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**Analysis of Disclosures, Agency Investigation and Reports,
and Whistleblower Comments**

**OSC File No. DI-10-2602
(Rand Foster)**

The allegations in these matters were disclosed by a whistleblower at the Department of Transportation (DOT), Federal Aviation Administration (FAA), Northwest Mountain Region, Renton, Washington. Mr. Rand Foster, an Aviation Safety Inspector, disclosed that FAA employees in the Rotorcraft Directorate, Southwest Region, the Flight Standards Division, Northwest Mountain Region, and FAA Headquarters were engaging in conduct that constituted a violation of law, rule, or regulation, gross mismanagement, and an abuse of authority, all of which has contributed to a substantial and specific danger to public safety.

Specifically, Mr. Foster disclosed that hundreds of emergency medical service (EMS) helicopters were modified with a night vision imaging system (NVIS), a supplemental lighting system to allow the use of night vision goggles (NVG). Even after FAA discovered that the modifications did not comply with the required specifications, and in many instances created a serious safety hazard, FAA failed to implement a formal process to ensure that the helicopters were brought into compliance in a timely and coordinated manner. Rather than ensuring that proper inspections were completed, FAA engaged in a process of “rubber-stamping” drawings of modified helicopter configurations, based on photographs, in order to retroactively approve the data for those aircraft. Mr. Foster contended that the lack of a coordinated plan could result in unnecessary and sporadic groundings of EMS helicopters, putting at risk trauma patients whose lives depend on their availability. Finally, Mr. Foster disclosed that recent inspections resulted in the identification of a significant number of non-compliant modifications. The Office of Special Counsel (OSC) determined that there was a substantial likelihood that the allegations constituted a violation of law, rule, or regulation, gross mismanagement, an abuse of authority, and a substantial and specific danger to public safety.

On July 9, 2010, OSC referred Mr. Foster's allegations to the Honorable Ray LaHood, Secretary of Transportation, to conduct an investigation pursuant to 5 U.S.C. § 1213(c) and (d). This 2010 referral contained the same allegations referred to then-Secretary Mary E. Peters in 2008, when Mr. Foster first brought disclosures to OSC, as discussed more specifically below. In that case, the Secretary did not produce an investigative report within the time period allotted by OSC, and OSC notified the President and congressional oversight committees for the DOT of the Secretary's failure. After OSC referred the allegations for a second time upon receipt of Mr. Foster's disclosures that the problems had not been resolved, Secretary LaHood delegated responsibility for investigating the matter to FAA's Office of Audit and Evaluation (AAE). OSC received the agency's report on December 10, 2010, and supplemental reports on May 18, 2011,

and July 22, 2011. Mr. Foster provided comments on the reports pursuant to 5 U.S.C. § 1213(e)(1), which are also enclosed.

Summary of Agency's Findings

The OIG's investigation substantiated the allegation that a significant number of EMS helicopters were not in compliance with approved FAA certification requirements for the NVIS systems. It also confirmed Mr. Foster's allegation that FAA did not maintain sufficient tracking and surveillance to ensure that all NVIS-modified EMS helicopters were fully compliant at the time of the completed modifications, and to ensure that the aircraft remained in compliance once they were in service. The investigation found that while FAA's certification process for the NVIS modifications was technically compliant with regulations, an installer of the systems, Aviation Specialties Unlimited, Inc. (ASU), did not fully comply with the requirements in numerous cases. In addition, the certificate holders who modified, maintained, and operated NVIS-equipped aircraft bore sole responsibility for compliance with the approved certification criteria.

The investigation also substantiated that on numerous occasions, an FAA inspector inappropriately issued field approvals, which allowed some aircraft to return to service contrary to FAA policy, and that FAA "did not provide clear and unambiguous guidance to operators for maintaining continuing compliance with the NVIS certification requirements." Notwithstanding the installer's responsibility noted above, the FAA shortcomings, according to the report, also contributed to the compliance deficiencies that were identified in the ASU-modified fleet.

Referral History

2008 Referral and Investigation

On July 8, 2008, OSC referred to the Honorable Mary E. Peters, then-Secretary of Transportation, pursuant to 5 U.S.C. § 1213(c), serious allegations made by Mr. Foster concerning the non-compliant and potentially unsafe modifications made to nearly 300 EMS helicopters, and FAA's alleged failure to appropriately address this problem. Based on Mr. Foster's disclosures, we found a substantial likelihood that FAA officials and employees engaged in a violation of law, rule, or regulation, gross mismanagement, and an abuse of authority, all of which contributed to a substantial and specific danger to public safety.

Under 5 U.S.C. § 1213(c), then-Secretary Peters was required to conduct an investigation of the allegations and submit a written report to OSC within 60 days of OSC's transmittal or within any longer period of time agreed to by OSC, setting forth DOT's findings and any corrective action taken. OSC granted DOT five extensions of time over a period of more than twelve months. During this time, OSC was advised by DOT that FAA had completed an initial investigation in August 2008, and provided a report to DOT's Office of Inspector General (OIG) for review in September 2008. OSC learned that in October 2008, OIG responded to FAA with an extensive report outlining OIG's questions, concerns and recommendations for further

investigation by FAA. We also understood that FAA submitted a supplemental report to OIG. Despite the extensions granted, and OSC's notice to DOT that the fifth extension would be final, the Secretary did not submit the required report. Rather, after the close of business on July 20, 2009, the final due date of the report, DOT's Office of General Counsel (OGC) requested an additional 60-day extension of time to file the report. In light of the serious nature of the safety allegations and the length of time that had passed, OSC concluded that it was no longer in the public interest for OSC to grant further extensions of time.

On July 30, 2009, OSC transmitted the prior disclosure to the President and congressional oversight committees, noting the Secretary's failure to produce a report, in accordance with 5 U.S.C. § 1213(e)(4). In addition, we filed a copy of this transmittal in our public file and concluded our involvement in the matter. A copy of OSC's July 30, 2009 letter is enclosed as Enclosure A.

