

**Federal Aviation Administration
Report of Investigation
To the Secretary of Transportation**

In response to:

U.S. Office of Special Counsel (OSC)

File DI-17-1298

**Director, Office of Audit and Evaluation (AAE-1)
Federal Aviation Administration
Washington, D.C.**

NOV 03 2017

Executive Summary

Secretary of Transportation, Elaine Chao directed the Federal Aviation Administration (FAA), Office of Audit and Evaluation (AAE) to investigate a U.S. Office of Special Counsel (OSC) whistleblower disclosure (OSC File No. DI-17-1298) referred on July 11, 2017. AAE is an independent office with the statutory authority to conduct impartial investigations of aviation safety-related whistleblower disclosures. This disclosure, regarding improper approval of aircraft being operated under 14 CFR Part 135 and invalid aircraft registration, was submitted by a confidential whistleblower employed by FAA's Flight Standards Service (AFS) in Washington DC.

The whistleblower alleged that: (1) Aviation safety inspectors are improperly approving aircraft that are prohibited from being operated for hire or common carriage for commercial operations under 14 CFR Part 135; and (2) Aviation safety inspectors have failed to ensure that all aircraft operating in the national air system have valid aircraft registration.

Our investigation confirmed the allegation that aviation safety inspectors (ASI) are improperly approving aircraft for addition to Operations Specifications (Ops Specs) under 14 CFR Part 135 without appropriately reviewing the exemptions of the aircraft. We identified nine Principal Inspectors responsible for five aircraft fleet types operating under Part 135. When interviewed, all were unaware of their requirement to review exemption limitations prior to approving the aircraft for addition to the Ops Spec. Two of the nine were made aware of the concern by the whistleblower when the whistleblower emailed them in August 2016. Though approvals from the Aircraft Certification Service (AIR) may exist to mitigate the limitation of an existing exemption, without a physical inspection of every aircraft with an exemption that was added to the Ops Specs of a Part 135 operator, it is unclear how many aircraft are operating in the National Airspace System (NAS) without mitigations to remove exemption limitations.

Additionally, we confirmed that some aircraft are operated in violation of the regulations after the registration has expired. Title 14, CFR § 47.45 requires that the holder of an aircraft registration certificate notify the FAA of a change of address within 30 days. This is usually an overlooked, inadvertent violation by aircraft owners. However, FAA developed the requirement to register an aircraft every three years in response to requests by government and law enforcement agencies to provide more accurate and up-to-date aircraft registration information. Based upon the large number of aircraft that have been identified by the whistleblower, it appears that the registry has failed to take sufficient steps to ensure that aircraft can be located and that ownership can be accurately identified and contacted. These process shortcomings introduce an unknown level of risk to the NAS and contrary to regulatory requirements.

AAE issued five recommendations for corrective action to [REDACTED], FAA's Associate Administrator for Aviation Safety (AVS-1) on September 5, 2017, and received his concurrence on September 18, 2017. The FAA will establish a task force to conduct analyses of approximately 1,000 exemptions and records for over 11,000 aircraft operating under Part 135, and will finalize a comprehensive corrective action plan by December 1, 2017. The plan will include the provision of appropriate guidance for FAA inspectors and air operators.

Additionally, AVS will develop plans for a multi-level active enforcement program to identify and address inaccurate aircraft operators and airmen records by December 1, 2017.

Detailed Findings

Allegation 1: Aviation safety inspectors are improperly approving aircraft that are prohibited from being operated for hire or common carriage for commercial operations under 14 CFR Part 135.

Finding: Substantiated.

When interviewed, the whistleblower stated that he was vetting [REDACTED] Ops Specs, which identified aircraft used for Part 135 (commercial) operations, when he noticed that some of the Cessna 560XL aircraft listed on the Ops Specs were exempt from requirements of 14 CFR §25.813(e) pursuant to exemption 8621. 14 CFR §25.813(e) is a safety regulation pertaining to emergency exit access for aircraft passengers and states, “no door may be installed between any exit, such that the door crosses any egress path (including aisles, cross aisles and passageways.” If granted an exemption, an aircraft owner can install interior doors that limit access to the aircraft’s emergency exit. However, exemption 8621 includes specific conditions, that the aircraft is designated as “private, not for hire” and that the aircraft cannot be operated for hire or offered for common carriage under Part 135.

The whistleblower also spot-checked two other certificate holders and found additional Cessna 560XL listed on Ops Specs that are subject to the limiting condition of exemption 8621. The whistleblower provided the information to his FAA management in the Special Emphasis Investigation Team (SEIT) on August 31, 2016. Those managers wrote management personnel at the Atlanta Aircraft Certification Office, certificate management and safety oversight section, requesting information on the approved configuration. Guidance was sent indicating that the aircraft could be operated in a Part 135 operation provided that the doors are physically locked open at all times, and that a maintenance action is required to lock the doors open, such that a passenger would not be able to unlock the lock mechanism and close the door. SEIT management gave the whistleblower permission to notify the principal inspectors of the interpretation to ensure that the aircraft they were adding to the Ops Specs had the door locked open mechanism.

In September 2016, the whistleblower wrote SEIT management indicating that FAA has granted seventy-one exemptions from 14 CFR § 25.813(e). The whistleblower suggested that an Information for Operators (InFO¹) be issued, and prepared a draft (*Attachment 1*) which would be distributed to all Part 135 operators.

¹ An InFO contains valuable information for operators to help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety. See FAA Order 8000.91 establishing the method for sending information to operators in a timely manner.

In late September 2016, SEIT management concurred with the InFO draft prepared by the whistleblower and encouraged the whistleblower to proceed with InFO publication. The whistleblower also had the regulatory authority to submit the InFO as a safety recommendation², or he/she could have taken the issue to the Air Transportation Division for resolution. When questioned why this course of action was not pursued, the whistleblower stated that he/she had already informed management. Thus, the whistleblower chose to take no further action.

AAE investigators reviewed the FAA Automated Exemption System (AES), identifying seventy-one granted exemptions to 14 CFR 25.813(e). Of these, only twenty-four were issued to eleven aircraft fleet types eligible to be used by a 14 CFR 135 operator.

A search of FAA's Web Based Operations Safety System (WebOPSS) reduced the total number of possible aircraft fleet types to nine, and identified the number of potentially affected aircraft as 600. Sampled review of individual aircraft airworthiness certificates further reduced the number of actual aircraft fleet types found on 14 CFR 135 Ops Specs to five fleet types (BD700-1A10, BD700-1A11, CE-560XL, CE-750, and GVI), totaling 397 aircraft.

The sampling methodology is as follows:

<u>AC Type</u>	<u>#Sampled</u>	<u>%Sampled</u>	<u>#NFH or CC³</u>	<u>%NFH or CC</u>
BD CL-600-2B19	8/10	80	0	0
BD BD-700-1A10	33/70	47	25	75
BD BD-700-1A11	37/47	79	35	95
Cessna 560XL	107/142	75	36	34
Cessna 750	115/120	96	44	38
DA Falcon 7X	4/13	31	0	0
DA Falcon 900 & 900EX	13/70	19	0	0
DA Falcon 2000 & 2000EX	26/110	24	0	0
GVI	9/18	50	1	11

² FAA Order 8020.17, FAA's Procedures for Handling FAA and International Safety Recommendations is used to identify and correct safety deficiencies in the NAS. Aviation Safety Recommendations can be submitted by any FAA employee, and no FAA employee may prevent the recommendation from being submitted to FAA's Office of Accident Prevention (AVP), or alter the content of the submission without the author's consent. The information may be reviewed by the author's supervisor or other subject matter experts, but such a review is not required.

³ Not for Hire or Common Carriage – (NFH or CC)

The investigation further determined that the BD700-1A10 and BD700-1A11 fleet types had a Supplemental Type Certificate (STC) issued which provided for the use of aircraft with a 14 CFR 25.813(e) exemption for hire or in common carriage. To affect this, the cabin doors in question must be deactivated or non-operational to allow the private use limitation to be removed. The STC sets out specific requirements to deactivate or make the doors non-operational and required aircraft logbook documentation that the work was completed.

The investigation found that it was possible that some Cessna aircraft (560XL and 750) may have an exemption listed on aircraft airworthiness certificates for modifications that were not made to the aircraft. According to communication from Cessna, their past practice was to list all exemptions the airframe was eligible for, whether installed or not. This practice was stopped following the Cessna merger with Beech.

Interviews were then conducted with the Principal Maintenance Inspectors (PMI) with the greatest risk exposure based upon the numbers of each aircraft fleet type overseen. This included the PMIs (and two Principal Avionics Inspectors) for seven of the largest Part 135 operators.

Though approvals may exist for the mitigation of exemption limitations, we found that maintenance ASIs are not sufficiently familiar with the requirement to review exemptions associated with each aircraft prior to adding aircraft to a 14 CFR 135 certificate. Only 22% (2 of 9) of those interviewed were aware of a responsibility to determine whether exemptions on aircraft airworthiness certificates needed to be considered prior to adding an aircraft to an operator's Ops Specs. The 22% that were aware only became aware after they were contacted by the whistleblower in 2016.

All interviewed stated that FAA guidance on the requirement was either weak or did not exist. However, FAA Order 8900.1, volume 10, chapter 9, section 1, table 10-9-1C documents a requirement to "check the applicability of exemptions/deviations from the Type Certificate Data Sheet (TCDS) or other certification document." This requirement appears to be mislabeled since it is in a section for Export Certificate of Airworthiness and the aircraft in question were not being readied for export.

Allegation 2: Aviation safety inspectors have failed to ensure that all aircraft operating in the National Airspace System have valid aircraft registration.

Findings: Substantiated, in part.

Background

Effective October 1, 2010, aircraft owners are required to re-register their aircraft every three years. The re-registration of all aircraft occurred between October 1, 2010 and December 31, 2013, updating the U.S. Civil Aircraft Register with current data derived from recent contact with aircraft owners. At the time the rule was published in the Federal Register, FAA personnel at the aircraft registry estimated that one-third of the 357,000 aircraft records it maintained were inaccurate. The new requirement was in response to government and law enforcement agency requests to provide more accurate and up-to-date aircraft registration information.

Section 47.45 requires that the holder of an aircraft registration certificate notify the FAA of a change of address within 30 days. This is an often overlooked, inadvertent violation by aircraft owners. Approximately six months before an aircraft's registration expires, the Aircraft Registry mails a notice with instructions to the owner using the mailing address of record. If renewal has not occurred two months prior to expiration, a second notice is sent to the owners. If aircraft registration has expired and a renewal certificate has not been issued, received and placed in the aircraft, the aircraft is without authority to operate. If a renewal notice is returned to the Registry as undeliverable, a copy is placed in the registry file. Once the registration has expired, the Registry sends a letter notifying the owner that the aircraft registration and airworthiness certificates no longer support the aircraft's operation, that the aircraft registration number is no longer authorized for use, and its assignment to the aircraft is scheduled for cancellation 60 days from the date of the notice. However, we were not able to identify instances in which the aircraft registration number was cancelled solely due to an expired registration.

ASIs as part of their routine duties, do ensure that all aircraft operating in the NAS have a valid registration. However, the primary responsibility for current aircraft registration remains with personnel at FAA's Civil Aviation Registry who manage the permanent records for aircraft and airmen registration.

The FAA has processes in place once an aircraft has been identified and reported as operating with an expired registration. However, it has limited resources to proactively identify aircraft that have expired registrations beyond correspondence sent to the last known address provided to the registry by the owner.

On numerous occasions, the whistleblower has provided lists of aircraft operating in the NAS without a valid registration to his management team. Our investigation determined that the whistleblower first brought such a list to the attention of SEIT management in August 2016. In September 2016, the whistleblower provided a list of additional aircraft. After discussions, the FAA's Office of Security and Hazardous Materials Safety (ASH) Law Enforcement Assistance Program (LEAP) Manager [REDACTED] and SEIT Manager [REDACTED] developed a process in which the SEIT management official will forward the whistleblower's findings to [REDACTED] for coordination throughout ASH. This corresponds to a Memorandum of Understanding (MOU) between ASH and FAA's Office of Aviation Safety (AVS) which states that FAA investigative personnel will promptly notify the applicable LEAP office of any other potential violations that fall within ASH's responsibility, such as aircraft registration discrepancies that surface as a result of an inspection or investigation for which AFS has regulatory responsibility. There are approximately 20 personnel FAA-wide whose daily duties include aircraft registration issues.

Additionally, Special Agents assigned to FAA's ASH, Investigations and LEAP Division conduct "ramp checks" frequently. For instance, in FAA's Eastern region, personnel conduct inspections at 25-30 airports and 150-200 aircraft per month in a proactive effort to ensuring aircraft are properly registered. Additionally, on at least a quarterly basis, LEAP personnel, along with ASIs, SEIT and law enforcement personnel conduct operations to inspect aircraft operating into or out of the country. Such an inspection includes reviewing for valid aircraft

registration. Typically, LEAP personnel visit 3-4 airports and inspect about 75-100 aircraft in two to three days.

For example, the whistleblower provided a list of aircraft operating with expired registrations as of July 1, 2017. At our request, LEAP special agents used law enforcement resources to identify the aircraft owners and bring them into compliance. All of those contacted indicated that their corporate addresses had changed, and they were unaware they were operating in violation of the FAR. Of the three aircraft identified in the July 11, 2017 OSC referral (N552QS, N553QS and N601QS, OSC referral, paragraph 1, page 3), two of these aircraft were operating under “pink slips” in which the aircraft registration ended as prescribed by §47.41 (e.g., expiration, destruction, etc.) and the N-number is no longer authorized for use, however, there remains a 90-day temporary operating authority of the second or “pink” copy of the Aircraft Registration Application following ownership transfers under §47.31(c)). All three aircraft are current in their registration and were brought into compliance prior to the OSC referral.

Except for criminal cases such as smuggling or other illegal operations, most of the violations of expired registration have been technical, inadvertent, or unintentional. In and of itself, an expired registration does not necessarily increase risk in the NAS. However, when the agency does not know the location of the aircraft, the owner of the aircraft, or whether the aircraft might be attempting to deliberately circumvent the regulations, then the level of risk is increased.

