENT 3: FAA ACTION PLAN

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this project. The projected completion date for these AD's is December 31, 2011. Our office will deploy additional Inspectors to assist in this review. This action will ensure the FTS AD requirements were accurately transcribed into the work documents; that all initial and repetitive requirements are scheduled, and all maintenance was properly recorded.

2. Since some of the findings were departures from DALA's manual system and not directly related to the FTS AD or EWIS rule, a 100% review of a representative fleet's maintenance task cards was conducted by this office. The B-757 fleet was emphasized in the findings and was therefore selected for this comprehensive review. The DALA CMU assembled a team of four (4) Aviation Safety Inspectors from the Avionics specialty to conduct the audit and ensure the FTS and EWIS requirements were completely incorporated in the DALA Maintenance Program in accordance with the Federal Aviation Administration Directives / Guidance. This audit was completed on August 18, 2011.

The audit uncovered sufficient deficiencies in the FTS and EWIS programs that warranted the initiation of Enforcement Investigation Reports (EIR) for correction⁴. The deficiencies represent apparent regulatory non-compliance, but do not pose a safety of flight concern. Since this review was done against one representative fleet, this office is requiring DALA to evaluate these deficiencies against all fleet types, to determine if these deficiencies are systemic, and provide a comprehensive corrective action plan to prevent recurrence. The deficiencies noted during the review are wide ranging in nature and some may result in a mechanic performing the task incorrectly. DALA has committed to addressing this category of deficiencies across all fleets by December 31, 2011. In the event that DALA identifies any deficiencies during the review in the above category, DALA will issue an Alert Bulletin to notify affected employee groups of the deficiency as well as instructions for corrective action. The remainder of these deficiencies, which are apparent administrative errors, will be addressed across all fleet types by April 30, 2012. This office will issue Constructive Dynamic Observation Reports (CONDOR) for our Inspectors to evaluate the effectiveness of the FTS/EWIS maintenance program task cards beginning in the first quarter of FY 2012.

⁴ EIR numbers 2011SO275337 and 2011SO275338 were initiated on August 19, 2011.

ATTACHMENT 4: FAA ACTIONS TO ADDRESS OIG'S 2009 REPORT**Federal Aviation
Administration**

Memorandum

Date:

To: Lou E. Dixon, Assistant Inspector General (OIG) for Aviation and Special Program Audits, JA-10

From: Raymond Towles, Deputy Director, Flight Standards Service, AFS-2F

Prepared by: Rick Domingo, Acting Division Manager (AWP-200) and IAC Team Lead, (310) 725-7200

Subject: FAA Oversight of Airworthiness Directive (AD) Compliance at Northwest Airlines, Project No. 09A1002A000 - Internal Assistance Capability (IAC) Team Status Final Update

Attachment 1 reports our actions in fulfillment of the five recommendations provided by your office. For convenience, we've consolidated and updated the information in our previous interim replies so Attachment 1 addresses each of the five recommendations. In addition, we've provided Attachments 2 and 3 as further support of the described actions. Thus, Attachment 1 presents our final update.

Attachments

ATTACHMENT 4: FAA RESPONSE TO 2009 OIG REPORT RECOMMENDATIONS

Attachment 1

FAA Oversight of Airworthiness Directive (AD) Compliance at Northwest Airlines Project No. 09A1002A000 – Internal Assistance Capability (IAC) Team Report

Background: This attachment addresses the FAA's actions in response to the five OIG recommendations. Attachment 2 is a draft report dated May 21, 2010, entitled "Results of 2010 Air Carrier Evaluation Program Inspection at Delta Airlines (Northwest Legacy Operations)" that was prepared independently by the AFS Analysis and Information Staff (AFS-20). Attachment 3 is a memorandum dated May 19, 2010 entitled "Northwest Airlines (NWA) System Analysis Team (SAT)/Airworthiness Directive (AD) Verification and Effectiveness," prepared by the FAA's Delta Air Lines Certificate Management Office (CMO).

OIG Recommendation #1: Determine why inspectors did not identify significant systemic issues in Northwest's AD program during the February 2008 Safety Attribute Inspection (SAI) and whether changes to the SAI checklist for AD programs are needed to more effectively identify potential systemic deficiencies in air carrier programs.