June 2010 Request for Information

On June 10, 2010, in response to a new whistleblower disclosure filed by Mr. Foster, OSC requested that DOT provide additional information and the current status of any report in connection with Mr. Foster's prior allegations. DOT, through its OGC, acknowledged that a final report had been completed but declined to provide the report to OSC. Because Mr. Foster had detailed his continuing concerns regarding the non-compliant modifications on what was by then approximately 500 aircraft, as well as the propriety of the retroactive approval of modifications, OSC referred the essentially identical allegations to the Secretary for an investigation and report pursuant to 5 U.S.C. § 1213(c). That referral and the resulting report are the subject of this correspondence.

The Whistleblower's Disclosures in Both Referrals

As detailed in our 2008 referral, a copy of which is enclosed as Enclosure B, Mr. Foster disclosed that approximately 300 EMS helicopters were modified with a NVIS to allow the use of NVG. After FAA discovered that the modifications did not comply with required specifications, and in many instances created a serious safety hazard, FAA prepared a national notice (Notice) declaring the helicopters' airworthiness certificates invalid and establishing procedures to bring the aircraft into compliance. According to Mr. Foster, FAA officials delayed issuance of the Notice due to concerns over the negative publicity regarding Southwest Airlines and American Airlines in April 2008.¹

In August 2007, Mr. Foster identified approximately 250 U.S. registered EMS helicopters that had received non-compliant modifications to install a NVIS. The vast majority of these helicopters are used by hospitals, fire departments, and paramedic companies to transport

¹ In his current disclosure, Mr. Foster notes that the notice, Notice of National Policy 8900.51, was finally issued in September 2008. It is discussed in detail in the enclosed Report of Disclosures (Enclosure B).

patients for emergency medical services, while others are used by sheriff, police, and fire departments for public safety. The modifications on these helicopters were performed by a repair station operated by ASU, of Boise, Idaho, pursuant to several Supplemental Type Certificates (STCs) issued to ASU for the NVIS modifications.² The STCs for the NVIS modifications were issued by FAA's Seattle Aircraft Certification Office (SACO). Because of variations in the configuration of the cockpits and patient transport areas of different helicopters, the STCs that were issued were specific to the particular make, model, series and serial number of the various helicopters. Thus, the NVIS modifications had to conform to the data, specifications and drawings contained in the STC issued for that particular aircraft.

Mr. Foster explained that he coordinated with FAA's Rotorcraft Directorate, Fort Worth, Texas, to conduct follow-up surveys on the modified helicopters, which identified safety issues relating to the NVIS installations. In particular, some of the filters were improperly installed on instruments and radios in the helicopters, and the placement of these filters significantly impaired the pilot's ability to read the instruments during daylight and night operations without NVG. The installations also had reflections and incompatible light sources that may interfere with the pilot's vision while using the goggles under emergency operation conditions. The Rotorcraft Directorate determined that most of the NVIS modifications were made by ASU without "approved data" – *i.e.*, the modifications did not conform to the data, specifications and drawings contained in the STC issued for a particular type of helicopter.

In addition, many of the helicopters were returned to service following modification with field approvals, without a physical inspection of the aircraft, by an FAA Aviation Safety Inspector (ASI) in the Boise Flight Standards District Office (FSDO), contrary to FAA policy. FAA Order 8300.10, now incorporated into FAA Order 8900.1, Volume 4, Chapter 9, requires inspection and approval by the Aircraft Certification Office that issued the STC, in this case SACO. It was initially determined that approximately 140 helicopters were returned to service with approvals inaccurately indicating that the NVIS modifications conformed to the specifications of the STC. Mr. Foster indicated that through further collection of information, he identified additional helicopters modified for NVIS by ASU, bringing the total to more than 500.

In response to these findings, Mr. Foster drafted a proposed corrective action plan to resolve the NVIS modification issues, which he submitted to his superiors on August 3, 2007. The plan set forth procedures to ensure that all NVIS modified helicopters were properly inspected, that the modifications were brought into conformity with the applicable STC or dismantled, and that the helicopters were in airworthy condition.³ He explained that a coordinated plan for bringing the aircraft into compliance in a timely and systematic manner was

² A STC is a Type Certificate (TC) -- a design approval containing data, specifications and drawings -- issued by FAA to modify an aircraft from its original design. The STC, which incorporates by reference the related TC, approves not only the modification but also how that modification affects the original design.

³ In November 2007, Mr. Foster initiated enforcement actions against both ASU and its Director of Maintenance, Kip McDermott. ASU relinquished its repair station certificate for revocation based on falsification of maintenance records. ASU has since applied for and received a new certificate. Mr. McDermott's Airframe and Powerplant

critical, in order to ensure the airworthiness of the aircraft while preventing unnecessary and/or mass groundings of EMS helicopters. In his proposal, he explained that in instances where a helicopter may be found technically unairworthy (*e.g.*, the NVIS modification did not strictly conform to the STC but there were no safety issues), grounding of the emergency aircraft would be unreasonable and could potentially jeopardize the lives of patients in need of their service. However, in instances where the helicopter is not airworthy due to the unknown condition of the NVIS installation and/or the NVG system, then the aircraft should immediately be removed from authorization to use the NVG system until the situation is resolved.

Between August 2007 and May 2008, Mr. Foster participated in meetings with Bradley Pearson, Manager, and Rick Domingo, then-Assistant Manager, Flight Standards Division, Northwest Mountain Region; David Downey, Manager, Rotorcraft Directorate; Richard McCauley, Manager, SACO, and others regarding the NVIS modification issues. In November and December 2007, Mr. Foster reviewed and provided input on the draft Notice, entitled 8900.nn, alerting various FAA components and aircraft operators of the non-compliance of the NVIS modifications made by ASU. As stated earlier, the Notice was issued in September 2008, and established as national policy a Corrective Action Plan for NVIS modifications performed by ASU.

The Notice, dated September 17, 2008, explained that the NVIS modifications were made by ASU on “over 50% of the total aircraft capable of NVG use in the United States today.” Critically, it stated that “the aircraft modified by ASU may have been improperly returned to service,” which “may have resulted in incomplete installations, due to incomplete technical data, or unapproved data that was not specific to the aircraft installation.” Further, the Notice stated that: “Although those ASU modified aircraft may have been improperly returned to service, it is important to note the return to service is valid unless actual safety discrepancies are identified.”

