



THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

August 28, 2009

William E. Reukauf
Associate Special Counsel
U.S. Office of Special Counsel
1730 M Street, NW, Suite 218
Washington, DC 20036

Re: OSC File No. DI-08-1733

Dear Mr. Reukauf:

This is in response to a letter of June 24, 2008, from former Special Counsel Scott Bloch concerning whistleblower allegations of management improprieties at the Federal Aviation Administration's (FAA) Certificate Management Office (CMO) for United Airlines (UAL) in Daly City, California. The complainant, Cheryl Henderson, an Aviation Safety Inspector, raised several concerns, namely that CMO management (a) improperly permitted UAL to self-disclose Airworthiness Directive (AD) non-compliance involving overhead storage bins on Boeing B-767 aircraft; and (b) failed to properly address safety issues involving expired batteries in emergency doors on Boeing B-777 aircraft.

The former Secretary of the U.S. Department of Transportation, Mary Peters, delegated responsibility for investigating Ms. Henderson's concerns to the Department's Inspector General, who has concluded his investigation and provided me the enclosed memorandum report containing his findings and recommendations.

In short, the Office of Inspector General (OIG) found merit to most of Ms. Henderson's concerns. In particular, the OIG found that in 2007, two CMO supervisory inspectors violated FAA policy for its Voluntary Disclosure Reporting Program (VDRP) by improperly allowing UAL to self-disclose AD non-compliance. Second, the OIG confirmed that CMO management did not adequately address safety-related issues regarding the emergency door battery assemblies. Regarding this finding, the OIG concluded that while UAL had replaced all of the batteries in question, a CMO supervisory inspector did not take appropriate action to determine whether UAL was required to maintain a tracking system for emergency door batteries. Lastly, the OIG found that a CMO supervisor inappropriately delayed, by approximately 18 months, a finding of UAL regulatory non-compliance for its use of non-calibrated equipment for a battery restoration process. In October 2008, the CMO issued a Letter of Warning to UAL for its non-compliance.

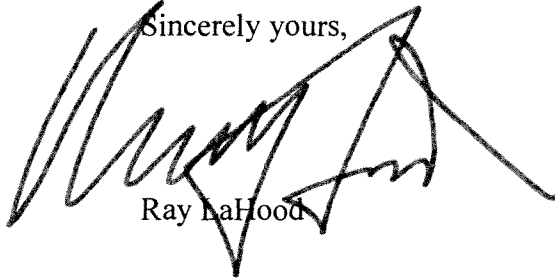
Based on these findings, the OIG recommended to FAA that it determine whether emergency door batteries are "life limited" parts requiring carriers to track the service history and status, to ensure that only non-expired and sufficiently charged batteries are installed in emergency doors. The OIG also recommended that FAA consider appropriate administrative action for the two culpable supervisors.

Page 2
William E. Reukauf

By the enclosed memorandum, the FAA Administrator concurred with the OIG's findings and recommendations, and provided an implementation plan for the appropriate corrective actions in this matter.

I appreciate Ms. Henderson's diligence in raising her concerns.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Ray LaHood', is written over the typed name. The signature is stylized and somewhat illegible due to its cursive nature.

Ray LaHood

Enclosures



Memorandum


**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

Office of Inspector General

Subject: ACTION: OIG Investigation #I08E000358SINV,
Re: Certificate Management Office for United Airlines

Date: August 26, 2009

From: Calvin L. Scovel III 
Inspector General

Reply to
Attn of:

To: The Secretary

In accordance with the statutory requirements of the U.S. Office of Special Counsel (OSC), this memorandum presents our investigative results stemming from whistleblower concerns raised by Cheryl L. Henderson, an Aviation Safety Inspector (ASI) and Boeing 777 (B-777) Partial Program Manager assigned to the Federal Aviation Administration's (FAA) Certificate Management Office (CMO) for United Airlines (UAL) in Daly City, CA (near San Francisco International Airport).