In 2013, a Department of Transportation (DOT), Office of Inspector General (OIG) audit report cited the fact that FAA relies on each aircraft owner to validate that the information on his or her aircraft, including make, model, serial number, and the owner’s physical address in the registry is current. The OIG found that FAA lacks formal quality control procedures for the Registry. Among other recommendations, OIG recommended to FAA that it develop procedures for periodic reassessments of aircraft and airmen data to improve and maintain data integrity. The FAA’s response to this audit advised OIG that the agency does not believe the recommended establishment of a scheduled periodical reassessment procedure offers sufficient improvement to be worth the investment of resources that would be required. The FAA partially non-concurred with this recommendation, and AFS presented evidence to suggest that such a process was not needed and that sufficient corrective action was occurring. (*See OIG report, FAA’s Civil Aviation Registry Lacks Information Needed for Aviation Safety and Security Measures, Report Number FI-2013-101, June 27, 2013 Attachment 2*)

However, it appears that FAA’s partial non-concurrence with the OIG recommendation was premature, as the whistleblower has identified numerous aircraft operating with expired registrations. Based upon the whistleblower’s substantiated allegations, it appears that the corrective actions identified by AFS in 2013 have not been successful.

Recommendations and Corrective Actions:

On September 5, 2017, we made recommendations for corrective action to [REDACTED], FAA’s Associate Administrator for Aviation Safety (AVS-1). We received AVS’s response on September 18, 2017. The recommendations and AVS’s plan for correction are as follows:

Recommendation 1: Develop a Corrective Action Plan, with firm due dates, which requires PMIs to review the exemptions on the airworthiness certificates for all aircraft currently overseen to determine 1) whether exemptions on each aircraft airworthiness certificate are appropriate (the modifications identified in the exemption were made) and 2) whether any aircraft has a limitation preventing use in 14 CFR 135 operations. If an aircraft has a limitation preventing aircraft use under 14 CFR 135 operations, determine if a subsequent STC allowed for the removal of any private use limitation, and that appropriate documentation showing STC compliance was made.

AVS Response: Concur. This is a complex issue that will require extensive analyses to understand the scope and the impact of all exemptions currently in active use for 14 CFR parts 23 (Airworthiness Standards: Normal Category Airplanes), 25 (Airworthiness Standards: Transport Category Airplanes), 27 (Airworthiness Standards: Normal Category Rotorcraft) and 29 (Airworthiness Standards: Transport Category Rotorcraft). There are currently over 1,000 exemptions within these 14 CFR parts, requiring a labor-intensive review of each one to determine if it allows conditions or limitations that could impact compliance with 14 CFR part 135 (Operating Requirements: Commuter and on Demand Operations and Rules Governing Persons on Board Such Aircraft) operations. Once these have been identified, we then need to determine if the limitation or condition impacts the operation of the aircraft, what needs to be done to address it and if correction is needed, can the aircraft continue to operate and if so, for how long and under what conditions, etc.

The exemption identified in this complaint⁴, allows the Cessna Aircraft Company to install interior doors between passenger compartments in the Cessna Model 560XL aircraft. The affected rule (14 CFR 25.813(e)⁵) states:

No door may be installed between any passenger seat that is occupiable for takeoff and landing and any passenger emergency exit, such that the door crosses any egress path (including aisles, crossaisles and passageways).

This exemption required this operating limitation to be added to the Airplane Flight Manual:

The airplane must not be operated for hire or offered for common carriage. This does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR parts 125 and 91, subpart F, as applicable.

As we know, 14 CFR § 135.178(f)⁶ operating regulation prevents the unsafe condition this exemption allows, and states in part:

⁴ Attachment 3 – Exemption 8621.pdf

⁵ Attachment 4 – CFR-2017-title14-25.813.pdf

⁶ Attachment 5 – CFR-2014-title14-vol3-sec135-178.pdf

(f) *Emergency exit access.* Access to emergency exits must be provided as follows for each passenger-carrying airplane:

- (1) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, must be unobstructed and at least 20 inches wide.

The exemption and the requirements of 14 CFR § 135.178(f) appear to conflict in this case and could raise the question as to whether the aircraft is being operated in compliance with either the current air operators certificate or the exemption. Once the determination that the aircraft is being operated in full compliance of 14 CFR § 135.178(f) is made, our concern is now whether the aircraft meets the requirements of its Type Design as airworthiness exemptions are explicitly granted as part of the aircrafts airworthiness.

To accomplish the required analyses and determine the scope and applicability of the analysis to aircraft currently in use for 14 CFR part 135 operations, will require the formation of a dedicated team of specialists to review each exemption, identify the applicable aircraft make, model, series and whether it imposes an adverse impact or potential noncompliance in 14 CFR part 135 operations. This team will include members of the Flight Standards Service and the Aircraft Certification Service.

Once the exemptions have been reviewed and their potential impact to 14 CFR part 135 operations has been determined, a comprehensive search for aircraft currently used in 14 CFR part 135 operations (about 11,041 aircraft) will be conducted to identify the applicable aircraft and companies (5,331 active certificated 14 CFR part 135 Air Operators).

At the completion of the analysis, we will be able to establish the baseline for the continuing efforts to determine the airworthiness actions necessary to ensure the safety of all aircraft, with exemptions, currently operating in 14 CFR part 135 operations. While it is difficult to specify, with any certainty, what the continuing actions will be before the analysis is completed, these actions may include:

1. Issuance of Airworthiness Directives.
2. Targeted inspections of identified aircraft by FAA assigned Principle Inspectors.
3. Letters to air operators requiring them to demonstrate compliance with part 135 within a specified number of days.
4. Corrections of aircraft airworthiness certificates that may list an exemption that is not applicable to the aircraft for which it was issued.
5. Removal of exempted aircraft from part 135 operations until they can be brought into full compliance for these operations.
6. Review of any Supplemental Type Certificates (STC) that may have been applied to the aircraft to ensure continued compliance for part 135 operations.

This action plan will resolve the whistleblower's concerns for all aircraft currently in use for 14 CFR part 135 operations, the actions to answer recommendations 2, and 3 will address these same concerns for additional/new aircraft being added to 14 CFR part 135 operations in the future.

Guidance, is currently in draft, that addresses the review of all exemptions when considering whether an airplane can be added to an air operators certificate. This is further explained in the responses to recommendations two and three.

When analysis and the scope of the work to be completed has been determined, a comprehensive action plan will be developed. We will complete the comprehensive action plan by December 1, 2017.

Recommendations 2 and 3: Revise FAA Order 8900.1 to provide better clarity on ASI responsibilities to review limitations placed on aircraft as a result of limitations in associated exemptions and establish procedures to ensure exemptions are reviewed prior to aircraft addition to 14 CFR 135 Op Specs.

AVS Response: Concur: It must be remembered, it is always the air operator's responsibility to ensure their aircraft are in compliance with their operating rules, as such, guidance has been drafted for both the industry and FAA inspectors to mitigate the gaps found when adding an aircraft to an air operators certificate. The draft guidance will enter our review process which includes soliciting comments from FAA inspectors. After the conclusion of this process, we will publish an Information for Operators (InFO), addressing the adding of an aircraft to an air operators certificate, and an associated Advisory Circular (AC) to the public outlining the changes and requirements for adding aircraft to their operating certificates. The timelines for publication of these documents may vary, however, our goal for project completion is within 6 months from September 30, 2017.

Recommendation 4: Have personnel in AFS-200 review the InFO prepared by the whistleblower to determine whether it is appropriate for publication, and ensure that it is published in a timely manner.

Concur: The content in the supplied InFO cites language from the FAA Order 8900.1 (Flight Standards Information Management System) that is outdated and is currently in the process of being updated. Publishing the current information in the InFO, as written, would only serve to promulgate known outdated information as well as being limited to only one exemption issue. When the guidance materials have been updated, and the analysis in recommendation 1 is complete, we will publish an InFO that addresses all of the identified exemptions that impact current 14 CFR part 135 operations.

We also propose to publish a Notice directed at PI's to ensure the future aircraft additions to operator's operations specifications are reviewed with a specific focus on any airworthiness exemptions and the compatibility of any associated Conditions and Limitations with the intended operations of the aircraft. We will publish the InFO and the Notice by September 1, 2018.

Recommendation 5: *In the June 27, 2013 DOT OIG Report, FAA's Civil Aviation Registry Lacks Information Needed for Aviation Safety and Security Measures, Report Number FI-2013-101, OIG recommendations 1, 2, and 3 (page 10), all pertained to enhancing the accuracy and integrity of the information contained in the registry. Based on the volume of aircraft identified as operating in the NAS with expired registration (as provided by the whistleblower), it is clear that the registry does not have sufficient processes or personnel to maintain a robust and accurate registry. The FAA needs to implement these recommendations in a manner which addresses the recommendations' full intent, to include sufficient quality control processes.*

Concur: The FAA is evaluating additional actions that could be taken to further enhance the accuracy and integrity of the information contained in the registry. Specifically, to the recommendations in the 2013 DOT OIG Report:

OIG recommendation 1. *Develop procedures for periodic reassessments of aircraft and airman data to improve and maintain data integrity.*

Response: Aircraft owners are required to re-register their aircraft every three years. The aircraft data is reviewed during the re-registration process. The Registry updates its airman data from data submitted when an airman updates their medical certificate. The FAA is evaluating procedural enhancements that would address registry records in cases where a safety risk is identified.

OIG recommendation 2. *Issue policy or regulations that clarify informational requirements for registration of aircraft owned by trusts for non-citizens.*

Response: FAA published a policy clarification concerning registration of aircraft owned by trusts for non-citizens, in the Federal Register on June 18, 2013.

OIG recommendation 3. *Develop procedures to ensure that airman addresses are kept current.*

Response: Concerning airman data, the Registry acquired software to standardize an address using the rules established by the US Postal Service (USPS). It also checks if the address is valid; i.e. street, city, state and zip code; by checking against a data base of addresses provided by the USPS. We intend to partner with other offices within the Flight Standards Service (AFS) and the Office of Security and Hazardous Materials (ASH) to develop plans for a multi-level active enforcement program to identify and address inaccurate aircraft operators and airmen records. We will complete a plan of action for this effort by December 1, 2017.

Investigation Methodology

The investigation was conducted under the authority of the FAA Office of Audit and Evaluation (AAE), pursuant to Title 49 U.S.C. §106(t) and FAA Order 1100.167B.

Investigative Team:

- [REDACTED], Jr., Senior Investigator/Aviation Safety Inspector, Office of Audit and Evaluation
- [REDACTED], Investigator/Aviation Safety Inspector, Office of Audit and Evaluation
- [REDACTED], Senior Technical Advisor, Office of Audit and Evaluation

The investigative team analyzed records and documents obtained from the whistleblower, as well as hundreds of records including memorandums, emails, and FAA guidance, policy, regulations, orders and notices, hundreds of records related to aircraft exemptions, aircraft registrations. In addition, interviews or discussions of policy and practice were conducted with the following individuals:

- The confidential whistleblower
- [REDACTED], Principal Maintenance Inspector (PMI) Exclusive Jets (CE 560XL)
- [REDACTED], PMI for Sunset Aviation LLC (7SSA) (GVI)
- [REDACTED], PMI for XOJet Inc. AWKA (CE 750)
- [REDACTED], PMI for Delta Private Jets Inc. (CVGA) — (CE 560XL)
- [REDACTED], PMI for Executive Jet Management Inc. (CWQA) (GVI)
- [REDACTED], PMI for NetJets Aviation Inc.) DXTA — (BD700-1A10, BD700-1A11, CE 560XL, CE 750)
- [REDACTED], PMI for Zetta Jet USA Inc. (IIDA) (BD700-1A10)
- [REDACTED], Principal Avionics Inspector (PAI) for NetJets (DXTA)
- [REDACTED], PAI for Sunset Aviation LLC (7SSA)
- [REDACTED], Manager, Aviation Security and Special Activities, Special Emphasis Investigations Team (SEIT)
- [REDACTED], Manager, Safety Risk Management Division, SEIT
- [REDACTED], Supervisory Aviation Safety Inspector, SEIT
- [REDACTED], Program Manager, LEAP ASH
- [REDACTED], Special Agent, ASH

List of Attachments

1. Draft InFO
2. OIG Audit Report FI-2013-101
3. Exemption 8621.pdf
4. CFR 2017 title 14-25.813.pdf
5. CFR 14 title 14-vol3-sec135-178.pdf

Attachment 1



U.S. Department
of Transportation
Federal Aviation
Administration

InFO

Information for Operators

InFO:

DATE:

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info

An InFO contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety.

Subject: Exemption from 14 CFR § 25.813(e)

Purpose: This InFO contains information about Federal Aviation Administration (FAA) exemptions from 14 CFR § 25.813(e) and summarizes the associated conditions and limitations.

Background: FAA Order 8900.1 requires Principal Inspectors to obtain AFS-200 concurrence when a certificate holder/applicant requests authorization to conduct operations using turbine-powered airplanes and any airplanes in air ambulance operations. During our review we research many public and government information sources. Recently we began noting references to Exemptions which are listed as an exception on the Standard Airworthiness Certificate (FAA Form 8100-2) for aircraft being added to a Certificate Holders Operations Specifications.

Exemption Conditions and Limitations: A review of these exemptions within the FAA Automated Exemption System (AES) shows that that several petitioners have been granted a full or partial exemption from 14 CFR 25.813(e). Generally, the petitions have been granted to the extent necessary to allow the petitioner to install executive interiors on "private, not-for-hire" airplanes. Many of these exemptions list conditions including that the airplane is not to be operated for hire or offered for common carriage.

Recommended Action: Directors of operations/maintenance, chief pilots should review the Standard Airworthiness Certificate for any exemptions. If exemptions are noted, the operator should review each of them for any conditions or limitations. Link to 14 CFR 25.813(e) Exemptions -

[http://aes.faa.gov/Print/Frames.asp?pageURL=Exemption.asp%3fSelExemptID=0%26CurrPage=1%26ExpireFrom=%26ExpireTo=%26NeverExpire=%26IssueFrom=%26IssueTo=%26RegCode=25.813\(e\)%20%26RegTypeID=4%26Equipment=%26ExemptDocketno=%26ExemptorDocket=0%26DispositionID=%26Petitioner=%26OfficeCode](http://aes.faa.gov/Print/Frames.asp?pageURL=Exemption.asp%3fSelExemptID=0%26CurrPage=1%26ExpireFrom=%26ExpireTo=%26NeverExpire=%26IssueFrom=%26IssueTo=%26RegCode=25.813(e)%20%26RegTypeID=4%26Equipment=%26ExemptDocketno=%26ExemptorDocket=0%26DispositionID=%26Petitioner=%26OfficeCode)

Contact: Questions or comments regarding this InFO should be directed to the applicable FAA Principal Inspector assigned to the certificate holder.