Mr. Foster noted with concern that the language of the Notice was inconsistent with regulations and an FAA Order governing airworthiness and the conditions that must be met for an aircraft to be considered airworthy. Section 91.203(a)(1) of Title 14, Code of Federal Regulations, prohibits the operation of an aircraft without an appropriate and current airworthiness certificate, and Section 91.7 prohibits anyone from operating an aircraft unless it is in an airworthy condition. FAA Order 8900.1, Volume 7, Chapter 7, Section 1, Paragraph 7-223 clarifies that in order to be considered airworthy, an aircraft must conform to its type design (certificate). Specifically, Paragraph 7-223(A)(2)(a) states: “Conformity to type design is considered attained when the required and proper components are installed and they are consistent with the drawings, specifications, and other data that are part of the type certificate. Conformity would include applicable supplemental type certificates and field approved alterations.”

Certificate was revoked based on falsification of maintenance records. Mr. McDermott has since applied for and received a new certificate. Mr. Foster indicated to OSC that his disclosure does not pertain to allegations of wrongdoing by ASU and Mr. McDermott.

Mr. Foster noted that the Notice expired in September 2009. Moreover, notices such as this are directed at ASIs and are not mandates to industry or aircraft owners. Mr. Foster asserted that the issuance of the Notice was a purposeful remedy undertaken in an effort to avoid the need for issuance of an airworthiness directive (AD), which would have established a formal process to identify safety or non-compliance issues, and set a plan to mitigate the issues and a timeline for compliance. This Notice also did not satisfy the regulatory requirement that the aircraft comply with and conform to an approved type design.

According to Mr. Foster, at the time of OSC's 2008 referral, all of the operators of helicopters that received the NVIS modifications were advised by ASU of the non-conforming modifications, and SACO was working with ASU to bring the aircraft into conformity. He contended, however, that this informal process failed to adequately address the problem. First, the operators had not been advised of the potential safety hazard relating to the NVIS modifications, as the informal notification only indicated a technical non-conformity issue with data. Further, many of the helicopter operators delayed taking steps to bring their aircraft into conformity because they were awaiting formal action by FAA directing them to do so.

In addition, Mr. Foster alleged that SACO engaged in a process of "rubber-stamping" drawings of NVIS-modified helicopter configurations submitted by ASU, which were based on photographs of the aircraft, in order to retroactively approve the data in the STCs for those aircraft. He asserted that neither SACO nor ASU was properly inspecting the aircraft in accordance with FAA regulatory requirements to ensure readability of the instruments, warning lights and radios, and to maintain the enhanced level of safety requirements for air ambulance operations under 14 C.F.R. Part 135. He contended that this retroactive approval process failed to address the identified safety hazard relating to the installation of the filters and incompatible light sources. While these helicopters may now be deemed to conform to their STCs, they had not been physically evaluated to determine whether lights and filters previously installed without approved data were correctly positioned, were compatible with NVG use, and did not impede the pilot's ability to see the instruments and radios in normal night and day situations or while using the goggles. He also contended that in many installations the instruments manufactured to Technical Standard Order (TSO) requirements were modified contrary to regulatory requirements, with FAA concurrence, and the TSO markings were not removed so that any future installer would be aware that those instruments were not compliant with the TSO.⁴

Thus, Mr. Foster contended that FAA allowed aircraft with invalid airworthiness certificates, and potentially hazardous NVIS modifications, to remain in service. He asserted that without a systematic approach to ensuring conformity and airworthiness, the result would be continued operation of unairworthy aircraft that were not properly evaluated. Moreover, the failure to establish a formal approach to conformity could cause sporadic groundings of EMS helicopters that were waiting for approved data, putting at risk trauma patients whose lives

⁴ A Technical Standard Order (TSO) is a minimum performance standard issued by FAA for specified materials, parts, processes, and appliances used on civil aircraft.

depend on their availability. As an example, Mr. Foster indicated that in late April 2008, nine medivac helicopters located in California were voluntarily grounded by their operators when the FAA made a request to examine the aircraft to determine conformity with the data. He contended that removal of this many emergency helicopters from service at one time creates a substantial risk of harm to the public.⁵ Finally, Mr. Foster reported that recent inspections resulted in the identification of a significant number of non-compliant modifications, evidenced by the numerous enforcement actions against the repair station performing modifications, ASU.

Despite Mr. Foster's prior allegations, OSC's first referral, and the subsequent FAA investigation, the problems remained unresolved. In addition, at the time of OSC's second referral, Mr. Foster alleged, FAA had not yet established a formal, systematic approach to ensuring conformity of the aircraft.

The Agency's Findings

Helicopters were returned to service following modification, with field approvals, contrary to FAA policy, and numerous discrepancies with STC approved data were noted, with some possible impacts to safety.

According to the report, AAE confirmed that while there was no evidence to indicate that FAA officials engaged in unlawful conduct, gross mismanagement, or an abuse of authority, FAA was "initially not aggressive enough in monitoring and ensuring compliance." With regard to this finding, the report stated that the investigation, along with the "lessons learned" from the first OSC referral, has resulted in comprehensive process improvements and significant corrective actions with regard to the process of NVIS installation approval and the monitoring of compliance through periodic FAA inspections.

The AAE investigation did substantiate Mr. Foster's allegation that many of the helicopters were returned to service following modification with field approvals by an ASI in the Boise FSDO, contrary to FAA policy. According to the report, the investigation disclosed more than 50 erroneous field approvals performed by the ASI, together with an additional erroneous field approval by an ASI from the FSDO in Scottsdale, Arizona. These field approvals were performed contrary to FAA directives, and the inspectors involved appeared to be unaware of the appropriate guidance on field approvals. The report explained that the policies in effect at the time of the erroneous field approvals, FAA's Flight Standards Service (AFS) Notice 8000.349 and FAA Order 8300.10, required that a return to service for an NVIS modification be accomplished through a STC.⁶ Although the Boise FSDO did have a field approval review

⁵ On May 3, 2008, Mr. Foster reported his allegations to the DOT OIG, which opened a case file (Case No. 08IH-B-66-I-000) and referred the matter to FAA for investigation. Mr. Foster was never interviewed in connection with the OIG case.