Ms. Henderson made her disclosures to OSC, which, in turn, referred her allegations to then-Secretary Mary Peters on June 24, 2008 (OSC File No. DI-08-1733). Secretary Peters delegated investigation of Ms. Henderson's disclosures to our office. If you accept the results of our investigation, we recommend that you transmit this report to OSC, along with the FAA Administrator's statement of corrective actions in response to our findings and recommendations.

As detailed below, Ms. Henderson alleged several CMO management improprieties and regulatory failures involving the CMO's oversight of UAL.

U.S. Department of Transportation – Office of Inspector General

FOR OFFICIAL USE ONLY

(Public availability to be determined under 5 U.S.C. 552)

Specific Allegations:

1. Improper Acceptance of UAL Self-Disclosure Regarding Overhead Bins on Boeing B-767 Aircraft:

CMO management permitted UAL to improperly self-disclose Airworthiness Directive¹ non-compliance (improper installation of overhead bin tie rods) that was actually discovered by Ms. Henderson and reported to CMO management and UAL officials approximately two weeks prior to UAL's self-disclosure under FAA's Voluntary Disclosure Reporting Program (VDRP).²

2. Expired Emergency Door Batteries:

CMO management personnel failed to properly respond to safety concerns raised by Ms. Henderson, which enabled UAL to operate its B-777 fleet with Emergency Door Open Power Assist System (EPAS) battery packs³ containing expired batteries. Specifically, Ms. Henderson alleged that CMO management failed to adequately address her concerns that UAL:

¹ FAA issues Airworthiness Directives (ADs) to address unsafe conditions on aircraft, aircraft engines, propellers, and appliances. An AD is issued and the airlines are notified of the existence of a known unsafe condition which is likely to exist or develop in other products of the same type design. ADs specify inspections that must be carried out, conditions and limitations that must be complied with, and any actions that must be taken to resolve an unsafe condition. AD requirements are mandatory as set forth in 14 CFR Part 39.

² FAA Advisory Circular 00-58A, Voluntary Disclosure Reporting Program (VDRP), dated September 8, 2006, stipulates that certain criteria must be met for an air carrier to be able to self-disclose an apparent violation (thus precluding FAA regulatory enforcement action). The first condition is that the air carrier must notify the "FAA of the apparent violation immediately after detecting it and before the Agency has learned of it by other means."

³ A Boeing B-777 aircraft has 8 exit doors. Each door contained an EPAS manufactured by Radiant Power Corporation. The purpose of the EPAS is to provide a power assist when opening the door in the emergency mode. The EPAS utilized an internal battery assembly of 10 Nickel-Cadmium (NiCad) batteries as the source of power for operation. Each battery assembly was individually identified by cell pack serial number and date of manufacture.

- a. restored EPAS batteries when restoration was not authorized⁴, and failed to track the history of each battery to ensure that expired and insufficiently charged batteries were not being installed into EPAS units aboard aircraft.

Ms. Henderson also asserted that the Enforcement Investigative Report (EIR)⁵ she drafted regarding the EPAS battery issue was "reworked and abbreviated" by another CMO ASI at the direction of CMO management. This rewritten EIR failed to address the seriousness of the issue.⁶

- b. used a non-calibrated battery analyzer in its battery restoration process.

Results in Brief

First, our investigation found that CMO Principal Avionics Inspector (PAI) Kavin Krum and Principal Maintenance Inspector (PMI) Steven Crutcher violated FAA policy for its Voluntary Disclosure Reporting Program (VDRP) by improperly allowing UAL to self-disclose its non-compliance with an Airworthiness Directive (AD) involving overhead bins aboard Boeing B-767 aircraft. We confirmed that this non-compliance was discovered and reported to CMO management and UAL by Ms. Henderson approximately two weeks prior to UAL's self-disclosure.