Office of Inspector General
Audit Report

**FAA'S CIVIL AVIATION REGISTRY LACKS
INFORMATION NEEDED FOR AVIATION
SAFETY AND SECURITY MEASURES**

Federal Aviation Administration

Report Number: FI-2013-101
Date Issued: June 27, 2013





Memorandum

U.S. Department of
Transportation
Office of the Secretary
of Transportation
Office of Inspector General

Subject: ACTION: Report: FAA's Civil Aviation Registry
Lacks Information Needed for Aviation Safety and
Security Measures
Report Number FI-2013-101

Date: June 27, 2013

From: [REDACTED] [REDACTED]
Assistant Inspector General for Financial and
Information Technology Audits

Reply to
Attn. of: JA-20

To: Federal Aviation Administrator

As part of the Federal Aviation Administration's (FAA) safety mission, its Flight Standards Service¹ (AFS) maintains the Civil Aviation Registry to ensure that unqualified aircraft owners and airmen² do not receive aircraft registrations or licenses. FAA uses the Registry to process and maintain ownership registrations on 350,000³ private and commercial aircraft and records on pilots' licenses. The Registry, which contains personally identifiable information (PII), also serves as a source of information for other Government agencies, including those responsible for homeland security and investigations of aviation accidents and other incidents.

We initiated this audit because of congressional concerns over aviation safety and the security of the information that FAA maintains in the Registry. Our objectives were to determine whether (1) aircraft registrations and pilot certifications include the information needed for FAA to ensure aviation safety, (2) security controls keep the Registry secure from unauthorized access, and (3) contingency plans are sufficient to recover the Registry system in the event of an emergency.

To conduct our work, we interviewed officials from FAA's Flight Standards Service and Aviation Safety Office of Quality, Integration, and Executive Services. We reviewed laws governing aircraft registration and pilot certification and examined FAA's policies and procedures on the Registry's operations. We

¹AFS promotes safe air transportation by setting standards for certification and oversight of pilots; air carriers including major airlines, regional carriers and cargo carriers; flight schools and training centers; and management of the information systems of record for pilots and all civil aircraft.

²Individuals certified by FAA's Airman Certification Branch under 14 CFR Aeronautics and Space § 61, 63 and 65.

³The number of U.S. civil aircraft registered as of August 2012.

also assessed FAA's compliance with Department of Transportation (DOT) policy on maintenance of information systems' confidentiality and availability. We conducted this audit between January 2011 and April 2013 in accordance with generally accepted Government auditing standards. Exhibit A further details our scope and methodology.

BACKGROUND

AFS manages the Registry—located in Oklahoma City, Oklahoma—which consists of two databases, one on aircraft and the other on airmen. For aircraft, AFS accepts applications for and maintains permanent records on the registrations of all civil aircraft. Title 14 (Aeronautics and Space) of the Code of Federal Regulations (CFR) requires the application to include the aircraft's make, model, and serial number; the applicant's permanent address; and documentary proof—such as title of ownership or bill of sale—that the applicant owns the aircraft. Each applicant for registration must also certify that he or she is a citizen of the United States and that the aircraft is not registered under the laws of any other country. AFS reviews each applicant's information and issues Certificates of Aircraft Registration to applicants who meet requirements.⁴

FAA regulations also allow the registration of aircraft owned under trusts,⁵ which allow non-U.S. citizens to have their aircraft registered on FAA's Registry. To do this, an aircraft owner will create a trust agreement that transfers the aircraft's title to an American trustee. The trustee, who may be an individual or organization, will register the aircraft under his/her or its name. The agreement will also identify the beneficiary or person who can use the aircraft. The owner and the beneficiary are frequently the same person.

In July 2010, to ensure that aircraft owners provide accurate information for Registry records, FAA issued a rule on aircraft re-registration⁶ and registration renewal. The rule requires the re-registration of all civil aircraft by December 31, 2013, and enables FAA to cancel the registrations of aircraft that are not re-registered by this date. After initial re-registration, all aircraft registrations must be renewed every 3 years.

⁴Title 14, Section 47.5 of the CFR actually states that the Certificate of Aircraft Registration is issued "to the person who appears to be the owner" (emphasis added) of the aircraft.

⁵A trust is a legal entity created by one party, the owner and trustor, through which a second party, the trustee, holds the title to the trustor's assets or property for the benefit of a third party, the beneficiary. The trustor/owner may also be a trustee and/or one of the beneficiaries.

⁶Re-registration will take place between October 1, 2010, and December 31, 2013. All owners are required to re-register by predetermined quarterly dates based on the month of original registration. First-time registrations issued on or after October 1, 2010, also expire after 3 years.

CFR 14 also requires all persons who operate aircraft in the United States to obtain and maintain a valid pilot's certification. AFS accepts applications for pilots' certifications and maintains permanent records on the certifications in the Registry's pilot database. An application for a pilot's certification includes the applicant's social security number and date of birth, a record of pilot flight time, and the basis for the application such as test results or graduation from approved courses⁷. FAA uses designated examiners⁸—private individuals who act on FAA's behalf—to review and approve the applications, and AFS's Registry examiners review approved applications and issue certifications. FAA contracts with a vendor who furnishes the facilities, management, personnel, equipment, and materials necessary to produce and mail pilots' certifications.

RESULTS IN BRIEF

FAA's Civil Aviation Registry lacks accurate and complete information needed for aviation safety and security measures. The Registry lacks information on registered aircraft, owners—including non-U.S. citizens—and their compliance with FAA regulations. FAA's regulations require owners to periodically update or correct the information in their Registry records, but the Agency does not check these re-registrations against the original records to ensure accuracy and regulatory compliance. We found incomplete registrations for about 5,600 aircraft, or 54 percent, owned under trusts for non-U.S. citizens. As a result, FAA has been unable to provide information on these aircraft to foreign authorities upon request when U.S. registered aircraft are involved in accidents or incidents in foreign countries, as required by the Convention on International Aviation. FAA's Registry similarly lacks complete information on pilot certifications, which makes it difficult for law enforcement officials to use the Registry to conduct security screenings required by the Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA) or to detect pilots who provide false information. These data weaknesses largely stem from FAA's lack of formal quality control procedures to regularly reassess the integrity of the Registry's data and information systems.

FAA has not implemented needed security controls over the Registry's configuration and account management to mitigate the risk of unauthorized access to PII. FAA maintains it is not responsible for information voluntarily submitted to the Registry. However, FAA's practices are contrary to Office of Management and Budget (OMB) and National Institute of Standards and Technology (NIST) requirements that require protection of PII and emphasize the importance of access controls, up-to-date operating systems, and continuous monitoring. We found multiple weaknesses with the Registry servers, including outdated operating

⁷Submission of the data is mandatory, except for the Social Security Number, which is voluntary.

⁸Designated examiners exercise the authority of the FAA Administrator to certify and approve pilots' records, certifications, and test results.

systems and no routine monitoring over sensitive data access. FAA is also not in compliance with DOT policies calling for PII encryption and account access controls. Finally, FAA does not have agreements in place with external parties that receive registry information to protect PII to prevent unauthorized access, as required by the Federal Information Security Management Act (FISMA).

FAA's recovery plan for the Registry does not meet DOT's information technology (IT) security policy requirements and is inadequate to ensure that the system is recoverable after a disaster or other event causing it to be shut-down. For example, FAA's test procedures for the Registry's recovery plan did not include an alternative processing site for the resumption of Registry functions in case of a shut-down. Due to a reorganization of information technology activities some years ago and the Registry's complexity, FAA had not yet selected an alternate processing site. Lack of testing of the Registry's backup systems at an alternative site creates the risk that FAA will be unable to resume essential operations after a system shut-down.

We are making recommendations to improve the accuracy, security, and reliability of the Registry's data.

FAA'S REGISTRY DOES NOT CONTAIN COMPLETE AND ACCURATE INFORMATION ON AIRCRAFT REGISTRATIONS AND PILOT CERTIFICATIONS

FAA does not maintain accurate or complete information in its Registry. For example, it lacks information on registered aircraft, owners—including non-U.S. citizens—and their compliance with FAA regulations. FAA similarly lacks complete information on pilot certifications, which makes it difficult for the Transportation Security Administration (TSA) and other law enforcement officials to use the Registry for required security screenings or to detect pilots who provide false information. A major factor contributing to these weaknesses is FAA's lack of formal quality control procedures to regularly reassess the integrity of the Registry's data and information systems.

The Registry Lacks Complete and Reliable Information on Registered Aircraft and Their Owners and Operators

The Registry lacks information on registered aircraft, their owners, and their operators that FAA needs for aviation and security measures. We selected a random sample of 68 out of 10,292 fixed wing and rotary aircraft registrations and found that 37 out of 68 had incomplete registrations. Based on this finding we estimate that 5,600 or 54.4 percent of aircraft owned under trusts for non-US citizens lacked important information such as the identity of the trusts' owners and

aircraft operators.⁹ While FAA's regulations require registration applications to include copies of all documents that establish these trusts, they require few documents that identify the owners who established the trusts and how the trusts comply with regulations. However, under the Convention on International Civil Aviation,¹⁰ FAA has a duty to provide, upon request from appropriate foreign civil aviation authorities, accurate information on U.S. registered aircraft operated in foreign countries. Foreign aviation authorities have brought to FAA's attention numerous accidents, operational errors, and other incidents involving U.S. aircraft registered to trusts for non-U.S. citizen beneficiaries. Because the Registry lacks information on these aircraft, FAA is at risk of not being able to meet its duty under the Convention and answer these authorities' requests for information. FAA has taken actions by convening a working group to identify key issues, holding public meetings, and issued proposed policy clarification in the Federal Register for these types of aircraft registrations, but has yet to conclude work in this area. We are conducting additional audit work on the relationships between these trustees and the anonymous owners/beneficiaries.

We also found errors in Registry data. Specifically, 130 of 350,000 aircraft registration records in the Registry share make and model information and serial numbers with at least 1 other aircraft, making it difficult for FAA and other Registry users to identify the true owners of these specific aircraft. While this is a small number of discrepancies, the impact is potentially significant if a serious incident occurs and FAA is unable to identify the aircraft's owner in a timely manner. Inadequate quality control procedures contribute to such errors. For example, FAA does not check the Registry for duplicate information or perform semi-annual reassessments to review the information in aircraft registrations for accuracy or compliance with regulations in accordance with DOT policy.¹¹ Instead, FAA relies on each aircraft owner to validate that the information on his or her aircraft—including make, model, serial number, and the owner's physical address—in the Registry is current.

The Registry Does Not Contain Complete and Accurate Information on Pilots' Certifications

The Registry also lacks information on pilots that FAA needs to ensure aviation safety. Over 43,000 airmen have received certifications even though they have not provided FAA with accurate permanent personal addresses. Despite its policy,¹² FAA has permitted pilots to use business and flight school addresses on their

⁹Our \$,600 estimate has a precision of +/-1,027 at the 90-percent confidence level.

¹⁰Known as the Chicago Convention, it was signed on December 7, 1944.

¹¹DOT Order 1351.37 Departmental Cybersecurity Policy requires that System Owners perform semi-annual reassessments of the integrity of information and ensure the validity of information inputs.

¹²FAA Order 8900.2 CHG 1, General Aviation Airman Designee Handbook.

applications for certification. As a result, it is difficult for TSA to locate individuals to conduct IRTPA-required pilot screening. These screenings must be complete before FAA can issue pilot certifications. The Government Accountability Office (GAO) recently reported on the impact that FAA's lack of data on pilots has on aviation safety¹³ and has highlighted the importance of the Registry's accuracy for ensuring aviation security.¹⁴

FAA also does not comply with IRTPA's requirements for more secure pilot certification documentation. IRTPA requires FAA to issue pilots' licenses that are tamper resistant, include a photograph of the pilot, and can accommodate a biometric identifier, such as fingerprints. According to FAA officials, however, the Agency does not yet require pilots to provide photographs or biometric identifiers for inclusion in their certifications due to its lack of expertise in biometrics and a late start in its preparation to meet the requirement. The Department of Homeland Security's Inspector General has reported¹⁵ that because FAA does not require unique identifiers—such as photographs or social security numbers—on pilots' certifications, TSA may not be able to identify pilots who provide false personal information on their certification applications thereby making it easier for individuals using false identities to receive certifications.

FAA Lacks Formal Quality Control Procedures for the Registry

FAA does not have formal quality control procedures to conduct regular integrity assessments of the Registry's data. DOT policy¹⁶ states that Information System Owners—the manager responsible for an information system's operation and maintenance—must reassess semi-annually the integrity of both their systems' information and software. Furthermore, System Owners must ensure that their information systems validate information inputs to ensure that the systems' data are complete, accurate, and valid, and that the systems identify and reject any incorrect information. However, FAA has no documentation that describes the Registry's quality control requirements for reassessing its data and how those requirements correspond with FAA's policy and regulations.¹⁷

¹³GAO, *Additional FAA Efforts Could Help Identify and Mitigate Safety Risks*, GAO-13-36, October 4, 2012.

¹⁴GAO, *TSA's Process for Ensuring Foreign Flight Students Do Not Pose a Security Risk Has Weaknesses*, GAO-12-900T, July 18, 2012.

¹⁵DHS, *Transportation Security Administration (TSA) Vetting of Airmen Certificates and General Aviation Airport Access and Security Procedures*, OIG-11-96, July 2011.

¹⁶U.S. Department of Transportation, *Departmental Cybersecurity Compendium*, Supplement to DOT Order 1351.37, June 14, 2011.

¹⁷14 CFR § 47 (Aircraft Registration) and § 61, 63 and 65 (Airmen Certification).

THE REGISTRY'S SECURITY CONTROLS ARE INADEQUATE TO PROTECT THE REGISTRY'S PII FROM UNAUTHORIZED ACCESS

FAA's security controls for the Registry's system configuration and account management do not adequately protect the PII in the system. FAA's controls do not comply with DOT policies and put the system at risk for unauthorized access. Furthermore, FAA does not require the contractor who produces pilots' certifications to have the security controls required by FISMA and DOT policy in place.