⁶ The Flight Standards Service promotes safe air transportation by setting the standards for certification and oversight of airmen, air operators, air agencies, and designees. It also promotes safety of flight of civil aircraft and air commerce by: accomplishing certification, inspection, surveillance, investigation, and enforcement; setting

procedure, FSDO management did not enforce the procedure and was not aware of the requirement for return to service of an NVIS modification through an STC. After the 50 erroneous field approvals, the affected aircraft were brought into compliance by the issuance of one-time STCs, in accordance with guidance contained in FAA Order 8110.4.

During the course of the investigation, it was revealed that there were no instances of ASU NVIS aircraft being returned to service without an approved STC. The investigation did reveal numerous errors and/or discrepancies with the STC approved data. Of the 29 aircraft inspected as of the date of the report, “all aircraft had non-compliances and/or non-conformances,” according to the report, including installation conformity errors on all aircraft inspected. Of the 278 findings of non-compliance or non-conformance, 51 (18%) were potential safety concerns. Some of these potential safety findings were attributable to the STC holder, ASU, some attributable to the operator, and the remainder to the installer (also ASU).

The number of affected ASU modified helicopters doubled between the 2008 and 2010 OSC Referrals.

The investigation further substantiated Mr. Foster’s allegation that the number of ASU modified helicopters returned to service with approvals inaccurately indicating that the NVIS modifications conformed to the specifications of the STC increased from 250 to more than 500. First, approximately 160 aircraft were returned to service with approvals inaccurately indicating that the NVIS modifications conformed to the specifications of the STC. These aircraft received new STC data packages as a result of Mr. Foster’s first OSC disclosure. The 160 non-conforming aircraft were required to receive installation conformity inspections by their operators in order to be returned to service in accordance with FAA guidelines by October 30, 2008, as required in the corrective action plan developed in response to the first OSC disclosure. Those conformity inspections were not performed. An additional 250 to 500 aircraft were estimated to have had NVIS installed by ASU between the first and second OSC disclosures. The investigation confirmed that similar discrepancies could exist in the entire ASU-modified fleet. As a result, the corrective action plan developed as a result of the second OSC disclosure was designed to address all NVIS-modified aircraft, regardless of the date the modifications were initially accomplished.

The inspections were required to be completed by the operators of the aircraft. The report states that FAA should have maintained more extensive surveillance to ensure that these conformity inspections had been accomplished. More recently, it was determined that there were continuing errors and discrepancies with the approved STC data in the ASU-modified fleet.

Specifically, the investigation found numerous drawing/documentation errors and ambiguities which may have contributed to the non-conformance and non-compliance. In some

cases, the failure to thoroughly assess filtration requirements led to design omissions, such as components that may not have been lighted in NVIS mode, and/or lights that may not have been filtered. In numerous cases, there were errors in documents such as Instructions for Continued Airworthiness (ICAs), and Master Drawing Lists. Finally, the investigation revealed recurring issues related to design and installation processes, such as radar altimeter Decision Height light filters coming off while the aircraft was in service.

The agency report identified more specifically the findings in order to create an action plan and timeline for correcting the deficiencies. With regard to the FAA failures, the report noted that the minor change process then in place did not consistently produce compliant and/or conforming aircraft, and that AFS oversight of operator maintenance and alteration was inadequate. The investigation found that there was no standard process between FAA's Certificate Holding District Offices and the SACO for communicating concerns regarding ASU STCs. AFS Principal Inspectors and operators were found to have insufficient knowledge regarding NVIS-related maintenance procedures and to need additional training and guidance. With respect to the operators of the aircraft, the report noted that they failed to preserve the NVIS compatible configuration of their aircraft, changing the configuration of the flight deck after the STC modification without consideration of the NVG compatibility of the individual components. Operators did not properly maintain NVIS components, failing to follow inspection processes. ICAs lacked clarity and specificity. Moreover, the established maintenance program was not being effectively used to ensure appropriate maintenance.

FAA's National Policy did not establish accountability and tracking requirements to ensure compliance with NVIS certification standards.

Mr. Foster had alleged that the national policy reflected in Notice 8900.51, issued in 2008, and which established a corrective action plan for NVIS modifications performed by ASU, is inconsistent with regulations and an FAA Order governing airworthiness and the conditions that must be met for an aircraft to be considered airworthy. The investigation did not substantiate this allegation, because no inconsistencies with the regulations were found in the issuance of Notice 8900.51. Nevertheless, the investigation did reveal two significant shortcomings with the Notice, because it did not establish accountability and tracking requirements to ensure compliance with the NVIS certification standards. Inspectors were not required to document and track findings in the Program Tracking and Recording Subsystem (PTRS) database, a primary tool for tracking certificate-holder compliance with the regulations. During the investigation, senior FAA officials agreed that the Notice should have established these requirements and should have directed adequate surveillance, and AAE concluded that the Notice was not an effective means of accomplishing its objective, which was to secure regulatory compliance.

Mr. Foster had also alleged that the Notice did not satisfy the regulatory requirement that the aircraft comply with and conform to an approved type design. The investigation did not substantiate this allegation, noting that the fact that the Notice did not contain specific verbiage on this point did not establish that it failed to comply with regulatory requirements. The Notice

was directed to Flight Standards Inspectors as required by FAA policy, and not to operators; however, operators are required by regulations to conform to their approved type designs.

FAA's 2008 corrective actions failed to adequately address non-compliance problems.

The investigation partially substantiated Mr. Foster's allegation that the informal process for addressing non-conformity failed to adequately address the problem, but did not substantiate the allegation that many operators delayed taking steps to bring their aircraft into conformity because they were awaiting formal action by FAA. Addressing Mr. Foster's safety concerns first, the report reflected that FAA's Office of Aviation Safety Analytical Services conducted a safety analysis and concluded that the incident and accident rate for ASU NVIS-modified aircraft was comparable to the rate for unmodified aircraft. Based on this analysis, there is therefore "no analytical justification to substantiate that a potential safety hazard exists, which is unique to ASU NVIS installations." The investigation did, however, substantiate that Notice 8900.51 and subsequent corrective actions in 2008 failed to adequately address the non-compliance problem. The investigation revealed continued deficiencies with ASU as the STC-holder and installer, as well as incomplete actions by operators to maintain their aircraft in accordance with the ICAs. NVIS-modified aircraft ICAs require an annual conformity inspection of the modified aircraft to revalidate the NVG compatibility.