FAA Response: As described in greater detail in Attachments 2 and 3, an independent Design Assessment (DA) using the SAI on AD management of the (former) Northwest Airlines operations (hereinafter referred to as the "Northwest Legacy Operations") was conducted by a national Air Carrier Evaluation Process (ACEP)¹ team during the period January 12 through March 31, 2010.² Working under the auspices of the AFS Certification and Surveillance Division (AFS-900), the ACEP team determined the SAI checklist for AD programs was an effective tool to identify potential systemic deficiencies and AD noncompliance of Northwest Legacy Operations. In support of the determination, the ACEP team found the following as prime examples of the effectiveness of the SAI checklist:

1. Regarding the AD noncompliance rate:
 - For the A-319/320 fleet, the AD noncompliance rate was 26 percent;
 - For the A-330 fleet, the AD noncompliance rate was 0 percent;
 - For the B-747 fleet, the AD noncompliance rate was 10 percent;
 - For the B-757 fleet, the AD noncompliance rate was 29 percent;
 - For the DC-9 fleet, the AD noncompliance rate was 7 percent; and
 - Across all fleets, the AD noncompliance rate was 16 percent.

2. Regarding the 2008 Special Emphasis Validation of Airworthiness Directive Oversight, an overall AD noncompliance rate of 2.17 percent was noted across 113 operators studied, which included the Northwest Legacy Operations' AD noncompliance rate of 10.33 percent (eighth highest among carriers studied).³

OIG Recommendation #2: Require inspectors to perform the AD program SAI scheduled for FY 2010 at Northwest independently of Delta Air Lines so problems in the carrier's system are not overlooked.

FAA Response: As described in greater detail in Attachments 2 and 3, an independent DA, using the SAI on AD management of the Northwest Legacy Operations, was conducted by a national ACEP team.

¹ The ACEP is led by an AFS-900 national program manager and assistant manager plus a team of 10 members (including 2 team leaders). All team members are experts in either avionics or maintenance.

² The ACEP began on January 12 following the December 29, 2009 merger of Delta Air Lines and Northwest Airlines into one carrier and certificate. Using the various process tools and methods while conducting the ACEP, the ACEP team did not determine the reason why inspectors did not identify significant issues in Northwest Legacy Operations from the February 2008 SAI. As such, the ACEP team focused on assessing the current program.

³ Source: AFS Analysis and Information Staff, AFS-20.

ATTACHMENT 4: FAA RESPONSE TO 2009 OIG REPORT RECOMMENDATIONS

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OIG Recommendation #3: By March 31, 2010, conduct an independent review of Northwest's AD program to include the following:

- a. 10-percent sampling of ADs not previously reviewed by the CMO during the AD special emphasis review. If significant noncompliance continues to be identified, expand the review to 100 percent.
- b. Verification that actions taken in response to Letters of Correction and System Analysis Team (SAT) recommendations were implemented and are effective.
- c. Review of Northwest's parts configuration control procedures.
- d. Verification that Northwest's audit process (Engineering Mandatory Review Board) implemented in 2007 is being conducted before AD compliance dates.
- e. Assurance that the fuel tank programs for all Northwest fleets comply with the ADs for Fuel Tank System Maintenance Program and FAR 121.1113C.
- f. Assurance that Northwest takes adequate corrective actions if substantial noncompliance is found.

FAA Response: As described in greater detail in Attachments 2 and 3, the national ACEP team conducted structured Air Transportation Oversight System (ATOS) DA and Performance Assessments (PA) using ATOS data collection tools. Specific responses to each of the six items (a through f) are as follows:

Regarding 3a, the national ACEP team conducted a DA, using the SAT, and a PA, using the Element Performance Inspection (EPI), including a special emphasis compliance audit for 10 percent of the ADs for each Northwest Legacy Operations' fleet.³ The ACEP team also performed on-wing compliance inspections for eight ADs. (For a comparison of the findings regarding the Northwest Legacy Operations' fleet, see Tables 1 and 2 found in Attachment 2.) In this regard, the Delta Air Lines CMO has taken the following actions in response to the national ACEP team's findings:

1. Initiated enforcement action via three Letters of Investigation (LOI) for the following AD-related violations for the Northwest Legacy Operations' fleet:
 - A-319 - Sliding Window Flight Deck (AD 01-26-20), Enforcement Investigation Report (EIR) (see # E2010SO275012);
 - DC-9 - Crack Lower Left Nose Longerons and Attach Frames (AD 98-24-33) (see EIR # E2010SO275015); and
 - DC-9 - Installed an unapproved flexible potable water hose (AD 98-22-13) (see EIR# E2010SO270133).
2. The CMO sent a letter dated May 11, 2010, to Delta Air Lines identifying program deficiencies and initiated an ATOS Risk Management Process (RMP) on Delta Air Lines' AD management.

