



**U.S. Department
of Transportation**

Office of the Secretary
of Transportation

GENERAL COUNSEL

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December 5, 2012

Dear Ms. McMullen:

I have enclosed a final status update, prepared by the Federal Aviation Administration (FAA), on corrective actions relating to a whistleblower complaint (DI-10-2602) filed by Rand Foster, an Aviation Safety Inspector in Renton, Washington, concerning modifications to emergency medical service helicopters. The Office of Special Counsel closed this complaint on May 8, 2012.

Please feel free to call Debra Rosen or me if you have any questions.

Sincerely,

fn 
Terence Carlson
Acting Assistant General Counsel
for General Law

Enclosure



Federal Aviation Administration

Memorandum

Date:

NOV 20 2012

To:

Terence Carlson
Acting Assistant General Counsel for General Law, C-10

From:

A handwritten signature in black ink, appearing to read "H. Clayton Foushee".

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

Subject:

Close-out of Status Reports on Corrective Action Plan related to US Office of
Special Counsel (OSC) Case No. DI-10-2602- Night Vision Imaging System

This provides our final update regarding FAA's corrective actions pertaining to an aviation safety disclosure made by Rand Foster, originally made to the OSC in 2010. The Department was provided supplemental responses on December 10, 2010, May 18, 2011, July 22, 2011, and July 23, 2012, which were forwarded to OSC.

In our most recent update of July 23, 2012, we reported that FAA had completed 34 of 37 action items, closing six of the eight findings, and that Flight Standards Service (AFS) and Aircraft Certification Service (AIR) would make a final determination regarding completion of the remaining action items by September 28, 2012.

On September 14, 2012, AAE was notified that AFS-1 Director John Allen had received and concurred with FAA's actions as sufficient to close the remaining 3 items. Specifically, items 2b, 3c, and 3d, in support of findings 2 and 3 respectively, were dependent upon Aviation Safety Unlimited (ASU's) performance and the results of audits by AFS and AIR personnel. These audits determined that a high degree of operational safety and compliance were occurring with ASU and the items were closed.

As such, this action completed FAA's corrective action plan and AAE's requests for status updates, and we consider this matter closed. If you have any questions or need additional information, please contact me.

Attachment

2010 Audit Detailed Findings and Action Plans

**Final Update
September 4, 2012**

The "2010 Audit Detailed Findings and Action Plans" was originally provided to the U.S. Office of Special Counsel as an attachment to a supplemental response by the Department of Transportation on July 22, 2010.

This update to the original response contains the same text for the Findings and Action Plans but with certain changes to the "Due" and "Status" columns. Those changes are:

- Due dates clarified for Action Item 1.a.
- Due dates entered for Action Item 2.b. and 3. b., c. and d. (Previously, the dates were "Started and Continuous.")
- The "Status" column was extensively revised and updated since the earlier report to depict the actual status as of September 4, 2012:
 - Completed items begin with the word "Complete" or "Completed" in boldface with the date completed and a brief description of the action taken to complete the item.
- To aid the reader in understanding follow-up actions taken by the Aviation Safety Line of Business, selected items contain information on additional actions taken after completion of the initial Action Plan items.

2010 Audit Detailed Findings and Action Plans

Finding 1
<p>Of the 29 aircraft inspected (with findings validated) to date, all aircraft had non-compliances and/or non-conformances</p> <ul style="list-style-type: none"> - There were installation conformity errors found on all aircraft inspected - There are currently 278 findings of which 51 (18%) are potential safety findings. <i>Some findings and potential safety findings are associated with multiple entities. Therefore, aggregate percentages may exceed 100%.</i> <ul style="list-style-type: none"> o There are 9 STC Holder (ASU) potential safety findings (3% of the overall findings, 18% of the potential safety finding) o There are 41 operator potential safety findings (16% of the overall findings, 80% of the potential safety findings) o There are 13 installer (ASU) potential safety issues (5% of the overall findings, 25% of the potential safety findings) - ASU currently has 119 STC holder findings and 72 installer findings (55% of the overall findings) - Operators currently have 155 findings (45% of the overall findings)

Action Plan 1	Due (Reference date for start 10/15/2010)	Primary Office	Status
a. Appropriate FSDO PIs will formally notify operators of the findings and will track all findings through completion of action.	<ul style="list-style-type: none"> • On receipt by PIs • 2/15/2010 (60 days) 	CHDO	<p>Complete. ANM-200 confirmed via telephone or email that all operators were notified.</p> <p>Complete. No information available to show that PIs were tracking all findings as the operator addressed them, however, see 1b to show that corrective actions were completed.</p>
b. AFS Technical Standards Branches will follow-up with notified PIs to confirm corrective actions complete	Monthly thereafter until complete	Regional -230 branches	Complete. All air carrier corrective actions reported complete by PI or office leadership. One public aircraft operator declined to share corrective actions or root cause analysis information and is not required to do so.
c. SACO will notify ASU of all type design issues	11/14/2010 (30 days)	SACO	Completed 10/20/2010 when an LOI was issued to ASU. The case was closed with a Letter of Correction.
d. SACO will evaluate STC related potential safety findings using existing COS process	11/14/2010 (30 days)	SACO	Completed COS process 11/10/2010. (There was one safety issue for TOT Post Light issue. ASU issued a service bulletin on this issue on 4/6/2011 and the FAA issued an AD on 6/19/2012.)