The investigation did not substantiate that operators delayed taking steps to bring their aircraft into conformity because they were awaiting formal action by FAA. Rather, according to the report, FAA noted an increase in the number of requests by NVG operators to correct deficiencies discovered by them during operator data package reviews. As stated in the report, "[a]s a result of the continued deficiencies with NVIS installations, significant improvements and corrective actions have been and are continuing to be developed."

EMS Helicopters had not been physically evaluated to determine whether lights and filters previously installed without approved data were correctly positioned.

Mr. Foster had alleged that FAA officials approved drawings of NVIS modified helicopter configurations submitted by ASU, which were based on photographs of the aircraft, in order to retroactively approve the data in the STCs for those aircraft, and that the retroactive approval process failed to address the identified safety hazard related to the modifications. Although the report notes that the investigation did not substantiate that SACO officials "rubber-stamped" drawings or that there was a failure to address safety hazards through the retroactive approval process, it acknowledged that Notice 8900.51 lacked sufficient accountability and tracking to ensure that operators actually conducted inspections following receipt of revised data packages. The investigation did substantiate Mr. Foster's specific allegation that "while these helicopters may now be deemed to conform to their STCs, they have not been physically evaluated to determine whether lights and filters previously installed without approved data are correctly positioned."

The report notes that "...NVIS systems are a safety enhancement, even with the deficiencies noted in this investigation." As such, the issuance by FAA of a notice directing the immediate inspection of these aircraft to confirm whether or not they conformed to the ASU STC would have required grounding or restrictions on use in conditions where NVG operations are advised. This would have had a significant deleterious effect on the safety and well-being of the public, due to the unavailability of EMS helicopters or NVG-aided operations for the emergency transport of critically injured or ill patients (a point that was noted by Mr. Foster in the 2010 OSC Referral). The report concludes, "[t]herefore, conformity was a longer-term objective...."

The investigation did not substantiate the allegation that in many installations, instruments manufactured to TSO requirements were modified contrary to regulatory requirements, with FAA concurrence, and that the TSO markings were not removed so that future installers would be aware that those instruments were not compliant with the TSO. According to the report, this process is permitted by regulation, and the modification was part of the approved STC. The investigation did not substantiate any instances in which ASU did not follow the STC approved process to modify TSO articles. Notably, however, earlier routine AFS surveillance of ASU modifications did reveal instances where ASU employees may have modified equipment to the extent that it was non-functional. The report reflects that these incidents are being processed under the normal AFS enforcement program. Also of note is that while the investigation did not substantiate this allegation, AAE has requested that the FAA's Aircraft Certification Service⁷ review previously approved STC drawings packages as part of their action plan to ensure that the marking requirement existed on past approvals.

FAA lacked a successful systematic approach to ensuring conformity, resulting in a significant number of non-compliant modifications.

The investigation did not substantiate Mr. Foster's allegation that FAA allowed aircraft with invalid airworthiness certificates, and potentially hazardous NVIS modifications, to remain in service. However, Mr. Foster also contended that without a systematic approach to ensuring conformity and airworthiness, the result would be continued operation of unairworthy aircraft that were not properly evaluated, and the potential for sporadic groundings. The investigation did substantiate Mr. Foster's allegation that there was not a successful systematic approach to ensuring conformity. The report clarifies that aircraft may be operated only when they are airworthy. It is the operator's responsibility to maintain and operate only airworthy aircraft. The ICAs for NVIS require an annual conformity inspection of the aircraft. The investigation found

⁷ The FAA Aircraft Certification Service is the office responsible for: administering safety standards governing the design, production, and airworthiness of civil aeronautical products; overseeing design, production, and airworthiness certification programs to ensure compliance with prescribed safety standards; providing a safety performance management system to ensure continued operational safety of aircraft; and working with aviation authorities, manufacturers, and other stakeholders to help them successfully improve the safety of the international air transportation system. See http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/air/, last accessed May 4, 2012.

that “operators may not have appreciated the importance of this requirement and may not have been performing the required annual inspection.”

The investigation did substantiate the existence of a significant number of non-compliant modifications, evidenced by the numerous enforcement actions against ASU. As a part of the investigation, FAA conducted an audit of ASU-performed NVIS modifications. A significant number of non-compliant modifications were found, as discussed above. The report identified several causal factors underlying the non-compliances in addition to ASU faults, which included operator deficiencies. The investigation, according to the report, prompted widespread enhancements to the process by which NVIS installations will be monitored by continued FAA oversight of such installations.

Finally, the report did not substantiate Mr. Foster’s allegation that FAA officials delayed issuance of Notice 8900.51 due to concerns over negative publicity regarding Southwest Airlines and American Airlines in April 2008. The report explains that draft Notice 8900.nn was never issued due to the fact that the language did not meet the specific criteria of a notice in accordance with FAA Order 1320.1E. Subsequently, Notice 8900.51 was developed and issued and effective between September 17, 2008 and September 17, 2009. As previously noted, according to the report, “...Notice 8900.51 lacked sufficient accountability and tracking to ensure that operators actually conducted these inspections following receipt of revised data packages.”

FAA declined to provide OSC with the final report resulting from the investigation conducted in response to Mr. Foster’s first OSC disclosure.

OSC received a supplemental report from the DOT OGC dated May 18, 2011, in response to questions submitted by OSC after review of the initial report dated December 10, 2010. In those questions, OSC noted that the December 10, 2010 report did not include a summary of the investigation conducted by FAA and reviewed by DOT’s OIG in reference to Mr. Foster’s first OSC Referral, nor did it discuss the findings, recommendations, or corrective actions resulting from that investigation. In the cover letter transmitting the May 18, 2011 supplemental report to OSC, DOT’s OGC specifically declined to provide the final report, stating that, “[w]hile it addresses allegations raised and FAA’s response, the [report] was done solely for the Department’s consideration.” Although the report included an “Implementation Plan,” in response to OSC’s supplemental request, the report was not produced to OSC, leaving a gap in the chronology of events and in the full understanding of actions taken or not taken by FAA officials between Mr. Foster’s first and second disclosures. As discussed in greater detail below, the report was finally produced by DOT in response to OSC’s second request for supplemental information, and attached as an exhibit to the second supplemental report dated July 22, 2011.