Second, we confirmed Ms. Henderson's concern that CMO management did not adequately address safety issues regarding the EPAS battery assemblies. Between March 2007 and November 2007, UAL possibly operated B-777s with EPAS units containing batteries that were not sufficiently charged; however, we were unable to determine whether in fact this occurred because UAL, as it informed the CMO, did not have a tracking system for the batteries and had replaced all EPAS units with a new, different product by November 2007.

We concluded that Mr. Krum did not take appropriate action to determine whether UAL was required to maintain a tracking system for EPAS battery assemblies. UAL

⁴ UAL was restoring (discharging/recharging) the Nickel-Cadmium (NiCad) batteries in order to reuse the battery.

⁵ As defined in FAA Order 2150.3B, *FAA Compliance and Enforcement Program*, the Enforcement Investigative Report (EIR) is the FAA's means for "documenting, assembling, organizing, and presenting all evidence and other relevant information obtained during an investigation".

⁶ The rewritten EIR was 2007WP290018.

asserted to the CMO that it was not required to maintain a tracking system because it did not consider EPAS battery assemblies to have a “hard”, or mandatory, “life limit.” However, Mr. Krum did not independently validate this. Moreover, we found multiple references to the battery assemblies being “life limited” in Boeing, Radiant, and even UAL documents. Also, we found inconsistency and ambiguity in use of this term between the Federal Aviation Regulations (FAR) and the manufacturer’s (Radiant’s) guidance. Although UAL has since replaced all of the EPAS units in question, it is unknown whether the history and service status of the replacement batteries is currently being tracked by UAL.

Lastly, we found that while the CMO ultimately determined that UAL committed a FAR violation by using non-calibrated equipment for its battery restoration process, the CMO investigation and EIR were delayed by 18 months. This delay was not in keeping with FAA policy, which prescribes that investigations and EIRs should be completed within 75 days. Because the EIR was completed when UAL no longer used the battery analyzer in question, only a Letter of Warning was issued to the carrier, in October 2008. Our interviews with Mr. Krum and ASI Dennis Thorpe reflect that this issue was only investigated and reported a year-and-a-half later because of then-ongoing Congressional, OSC, and other probes into FAA oversight of air carriers, and also Ms. Henderson’s continuing concerns.

Our investigation did not find evidence of impropriety on the part of either the CMO Manager or Assistant Manager.⁷

Based on our findings, we recommended the following to FAA:

1. Determine whether EPAS batteries are “life limited” parts requiring carriers to track the service history and status, to ensure that only non-expired and sufficiently charged batteries are installed in aircraft emergency doors.
2. Consider appropriate administrative action for PAI Kavin Krum based on his (a) improper VDRP acceptance of UAL’s self-disclosure of AD non-compliance involving overhead bin tie rod installation; (b) failure to determine whether UAL was required to maintain a tracking system for its EPAS battery assemblies; and (c) failure to ensure timely completion of the investigation and EIR for UAL’s improper use of non-calibrated equipment for its EPAS battery restoration process.

⁷ CMO oversight of UAL’s certificate is divided between its Daly City, CA, and Denver, CO offices. The CMO Manager is based in Denver.

3. Consider appropriate administrative action for PMI Steven Crutcher based on his improper VDRP acceptance of UAL's self-disclosure of AD non-compliance involving overhead bin tie rod installation.

By the attached memorandum, the FAA Administrator concurred with our findings and recommendations, and provided an implementation plan for its corrective actions, committing to implementation by October 31, 2009. We consider FAA's actions responsive to our findings and recommendations.