FAA's Inadequate Security Controls Put the Registry's PII at Risk for Unauthorized Access

OMB requires all Federal agencies to implement the security controls necessary to prevent inappropriate access to, use, and disclosure of PII. Furthermore, NIST specifies the controls for high-impact systems,¹⁸ such as the Registry. For example, NIST requires access controls, up-to-date operating systems¹⁹ and patches,²⁰ and continuous monitoring. Pilots' certifications contain particularly sensitive PII, including social security numbers and personal medical information. Aircraft records submitted during the registration process may also contain PII inadvertently included by the registrant. However, FAA has not implemented security controls that will mitigate the risk of unauthorized access to the Registry's PII. We performed a vulnerability assessment²¹ of Registry systems and noted the following weaknesses:

- Thirty computer servers, 70 percent, of the 42 that support the Registry, contained at least 1 high risk or critical vulnerability—a weakness in an information system that could be exploited for unauthorized access.
- Two servers were running operating systems that were outdated and therefore no longer receiving vendor support or patches.
- Seven servers were missing update patches from 2007 and subsequent years.
- Access to sensitive Registry data is not monitored.

Furthermore, we found that FAA did not effectively implement the following controls that are required by FISMA, OMB, or DOT policy:

¹⁸A system is considered high impact if its loss of confidentiality, integrity, or availability is expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.

¹⁹An operating system is the software that allows computer users to run applications with the hardware of a specific system. Microsoft Windows or Apple Computer's OS are examples of operating systems.

²⁰Patches are software that fix problems with computer programs, including system vulnerabilities.

²¹A vulnerability assessment is a method of identifying weaknesses present in information technology systems by examining the current software versions and settings.

- **PII encryption.** FAA does not encrypt²² Registry data, including PII, on pilots and sensitive information inadvertently submitted by owners for aircraft registrations. The lack of encryption makes reading PII easier when it is accessed by an unauthorized party or stolen. During the pilot certification and aircraft registration processes, FAA receives copies of sensitive information such as driver licenses and documents ancillary to trusts, which without encryption, is at an increased risk of exposure.
- **Annual user account validations²³ to identify, disable, and remove accounts are no longer in use.** FAA only sporadically validates the Registry's user accounts and does not document this validation. Untimely disabling and removal of accounts could lead to unauthorized access to information and systems by individuals who are no longer authorized. Additionally, FAA has inadequate policies and practices for creating and managing user accounts. For example, FAA's system access authorizations do not adequately segregate approval and recording of changes to user accounts.
- **Multifactor user identity authentication.** OMB requires multifactor identity authentication, which consists of a password and another access method such as a smart card, to verify Registry users' identities before granting system access. Although FAA indicated that the Registry uses digital signatures²⁴ to authenticate Registry users, we found that it does not use this technology or multifactor authentication. In addition, there are over 38,000 Registry users—designated examiners that certify pilots' certifications application—who are not FAA employees, heightening the need for strong access controls, such as multifactor identity authentication, to prevent compromise of pilots' PII.

Inadequate procedures, delayed resolution of identified weaknesses, and not accepting responsibility for PII voluntarily submitted to the Registry contributed to these weaknesses. Specifically, FAA had no written procedures and guidance on configuration management and changes making it difficult to monitor and patch the system. FAA also had not completed the corrective actions included in its plans of action and milestones (POA&Ms) to address identified weaknesses. Twenty-six POA&Ms, including high risk items that FAA identified in 2009, were not resolved in a timely manner. For example, FAA wrote a POA&M for its lack of a configuration management plan for the Registry's system with a completion date of May 31, 2010, but did not complete the plan until October 2011. Finally, FAA officials informed us that because PII in aircraft registration records are

²²Encryption is the process of changing information in such a way as to make it unreadable by anyone except those possessing special knowledge (usually referred to as a "key") that allows them to change the information back to its original, readable form.

²³Annual validation is required for users' accounts and semi-annual for system owners and administrators' accounts.

²⁴Digital signature is a technology that uses encryption to authenticate the person who transmits information over a network and to ensure that the information is not changed during transmission.

voluntarily submitted to the Registry by aircraft owners, FAA does not have any responsibility to safeguard this sensitive information.

FAA Has Not Established Required Agreements with its Contractor and Other Agencies That Receive Registry Information to Ensure That Their Systems Protect the Information

FAA does not have FISMA-required agreements with its contractor and other Federal agencies that receive Registry information to ensure that these third-parties' systems can protect the Registry's PII from unauthorized access. FISMA requires Federal agencies to establish interconnection security agreements to authorize connections from one information system to systems outside of their authorization. These agreements provide assurance that the outside systems are secured according to the requirements for Federal information processing systems. DOT policy also calls for FAA to require providers of external information system services to employ security controls in accordance with the requirements for Federal systems. However, FAA has not entered into such an agreement with the vendor that produces pilots' certifications or included the required terms in its contract with the vendor. FAA also shares Registry information with other Government agencies, such as TSA, and Federal and State prisons, but does not have interconnection security agreements with all such entities. As a result, FAA does not have any assurance that the information it provides to external parties will be properly secured.

FAA'S CONTINGENCY PLAN FOR THE REGISTRY CANNOT ENSURE THAT THE AGENCY WILL RECOVER THE SYSTEM AFTER A SHUT-DOWN

FAA's contingency plan for the Registry does not ensure that FAA will be able to recover the Registry after a shut-down. At the time of our review, the plan described how to recover the system in the event of an emergency shut-down. However, FAA had not yet established an alternative operation site for the Registry. Both NIST Special Publication 800-53 and DOT policy, issued in August 2009 and June 2011 respectively, require DOT's operating administrations to establish alternate processing sites for their information systems and to implement plans for the resumption of system operations for essential missions and business functions when the primary processing capabilities are unavailable.

Furthermore, FAA's test procedures for the Registry's recovery plan do not include testing a recovered system. Because the Registry is a high-impact system, NIST requires FAA to test the Registry's contingency plan at the alternate processing site to determine the plan's effectiveness and staff's readiness to execute the plan, review the test results, and initiate corrective actions. However,

FAA only makes phone calls to ensure that the key personnel can be contacted in the event of an emergency shut-down of the Registry.

Due to a reorganization of information technology activities a number of years ago and the Registry's complexity, FAA is still working to establish the Registry's alternative processing site. However, the lack of testing of the Registry's backup systems at an alternative site creates the risk that FAA will be unable to resume essential operations after a system shut-down and ensure continued access to aircraft registrations and pilot certification records.

CONCLUSION

DOT's primary mission is safety. Integrally related to the safety of aviation operations is the security and integrity of information FAA collects on the pilots and aircraft operating in the National Airspace System and around the world. In furtherance of the aviation safety mission, FAA must collect and protect complete and accurate aircraft and pilot data. In addition, FAA must also ensure this data is readily available for safety purposes. The weaknesses we identified increase the risk that the integrity and privacy of the Registry's data will be compromised. In addition, in the event of a system disruption, the data may not be available in a timely manner. Until resolved, these weaknesses diminish FAA's ability to fully carry out its safety mission and provide required services and assistance to the aviation public, airlines, law enforcement, foreign governments, and Federal agencies responsible for homeland security.

RECOMMENDATIONS

To improve the accuracy, security, and reliability of the Registry's data, we recommend that FAA's Administrator require the Associate Administrator for Aviation Safety in consultation with the Agency's Chief Information Officer:

1. Develop procedures for periodic reassessments of aircraft and airman data to improve and maintain data integrity.
2. Issue policy or regulations that clarify informational requirements for registration of aircraft owned by trusts for non-citizens.
3. Develop procedures to ensure that airman addresses are kept current.
4. Implement the provisions of the Intelligence Reform and Terrorism Prevention Act's for pilot certifications.

5. Implement access monitoring, user accounts, and multi-factor authentication for the Registry.
6. Encrypt PII and mitigate the vulnerabilities on Registry computers. If controls cannot be implemented immediately then remove all PII or take other actions as appropriate, such as suspend the system's operation in accordance with FAA Order 1280.1B.
7. Ensure that the FAA contractor's computers and other third-party systems comply with information security controls required by FISMA and DOT policy.
8. Mitigate contingency planning weaknesses by selecting an alternative processing site and periodically conducting comprehensive contingency tests at the alternate site in accordance with DOT policy.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided FAA with a draft of this report on April 4, 2013, and requested the Agency's response within 30 calendar days. We received the response on June 20, 2013, which is included as an appendix to this report. FAA concurred with five of our eight recommendations (2, 3, 4, 7, and 8) and partially concurred with three (1, 5, and 6).

FAA concurred with recommendation 2 and requested that it be closed based on its recent publication of a revised policy on registration of non-citizen trusts; however, we do not agree that FAA's clarification of its aircraft registration policy will ensure that FAA has the information it needs. The new policy states that trustees, upon FAA's request, should provide information about registered aircraft and their operations within set time frames. However, FAA states that the Registry is the system of record in which the Agency maintains information that users need to locate individuals and aircraft. For the Registry to meet this purpose, FAA must collect this information as part of the registration process so that is available to users when they need it. Consequently, the new policy does not ensure that FAA will have the information it needs for proper safety oversight. Therefore, we request that FAA reconsider its response and provide information to clarify how it will collect and maintain current information about the ownership and operation of all aircraft owned under trusts for non-citizens.

FAA partially concurred with recommendations 1, 5 and 6. However, its planned actions do not address the recommendations' full intent. Therefore, we consider

them open and unresolved and request that FAA reconsider its related responses. Specifically:

- We disagree that the Agency has quality control processes in place that are sufficient to resolve recommendation 1. In addition, FAA has not provided information describing its quality control requirements for regular reassessments of the Registry's data. The Agency's planned action on data integrity improvements would be beneficial but does not go far enough. DOT policy requires semi-annual data integrity assessments for all information systems. FAA's planned action does not comply with this policy. Therefore, we request that FAA provide additional information on actions it plans to take to periodically reassess the Registry's data to identify and correct aircraft registrations and pilot certifications that do not conform to its policies and regulations.
- In response to recommendation 5, FAA stated that its self assessments of the Registry determined that the Registry's system was at low risk for inadvertent disclosure of sensitive information, despite the fact that FAA has not implemented system account management and strong user identity authentication mechanisms. Further, FAA categorized the Registry as a high impact system, meaning that loss of confidentiality, integrity or availability of its information would have a severe or catastrophic effect on FAA's operations. DOT policy requires high impact systems to use annual account validations and multifactor identity authentication to protect their sensitive information. FAA's response does meet these DOT policy requirements for such high risk systems. Therefore, we request that FAA provide clarifying information on its plans for establishing annual account validations and multifactor user identity authentication.
- FAA's lack of encryption of the data on its legacy systems does not comply with DOT policy and, therefore, does not sufficiently address recommendation 6. DOT policy requires encryption of all sensitive PII, wherever it may reside, and does not allow for application of encryption when practical. We request that FAA provide information on its planned action to include encryption of all sensitive PII in the Registry, including that contained in legacy systems.

Given FAA's reaction to our recommendations, we remain concerned that the integrity and privacy of the Registry's data will remain at risk.

ACTIONS REQUIRED

FAA's planned actions for recommendations 3, 4, 7, and 8 are responsive and we consider these recommendations resolved but open pending completion of the

planned actions. For recommendations 1, 2, 5, and 6, we are requesting the Agency provide additional information on its planned actions, as detailed above. In accordance with DOT Order 8000.1C, we request this information within 60 days. All corrections are subject to follow-up provisions in DOT Order 8000.1C.

We appreciate the courtesies and cooperation of Federal Aviation Administration representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-1407, or [REDACTED], Program Director, at (202) 366-1488.

#

cc: Chief Information Officer, DOT
Associate Administrator for Aviation Safety, FAA
Assistant Administrator for Information Services and
Chief Information Officer, FAA
DOT Audit Liaison, M-1
FAA Audit Liaison, AAE-100

EXHIBIT A. SCOPE AND METHODOLOGY

We conducted our work from January 2011 through April 2013 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To determine the sufficiency of the Registry's aircraft registrations and pilots records, if PII was secure from unauthorized use or access, and if contingency planning ensures Registry continuity, we interviewed officials from several FAA offices and directorates. This included FAA's Flight Standards Service-Civil Aviation Registry and Flight Standards Division Special Emphasis Investigations Team. We also interviewed officials from FAA's Office of Quality, Integration, and Executive Services; Office of the Chief Counsel; Office of Information Services-Information Systems Security; and Office of Acquisition Services-Contract Management Team. We obtained, reviewed, and analyzed documentation related to the confidentiality, integrity, and availability of the FAA's Registry system.

We used a statistical sample of 68 aircraft out of 10,292 from the Registry to evaluate aircraft registration compliance with 14 CFR § 47 (Aircraft Registration). We tested five key registration requirements on each of the 68 aircraft for a total of 340 tests. This statistical sample allowed us to project aircraft registration errors with a 90 percent confidence level and a precision of +/- 10 percent.

Finally, we performed a vulnerability assessment of the Registry's Pilot and Aircraft system components, including Pilot/Aircraft Web Services, IACRA Web Services and Admin web site, Electronic Document Retrieval System (EDRSII), Image Management System and the Registry and Office of Aviation Safety data center's pilot and aircraft processing infrastructure. We performed the assessment using automated software tools as well as manual testing techniques. The results of the scans were reviewed to determine if security settings meet policy and baseline requirements for security testing, vendor updates (patches), and FAA's configuration of these systems.

EXHIBIT B. MAJOR CONTRIBUTORS TO THIS REPORT

Name	Title
[REDACTED]	Program Director
[REDACTED]	Project Manager
[REDACTED]	Senior Auditor
[REDACTED]	Senior Auditor
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[REDACTED]	Senior Statistician
[REDACTED]	Referencer



Federal Aviation Administration

Memorandum

Date: June 20, 2013

To: [REDACTED], Assistant Inspector General for Financial and Information Technology Audits

From: [REDACTED], Director, Office of Audit and Evaluation, AAE-1

Subject: Federal Aviation Administration's (FAA) Response to Office of Inspector General (OIG) Draft Report: FAA's Civil Aviation Registry

The FAA Civil Aviation Registry (Registry) manages the permanent records for aircraft registration and airman certification. Each is governed by a Systems of Record Notice establishing its purpose, scope, and routine uses. Both systems are constantly evolving with changes in the industry and regulatory environment. Improvements in data quality, error checking, appropriate user access, and security are continually evaluated through International Organization for Standardization (ISO-9001) certified processes and advances in automation technologies.