Compliance issues identified through the 2010 Audit were not unique to ASU, and FAA policy changes will affect the entire NVIS modified fleet.

The May 18, 2011 supplemental report also clarified the impetus for the 2010 Audit referenced in the initial report. The report explained that after surveillance led to concerns over

ASU repair station performance, planning for an in-depth assessment designed to more clearly identify the issues began in March 2010. This process led to a decision to conduct the 2010 Audit in July 2010. The supplemental report notes, importantly, that the 2010 Audit data resulted in changes to the corrective actions outlined in the December 10, 2010 report to OSC, “to the extent that it will lead to FAA policy changes, which will affect the entire NVIS modified fleet.” Critically, the supplemental report noted that some of the earlier findings were not unique to ASU.

OSC also requested clarification of the basis for FAA’s determination that Notice 8900.51, advising that operators were not required to remove aircraft from service based solely on missing or incomplete data, was not “contrary to any regulations, orders or policies pertaining to airworthiness.” According to the May 18, 2011 supplemental report, “[i]n retrospect, the decision not to aggressively pursue NVIS conformity determination can be legitimately questioned...” Notwithstanding this acknowledgement, the report stated that the safety consequences of grounding a large percentage of the HEMS fleet was considered to be “a much larger safety issue.” Thus, according to the report, the FAA stands by its decision to allow the aircraft to remain in operation while corrective action was pursued, “because of the greater public good.”

OSC questioned whether these safety concerns could have been addressed in an AD. In response, the supplemental report noted that under Title 14 C.F.R. Part 39, FAA issues an airworthiness directive addressing a product when it finds that (a) an unsafe condition exists in the product, and (b) the condition is likely to exist or develop in other products of the same type design. The supplemental report explained that an AD only affects aircraft with known, unsafe conditions, but does not necessarily apply to an entire fleet. With regard to the EMS helicopters at issue, the concept of a “fleet” has questionable relevance, as there is far more variation between individual EMS aircraft than in, for example, large aircraft fleets. It is common for no two helicopters used by a given operator to be identical.

The May 18, 2011 report also clarified information regarding the revocation of ASU’s repair station certificate in April 2008. OSC requested additional information concerning FAA’s oversight and surveillance activities for ASU following its re-certification and prior to the 2010 Audit, in addition to information concerning an investigation initiated by FAA’s Civil Aviation Security Office regarding the Boise FSDO and its oversight and certification of ASU. The supplemental report reflected that FAA revoked ASU’s repair station certificate on April 29, 2008, and re-certified it on May 29, 2008. Thereafter, between June 2008 and August 2010, FAA records revealed surveillance activity significantly above the minimum requirements for a repair station of ASU’s complexity. In addition, the FAA’s Office of Security and Hazardous Materials (ASH) conducted an investigation into a complaint that alleged that there was a conspiracy by the FAA against ASU, which likely was stimulated by heightened FAA surveillance activities, according to the report. The allegation was not substantiated.

Another, separate investigation by ASH evaluated allegations that Boise FSDO management attempted to interfere with the first ASH investigation. In the second investigation,

all FAA Boise FSDO employees with knowledge of ASU certificate management functions were interviewed. The Boise FSDO Manager admitted to asking for copies of the statements to ASH from employees under his supervision, at the request of the Acting Assistant Regional Manager in the Northwest Mountain Region. Thereafter, the Boise FSDO Manager “suggested” to his employees, verbally and in writing, that they delete their statements from their government computers. The supplemental report reasoned that the initial requests for copies of the statements did not result in the alteration of any statements supplied to ASH, and the majority had already been submitted. In addition, while some statements were deleted from certain individual employee’s computers, no statements were actually destroyed or altered, and they remain in the custody of ASH. No records pertaining to FAA surveillance of ASU were destroyed, the supplemental report asserts. The actions of both managers were under review for potential personnel action or management counseling, as appropriate.

Significantly, the initial December 10, 2010 report did not substantiate any form of wrongdoing that formed the basis for OSC’s referral – i.e., a violation of law, rule, or regulation, gross mismanagement, or an abuse of authority, despite substantiating several of Mr. Foster’s allegations. OSC requested further explanation for this lack of specificity in the findings of the initial report. According to the May 18, 2011 supplemental report, the inspector involved in returning helicopters to service with field approvals contrary to FAA policy, Mr. Michael Mesnick, received a five-day suspension, and the managers involved, Mr. John Walker, FSDO Manager, and Mr. Lewis Sanders, FSDO Assistant Manager, received “appropriate impacts on their pay-for-performance payouts.” The supplemental report further acknowledged that in addition to failures by operators and industry personnel, FAA ASIs also failed to perform adequate surveillance and oversight. With regard to the non-compliance issues, much of the responsibility fell to ASU as the STC holder, for which enforcement actions were initiated. Without acknowledging FAA responsibility specifically, the supplemental report stated that the proposed corrective actions will resolve the remaining concerns. It is clear from the reports that FAA lacked a successful systematic approach to ensuring conformity, resulting in a significant number of non-compliant modifications, and that the proposed corrective actions appear designed to correct this major deficiency.

Similar problems existed in both ASU modified and non-ASU modified helicopters.

OSC received a second supplemental report dated July 22, 2011, in response to OSC’s request for additional information and clarification of certain responses in the May 18, 2011 supplemental report. Clarifying the results of the 2010 Audit, the July 22, 2011 supplemental report noted that Phase 2 of the 2010 Audit “validated the FAA’s concern that similar problems existed in both ASU modified helicopters and non-ASU modified helicopters.”

OSC also requested clarification of the criteria used for visual tests, and whether the helicopters were tested with goggles in night conditions, and if not, how FAA determines that the aircraft are in full compliance with the data in the approved STC. FAA provided the explanation that in order for an ASI to make an accurate determination of what filters are to be installed on instruments and radios as part of a NVIS installation, the ASI would refer to the approved STC

data package for the specific aircraft to establish specific part number applicability. The installer, the report explained, is required to complete a day and night readability inspection in accordance with the approved STC. The FAA inspector then verifies through a comprehensive records review and physical inspection of the aircraft that the above actions have been accomplished correctly. The specific steps an FAA inspector is required to take in order to complete a NVIS lighting installation inspection of a modified helicopter are outlined in FAA Notice 8900.152.