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Finding 2
<p>There are numerous drawing/documentation errors and ambiguities which may have contributed to non-conformance/non-compliance</p> <ul style="list-style-type: none"> - Failures to thoroughly assess filtration requirements led to design omissions (e.g. components not lighted in NVIS mode, lights not filtered) - Numerous cases of document errors (e.g. ICAs, Master Drawing Lists) <ul style="list-style-type: none"> o Recurring issues related to design and installation processes (e.g. radar altimeter Decision Height light filters coming off in service)

Action Plan 2	Due	Primary Office	Status
a. Formally notify ASU of the inaccuracies found in documents during the audit.	12/13/2010 (60 days)	SACO	Completed 10/20/2010 with LOI in Action Item 1.c.
1. Require ASU to provide root cause analyses for the issues found to reduce the overall error rate.	4/15/2011 (180 days)	SACO	Completed 2/1/2011 when ASU submitted their root cause to the SACO. A series of corrective procedures were subsequently approved, the last on 6/18/2011.
2. ASU to define how it will incorporate the root cause corrective action(s) for the drawing and document errors into all of its modified aircraft, not just the aircraft in the audit.	4/15/2011 (180 days)	SACO	Completed 2/1/2011. ASU is on a second iteration of their root cause corrective action document.
3. Corrective action must address the inadequate pre-assessment process and how it will be improved.	10/15/2011 (12 months)	SACO	Completed 6/18/11.
b. SACO to monitor ASU's performance and provide follow-up management through Action Plan 3.	09/28/2012	SACO	Completed 9/4/2012. A risk-based approach, coordinated between ANM-100 and ANM-200, guided completion of this item. ANM-100 and -200 agreed in February of 2012 that additional structured, metrics-based surveillance of process improvements implemented by ASU was considered necessary to validate successful completion of the Action Plan by ASU. A subset of supplemental type certificate projects were assigned to designees and audited by AFS and AIR personnel. Results to date assure continued operational safety. A final determination regarding completion of the Action Plan was made on 9/4/2012. See interdependent Action Plan Items 3c and 3d.

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c. Send the TSO policy clarification memorandum (AIR-100 dated 9/28/10) to all ACOs/MIDOs via email with explanation.	11/14/2010 (30 days)	AIR-100	Completed September of 2010.
d. SACO to work with the Rotorcraft Directorate to standardize drawing marking requirements for modified Technical Standard Order (TSO) articles; as part of the detailed corrective action, previously approved STC drawings must be reviewed to ensure they require marking of modified TSO articles per FAA Order 8150.1.	10/15/2011 (12 months)	SACO	Completed 4/29/2011.
e. AIR and AFS to develop an NVIS installation conformity checklist.	1/15/2011 (3 months)	Seattle MIDO	Completed 4/29/11. There were two separate checklists associated with this action item: (1) The AIR checklist was completed 1/28/2011. (2) The AFS checklist was completed 4/29/2011.

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Finding 3

The minor change process does not consistently produce compliant/conforming aircraft

Action Plan 3	Due	Primary Office	Status
a. Terminate the minor change authority in the PSP. All ASU certification activities will be managed by the SACO.	10/15/2010	ANM-100	Completed 10/15/2010.
b. Increase the level of involvement of FAA engineers and inspectors in future ASU projects. Add one additional engineer to project.	12/31/2010	SACO	Completed 10/8/2010. Additional engineer added to the project.
c. Increase level of designee supervision for designees associated with ASU projects	09/28/2012	SACO	Completed 9/4/2012. A risk-based approach, coordinated between ANM-100 and ANM-200, guided completion of this item. ANM-100 and -200 agreed in February of 2012 that additional structured, metrics-based surveillance of process improvements implemented by ASU was considered necessary to validate successful completion of the Action Plan by ASU. A subset of supplemental type certificate projects were assigned to designees and audited by AFS and AIR personnel. Results to date assure continued operational safety. A final determination regarding completion of the Action Plan was made on 9/4/2012. See interdependent Action Plan Items 2b and 3d.
d. Evaluate ASU's performance prior to considering re-issuance of minor change authority in the PSP. Minor change authority will not be re-issued until ASU develops and implements specific procedures to reliably produce complete and compliant STCs.	09/28/2012	SACO	Completed 9/4/2012. A risk-based approach, coordinated between ANM-100 and ANM-200, guided completion of this item. ANM-100 and -200 agreed in February of 2012 that additional structured, metrics-based surveillance of process improvements implemented by ASU was considered necessary to validate successful completion of the Action Plan by ASU. A subset of supplemental type certificate projects were assigned to designees and audited by AFS and AIR personnel. Results to date assure