Methodology

To address Ms. Henderson's concerns, our investigation included the following interviews:

- Cheryl Henderson, ASI, Daly City CMO (complainant)
- Robert Sissung, ASI, Daly City CMO
- Dennis Thorpe, ASI, Daly City CMO
- Naomi Tsuda, Regional Counsel, FAA Western Pacific Region
- Gary Suozzi, ASI, FAA Western Pacific Region
- Scott Morris, Attorney, FAA Northwest Mountain Region
- Greg Young, ASI, FAA Northwest Mountain Region
- David Verschoyle, ASI, Daly City CMO
- Kavin Krum, PAI, Daly City CMO
- Steven Crutcher, PMI, Daly City CMO
- Brad Lewis, Assistant Manager, Daly City CMO
- Jack Grossman, Manager, Daly City CMO

Further, we reviewed numerous documents, including applicable ADs, EIRs, memoranda, letters, manuals, and applicable FAA Regulations and Orders.

Findings in Detail

Allegation 1: CMO management improperly allowed UAL to make a VDRP self-disclosure of AD non-compliance two weeks after Ms. Henderson identified and reported the non-compliance to CMO management and UAL.

Our investigation substantiated that CMO PAI Kavin Krum and PMI Steven Crutcher violated FAA Advisory Circular 00-58A (Voluntary Disclosure Reporting Program), by allowing UAL to self-disclose AD non-compliance that was discovered and

reported to UAL by Ms. Henderson approximately two weeks prior to its self-disclosure.

On October 17, 2007, while examining interior modifications that UAL was making to its B-767 fleet, Ms. Henderson discovered that UAL had misinterpreted Boeing's Service Bulletin directions on how to comply with an FAA Airworthiness Directive (AD #2005-20-05) regarding a safety modification to overhead bin tie rods⁸. Ms. Henderson stated that later that day, she presented documentary evidence of the AD non-compliance to another CMO ASI, David Verschoyle. Mr. Verschoyle told us that he agreed with Ms. Henderson's conclusion, but did not recall the date of their discussion. Ms. Henderson was concerned that some, if not all, of the aircraft modified to be in compliance with the AD had been modified incorrectly. According to Ms. Henderson, she reported this to her supervisor, PAI Kavin Krum, and to PMI Steven Crutcher.

On October 18, 2007, a meeting was held at the CMO with representatives from UAL and CMO personnel, including Ms. Henderson, Mr. Krum, and Mr. Crutcher to discuss Ms. Henderson's discovery. According to Ms. Henderson, during the meeting UAL representatives were shown the documents in question and agreed that the AD requirements may not have been properly accomplished. UAL was requested to expeditiously perform inspections on the approximate 20 B-767s for which overhead bin tie rod installation had been completed to date and report the results to the CMO.

Ms. Henderson told us that after the meeting, she was directed by Mr. Krum to draft a letter to UAL that documented the meeting and formally requested that UAL expedite their actions and notify FAA of their findings. We confirmed the existence of the draft letter and its contents are consistent with Ms. Henderson's account of the meeting. Ms. Henderson stated she gave the draft letter to Mr. Krum but, to her knowledge, the letter was never signed and sent to UAL. Ms. Henderson stated she had no further involvement in this matter once she provided the draft letter to Mr. Krum.

⁸ AD 2005-20-05 was issued on November 3, 2005, to "prevent failure of the attachment of the 9.0g tied rods to the center overhead stowage bin modules. This failure could result in collapse of the stowage bin modules, and consequent injury to passengers and crew and interference with their ability to evacuate the airplane in an emergency". FAA Seattle Aircraft Certification Office letter dated March 20, 2008, approved extending the compliance deadline for AD 2005-20-05 by an additional 18 months, to May 3, 2010.

When interviewed, Mr. Krum initially recalled the October 18, 2007, meeting but then changed his statement and told us that he did not recall it. Mr. Krum stated that he attends many meetings and if he did not take notes at this meeting, then he would not remember it. He did not recall the letter to UAL, but did not deny asking Ms. Henderson to draft the letter. Throughout the interview, he maintained that he turned the matter over to Mr. Crutcher and did not recall any specifics about the issue. Although Mr. Crutcher recalled attending the meeting, he did not recall the purpose and specifics of it.