The July 22, 2011 supplemental report noted that the FAA, with AAE concurrence, believes that they have made significant enhancements to the certification and safety oversight of NVIS modified aircraft. Mr. Foster's disclosures to OSC identified previous gaps in agency processes and procedures that have now been corrected or are scheduled to be corrected.

The OIG's review of the FAA investigation into Mr. Foster's original 2008 disclosure finds that FAA's inspection methods were "unusual" but did not violate FAA policy. FAA acknowledges the appearance of "coziness" with the repair station.

Attached to the July 22, 2011 supplemental report is a Memorandum dated January 5, 2010, from Robert A. Westbrook, Acting Assistant Inspector General for Special Investigations and Analysis, to Judy Kaleta, Assistant General Counsel for General Law, Office of the Secretary of Transportation. The Memorandum transmits the OIG's review of the FAA investigation into Mr. Foster's original 2008 disclosure referred by OSC. As noted, DOT declined OSC's request to provide us this Memorandum in 2010, prior to our referral of Mr. Foster's second disclosure, and upon our request for supplemental information in March, 2011, after our review of the initial report. The Memorandum stated the OIG's finding that FAA has sufficiently addressed the initial concerns referred by OSC, as well as the additional issues identified during the initial OIG review. The Memorandum indicates that FAA substantiated the allegation that ASU improperly modified EMS helicopters, and falsified documents related to the modifications. The false data packages affected nearly 250 EMS helicopters, and the modifications violated Federal Aviation Regulations. This Memorandum, contrary to the May 18, 2011 supplemental report, stated that FAA initiated action to revoke ASU's certificate, but ASU voluntarily surrendered the certificate, canceling any legal enforcement action by FAA. In addition, the Airframe and Powerplant Certificate held by ASU's Director of Maintenance was revoked for falsification of records. The allegations of falsification of records were submitted to the United States Attorney's Office (USAO) for the District of Idaho, for evaluation for criminal prosecution, but the USAO declined prosecution.

The Memorandum reflects that FAA also substantiated the allegation that a Boise Flight Standards District Office employee improperly granted field approvals and reflects that FAA took administrative action against the employee, and against the Manager of the Boise FSDO for failing to provide appropriate oversight.

With regard to the corrective actions established by FAA for inspections of the affected helicopters, the Memorandum found that the plan was "unusual," but did not violate FAA policy.

FAA's corrective action plan authorized inspection of the impacted helicopters by review of cockpit photographs and review of drawings contained in data packages for various STCs, instead of grounding all affected helicopters until they could be inspected. FAA determined that a physical inspection of only one helicopter was necessary, and concluded that "despite the assertions contained in the OSC disclosure, no safety risk was ever present; instead, the issue was a matter of improper paperwork."

The OIG condoned the FAA's "unusual" inspection methods, finding that the practice did not violate any law, rule, or regulation. Moreover, FAA's Associate Administrator for Aviation Safety, its Director of the Flight Standards Division, the Director of the Seattle Aircraft Certification Office, and FAA's Chief Scientist "all opined that the statistical data relied upon was accurate, and the methodology used created less risk to public safety than grounding emergency service helicopters...." The OIG found this sufficient and concluded that there were no additional facts that would support a finding of a substantial and specific danger to public safety.

The OIG also noted that FAA's investigation did not produce evidence that concerns regarding negative publicity slowed the process of issuance of Notice 8900.51, outlining the corrective action plan. The Memorandum further purports to resolve additional concerns surrounding the FAA's investigation and report in response to Mr. Foster's 2008 disclosures to OSC. Although concerns emerged during the investigation regarding FAA's motivation to delay corrective action, including that FAA may have intended to protect ASU financially, the OIG Memorandum determined that although the Northwest Mountain Region delayed taking action, "the inquiry into 'why' this was has been exhausted and no specific evidence was developed that any officials committed an illegal act." According to the Memorandum, FAA acknowledged the appearance of coziness, but was able to justify the actions taken to the satisfaction of the OIG.

The Whistleblower's Comments

Pursuant to 5 U.S.C. § 1213(e)(1), Mr. Foster provided comments on the initial and supplemental reports. In his comments, Mr. Foster noted that the central consideration here is that FAA regulations require that all work performed on aircraft must be accomplished in accordance with approved data. He is cognizant of the obligation of an ASI assigned to the FAA Flight Standards line of business. When an ASI discovers that approved data was not used or modifications were performed contrary to approved data, then he is obligated to take action under FAA Order 2150.3.

He asserted that ASIs are not certain about their responsibilities because FAA has not been clear on what airworthiness means. They are confused when regional leadership advises them to downgrade findings or sanctions. The historical guidance and regulations seem very clear regarding airworthiness. As defined in FAA Orders, airworthiness means that an aircraft conforms to its type design and is in a condition for safe operation. There does not appear to be any valid arbitrary basis for management to define it otherwise and still be compliant with aviation rules and laws. If the FAA intends to make decisions as they have in the matter of this

disclosure, Mr. Foster stated, they should publish objective criteria for making a determination of a safe versus unsafe condition, so that ASIs are comfortable with their responsibilities.

He further commented that the condition of “safe” appears to be subjective, in that the FAA simply made a judgment that the modifications, even those that contained filters where pilots could not see caution lights or read instruments or light reflections that rendered the goggles less than effective, were safe as long as no accident had been attributed to the NVIS modifications. Mr. Foster asserted that the same line of thinking could have averted the grounding of countless American Airlines aircraft since no fires or crashes occurred, because the wiring bundles seemed to be tied up sufficiently even though they were not tied up “exactly” as per the maintenance data. Determining conformity is the only method that the FAA has to make sure that a particular modification meets the safety and guidance requirements. He agreed that grounding the entire fleet was not appropriate, but neither was turning a blind eye. Mr. Foster’s concern remains that the FAA failed to take any follow-up action prior to the second disclosure to OSC and did not use any process to force compliance.

Mr. Foster explained that the only way to determine whether an aircraft has been properly altered and is therefore airworthy, is to compare the approved data used to modify the aircraft to the actual aircraft to determine if it was modified in accordance with the approved data. Evidence in this case shows that the repair station and other installers failed to factually conform their work, and thus the aircraft should have been deemed unairworthy. The FAA failed to follow or enforce the regulations it put into effect as required by Title 49 U.S.C. Section 44701.