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			continued operational safety. A final determination regarding completion of the Action Plan was made on 9/4/2012. See interdependent Action Plan Items 2b and 3c.
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Finding 4
AFS oversight of operator maintenance/alteration is inadequate
 - There is no standard process between CHDOs and the SACO for communicating issues with ASU STCs

		Office	Status
a. Issue interim guidance to AFS PIs to require confirmation that Operator paragraph D093 contents are correct, that operators are properly implementing ICA requirements for both aircraft NVIS equipment and goggles, and that NVIS equipped aircraft continue to meet type design requirements by conforming aircraft with NVIS STC data and other type design change data occurring after NVIS modification.	11/15/2010 (30 days)	AFS	Completed 4/29/2011 by 12/3/2010 memo issued by AFS-300 and Notice N 8900.152 dated 4/29/2011.
b. Prescribe actions to ensure an effective and immediate surveillance plan is in place for NVIS modified aircraft.	11/15/2010 (30 days)	AFS	Completed 4/29/2011 by 12/3/2010 memo issued by AFS-300 and Notice N 8900.152 dated 4/29/2011.
c. Establish an interim procedure for sharing potential safety findings with the appropriate certificate managing ACO.	11/15/2010 (30 days)	AFS and AIR	Completed 12/3/2010 by memo issued by AFS-300.
d. Establish a standard process between CHDOs, the ASW AEG and the SACO for communicating issues with ASU STCs	4/15/2012 (18 months)	AFS	Completed 9/7/2011. Sufficient guidance was available for ASIs addressing the role of the AEG. However, AFS-300 published additional guidance to clarify the role of the AEG regarding NVIS. The following guidance was published: Notice N8900.152 dated 4/29/2011 and change 172 to Order 8900.1 dated 9/7/2011.
e. Add inspection requirements to FY 2012 National Program Guidelines.	10/15/2011 (12 months)	AFS	Completed 7/21/2011. Required two steps: (1) AFS-300 - Furnished draft NPG language to AFS-900 for NVIS inspection requirements for FY 2012 NPG. (2) AFS-900 - Published NVIS inspection requirements in 2012 NPG, Order 1800.56L.

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Finding 5			
Operators failed to preserve the NVIS compatible configuration of their aircraft			
- Changing the configuration of the flight deck after STC modification without consideration of the NVG compatibility of the individual components			
			Status
a. Issue interim guidance to operators to ensure that operators properly implement TCA requirements addressing the maintenance of the NVIS compatible configuration.	7/15/2011 (9 months)	AFS	Completed 4/29/2011 by Notice N 8900.152.
b. Publish a revision to FAA Order 8900.1 to formally provide NVIS oversight guidance	10/15/2011 (12 months)	AFS	Completed 9/7/2011 by change 172 to Order 8900.1.
c. Issue guidance to operators to increase awareness of regulatory requirements to maintain NVG compatibility	4/15/2011 (6 months)	AFS	Completed 12/15/2010 by publication of SAFO 10022 on maintenance of NVIS and FAA conformity checklists.
d. Initiate a working group between the Rotorcraft Directorate, AFS and Industry (e.g., Helicopter Association International) to develop educational material that communicates the importance of maintaining NVG compatibility and possible venue FAASTeam presentations.	4/15/2011 (6 months)	AFS	Completed 3/22/2011. The FAAST collaborated with HAI and others to present a seminar in each of the eight AFS regions on NVIS topics. The first was on 3/22/2011 and the last on 9/9/2011. The earlier material is not currently available through FAAST. In order to reach new NVIS operators or those who missed the earlier presentations, FAAST plans another round of seminars in the fall-winter of 2012/2013, funding permitting. FAAST also plans to have the new material available on their website.