RECOMMENDATIONS AND RESPONSES

Recommendation #1: Develop procedures for periodic reassessments of aircraft and airman data to improve and maintain data integrity.

Response: Partial Concur. As described in the draft report, the Registry already has processes in place to review aircraft and airman records, as well as quality control processes. The FAA does not believe the recommended establishment of a scheduled periodic reassessment procedure offers sufficient improvement to be worth the investment in resources that would be required. However, the Registry will evaluate ways to improve data quality and integrity and provide a follow-up response by December 31, 2013.

Recommendation #2: Issue policy or regulations that clarify informational requirements for registration of aircraft owned by trusts for non-citizens.

Response: Concur. An official FAA policy clarification on registration of aircraft owned by trusts for non-citizens has been under development since early 2010 and was

Appendix: Agency Response

published in the Federal Register on June 18, 2013. The FAA request this recommendation be closed.

Recommendation #3: Develop procedures to ensure that airman addresses are kept current.

Response: Concur. Airmen are required by 14 Code of Federal Registration Part 61.60 to report a change in address within 30 days of a move and must provide an acceptable physical residential address if different than a mailing address. It's the responsibility of the airman to inform the FAA if there is a change of address, and this can be accomplished through a change of address notification, when adding a rating or applying for an airman certificate or replacement. The FAA provides policy guidance regarding acceptable address information for FAA authorized designees, FAA inspectors and other officials in FAA Orders 8900.1, 8900.2 and other publications. Additional instructions are provided on each application for an airman certificate and/or rating. If an airman/applicant provides an unacceptable address, the Registry rejects the application or request for reissuance of a certificate and the permanent airman certificate is not issued until the airman complies with the FAA address requirements to provide an acceptable address. Currently, the FAA does not preclude an airman from using a flight school address or acceptable commercial address as a preferred mailing address, as long as the airman also provides an acceptable physical, residential address for the official airman record. Both addresses, when provided, are included in data that the FAA provides to the Transportation Security Administration (TSA) and other law enforcement entities, as required by U.S.C. 44703. The residential address may be shown in the database or contained within the airman record on digital images.

Also, the FAA continues to update its system to identify addresses that are not acceptable in accordance with U.S.C. 44703, and has implemented software changes and system edits to identify unacceptable addresses. The Registry utilizes United States Postal Service software to identify and standardize address information in order to ensure the address information provided by an applicant is not a fictitious address and to ensure proper delivery of the airman certificate. Going forward, the FAA has purchased new address validation software, called Melissa Data, which is currently undergoing testing to confirm that it will identify a "commercial" address (such as a flight school address), which would thereby require the airman to provide a physical residential address for official record purposes. If this testing is successful, the FAA plans to fully implement Melissa Data by September 30, 2014 and will also purchase a subscription of annual updates to ensure continuing currency of address validation data.

It should be noted that many of the records identified by the OIG were established prior to the requirement to provide a physical residential address. These airmen have had no other contact with FAA, in some cases, since the original issuance of the airman certificates. Many of the airmen the OIG identified are not "active", and many of the airman certificates were issued before or during the 1970's and 1980's, prior to the requirement to provide a physical residential address (DEA Act of 1988). Prior to 1988,

Appendix: Agency Response

it was acceptable to use an aviation school address, a post office box or other mailing address when applying for an airman certificate and the purpose of capturing an address was to ensure the FAA had a good address to be able to mail airman certificates, FAA safety publications and notices to airmen.

Recommendation #4: Implement the provisions of the Intelligence Reform and Terrorism Prevention Act's (IRTPA) for pilot certifications.

Response: Concur. Historically, the purpose of a pilot certificate is to display airman certificate privileges and qualifications. Section 4022 of IRTPA changed the purpose and utilization of a pilot certificate and required the FAA to issue improved pilot certificates that (1) are resistant to tampering, altering, or counterfeiting; (2) include a photograph of the individual to whom the certificate is issued; and (3) are capable of accommodating a digital photograph, a biometric identifier, or any other unique identifier that the FAA Administrator considers necessary.

The FAA began issuing plastic tamper- and counterfeit- resistant certificates in 2003. In February 2008, the FAA published the Drug Enforcement Assistance (DEA) final rule (73 FR 10662), which required all pilots (except student pilots) to obtain the tamper-resistant plastic certificate by March 31, 2010. The DEA final rule satisfied the IRTPA requirement to issue pilot certificates that are resistant to tampering, altering and counterfeiting.

In November 2010, the FAA published a Notice of Proposed Rulemaking (NPRM) titled "Photo Requirements for Pilot Certificates" (75 FR 70871). The NPRM proposed to fulfill the final requirements of section 4022 of the IRTPA by requiring a photo of the pilot on all plastic pilot certificates, including students. This rulemaking project was placed on hold because it was superseded by Section 321 of the FAA Modernization and Reform Act of 2012. To address the additional requirements of Section 321, and because a pilot certificate is not and has never been utilized as a security credential, the FAA formed a working group consisting of multiple FAA and TSA offices. This working group is evaluating the FAA's current certification processes and how they could be changed to accommodate such certificates, the infrastructure required to utilize such certificates, and associated costs that may be incurred. For example, the FAA must consider infrastructure requirements such as biometric collection and card readers that would need to be developed and distributed for airmen, government and industry to utilize biometric pilot certificates. The working group is also looking at funding considerations, and options to reduce the burden on the public and the FAA.

The new associated rulemaking project has been accepted by FAA's Office of Rulemaking, but a schedule has not yet been approved. The timing of any proposed rule will be critical so as not to duplicate rulemaking efforts between TSA and the FAA, but the complex project is unlikely to be complete in the near term, and therefore the FAA will provide an update by September 30, 2015.

Recommendation #5: Implement access monitoring, user accounts, and multi-factor authentication for the Registry.

Appendix: Agency Response

Response: Partial Concur. The FAA concurs with the recommendation to implement access monitoring but does not concur with the recommendations regarding user accounts or multi-factor authentication.

The OIG conducted this audit between January 2011 and April 2013. During this period, the FAA closed a number of open Plan of Action and Milestones (POA&M) items which add insight into FAA's activities on this issue. The OIG confirmed the Fiscal Year (FY) 2012 Assessment Team audit review finding Cyber Security Assessment and Management ID 48954) that web application audit logs are not routinely monitored. During the follow on FY2013 assessment, the Assessment Team concluded that the system owners review web application audit records on a daily basis, and recommended closing POA&M item 48954 with an effective date of March 2013. The FY2013 Assessment Team also recommended that the Integrated Airman Certification and Rating Application (IACRA) Information Technology Program Manager continue progress on POA&M item 28838, to modify the application to have a user interface that can display audit reports such as events that occurred during a selected time span or a listing of audit records for a specific event type. This modification is scheduled to be completed by September 30, 2013.

The OIG proposes an annual process to validate user accounts for the Registry web applications and the IACRA system. These applications provide services to authorized users, as the user requires these services, but once authorized, the applications do not require any minimum level of activity to maintain an account. The FY2013 Security Assessment Team assessed this risk as the lowest level of risk that can be calculated for the Registry system. Based on the business requirements and the extremely low risk, the Assessment Team recommended that the risk be accepted by the Authorizing Official, as it was previously with POA&M item 38397.

The Office of Management and Budget published Memorandum number 4 in FY2004 (M-04-04) that describes the e-authentication analysis process. Assessment Teams use the M-04-04 process to determine the level of authentication required for non-organizational (external) users, e.g. Designated Pilot Examiners. The IACRA system and the Registry web applications authenticate external users. The FY2013 Assessment Team completed independent assessments and determined that level 2 user identifier and passwords are appropriate and should be required. The FAA reviewed, and concurs with the Assessment Team conclusion, that multi-factor authentication is not required for external users.

Recommendation #6: Encrypt PII and mitigate the vulnerabilities on Registry computers. If controls cannot be implemented immediately then remove all PII or take other actions as appropriate, such as suspend the system's operation in accordance with FAA Order 1280.1B.

Response: Partial Concur. The FAA concurs with the OIG recommendation to mitigate the vulnerabilities on the Registry computers. However, this remediation cannot be

Appendix: Agency Response

performed immediately. FAA Order 1280.1B, *Protecting Personally Identifiable Information (PII)*, does not require immediate implementation and thus the FAA will not suspend operations. The Registry and IACRA systems will continue to operate while the FAA performs activities to mitigate the vulnerabilities.

The OIG confirmed the FY2012 Assessment Team patch management finding. In response to missing patches, the FY2013 Assessment Team updated POA&M item 38344 for the Registry and developed a new POA&M item for the IACRA system to address missing security patches. The FAA concurs with the OIG conclusions and assessed these POA&M items at a high risk level. Remediation is scheduled for completion by September 30, 2013.

As the OIG noted in the findings, the Registry system contains several legacy components, therefore, the FAA will not be able to encrypt all PII. In cases where encryption is not practical, the FAA will continue to implement strong access controls to PII in accordance with DOT Privacy Policy. The current access controls reduce risk to an acceptable level, in compliance with that same DOT Privacy Policy.

It is not practical to implement encryption in the mainframe portion of the Registry system as this component is being phased out. In addition, the image files cannot be encrypted because of the legacy application. However, the image files are stored with a proprietary wrapper and are not directly readable from storage. The sensitive data residing in databases in the enterprise data center can be encrypted, and the FAA is reviewing potential solutions and plan to implement by December 31, 2013.

Recommendation #7: Ensure that the FAA contractor's computers and other third-party systems comply with information security controls required by FISMA and DOT policy.

Response: Concur. The FAA will add additional security controls to the next contract and Statement of Work (SOW) which goes into effect October 2013. Even though specific security requirements were not listed in the contract, the security requirements were vetted by the FAA's contracting office prior to awarding the contract. The current SOW requires periodic background checks on each individual with access to airman data and the contractor routinely provides background check results to the FAA.

Recommendation #8: Mitigate contingency planning weaknesses by selecting an alternative processing site and periodically conducting comprehensive contingency tests at the alternate site in accordance with DOT policy.

Response: Concur. An alternate data center with demonstrated failover capability has been an identified vulnerability (POA&M item 48951). Due to competing priorities, slow progress has been made with a tentative date of September 30, 2014 to remediate this vulnerability. The FAA plans system functionality testing at the FAA disaster recovery site, the William J. Hughes Technical Center (WJHTC), Atlantic City, New Jersey. This activity is dependent upon the Unisys upgrade to version 8.2 and the

Appendix: Agency Response

inclusion of the ancillary servers on the replication platform. The FAA scheduled this item to be completed by September 30, 2014.

Although the FAA still needs to conduct functional testing at the alternative processing site, the FAA has conducted several other contingency tests. The Registry has an approved Information Security Contingency Plan in place in which Registry data is transferred to the WJHTC to provide an offsite storage location that is not subject to the same hazards as the primary site. The FAA has successfully completed file recovery exercises of the data transferred to the WJHTC. Additionally;

1. The FAA participates in two exercises per year simulating the loss of the mainframe component and also participates in the Mike Monroney Aeronautical Center exercises to evaluate continuity of operations readiness in a variety of scenarios.
2. Offsite backups and multiple levels of data protection are already in place. However, providing an alternate datacenter with demonstrated failover capability has been an identified vulnerability and the FAA plans to remediate this vulnerability by September 30, 2014.
3. System functionality testing is scheduled to be done at the designated Aviation Safety disaster recovery site at Atlantic City, New Jersey. This activity is currently scheduled to be completed by September 30, 2014.

Attachment 3



**Federal Aviation
Administration**

Memorandum

Date: **SEP 15 2017**

To: [REDACTED], Director, Office of Audit and Evaluation, AAE-1

From: [REDACTED], Associate Administrator for Aviation Safety, AVS-1 [REDACTED]

Thru: [REDACTED] Executive Director, Flight Standards Service, AFX-1 [REDACTED]

Prepared by: [REDACTED], Deputy Director, Office of Safety Standards, AFS-2B

Subject: **AFX-1 Proposed Corrective Action Plan to AAE-1 Recommendations:
U.S. Office of Special Counsel (OSC) File DI-17-1298**

Recommendation 1: *Develop a Corrective Action Plan, with firm due dates, which requires PMIs to review the exemptions on the airworthiness certificates for all aircraft currently overseen to determine 1) whether exemptions on each aircraft airworthiness certificate are appropriate (the modifications identified in the exemption were made) and 2) whether any aircraft has a limitation preventing use in 14 CFR 135 operations. If an aircraft has a limitation preventing aircraft use under 14 CFR 135 operations, determine if a subsequent STC allowed for the removal of any private use limitation, and that appropriate documentation showing STC compliance was made.*

Concur: This is a complex issue that will require extensive analysis and research to understand the scope and the impact of all exemptions currently in active use for 14 CFR parts 23 (Airworthiness Standards: Normal Category Airplanes), 25 (Airworthiness Standards: Transport Category Airplanes), 27 (Airworthiness Standards: Normal Category Rotorcraft) and 29 (Airworthiness Standards: Transport Category Rotorcraft). There are currently over 1,000 exemptions within these 14 CFR parts, requiring a labor-intensive review of each one to determine if it allows conditions or limitations that could impact compliance with 14 CFR part 135 (Operating Requirements: Commuter and on Demand Operations and Rules Governing Persons on Board Such Aircraft) operations. Once these have been identified, we then need to determine if the limitation or condition impacts the operation of the aircraft, what needs to be done to address it and if correction is needed, can the aircraft continue to operate and if so, for how long and under what conditions, etc.

The exemption identified in this complaint¹, allows the Cessna Aircraft Company to install interior doors between passenger compartments in the Cessna Model 560XL aircraft. The affected rule (14 CFR 25.813(e)²) states:

No door may be installed between any passenger seat that is occupiable for takeoff and landing and any passenger emergency exit, such that the door crosses any egress path (including aisles, crossaisles and passageways).

This exemption required this operating limitation to be added to the Airplane Flight Manual:

The airplane must not be operated for hire or offered for common carriage. This does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR part 125 and 14 CFR part 91, subpart F, as applicable.