Documents we obtained reflect that on November 1, 2007, Jonathan Legg of UAL, contacted Mr. Krum to make a self-disclosure under the VDRP regarding "recently identified issues" with job instruction cards associated with the accomplishment of AD2005-20-05. The disclosure stated that, as of the date of the disclosure, "22 of our 33 767-300 aircraft have been [corrected]...and the apparent violation [improper overhead bin tie rod installation] occurred at the time of accomplishment of the first aircraft, 6358, on October 23, 2006." Mr. Krum and Mr. Crutcher accepted UAL's self-disclosure, precluding regulatory enforcement action and any civil penalty for this violation.

Pursuant to FAA Advisory Circular Number 00-58A, *Voluntary Disclosure Reporting Program*, the first requirement for an air carrier to be permitted to self-disclose a violation is that the air carrier "has notified the FAA of the apparent violation immediately after detecting it and before the Agency has learned of it by other means." In this case, the evidence reflects that UAL was informed of the violation by FAA, but Mr. Krum and Mr. Crutcher improperly accepted the self-disclosure.

Allegation 2:

Background

In February 2007, while on a site visit to Radiant Power Corporation, manufacturer of the EPAS, Ms. Henderson received information regarding EPAS units that had been returned to UAL without being serviced by Radiant. Ms. Henderson found that Radiant returned the units without servicing them because the EPAS units' internal batteries were beyond the 3-year service life. The EPAS system had been the subject of an Airworthiness Directive (AD) that required new, different EPAS units to be installed in all B-777 by June 30, 2008.

Upon her return to San Francisco, Ms. Henderson visited UAL on March 7, 2007, in order to track down the returned EPAS units to determine what UAL had done with them. When she asked about the returned units, she found that UAL did not have any

records on them. Further, she found that UAL did not have a tracking system in place for the EPAS units' battery assemblies, even though they were removing, testing, and restoring them to extend their service life, so that the battery assemblies could then be reinstalled into an EPAS unit.

According to Ms. Henderson, on the next day, March 8, 2007, she and another CMO ASI, Robert Sissung, returned to UAL to conduct further investigation of the EPAS issue. They visited the UAL Battery Shop, which was used by UAL to test and recharge the EPAS internal batteries, and found battery testing/charging equipment that had never been calibrated since being installed in 1998.⁹

Ms. Henderson found that the Radiant Power Corporation EPAS Component Maintenance Manual noted that the "Service Life" of the EPAS is "3 years operational after 10 years storage". At that time, she did not find any reference to any restoration process that would enable the batteries to be used beyond the recommended 3-year service life. In view of this, in addition to not tracking the history of the batteries, she concluded that UAL was improperly restoring the batteries through an unapproved process using non-calibrated equipment and then reinstalling them into EPAS units which were then placed into aircraft emergency doors. Ms. Henderson determined that this unapproved process did not guarantee that the batteries were properly charged and this, she asserted, created a significant safety hazard for the flying public.

She reported these concerns to her immediate supervisor, Kavin Krum, Principal Avionics Inspector (PAI), and commenced preparing an EIR to address the allegations. Mr. Krum told Ms. Henderson that the issue of the non-calibrated battery testing/charging equipment was to be investigated by another CMO ASI, Dennis Thorpe.

⁹ UAL was using a CADEX C7000ER Battery Analyzer. According to the user's manual, it is used to (1) exercise (discharge and charge) batteries to maintain optimum performance by restoring the batteries affected by battery "memory"; (2) charge batteries; (3) prepare new or stored batteries for use by charging/discharging the batteries to achieve peak performance; and (4) test the batteries to determine the "state of health", which is the approximation of the battery capacity and resistance.