Regarding 3b and as described in greater detail in Attachment 3, the Delta Air Lines CMO worked with the Northwest Legacy Operations to improve its AD verification program. This program was established on October 23, 2009, as part of a Northwest CMO joint SAT with Northwest Legacy Operations.

³ Working with the Delta Air Lines CMO, the ACEP team performed an Assessment, Determination, and Implementation (ADI) process.³ In this regard, the ACEP team found only significant technical noncompliance issues (i.e., documentation concerns). The ACEP team did not find significant safety non-compliance issues. As such, the ACEP team did not expand the review to 100 percent.

ATTACHMENT 4: FAA RESPONSE TO 2009 OIG REPORT RECOMMENDATIONS

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Regarding 3c and as described in greater detail in Attachments 2 and 3, the ACEP team inspection completed a Constructed Dynamic Observation Report (ConDOR) for parts material control. The ACEP team found no adverse findings.

Regarding 3d and as described in greater detail in Attachments 2 and 3, the ACEP team inspection completed a ConDOR involving engineering major alterations and repair accomplishment. The ACEP team found one noncompliance related to documentation but required no further action.

Regarding 3e and as described in greater detail in Attachments 2 and 3, the ACEP team inspection completed a ConDOR involving fuel tank AD accomplishment (AD 97-03-17) resulting in an EOI regarding fuel tank safety (see EIR # E-2010SO275014). The CMO also initiated an RMP in this area to all Delta Air Lines fleets.

Regarding 3f and as described in greater detail in Attachment 2 and 3, the Delta Air Lines CMO, as a result of the ACEP findings, has issued Delta Air Lines multiple EIRs, RMPs, and a general letter to address the findings from the ACEP inspection. The Delta Air Lines CMO determined the ACEP team findings warrant a further review of the operator to ensure continuing compliance. In this regard, the CMO initiated an ATOS RMP (tracking number G2010-05-5005) to fully identify the hazards, analyze and assess the risk, make and implement decisions, and validate the effectiveness of the decisions.

OIG Recommendation #4: Consider taking administrative action against the Principal Avionics Inspector (PAI) for improperly approving the Operations Specification for Fuel Tank System Maintenance Program and extending AD and FAR required compliance dates.

FAA Response: In consultation with the regional servicing Human Resource Management Division and the Office of the Regional Counsel and after evaluating the PAI's response to the proposal notice, the AFS Southern Region Deputy Division Manager (ASO-201) issued a 3-day suspension to the PAI. Subsequently, the PAI served the 3-day suspension.

OIG Recommendation #5: Consider taking administrative action against the CMO manager for accepting voluntary disclosures during the special emphasis review and incorrectly reporting a noncompliant AD as compliant.

FAA Response: After receiving a notice of proposed 10-day suspension on January 29, 2010, the CMO manager requested and was granted an extension to provide a response. Subsequently, the CMO manager voluntarily retired effective February 26, 2010.



Federal Aviation Administration

Memorandum

Date: NOV 15 2011

To: Ronald Engler, Director, Special Investigations, JI-3

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

Subject: Office of Inspector General (OIG) Investigation #I11A004SINV, dated November 2, 2011, Re: FAA Oversight of Delta Airlines Fuel Tank Safety and Electrical Wiring Interconnection System Maintenance Programs (U.S. Office of Special Counsel (OSC) File Nos. DI-11-2238 and DI-11-2709



This is in response to your November 2, 2011, memorandum regarding the above-referenced OIG investigation. You requested that the Federal Aviation Administration (FAA) review the findings and provide a response to your office with any comments, statement of any corrective action taken, and the timeframe for any planned corrective action.

The FAA concurs with OIG's findings.

In response to the determinations detailed in your report for each substantiated allegation, the FAA prepared specific comments and updated plans of action and milestones for your consideration (see attachment dated November 8, 2011). Please note that the attachment further supplements the FAA September 29, 2011, memorandum describing the plans of action and milestones already underway as prepared by the affected certificate management office, regional division, and headquarters policy divisions.