As we know, 14 CFR part 135.178(f)³ operating regulation prevents the unsafe condition this exemption allows, and states in part:

(f) *Emergency exit access.* Access to emergency exits must be provided as follows for each passenger-carrying airplane:

- (1) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, must be unobstructed and at least 20 inches wide.

The exemption and the requirements of 14 CFR part 135.178(f) appear to conflict in this case and could raise the question as to whether the aircraft is being operated in compliance with either the current air operators certificate or the exemption. Once the determination that the aircraft is being operated in full compliance of 14 CFR part 135.178(f) is made, our concern is now whether the aircraft meets the requirements of its Type Design as airworthiness exemptions are explicitly granted as part of the aircrafts airworthiness.

To accomplish the analysis and determine the scope and applicability of the analysis to aircraft currently in use for 14 CFR part 135 operations, will require the formation of a dedicated team of specialists to review each exemption, identify the applicable aircraft make, model, series and whether it imposes an adverse impact or potential noncompliance in 14 CFR part 135 operations. This team will include members of the Flight Standards Service and the Aircraft Certification Service. Once the exemptions have been reviewed and their potential impact to 14 CFR part 135 operations has been determined, a comprehensive search for aircraft currently used in 14 CFR part 135

¹ Attachment 1 – Exemption 8621.pdf

² Attachment 2 – CFR-2017-title14-25.813.pdf

³ Attachment 3 – CFR-2014-title14-vol3-sec135-178.pdf

operations (about 11,041 aircraft) will be conducted to identify the applicable aircraft and companies (5,331 active certificated 14 CFR part 135 Air Operators).

At the completion of the analysis, we will be able to establish the baseline for the continuing efforts to determine the airworthiness actions necessary to ensure the safety of all aircraft, with exemptions, currently operating in 14 CFR part 135 operations. While it is difficult to specify, with any certainty, what the continuing actions will be before the analysis is completed, these actions may include:

1. Issuance of Airworthiness Directives.
2. Targeted inspections of identified aircraft by FAA assigned Principle Inspectors.
3. Letters to air operators requiring them to demonstrate compliance with FAR 135 within a specified number of days.
4. Corrections of aircraft-airworthiness certificates that may list an exemption that is not applicable to the aircraft for which it was issued.
5. Removal of exempted aircraft from FAR 135 operations until they can be brought into full compliance for these operations.
6. Review of any Supplemental Type Certificates (STC) that may have been applied to the aircraft to ensure continued compliance for FAR 135 operations.

This action plan will resolve the complainants concerns for all aircraft currently in use for 14 CFR part 135 operations, the actions to answer recommendations 2, 3 and 4 will address these same concerns for additional/new aircraft being added to 14 CFR part 135 operations in the future.

Guidance, is currently in draft, that addresses the review of all exemptions when considering whether an airplane can be added to an air operators certificate. This is further explained in the responses to recommendations two and three.

When analysis and the scope of the work to be completed has been determined, a comprehensive action plan will be developed. We will complete the comprehensive action plan by December 1, 2017.

Recommendation 2 and 3 (combined): *Revise FAA Order 8900.1 to provide better clarity on ASI responsibilities to review limitations placed on aircraft as a result of limitations in associated exemptions and establish procedures to ensure exemptions are reviewed prior to aircraft addition to 14 CFR 135 Op Specs.*

Concur: It must be remembered, it is always the air operator's responsibility to ensure their aircraft are in compliance with their operating rules, as such, guidance has been drafted for both the industry and FAA inspectors to mitigate the gaps found when adding an aircraft to an air operators certificate. The draft guidance will enter our review process which includes soliciting comments from FAA inspectors. After the conclusion of this

process, we will publish an Information for Operators (InFO), addressing the adding of an aircraft to an air operators certificate, and an associated Advisory Circular (AC) to the public outlining the changes and requirements for adding aircraft to their operating certificates. The timelines for publication of these documents may vary, however, our goal for project completion is within 6 months from September 30, 2017.

Recommendation 4: *Have personnel in AFS-200 review the INFO prepared by the whistleblower to determine whether it is appropriate for publication, and ensure that it is published in a timely manner.*

Concur: The content in the supplied InFO cites language from the FAA Order 8900.1 (Flight Standards Information Management System) that is outdated and is currently in the process of being updated. Publishing the current information in the InFO, as written, would only serve to promulgate known outdated information as well as being limited to only one exemption issue. When the guidance materials have been updated, and the analysis in recommendation 1 is complete, we will publish an InFO that addresses all of the identified exemptions that impact current 14 CFR part 135 operations.

We also propose to publish a Notice directed at PI's to ensure the future aircraft additions to operator's operations specifications are reviewed with a specific focus on any airworthiness exemptions and the compatibility of any associated Conditions and Limitations with the intended operations of the aircraft. We will publish the InFO and the Notice by September 1, 2018.

Recommendation 5: *In the June 27, 2013 DOT OIG Report, FAA's Civil Aviation Registry Lacks Information Needed for Aviation Safety and Security Measures, Report Number FI-2013-101, OIG recommendations 1, 2, and 3 (page 10), all pertained to enhancing the accuracy and integrity of the information contained in the registry. Based on the volume of aircraft identified as operating in the NAS with expired registration (as provided by the whistleblower), it is clear that the registry does not have sufficient processes or personnel to maintain a robust and accurate registry. The FAA needs to implement these recommendations in a manner which addresses the recommendations' full intent, to include sufficient quality control processes.*

Concur: The FAA is evaluating additional actions that could be taken to further enhance the accuracy and integrity of the information contained in the registry. Specifically, to the recommendations in the 2013 DOT OIG Report:

OIG recommendation 1. *Develop procedures for periodic reassessments of aircraft and airman data to improve and maintain data integrity.*

Response: Aircraft owners are required to re-register their aircraft every three years. The aircraft data is reviewed during the re-registration process. The Registry updates its airman data from data submitted when an airman updates their

medical certificate. The FAA is evaluating procedural enhancements that would address registry records in cases where a safety risk is identified.

OIG recommendation 2. *Issue policy or regulations that clarify informational requirements for registration of aircraft owned by trusts for non-citizens.*

Response: FAA published a policy clarification concerning registration of aircraft owned by trusts for non-citizens, in the Federal Register on June 18, 2013

OIG recommendation 3. *Develop procedures to ensure that airman addresses are kept current.*

Response: Concerning airman data, the Registry acquired software to standardize an address using the rules established by the US Postal Service (USPS). It also checks if the address is valid; i.e. street, city, state and zip code; by checking against a data base of addresses provided by the USPS. We intend to partner with other offices within the Flight Standards Service (AFS) and the Office of Security and Hazardous Materials (ASH) to develop plans for a multi-level active enforcement program to identify and address inaccurate aircraft operators and airman records. We will complete a plan of action for this effort by December 1, 2017.

Attachments

Attachment 4

ATTACHMENT #4

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Exemption No. 8621

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056

In the matter of the petition of

Cessna Aircraft Company

for an exemption from § 25.813(e) of
Title 14, Code of Federal Regulations

Regulatory Docket No. FAA-2005-21902

GRANT OF EXEMPTION

By letter L390-05-2279, dated July 8, 2005, [REDACTED] Director of Airworthiness and Product Safety, Cessna Aircraft Company, One Cessna Boulevard, P.O. Box 7704, Wichita, Kansas 67277-7704, petitioned the Federal Aviation Administration (FAA) for an exemption from the requirements of § 25.813(e) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would permit relief from the requirement that prohibits the installation of interior doors between passenger compartments. The proposed exemption is specifically for the installation of an executive interior on the Cessna Model 560XL airplane that will be designated as "private, not-for-hire."

The petitioner requests relief from the following regulation:

Section 25.813(e), Amendment 25-82 - Prohibits installation of interior doors between passenger compartments.

The petitioner's supportive information is as follows:

"The Cessna Model 560XL aircraft is designed to the requirements of 14 CFR part 25. The requirements of 14 CFR part 25 address Transport Category airplanes. These requirements must address aircraft with seating capacities in excess of 500 passengers and are used for the carriage of fare paying passengers from the general public. On the contrary, the Cessna Model 560XL aircraft is Type Certified for a maximum of 12 passengers and is typically outfitted for corporate use (private). Current 14 CFR part 25 rules for Transport Category aircraft do not make any distinction between the commercial aircraft used in airline operations and the aircraft specifically used for corporate operations.

ANM-05-439-E

"Cessna believes that aircraft specifically designed for corporate service should be eligible for the acceptance of cabin features and facilities which do not comply with the full requirements of 14 CFR part 25 by exemption, provided a similar level of safety is provided and can be demonstrated.

"Cessna aircraft are specifically designed and outfitted for corporate operation. Some anomalies of aircraft operated in this manner are the crew is intimately knowledgeable of the specific aircraft they are operating. Also, the passengers of corporate aircraft are typically frequent fliers and familiar with the specific aircraft they are aboard. Finally, the crew of a corporate aircraft has regular contact with their passengers, which has a positive influence on communicating safety issues. The combination of these factors is unique to corporate aircraft operations and provides an initial level of safety that cannot be achieved in an airliner.

"Many customers who purchase and operate Cessna aircraft consider privacy to be of paramount importance. It is therefore important that a portion of the cabin be configured with a private area that will prevent personnel who are not seated within the compartment from hearing conversations taking place inside the compartment. The only plausible method of providing such privacy is through the use of doors that separate passenger compartments. When a privacy area is created within the passenger cabin, the doors separating the private area from the rest of the cabin will be located between passenger compartments.

"Some customers, in particular Islamic customers, are bound by religious laws that require the segregation of men and women who are not related or married. According to Islam, men and women who are not related or married should never shake hands or touch, and should never be alone in a closed room or isolated place. An aircraft the size of the Cessna Model 560XL can be considered a closed space. It is again important that a portion of the cabin be configured with a private area that will create separate compartments within the cabin.

"The cabin of the Cessna Model 560XL is approximately 5.5 feet wide. It is necessary to divide the cabin full width laterally to produce a private area, because a side corridor is impractical. The proposed doors for the Cessna Model 560XL will be comprised of left and right halves that slide laterally into recesses of the dividing bulkhead between the two passenger compartments. When the doors are open (i.e. stowed), an unobstructed opening is provided that complies with the dimensions of 14 CFR 25.813 for the maximum possible passenger configuration. In addition, Cessna proposes that the doors have the following additional safety features:

- "1. The door will be placarded to be latched open during taxi, takeoff, and landing.
- "2. When the doors are deployed (i.e. spanning across the aisle), there will not be a latching mechanism that keeps the doors in that position, obstructing the aisle. Only low strength magnets or equivalent non-latching parts may be

used to keep the two doors secured together. This will allow occupants to access the opposite side of the door without use of any tools.

- "3. Each door will feature a locking mechanism that is capable of supporting the inertia loads specified in 14 CFR 25.561. The locking mechanism design would minimize the probability of the door unlocking due to fuselage distortion in an emergency landing.
- "4. The door will be designed to be frangible, with features that will allow a 5th percentile female to break the doors open in case of an emergency, resulting in an aperture large enough to allow for a 95th percentile male to escape.
- "5. An amber caution light will be provided in the annunciator panel. The light is not active with the squat switch in the air and the flaps selected up, and will illuminate with either the squat switch on the ground or flaps not selected up if the partition door was not latched open. This indication would provide the crew with enough time to set the cabin doors for landing. This logic is similar to the current lavatory door logic.
- "6. Bulkhead emergency exit sign(s) will be installed to ensure that the level of passenger guidance required to find an exit will be provided.

"The following provision will be documented as operating limitations in the limitations section of the Airplane Flight Manual.

"The airplane must not be operated for hire or offered for common carriage. This does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR part 125 and 14 CFR part 91, subpart F, as applicable.

"Effect of the Exemption

"The safety features described above are to ensure there is a clear path through the partition to an emergency exit. However, even if some extreme condition should result in a door being closed or partially closed after an accident, there are simple means to get through the door to reach the exit(s). The basic issues of a passenger finding and reaching an exit in an emergency are addressed by the above additional safety features and by the existing safety parameters inherent in corporate operation. For this reason, the exemption, as requested, would provide a level of safety for the Cessna Model 560XL passengers that would be equal to that required for airline airplanes.

"Public Interest Statement

"Cessna Aircraft Company is a major U.S. corporation, which manufactures, sells, and services business transport aircraft to the domestic and international markets. Its manufacturing facilities are mainly located in the United States and its sales and service facilities are located in the United States and other locations throughout the world. The company employs thousand of employees in the United States providing strong support to the local economies where these employees and facilities are located. The company

utilizes numerous products, such as avionics and environmental control systems, from scores of suppliers located throughout the world.

"Cessna competes for new business all over the world, and the corporate aircraft market is expected to grow. The owners and operators of Cessna business aircraft very often prefer to configure their aircraft interiors to facilitate use of interior space for in-flight conferences and other work not normally accomplished aboard airline aircraft. In order to satisfy the customer demands and maintain its marketing competitiveness, Cessna is seeking to accommodate mid cabin divider installations in its business aircraft. Doing this without compromising safety can only increase the sales volume of these aircraft, benefiting Cessna, its employees, and the local and national economies they support. Due to the high demand for these business aircraft, it is important that Cessna be granted the regulatory relief requested. The stabilizing effect that Cessna has on the job market is significant and in the best interest of the public. Failure to achieve this goal will result in a significant loss of income for the local economy and will have a negative affect on both domestic and foreign trade for the United States.

"Private areas in corporate aircraft are being requested by an increasing number of prospective aircraft operators. These operators compare Cessna products with other products from other domestic and foreign aircraft manufacturers who are able to offer this feature. This differential creates an unfair competitive edge in this market. The exemption as proposed above is in essence only an alternative method of achieving an appropriate level of safety, while at the same time providing features attractive to prospective purchasers.

"Cessna believes that action on this petition should not be delayed by publication and comment procedures since the FAA has previously published other petitions for exemption on this same issue and has received no adverse comments. In addition, further delay on this petition could cause economic harm to Cessna and their suppliers whose material procurement decisions will be substantively affected by the decision on this petition."

Public Comment

A summary of this petition was not published in the Federal Register. The nature of this exemption is effectively identical to those of previous petitions for which there were no public comments received.