- a. *Although we found that UAL's EPAS battery restoration process was authorized and properly carried out, we confirmed Ms. Henderson's concern that UAL did not have a tracking system for EPAS batteries and the CMO PAI did not determine whether UAL was required to have such a tracking system. Because the CMO's investigation and EIR did not address this issue, it is unknown whether UAL operated B-777s with EPAS units containing batteries that were expired and insufficiently charged.*

According to Ms. Henderson, the original EIR she drafted covered two areas of concern: (a) UAL restored EPAS batteries when restoration was not authorized; and (b) UAL lacked an EPAS battery tracking system. CMO personnel involved in the review process for Ms. Henderson's draft EIR told us that her original draft was not focused, hard to follow, and did not contain sufficient items of proof to substantiate the allegations. Consequently, Mr. Krum tasked Ms. Henderson to rewrite the draft EIR, but, according to him, her attempts still did not result in a quality EIR. Therefore, he asked another CMO ASI, Dennis Thorpe, to assist her in re-drafting the EIR. Mr. Thorpe told us he determined that Ms. Henderson should have focused on the potential violation of UAL utilizing an unapproved process to restore the EPAS batteries as opposed to asserting that any restoration was unauthorized.

Mr. Thorpe then re-drafted the EIR, dated June 14, 2007, concluding that UAL violated the FAR by using an unapproved process to restore the EPAS batteries. CMO management transmitted the EIR to FAA's Western Pacific Region Counsel's office for review, concurrence, and processing. During this time, Ms. Henderson complained to Naomi Tsuda, Western Pacific Regional Counsel, that the EIR, as forwarded by the CMO, did not accurately address the safety violations. Ms. Tsuda told us that the EIR was forwarded to FAA's Northwest Mountain Region for review in order to obtain a more independent viewpoint of it. Further, Ms. Tsuda informed us that she considered the findings in this EIR to constitute an administrative violation, i.e., an unapproved process, and not a safety violation. Accordingly, she did not process the EIR expeditiously.

Greg Young, ASI-Airworthiness Specialist, Northwest Mountain Region, was assigned to review and evaluate the EIR. After his review, Mr. Young reported that, under the provisions of 14 CFR Part 43.13(c), UAL was authorized to develop and utilize its EPAS battery restoration process, thus no enforcement action was warranted. Further, Mr. Young found that the Boeing B-777 Maintenance Review Board (MRB) Report provides for restoration at intervals recommended by the manufacturer. In Radiant's Component Maintenance Manual, it states that the service life is 3 years, but also states that the batteries can be restored. Therefore, Mr. Young concluded that UAL had requisite authority to develop and carry out the battery restoration process.

Mr. Young debriefed Ms. Henderson on his findings on May 21, 2008. During his debrief, Ms. Henderson told him that UAL did not have a method for tracking the in-service life histories of the batteries that were installed on its fleet of B-777 aircraft. In his May 23, 2008, memorandum summarizing this meeting, Mr. Young stated, "This facet, if proven to be true, would call into question the carrier's ability to show it had removed the batteries from the aircraft upon reaching their 3 year in service life." In our interview with him, he also stated that he believed that this issue required further examination.

UAL's letter to Ms. Henderson dated April 17, 2007, asserted that they are not required to maintain records, as per 14 CFR Part 121.380, on the EPAS battery assemblies because the batteries are not "hard", or mandatory, "life limited". We found that Mr. Krum did not independently validate this assertion by UAL. Moreover, we found references in several documents to the battery assemblies having a "life limit" and a "service life", including the Boeing B-777 Maintenance Review Board (MRB) Report and B-777 Maintenance Planning Document. In Radiant's letter to UAL dated March 16, 2007, the manufacturer stated:

"Radiant recommends replacing the battery pack after three years of service life for optimum performance. It is not mandatory to discard after three years of operation, if the battery pack is refurbished per the Radiant approved procedure and is performing as designed. However, Radiant recommends a life limit of this part for a period of nine (9) years".

Further, in an email from Boeing to UAL dated March 23, 2007, they stated, "We concur with UAL's interpretation of these documents that the MRB requirement to "Restore EPAS BATTERY on all Passenger Entry Doors at Manufacturer's recommended life limit" refers only to the NiCad battery assembly."