Mr. Foster also provided specific comments on the findings of the supplemental reports. He pointed out that the actions taken to address the ASU issues did not increase between the first OSC referral and his March 2010 letter to FAA. In fact, he stated that the review and analysis of repair station data available to FAA would have taken about an hour. Any ASI could determine whether the repair station work was inadequate based on the records entered by ASIs. The FAA’s efforts centered around how to keep the repair station in business and the helicopters in the air rather than advising the pilots about how the installations might be defective. Mr. Foster found no evidence in the reports that the FAA continued activities to resolve the NVIS issues after August 2009, until after his letter to FAA in March 2010. He noted that the first action following his March 2010 letter was for FAA to obtain a status report and respond to him with a denial of all allegations. All other activities returned to the status quo of correcting drawings to make the drawings match the aircraft, until after the second OSC referral.

With regard to the 2010 audit, Mr. Foster pointed out that the finding that other installations also have problems should have been resolved in 2007 with ASU and all other installers becoming fully compliant without further study. The data contained in the FAA databases was simple and straightforward. There was very little to analyze other than reading comments in the PTRS that showed non-compliance. Moreover, regarding the risk analysis that was performed (Attachment E to the May 18, 2011 supplemental report), Mr. Foster noted that it did not include data concerning the number of installations where the pilots were having vision issues due to light interference, or where the filters were improper and the gauges or instruments

could not be read during the day or night. FAA inspectors were told not to evaluate this issue using the goggles during the 2010 audit.

Mr. Foster vehemently objected to the AAE finding that ASIs failed to perform adequate surveillance and oversight. Management's failures left the ASIs confused about their roles when there was conflicting support for their responsibilities. The repair station complained at every opportunity against the ASIs and management accommodated those complaints at the expense of the inspectors' morale. ASIs suggested writing enforcement cases but were rebuffed and their actions subverted by management.

With regard to the July 19, 2011 supplemental report, Mr. Foster noted that the problem with the installations was that no person actually did any conformity checks after installation for readability, including the FAA when it conducted the special emphasis evaluations part of the 2008-2009 corrective action plan and the 2010 audits. An inspector performing a comprehensive review of the records could not perform a quality conformity test. Evaluating the filters by looking at a drawing without knowing the part numbers on the actual filters serves no purpose.

Mr. Foster emphasized that the AAE report, in not substantiating five of his allegations, did not provide any evidence that would refute his allegations or support a legitimate argument that they did not occur. He hoped that in March 2010, when he appealed to the FAA's Deputy Associate Administrator for Aviation Safety, John Hickey, the FAA would recognize the seriousness of his allegations and take action so that he would not need to take the situation out of the agency for a second independent review by OSC. He remains concerned that the failure of the FAA to require accountability is what drives the culture to waver in its mission and the mandates set forth by Congress in law.

In supplemental comments dated February 2, 2012, Mr. Foster described additional concerns that arose in January 2010 when the FAA's ACO approved installations that contained the wrong color of lights in a warning indicator. The flight manuals used by pilots stated that the lights were to be red, but the actual installations used a light that was green. Moreover, the filters on the instruments did not meet NVIS visual requirements for normal day operations. He noted that although ASIs eventually initiated an enforcement case in order to force the operator of the aircraft into making the aircraft airworthy, the FAA chose to "study" the problem rather than to aggressively enforce airworthiness requirements. He asserted that a notice concerning operations with NVIS modifications that were accomplished in error, Notice 8900.166, provides that the aircraft can continue operations in an unairworthy condition as long as it is safe to fly. To the contrary, Mr. Foster argued, aircraft in an unknown status because of unapproved modifications are unairworthy and prohibited from operation. Like the notice issued to address the ASU modifications, Notice 8900.166 allowed continued operation of the aircraft, yet did not require the generation of new approved data to provide for the actual conformity of the aircraft condition, therefore formally endorsing the non-compliance of the unairworthy condition. Mr. Foster maintained that being airworthy for operations and airworthy for the aircraft to fly are distinctly intertwined and inseparable, and require approved data.

Finally, Mr. Foster identified the central problem with FAA oversight as a continued emphasis on customer service, with the customer defined as the regulated entity. In addition, the division of responsibility and oversight between the FAA's Flight Standards Service and the ACO contributes to conflict between approvals and existing operational rules because the ACO does not understand or have authority over the rules enforced by the 3500 Flight Standards inspectors world-wide, whose primary goal is to ensure public safety.

The Special Counsel's Comments

I have reviewed the original disclosure, the agency's reports, and Mr. Foster's comments. The reports provide troubling findings on the extremely high number of non-compliant modifications made to EMS helicopters by ASU, and FAA's failure, for a period of more than three years, to resolve these issues. Given the series of issues that were confirmed as Mr. Foster continued to question the FAA's actions, through his early disclosures within FAA, his 2008 disclosures to OSC, his correspondence to FAA leadership, and his subsequent 2010 disclosures to OSC, FAA's failure to act sooner to identify the scope and depth of the issues is unreasonable and unacceptable. Moreover, OSC's efforts, first to ensure appropriate and timely investigation, and later to ascertain the status of FAA's actions, were met with resistance and denial. The supplemental reports reflect that not only were Mr. Foster's initial and subsequent allegations valid, but the eventual careful examination of the problem revealed a larger scope as FAA has now determined that similar problems existed in both ASU and non-ASU modified helicopters.

Despite these concerns, it appears that FAA has established a corrective action plan designed to ensure that all EMS helicopters receive fully-compliant modifications to permit the safe use of NVIS. While I am encouraged that corrective action is in place, I remain concerned that it required the years-long persistence of one whistleblower and multiple referrals from my office for FAA to acknowledge that its oversight was lacking. I am also concerned that the reports repeatedly shifted responsibility to the installers and operators. While they do bear responsibility for making safe and compliant repairs and ensuring the airworthiness of their aircraft, respectively, had FAA management and oversight met even minimal standards, the compliance problems may have been identified and resolved much earlier and more efficiently. I intend to request an update from the agency within the next two months for an update on the status of the corrective action plan.