The FAA's analysis/summary is as follows:

The FAA finds that the petitioner's proposal is in the public interest because the private area created by the installation of doors in the passenger cabin will allow Islamic customers to comply with religious laws that require the segregation of men and women who are not related or married. Thus, these customers will be able to benefit from use of this airplane. The FAA also considers the petitioner's proposal to be in the public interest for the previously described benefits to the national and local economies.

As more and more transport category airplanes have been configured (or re-configured) for "private, not-for-hire" use, the FAA has given considerable attention to the issue of appropriate regulation of such airplanes. Some of the current regulations governing design certification of transport category airplanes are not compatible with private, not-for-hire use of such airplanes. Given this situation, the FAA has received a number of petitions for exemption from certain regulations. The FAA has granted such exemptions when it finds that to do so is in the public interest and does not adversely affect the level of safety provided by the regulations. In the future, the FAA intends to propose regulations governing transport category airplanes in private use, obviating the need for case-by-case review of individual petitions for exemption.

Interior Doors

The placement of interior doors is clearly quite significant to the owner/operator of the airplane. The flexibility to partition the airplane into individual rooms, such as private meeting rooms or bedrooms, is paramount to an acceptable interior. The availability of private meeting rooms and bedrooms is essential. The FAA acknowledges the desirability of these features from the operator's point of view.

When the regulations pertaining to interior doors were adopted, they did not necessarily consider "rooms." They considered two possible types of interior doors in a passenger compartment. The first type is an interior door between passenger compartments. The second type is an interior door between the exit and the passenger compartment.

Until recently, only the first type of door was prohibited by § 25.813(e). However, part 25, as amended by Amendment 25-116, prohibits interior doors between the exit and the passenger compartment. In addition, Amendment 121-306 prohibits these doors in airplanes manufactured after November 27, 2006, operated under 14 CFR part 121. Amendments 25-116 and 121-306, titled "Miscellaneous Cabin Safety Changes," were published in the Federal Register on October 27, 2004.

In terms of airplanes configured for "private, not-for-hire" use, there are four different categories of doors in the passenger cabins.

1. Category I is a door in a room and the room is less than the full width of the airplane. There will be an aisle on the outside of the room. This type of room

may be occupied during takeoff and landing, and only the occupants of the room must use the door to reach an exit.

2. Category 2 is a door in a room and is the same as Category 1, except there is a single emergency exit or pair of emergency exits within the room.
3. Category 3 is a door or doors in a compartment and the compartment is the full width of the airplane. There are passengers seated on both sides of the door(s) and the main aisle leads out of or passes through the compartment. The compartment does not have any emergency exits. This type of compartment may be occupied during takeoff and landing.
4. Category 4 is a door in a room and the room is the full width of the airplane. Passengers are seated on both sides of the door, and there is a pair of emergency exits at one end. This type of room may be occupied during takeoff and landing.

After considerable deliberation, the FAA has concluded that, in regard to the installation of interior doors between passenger compartments, not all interior doors are equivalent. With respect to such interior doors, the FAA has determined that the following requirements will produce an adequate level of safety:

1. In order to maximize the level of safety, doors in Category 2, 3, or 4 installed across the main cabin aisle must open and close in a transverse direction. That is, the direction of motion of the door must be at a right angle to the longitudinal axis of the airplane. A "pocket door" is one example of such a design. This will tend to minimize the chance that the inertia forces of an accident could force the door closed.
2. Redundant means are necessary to latch doors open for takeoff and landing. Each latching means must have the capability of retaining the door in the takeoff and landing position under the inertia forces of § 25.561.
3. Each interior door must be frangible, in the event that it is jammed in the closed position in flight or during taxi, takeoff, or landing. Frangibility is intended to ensure that if a door is jammed closed occupants can escape in either direction and emergency equipment can be moved. Frangibility may be demonstrated in either of the following ways:
 - A 5th percentile female can break through the door, creating a large enough opening that a 95th percentile (or larger) male can pass through. (See Advisory Circular 25-17, "Transport Airplane Cabin Interiors Crashworthiness Handbook," paragraph 43b(2)).
 - A 5th percentile female can break a hinge on the door or a hinge on a smaller door within the door such that the door can swing, so as to allow a 95th (or larger) percentile male to pass through the opening with the door swung open.

This evaluation must be made with any cabin furnishing or equipment that could limit the swing arc of the door installed and then placed in the most adverse position. In using this approach, one must consider the possibility that the door is physically jammed in the closed position by distortion of the fuselage or furnishings. This possibility must be considered even if the door normally translates into the open and closed positions.

4. Doors which fall into Category 1 must be in the open position during taxi, takeoff and landing only when the room is occupied.
5. Doors which fall into Categories 2, 3, or 4 must be in the open position during taxi, takeoff and landing, regardless of occupancy.
6. With respect to the possibility that a door will remain closed when it should not be, the FAA has determined that a higher level of awareness is required to address this issue. Due to the relative complexity of the cabin interior, the FAA has determined that inspection by flight attendants prior to takeoff and landing is sufficient to verify that interior doors are in the proper position. Consequently, some type of remote indication is considered necessary. The petitioner's proposal to provide remote indication to the flightcrew is considered adequate.

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in § 49 U.S.C. §§ 40113 and 44701, delegated to me by the Administrator, Cessna Aircraft Company is hereby granted an exemption from 14 CFR § 25.813(e), Amendment 25-82. The petition is granted to the extent necessary to allow the Cessna Aircraft Company to install executive interiors on "private, not-for-hire" Cessna Model 560XL airplanes. This exemption is subject to the following conditions:

1. The airplane is not operated for hire or offered for common carriage. This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR parts 125 and 91, subpart F, as applicable.
2. Each door between passenger compartments must be frangible.
3. Doors that fall into Categories 1 and 3 must be in the open position during taxi, takeoff and landing only when the room is occupied or when passengers must pass through the room to reach an emergency exit.
4. Doors that fall into Categories 2 or 4 must be in the open position during taxi, takeoff and landing, regardless of occupancy.
5. Appropriate procedures must be established to signal the flightcrew that a door between passenger compartments is closed and to prohibit takeoff or landing when a door between passenger compartments is not in the proper position.

6. Doors between passenger compartments must have dual means to retain them in the open position, each of which means must be capable of withstanding the inertia loads specified in § 25.561.
7. Doors in Categories 2, 3, or 4, which are installed across a longitudinal aisle, must translate laterally to open and close.

Issued in Renton Washington, on October 3, 2005.

Signed by Ali Bahrami

Ali Bahrami

Manager, Transport Airplane Directorate
Aircraft Certification Service

Attachment 5

ATTACHMENT #5**ELECTRONIC CODE OF FEDERAL REGULATIONS**

e-CFR data is current as of August 25, 2017

Title 14 → Chapter I → Subchapter C → Part 25 → Subpart D → §25.813

Title 14: Aeronautics and Space
 PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES
 Subpart D—Design and Construction

§25.813 Emergency exit access.

Each required emergency exit must be accessible to the passengers and located where it will afford an effective means of evacuation. Emergency exit distribution must be as uniform as practical, taking passenger distribution into account; however, the size and location of exits on both sides of the cabin need not be symmetrical. If only one floor-level exit per side is prescribed, and the airplane does not have a tailcone or ventral-emergency exit, the floor-level exit must be in the rearward part of the passenger compartment, unless another location affords a more effective means of passenger evacuation. Where more than one floor-level exit per side is prescribed, at least one floor-level exit per side must be located near each end of the cabin, except that this provision does not apply to combination cargo/passenger configurations. In addition—

(a) There must be a passageway leading from the nearest main aisle to each Type A, Type B, Type C, Type I, or Type II emergency exit and between individual passenger areas. Each passageway leading to a Type A or Type B exit must be unobstructed and at least 36 inches wide. Passageways between individual passenger areas and those leading to Type I, Type II, or Type C emergency exits must be unobstructed and at least 20 inches wide. Unless there are two or more main aisles, each Type A or B exit must be located so that there is passenger flow along the main aisle to that exit from both the forward and aft directions. If two or more main aisles are provided, there must be unobstructed cross-aisles at least 20 inches wide between main aisles. There must be—

(1) A cross-aisle which leads directly to each passageway between the nearest main aisle and a Type A or B exit; and

(2) A cross-aisle which leads to the immediate vicinity of each passageway between the nearest main aisle and a Type I, Type II, or Type III exit; except that when two Type III exits are located within three passenger rows of each other, a single cross-aisle may be used if it leads to the vicinity between the passageways from the nearest main aisle to each exit.

(b) Adequate space to allow crewmember(s) to assist in the evacuation of passengers must be provided as follows:

(1) Each assist space must be a rectangle on the floor, of sufficient size to enable a crewmember, standing erect, to effectively assist evacuees. The assist space must not reduce the unobstructed width of the passageway below that required for the exit.

(2) For each Type A or B exit, assist space must be provided at each side of the exit regardless of whether an assist means is required by §25.810(a).

(3) For each Type C, I or II exit installed in an airplane with seating for more than 80 passengers, an assist space must be provided at one side of the passageway regardless of whether an assist means is required by §25.810(a).

(4) For each Type C, I or II exit, an assist space must be provided at one side of the passageway if an assist means is required by §25.810(a).

(5) For any tailcone exit that qualifies for 25 additional passenger seats under the provisions of §25.807(g)(9)(ii), an assist space must be provided, if an assist means is required by §25.810(a).

(6) There must be a handle, or handles, at each assist space, located to enable the crewmember to steady himself or herself:

(i) While manually activating the assist means (where applicable) and,

(ii) While assisting passengers during an evacuation.

(c) The following must be provided for each Type III or Type IV exit—(1) There must be access from the nearest aisle to each exit. In addition, for each Type III exit in an airplane that has a passenger seating configuration of 80 or more—

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(i) Except as provided in paragraph (c)(1)(ii), the access must be provided by an unobstructed passageway that is at least 10 inches in width for interior arrangements in which the adjacent seat rows on the exit side of the aisle contain no more than two seats, or 20 inches in width for interior arrangements in which those rows contain three seats. The width of the passageway must be measured with adjacent seats adjusted to their most adverse position. The centerline of the required passageway width must not be displaced more than 5 inches horizontally from that of the exit.

(ii) In lieu of one 10- or 20-inch passageway, there may be two passageways, between seat rows only, that must be at least 6 inches in width and lead to an unobstructed space adjacent to each exit. (Adjacent exits must not share a common passageway.) The width of the passageways must be measured with adjacent seats adjusted to their most adverse position. The unobstructed space adjacent to the exit must extend vertically from the floor to the ceiling (or bottom of sidewall storage bins), inboard from the exit for a distance not less than the width of the narrowest passenger seat installed on the airplane, and from the forward edge of the forward passageway to the aft edge of the aft passageway. The exit opening must be totally within the fore and aft bounds of the unobstructed space.

(2) In addition to the access—

(i) For airplanes that have a passenger seating configuration of 20 or more, the projected opening of the exit provided must not be obstructed and there must be no interference in opening the exit by seats, berths, or other protrusions (including any seatback in the most adverse position) for a distance from that exit not less than the width of the narrowest passenger seat installed on the airplane.

(ii) For airplanes that have a passenger seating configuration of 19 or fewer, there may be minor obstructions in this region, if there are compensating factors to maintain the effectiveness of the exit.

(3) For each Type III exit, regardless of the passenger capacity of the airplane in which it is installed, there must be placards that—

(i) Are readable by all persons seated adjacent to and facing a passageway to the exit;

(ii) Accurately state or illustrate the proper method of opening the exit, including the use of handholds; and

(iii) If the exit is a removable hatch, state the weight of the hatch and indicate an appropriate location to place the hatch after removal.

(d) If it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from any seat in the passenger cabin, the passageway must be unobstructed. However, curtains may be used if they allow free entry through the passageway.

(e) No door may be installed between any passenger seat that is occupiable for takeoff and landing and any passenger emergency exit, such that the door crosses any egress path (including aisles, crossaisles and passageways).

(f) If it is necessary to pass through a doorway separating any crewmember seat (except those seats on the flightdeck), occupiable for takeoff and landing, from any emergency exit, the door must have a means to latch it in the open position. The latching means must be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, listed in §25.561(b).

[Amdt. 25-1, 30 FR 3204, Mar. 9, 1965, as amended by Amdt. 25-15, 32 FR 13265, Sept. 20, 1967; Amdt. 25-32, 37 FR 3971, Feb. 24, 1972; Amdt. 25-46, 43 FR 60597, Oct. 30, 1978; Amdt. 25-72, 55 FR 29783, July 20, 1990; Amdt. 25-76, 57 FR 19244, May 4, 1992; Amdt. 25-78, 57 FR 29120, June 30, 1992; Amdt. 25-88, 61 FR 57958, Nov. 8, 1996; Amdt. 25-116, 69 FR 62738, Oct. 27, 2004; Amdt. 25-128, 74 FR 25845, May 29, 2009]

Need assistance?

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§ 135.175 Airborne weather radar equipment requirements.

(a) No person may operate a large, transport category aircraft in passenger-carrying operations unless approved airborne weather radar equipment is installed in the aircraft.

(b) No person may begin a flight under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar equipment, may reasonably be expected along the route to be flown, unless the airborne weather radar equipment required by paragraph (a) of this section is in satisfactory operating condition.

(c) If the airborne weather radar equipment becomes inoperative en route, the aircraft must be operated under the instructions and procedures specified for that event in the manual required by § 135.21.

(d) This section does not apply to aircraft used solely within the State of Hawaii, within the State of Alaska, within that part of Canada west of longitude 130 degrees W, between latitude 70 degrees N, and latitude 58 degrees N, or during any training, test, or ferry flight.

(e) Without regard to any other provision of this part, an alternate electrical power supply is not required for airborne weather radar equipment.

§ 135.177 Emergency equipment requirements for aircraft having a passenger seating configuration of more than 19 passengers.

(a) No person may operate an aircraft having a passenger seating configuration, excluding any pilot seat, of more than 19 seats unless it is equipped with the following emergency equipment:

(1) At least one approved first-aid kit for treatment of injuries likely to occur in flight or in a minor accident that must:

(i) Be readily accessible to crewmembers.

(ii) Be stored securely and kept free from dust, moisture, and damaging temperatures.