2010 Audit Detailed Findings and Action Plans

Findings:

Operators are not properly maintaining NVIS components

- Operators are failing to follow inspection processes (e.g. daily inspections and failure to follow ICAs)
- ICAs generally lack clarity and specificity

a. Properly implement ICA requirements addressing the maintenance of the NVIS configuration	(9 months)		Completed 12/15/2010 by publication of SAFO 10022 on maintenance of NVIS and FAA conformity checklists.
b. Issue guidance to operators to increase awareness of regulatory requirements for maintenance.	4/15/2011 (6 months)	AFS	Completed 12/15/2010 by publication of SAFO 10022 on maintenance of NVIS and FAA conformity checklists.
c. Develop and implement an AFS surveillance program to ensure continuing compliance with required NVIS inspections.	10/15/2011 (12 months)	AFS	Complete 7/21/2011. Split into two parts: (1) AFS-300 - Furnished draft NPG language to AFS-900 for NVIS inspection requirements for FY 2012 NPG. (2) AFS-900 - Published NVIS inspection requirements in 2012 NPG, Order 1800.56L.
d. Charter a work group to develop guidance for ICAs	4/15/2011 (6 months)	AFS and AIR	Completed 2/14/2011. The work group completed a draft update to Order 8110.54A, <i>Instructions for Continued Airworthiness Responsibilities, Requirements and Contents</i> , and a draft AC. The drafts are currently with AIR-100 management prior to coordination and field comment.
e. Add an ASI to the Rotorcraft AEG staff specifically dedicated to the review of ICAs for initial and amended NVIS STCs.	4/15/2011 (6 months)	AFS-100 and ASW-200	Completed 4/19/2011. The position was filled later than planned due to AVS-wide hiring constraints, but a temporary assignment was made by the completion date.

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Finding 7
 There is insufficient knowledge among AFS PIs and operators regarding NVIS-related maintenance procedures
 - Special emphasis inspection results demonstrate a need for additional training/guidance

Finding	Due Date	Responsible Party	Action Plan
b. Develop and present appropriate training and support material to improve ASI knowledge.	10/15/2012 (24 months)	AFS	Completed 11/29/2011. Required three steps: (1) Form workgroup and develop course outline by 4/30/10. (2) Complete training course prototype by 8/31/11. (3) Training course available to field personnel.
c. Develop appropriate guidance for operators (e.g., SAFO, AC)	4/15/2011 (6 months for SAFO)	AFS	Completed 12/15/2010 by publication of SAFO 10022 on maintenance of NVIS and FAA conformity checklists.

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Finding 8
<p>OpsSpec paragraph D093 (HNVGO Maintenance Program) is not being effectively used to require appropriate maintenance</p> <ul style="list-style-type: none"> - AFS guidance for issuance of OpsSpec paragraph D093 is inadequate - Currently issued OpsSpec paragraphs D093 do not always include requirements for maintenance of the NVGs and NVIS modified aircraft - OpsSpec paragraph D093 is unclear

D093	(9 months)		8900.1.
b. Develop and implement an AFS surveillance program to ensure compliance with the existing and revised OpsSpec paragraph D093	7/15/2011 (9 months)	AFS	Completed 7/21/2011 with Notice N 8900.56L.
c. Clarify the language in OpsSpec paragraph D093.	4/15/2012 (18 months)	AFS	Completed 7/14/2011 with change to OpsSpec paragraph D093.
d. Revise OpsSpec paragraph D093 to better describe operator duties to maintain the NVIS equipment on their aircraft.	4/15/2012 (18 months)	AFS	Completed 7/14/2011 with change to OpsSpec paragraph D093.

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Appendix A

List of Acronyms and Abbreviations

8900.1	Standards Information Management System (FSIMS)
AC	Advisory Circular
AD	Advisory Circular
AEG	Advisory Evaluation Group
AFS	Standards Service
AFS-100	Operational Resources and Program Management Division
AFS-300	Flight Maintenance Division or the Division Manager
AFS-900	Flight Field Office
AIR	Flight Certification Service
AIR-100	Flight Engineering Division
ANM-100	Port Airplane Directorate or the Directorate Manager
ANM-200	West Mountain Region Flight Standards Division or the Division Manager
ASI	Aviation Safety Inspector
ASU	Aviation Specialties Unlimited, Inc., of Boise, Idaho
ASW-200	West Region Flight Standards Division or the Division Manager
CHDO	State Holding District Office
FAA	Federal Aviation Administration
FAAST	Safety Team or FAASTeam
FSDO	Standards District Office
HAI	Helicopter Association International
HNVGO	Headset Night Vision Goggle Operations
ICA	Instructions for Continued Airworthiness
LOI	Letter of Investigation
MIDO	Manufacturing Inspection District Office
NPG	Flight Standards Work Program Guidelines
NVG	Night Vision Goggle(s)
NVIS	Night Vision Imaging System
OpsSpec	Operations Specifications or the Operations Specifications System
PI	Principal Inspector
PSP	Plan for Safety Plan
SACO	Standards Aircraft Certification Office
SAFO	Safety Alert for Operators
STC	Supplemental Type Certificate
TOT	Total Outlet Temperature
TSO	Technical Standard Order