Most importantly, we found that the UAL Change Order Authorization (AOP 45-07-28-01) dated July 20, 2000, states "Restore EPAS BATTERY on all Passenger Entry Doors at manufacturer's recommended life limit". Further, the description section of this document states, "This COA [Change Order Authorization] verifies EPAS Battery expiration and performs battery replacement." The reason for the COA is "To assure that aircraft comply with manufacturer's recommended battery life limit". As previously noted, in addition to these multiple references to battery "life limit", we found inconsistency and ambiguity in use of this and similar terminology between the FAR and the manufacturer's (Radiant's) guidance; namely, 14 CFR Part 43.10 defines "life limit" as having a "**mandatory** replacement limit" [emphasis added] as

specified by the manufacturer, yet Radiant refers only to a “**recommended** life limit” [emphasis added].

In summary, we found merit to Ms. Henderson’s concern that CMO management did not adequately address her safety concerns regarding the EPAS battery assemblies. Between March 2007 and November 2007, UAL possibly operated B-777s with EPAS units containing batteries that were not sufficiently charged; however, we were unable to determine whether in fact this occurred because UAL, as it informed the CMO, did not have a tracking system for the batteries and had replaced all EPAS units by November 2007 (seven months before the date required by an AD¹⁰). We concluded that even if Ms. Henderson’s original EIR was not well-written, Mr. Krum was responsible for ensuring that the investigation and re-worked EIR addressed all of the safety-related allegations, namely the battery tracking issue.

b. The CMO’s investigation of UAL’s use of non-calibrated equipment was inappropriately delayed by 18 months.

We found that after Ms. Henderson informed Mr. Krum in March 2007 of the use of a non-calibrated battery analyzer in UAL’s Battery Shop, Mr. Krum assigned ASI Dennis Thorpe to look into the issue. Mr. Thorpe told us that when he inquired about it at UAL shortly thereafter, UAL told him that the equipment was not used for a “final determination for airworthiness”; therefore, it did not need to be calibrated. He reported this to Mr. Krum and this issue was closed for the time being.

We found that approximately 18 months later, the formal investigation was both initiated and completed, and an EIR (2008WP290036) was prepared by Mr. Thorpe on this allegation at the direction of Mr. Krum, after UAL discontinued use of the battery analyzer in question. ASI Thorpe found UAL to be in violation of the maintenance requirements of 14 CFR 121.367(a), "Maintenance, preventive maintenance, and alterations program" because the battery analyzer was required to be

¹⁰ AD 2006-11-13, with an effective date of June 30, 2006, was prompted by intermittent failures of EPAS battery pack found during testing, which were due to switch contamination, cam alignment problems, and inadequate self-test capability. The FAA issued the AD to prevent failure of the EPAS, which could result in the inability to open the exit door during an emergency evacuation. The battery packs were to be replaced by June 30, 2008. UAL informed the CMO that they replaced the units by November 2007, 7 months before the required date.

calibrated annually to maintain performance accuracy.¹¹ On October 23, 2008, Mr. Krum issued a Letter of Warning to UAL stating:

“[UAL] did not correctly identify or require the CADEX, C7000ER [battery analyzer] to be maintained and calibrated. This is contrary to the maintenance program requirements of UALS and 14 CFR 121.367(a) of the Federal Aviation Regulations (FARs)”.

We found that the CMO’s delay was not in keeping with provisions of FAA Order 2150.3B, *FAA Compliance and Enforcement Program*, which prescribes that investigations and EIRs should be completed within 75 days. Our interviews with Mr. Krum and Mr. Thorpe reflect that this issue was only investigated 18 months after-the-fact because of recent Congressional, OSC, and other probes into FAA oversight of air carriers, and also Ms. Henderson’s continuing concerns.