Attachment:

Response to OIG Investigation Report #I11A004SINV

cc: J. Randolph Babbitt, AOA-1



Federal Aviation Administration

Memorandum

Date: **NOV 8 2011**

To: John Allen, Director, Flight Standards Service, AFS-001
THRU: Michael McCafferty, Manager, Flight Standards Service, AFS-010

From: Thomas A. Winston, Division Manager, So. Region Flight Standards, ASO-200
Thomas A. Winston

Prepared By: Tom Stachiw, Manager, Delta Certificate Management Office, CMO-27

Subject: Response to OIG Investigation Report #I11A004SINV

Southern Region Flight Standards Division has reviewed OIG investigative report I11A004SINV, dated November 2, 2011, and concurs with the OIG's synopsis, as outlined on page five. Below is a status update to the corrective actions identified in the OIG investigative report.

Allegation #1: (substantiated), corrective actions beginning on page 7

The CMO and Delta Airlines will make FTS ADs a priority as part of an on-going joint review of all ADs. The review will ensure that all AD requirements are accurately transcribed in work documents, all initial and repetitive requirements are scheduled, and all maintenance properly recorded. FAA projects the review will be completed by December 31, 2011.

Update: Delta has rearranged the priority of AD's subject to review by the AD SAT team to ensure all **Fuel Tank Safety** AD's are reviewed by December 31, 2011. This commitment is documented in Delta letter 11-T30, dated October 21, 2011.

Prior to the whistleblowers' OSC complaint, in April 2011, the CMO began an audit of FTS and EWIS maintenance task cards for the B757 fleet. The audit was completed on August 18, 2011, and uncovered enough deficiencies to warrant initiation of an Enforcement Investigation Report. As a result, the CMO has initiated the following:

For FTS AD deficiencies that may result in a mechanic performing a task incorrectly, the CMO has required Delta to evaluate these deficiencies against all fleet types to determine if they are systemic. Delta has committed to completing this review by December 31, 2011.

Update: Delta has completed the review and, in collaboration with this office, has finalized a corrective action plan. The corrective action plan for revising the task cards is documented in

Delta Engineering Report 10-100511-20, dated October 12, 2011 and being coordinated with Delta CMO.

For FTS and EWIS administrative errors, Delta will address them across all fleet types and prepare a comprehensive corrective action plan by December 31, 2011.

Update: The corrective action plan for revising the task cards is complete and is documented in Delta Engineering Report 10-100511-20, dated October 12, 2011 and being coordinated with the Delta CMO.

CMO inspectors will evaluate the effectiveness of the FTS and EWIS maintenance task cards beginning first quarter FY 2012.

Update: ATOS Constructed Dynamic Observation Report (CONDOR) inspections have been assigned to Inspectors to evaluate the effectiveness of the FTS/EWIS program at Maintenance and Repair Organizations (MRO) in the first quarter of 2012. The following CONDOR's were issued: ID #2145964/2145968 in Hong Kong, 2145965/2145969 in Peking, 2145966/2145970 in Guadalajara.

Delta is conducting a comprehensive review of all Enhanced Zonal Analysis Procedures (part of EWIS) and SFAR 88 driven tasks in its records to ensure they are properly identified. FAA projects this task will be completed by December 31, 2011.

Update: These corrections will be incorporated concurrent with the corrective action plan as defined in Delta Engineering Report 10-100511-20, dated October 12, 2011.

FAA will revise its inspection data collection tool (EPI 1.3.1) for FTS and EWIS to address the administrative concerns...

Update: The DCTs will be revised once the in progress update of advisory circular (AC 120-97) and the accompanying inspector guidance (FAA Order 8900.1 FSIMS) are published by the AFS-300 policy division. AFS-900 anticipates publishing the related revised DCTs by September 2012, following the projected March 2012 release of the amended AC and inspector guidance.

Allegation #2: (not substantiated), corrective action beginning on p. 8

Prior to the SPAI's approval of Delta's EWIS maintenance program, one of the whistleblowers identified discrepancies in the B757 task cards, which he believed represented Delta's non-compliance with EWIS requirements. The SPAI believed the discrepancies were administrative in nature, did not impact the safe implementation of the EWIS program, and could be addressed through subsequent management of the program. To address his administrative concerns, in April 2011, the SPAI requested a 100 percent audit of all B757 EWIS task cards. This review identified that 63 percent of the Legacy Northwest and seven percent of the Legacy Delta task cards contained discrepancies when compared to the Boeing ICA documents. For example, the task card might instruct the mechanic to the proper area, but perform a "General Visual Inspection" instead of "Internal General Visual Inspection." Also, some task cards failed to

identify the zone number where the inspection was to be performed (e.g., "Zone 711"), although the card may include the name of the specific zone (e.g., "nose landing gear").