Recommendations:

Based on our findings, we recommended the following to FAA:

1. Determine whether EPAS batteries are “life limited” parts requiring carriers to track the service history and status, to ensure that only non-expired and sufficiently charged batteries are installed in aircraft emergency doors.
2. Consider appropriate administrative action for PAI Kavin Krum based on his (a) improper VDRP acceptance of UAL’s self-disclosure of AD non-compliance involving overhead bin tie rod installation; (b) failure to determine whether UAL was required to maintain a tracking system for its EPAS battery assemblies; and (c) failure to ensure timely completion of the investigation and EIR for UAL’s improper use of non-calibrated equipment for its EPAS battery restoration process.
3. Consider appropriate administrative action for PMI Steven Crutcher based on his improper VDRP acceptance of UAL’s self-disclosure of AD non-compliance involving overhead bin tie rod installation.

¹¹ The CADEX C7000 Series Battery Analyzer User's Manual states to "Voltage calibrate the C7000 once a year to maintain performance specifications." Further, the manual states that a voltage calibration kit must be used and this kit must be calibrated every 3 years. The manual also states that, "Failing to calibrate could cause inaccurate capacity readings, especially on low voltage batteries or single cells."

By the attached memorandum, the FAA Administrator concurred with our findings and recommendations, and provided an implementation plan for its corrective actions, committing to implementation by October 31, 2009. We consider FAA's actions responsive to our findings and recommendations.

If I can answer any questions, please contact me at 202-366-1959, or my Deputy, David Dobbs, at 202-366-6767.

Attachment

#



Federal Aviation Administration

Memorandum

Date: AUG 25 2009

To: Rick Beitel, Assistant Inspector General for Washington Investigative Affairs

From: J. Randolph Babbitt, Administrator *JB*

Prepared by: Margaret Gilligan, Associate Administrator for Aviation Safety, AVS-1; 73131

Subject: Implementation Plan for Recommendations Included in the Report on OIG Investigation #IO8E000358SINV

I accept the results and recommendations presented in the report on OIG Investigation #IO8E000358SINV and commit to put into action the recommendations as indicated in the attached Implementation Plan.

If you have any further questions, please contact Mr. Doug Dalbey, Deputy Director, Flight Standards Service, at 202-267-8237.

Attachment

Implementation Plan for OIG Investigation #IO8E000358SINV

Recommendation #1:

Determine whether EPAS batteries are "life limited" parts requiring carriers to track the service history and status, to ensure that only non-expired and sufficiently charged batteries are installed on aircraft emergency doors.

AVS Response:

The Aircraft Maintenance Division will work with the Aircraft Certification Service and determine if EPAS batteries are life limited by October 31, 2009.

Recommendation #2:

Consider appropriate administrative action for PAI Kavin Krum based on his (a) improper VDRP acceptance of UAL's self-disclosure of AD non-compliance involving overhead bin tie rod installation; (b) failure to determine whether UAL was required to maintain a tracking system for its EPAS battery assemblies; and (c) failure to ensure timely completion of the investigation and EIR for UAL's improper use of non-calibrated equipment for its EPAS battery restoration process.

AVS Response:

We will work with FAA Human Resource personnel in the region and in headquarters to determine the action we need to take regarding Mr. Krum. In that regard, we request from OIG any items of proof we may use in making our determination. We will make a determination, based on agency personnel policies, by October 31, 2009.

Recommendation #3:

Consider appropriate administrative action for Mr. Crutcher based on his improper VDRP acceptance of UAL's self-disclosure of AD non-compliance involving the overhead bin tie rod installation.

AVS Response:

Mr. Crutcher is no longer assigned to the UAL certificate management office. However, we will work with FAA Human Resource personnel in the region and in headquarters to determine the action we need to take regarding Mr. Crutcher. In that regard, we request from OIG any items of proof we may use in making our determination. We will make a determination, based on agency personnel policies, by October 31, 2009.