Update: We consulted with the Aircraft Certification Office; the office of primary responsibility to approve any deviations to FTS/EWIS requirements. They concurred that these differences did not constitute a deviation to the requirement and were acceptable.

We find that the written authority provided by the whistleblower does not support the whistleblower's assertion that Delta must copy, "verbatim," ICA tasks into its maintenance programs. The program rules in Boeing's ICA EWIS source document (D6-84438) require FAA approval if the type of task is changed (e.g., from a detailed to general visual inspection), but there is no provision within the source document that prohibits operators from modifying the wording of task instructions. Further, according to four FAA technical experts involved in the development and review of EWIS and FTS regulations and related documents, including those cited above by the whistleblower, there is no requirement that EWIS tasks be incorporated "without any word changes," as long as the task is completed as intended. They agreed that if a task or procedure is deleted or its meaning or intent changed, FAA approval is required.

Update: This office agrees with the statements made by the Inspection Team. Similarly, Delta has elected to conduct a more detailed inspection on certain tasks. Even though it is a greater level of inspection, by definition, it is "different". Therefore, Delta has applied for approval from the ACO to substitute these inspections. This request is documented in Delta letter, dated October 26, 2011.

For AD requirements for FTS maintenance programs, wording changes are not allowed. According to the technical experts, ADs address a specific unsafe condition; therefore, maintenance procedures cannot be revised without FAA approval, especially for FTS tasks required by ALI/CDCCLs. EWIS maintenance programs, however, are not subject to the same strict compliance standards resulting from ADs because they enhance an already existing inspection program for continuing airworthiness and do not address a specific unsafe condition.

Update: Delta has incorporated all AD driven tasks verbatim from the source requirement.

Allegation #3: (not substantiated), corrective action beginning on p. 11.

The type of discrepancies identified included missing or incorrect ALI/CDCCL information, steps, maintenance manual references, and caution/warning statements. Some required work steps are shown as "notes," which are not mandatory. Moreover, instead of instructing mechanics to perform a task "in accordance with" a required manual, the task merely identified the manual as a reference document. In addition, the whistleblowers provided examples of B767 and B747 task cards with similar discrepancies which demonstrate that compliance issues exist in other Delta fleet types.

Update: Delta explained that this convention was used to maintain consistency within the Legacy Northwest task card system. However, for FTS/EWIS, this office insisted that Delta adopt "in accordance with" for any description of a mandatory task, and remove any mandatory requirements from "notes", unless directed by the source requirement.

Allegation #4: (substantiated, findings listed on p. 12)

Enforcement Case No. 2009SO290159 relates to Delta's operation of the legacy Northwest B757 fleet without complying with AD 2008-10-11. That AD required the airline to revise its B757 ICAs to incorporate FTS airworthiness limitations developed by Boeing and perform related inspection tasks.

Update: The EIR case referenced in the OIG report is incorrect. The correct EIR is 2009SO270159. The assigned attorney continues to meet with Flight Standards personnel and is currently evaluating the case. ASO-7 is hopeful it will be ready to send to AGC for coordination soon.

Allegation #5: (substantiated), corrective action beginning on p. 12.

Air carrier personnel enter data into CASS to monitor the effectiveness of inspection and maintenance programs. CASS data includes results from internal audits. The headquarters review team reported that Delta did not ensure compliance with FTS AD requirements and did not ensure audit results and deficiencies were accounted for in its CASS. The headquarters review team's finding was echoed by the CMO's own audit of Delta's EWIS and FTS task cards, which found a significant number of discrepancies (as disclosed in the findings for allegations 2 and 3) that should have been identified by the airline's internal audits. In our interview with the CMO's SPAI, he agreed these discrepancies represented a failure of Delta's CASS.

Update: This office will not consider this project complete without necessary changes to Delta's CASS program to validate new or major maintenance program changes. This expectation was reiterated in our letter of concurrence with Delta's task card corrective action plan, dated November 4, 2011.

If you should require additional information or have any questions, please contact Kim O. Davies, at 404-305-6061.