(iii) Contain at least the following appropriately maintained contents in the specified quantities:

Contents	Quantity
Adhesive bandage compresses, 1-inch	15
Antiseptic swabs	20
Ammonia inhalant	10
Bandage compresses, 4-inch	8
Triangular bandage compresses, 40-inch	5
Arm splint, noninflatable	1
Leg splint, noninflatable	1
Roller bandage, 4-inch	4
Adhesive tape, 1-inch standard roll	2
Bandage scissors	1
Protective nonpenetrable gloves or equivalent	1 pair

(2) A crash axe carried so as to be accessible to the crew but inaccessible to passengers during normal operations.

(3) Signs that are visible to all occupants to notify them when smoking is prohibited and when safety belts must be fastened. The signs must be constructed so that they can be turned on during any movement of the aircraft on the surface, for each takeoff or landing, and at other times considered necessary by the pilot in command. "No smoking" signs shall be turned on when required by § 135.127.

(4) [Reserved]

(b) Each item of equipment must be inspected regularly under inspection periods established in the operations specifications to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes.

[Doc. No. 16097, 43 FR 48783, Oct. 10, 1978, as amended by Amdt. 135-25, 53 FR 12382, Apr. 13, 1988; Amdt. 135-43, 57 FR 19245, May 4, 1992; Amdt. 135-44, 57 FR 42676, Sept. 15, 1992; Amdt. 135-47, 59 FR 1781, Jan. 12, 1994; Amdt. 135-53, 59 FR 52848, Oct. 18, 1994; 59 FR 55203, Nov. 4, 1994; Amdt. 121-281, 66 FR 19046, Apr. 12, 2001]

§ 135.178 Additional emergency equipment.

No person may operate an airplane having a passenger seating configuration of more than 19 seats, unless it has the additional emergency equipment specified in paragraphs (a) through (1) of this section.

(a) *Means for emergency evacuation.* Each passenger-carrying landplane emergency exit (other than over-the-wing) that is more than 8 feet from the ground, with the airplane on the ground and the landing gear extended, must have an approved means to assist the occupants in descending to the ground. The assisting means for a

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floor-level emergency exit must meet the requirements of § 25.809(f)(1) of this chapter in effect on April 30, 1972, except that, for any airplane for which the application for the type certificate was filed after that date, it must meet the requirements under which the airplane was type certificated. An assisting means that deploys automatically must be armed during taxiing, take-offs, and landings; however, the Administrator may grant a deviation from the requirement of automatic deployment if he finds that the design of the exit makes compliance impractical, if the assisting means automatically erects upon deployment and, with respect to required emergency exits, if an emergency evacuation demonstration is conducted in accordance with § 121.291(a) of this chapter. This paragraph does not apply to the rear window emergency exit of Douglas DC-8 airplanes operated with fewer than 38 occupants, including crewmembers, and fewer than five exits authorized for passenger use.

(b) *Interior emergency exit marking.* The following must be complied with for each passenger-carrying airplane:

(1) Each passenger emergency exit, its means of access, and its means of opening must be conspicuously marked. The identity and locating of each passenger emergency exit must be recognizable from a distance equal to the width of the cabin. The location of each passenger emergency exit must be indicated by a sign visible to occupants approaching along the main passenger aisle. There must be a locating sign—

(i) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom;

(ii) Next to each floor level passenger emergency exit, except that one sign may serve two such exits if they both can be seen readily from that sign; and

(iii) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin, to indicate emergency exits beyond and obscured by it, except that if this is not possible, the sign may be placed at another appropriate location.

(2) Each passenger emergency exit marking and each locating sign must meet the following:

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(i) For an airplane for which the application for the type certificate was filed prior to May 1, 1972, each passenger emergency exit marking and each locating sign must be manufactured to meet the requirements of § 25.812(b) of this chapter in effect on April 30, 1972. On these airplanes, no sign may continue to be used if its luminance (brightness) decreases to below 100 microlamberts. The colors may be reversed if it increases the emergency illumination of the passenger compartment. However, the Administrator may authorize deviation from the 2-inch background requirements if he finds that special circumstances exist that make compliance impractical and that the proposed deviation provides an equivalent level of safety.

(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, each passenger emergency exit marking and each locating sign must be manufactured to meet the interior emergency exit marking requirements under which the airplane was type certificated. On these airplanes, no sign may continue to be used if its luminance (brightness) decreases to below 250 microlamberts.

(c) *Lighting for interior emergency exit markings.* Each passenger-carrying airplane must have an emergency lighting system, independent of the main lighting system; however, sources of general cabin illumination may be common to both the emergency and the main lighting systems if the power supply to the emergency lighting system is independent of the power supply to the main lighting system. The emergency lighting system must—

(1) Illuminate each passenger exit marking and locating sign;

(2) Provide enough general lighting in the passenger cabin so that the average illumination when measured at 40-inch intervals at seat armrest height, on the centerline of the main passenger aisle, is at least 0.95 foot-candles; and

(3) For airplanes type certificated after January 1, 1958, include floor proximity emergency escape path marking which meets the requirements of § 25.812(e) of this chapter in effect on November 25, 1984.

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(d) *Emergency light operation.* Except for lights forming part of emergency lighting subsystems provided in compliance with § 25.812(h) of this chapter (as prescribed in paragraph (h) of this section) that serve no more than one assist means, are independent of the airplane's main emergency lighting systems, and are automatically activated when the assist means is deployed, each light required by paragraphs (c) and (h) of this section must:

(1) Be operable manually both from the flightcrew station and from a point in the passenger compartment that is readily accessible to a normal flight attendant seat;

(2) Have a means to prevent inadvertent operation of the manual controls;

(3) When armed or turned on at either station, remain lighted or become lighted upon interruption of the airplane's normal electric power;

(4) Be armed or turned on during taxiing, takeoff, and landing. In showing compliance with this paragraph, a transverse vertical separation of the fuselage need not be considered;

(5) Provide the required level of illumination for at least 10 minutes at the critical ambient conditions after emergency landing; and

(6) Have a cockpit control device that has an "on," "off," and "armed" position.

(e) *Emergency exit operating handles.*

(1) For a passenger-carrying airplane for which the application for the type certificate was filed prior to May 1, 1972, the location of each passenger emergency exit operating handle, and instructions for opening the exit, must be shown by a marking on or near the exit that is readable from a distance of 30 inches. In addition, for each Type I and Type II emergency exit with a locking mechanism released by rotary motion of the handle, the instructions for opening must be shown by—

(i) A red arrow with a shaft at least three-fourths inch wide and a head twice the width of the shaft, extending along at least 70° of arc at a radius approximately equal to three-fourths of the handle length; and

(ii) The word "open" in red letters 1 inch high placed horizontally near the head of the arrow.

(2) For a passenger-carrying airplane for which the application for the type certificate was filed on or after May 1, 1972, the location of each passenger emergency exit operating handle and instructions for opening the exit must be shown in accordance with the requirements under which the airplane was type certificated. On these airplanes, no operating handle or operating handle cover may continue to be used if its luminescence (brightness) decreases to below 100 microlamberts.

(f) *Emergency exit access.* Access to emergency exits must be provided as follows for each passenger-carrying airplane:

(1) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, must be unobstructed and at least 20 inches wide.

(2) There must be enough space next to each Type I or Type II emergency exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required in paragraph (f)(1) of this section; however, the Administrator may authorize deviation from this requirement for an airplane certificated under the provisions of part 4b of the Civil Air Regulations in effect before December 20, 1961, if he finds that special circumstances exist that provide an equivalent level of safety.

(3) There must be access from the main aisle to each Type III and Type IV exit. The access from the aisle to these exits must not be obstructed by seats, berths, or other protrusions in a manner that would reduce the effectiveness of the exit. In addition, for a transport category airplane type certificated after January 1, 1958, there must be placards installed in accordance with § 25.813(o)(3) of this chapter for each Type III exit after December 3, 1982.

(4) If it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from any seat in the passenger cabin, the passageway must not be obstructed. Curtains may, however, be used if they allow free entry through the passageway.

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(5) No door may be installed in any partition between passenger compartments.

(6) If it is necessary to pass through a doorway separating the passenger cabin from other areas to reach a required emergency exit from any passenger seat, the door must have a means to latch it in the open position, and the door must be latched open during each takeoff and landing. The latching means must be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, listed in § 25.601(b) of this chapter.

(g) *Exterior exit markings.* Each passenger emergency exit and the means of opening that exit from the outside must be marked on the outside of the airplane. There must be a 2-inch colored band outlining each passenger emergency exit on the side of the fuselage. Each outside marking, including the band, must be readily distinguishable from the surrounding fuselage area by contrast in color. The markings must comply with the following:

(1) If the reflectance of the darker color is 15 percent or less, the reflectance of the lighter color must be at least 45 percent.

(2) If the reflectance of the darker color is greater than 15 percent, at least a 30 percent difference between its reflectance and the reflectance of the lighter color must be provided.

(3) Exits that are not in the side of the fuselage must have the external means of opening and applicable instructions marked conspicuously in red or, if red is inconspicuous against the background color, in bright chrome yellow and, when the opening means for such an exit is located on only one side of the fuselage, a conspicuous marking to that effect must be provided on the other side. "Reflectance" is the ratio of the luminous flux reflected by a body to the luminous flux it receives.

(h) *Exterior emergency lighting and escape route.* (1) Each passenger-carrying airplane must be equipped with exterior lighting that meets the following requirements:

(i) For an airplane for which the application for the type certificate was

filed prior to May 1, 1972, the requirements of § 25.812 (f) and (g) of this chapter in effect on April 30, 1972.

(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, the exterior emergency lighting requirements under which the airplane was type certificated:

(2) Each passenger-carrying airplane must be equipped with a slip-resistant escape route that meets the following requirements:

(i) For an airplane for which the application for the type certificate was filed prior to May 1, 1972, the requirements of § 25.803(e) of this chapter in effect on April 30, 1972.

(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, the slip-resistant escape route requirements under which the airplane was type certificated:

(1) *Floor level exits.* Each floor level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, each passenger ventral exit (except the ventral exits on Martin 404 and Convair 240 airplanes), and each tail cone exit, must meet the requirements of this section for floor level emergency exits. However, the Administrator may grant a deviation from this paragraph if he finds that circumstances make full compliance impractical and that an acceptable level of safety has been achieved.

(j) *Additional emergency exits.* Approved emergency exits in the passenger compartments that are in excess of the minimum number of required emergency exits must meet all of the applicable provisions of this section, except paragraphs (f) (1), (2), and (3) of this section, and must be readily accessible.

(k) On each large passenger-carrying turbojet-powered airplane, each ventral exit and tailcone exit must be—

(1) Designed and constructed so that it cannot be opened during flight; and

(2) Marked with a placard readable from a distance of 30 inches and installed at a conspicuous location near

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the means of opening the exit, stating that the exit has been designed and constructed so that it cannot be opened during flight.

(1) *Portable lights.* No person may operate a passenger-carrying airplane unless it is equipped with flashlight stowage provisions accessible from each flight attendant seat.

[Doc. No. 23530, 57 FR 19245, May 4, 1992; 57 FR 25120, June 30, 1992, as amended at 57 FR 34682, Aug. 6, 1992]

§ 135.179 *Inoperable instruments and equipment.*

(a) No person may take off an aircraft with inoperable instruments or equipment installed unless the following conditions are met:

(1) An approved Minimum Equipment List exists for that aircraft.

(2) The certificate-holding district office has issued the certificate holder operations specifications authorizing operations in accordance with an approved Minimum Equipment List. The flight crew shall have direct access at all times prior to flight to all of the information contained in the approved Minimum Equipment List through printed or other means approved by the Administrator in the certificate holder's operations specifications. An approved Minimum Equipment List, as authorized by the operations specifications, constitutes an approved change to the type design without requiring recertification.

(3) The approved Minimum Equipment List must:

(1) Be prepared in accordance with the limitations specified in paragraph (b) of this section.

(1) Provide for the operation of the aircraft with certain instruments and equipment in an inoperable condition.

(4) Records identifying the inoperable instruments and equipment and the information required by (a)(3)(1) of this section must be available to the pilot.

(5) The aircraft is operated under all applicable conditions and limitations contained in the Minimum Equipment List and the operations specifications authorizing use of the Minimum Equipment List.

(b) The following instruments and equipment may not be included in the Minimum Equipment List:

(1) Instruments and equipment that are either specifically or otherwise required by the airworthiness requirements under which the airplane is type certificated and which are essential for safe operations under all operating conditions.

(2) Instruments and equipment required by an airworthiness directive to be in operable condition unless the airworthiness directive provides otherwise.

(3) Instruments and equipment required for specific operations by this Part.

(c) Notwithstanding paragraphs (b)(1) and (b)(3) of this section, an aircraft with inoperable instruments or equipment may be operated under a special flight permit under §§ 21.197 and 21.199 of this chapter.

[Doc. No. 23780, 56 FR 12311, Mar. 22, 1991; 56 FR 14820, Apr. 8, 1991, as amended by Amdt. 135-60, 61 FR 2518, Jan. 23, 1996; Amdt. 135-91, 68 FR 54508, Sept. 17, 2003]

§ 135.180 *Traffic Alert and Collision Avoidance System.*

(a) Unless otherwise authorized by the Administrator, after December 31, 1995, no person may operate a turbine powered airplane that has a passenger seat configuration, excluding any pilot seat, of 10 to 80 seats unless it is equipped with an approved traffic alert and collision avoidance system. If a TCAS II system is installed, it must be capable of coordinating with TCAS units that meet TSO C-119.

(b) The airplane flight manual required by § 135.21 of this part shall contain the following information on the TCAS I system required by this section:

- (1) Appropriate procedures for—
 - (i) The use of the equipment; and
 - (ii) Proper flightcrew action with respect to the equipment operation.
- (2) An outline of all input sources that must be operating for the TCAS to function properly.

[Doc. No. 26356, 64 FR 951, Jan. 10, 1999, as amended by Amdt. 135-54, 69 FR 67637, Dec. 29, 1994]



Federal Aviation Administration

Memorandum

Date: **SEP 15 2017**

To: [REDACTED], Director, Office of Audit and Evaluation, AAE-1

From: [REDACTED], Associate Administrator for Aviation Safety, AVS-1 [REDACTED]

Thru: [REDACTED], Executive Director, Flight Standards Service, AFX-1 [REDACTED]

Prepared by: [REDACTED], Deputy Director, Office of Safety Standards, AFS-2B

Subject: AFX-1 Proposed Corrective Action Plan to AAE-1 Recommendations:
U.S. Office of Special Counsel (OSC) File DI-17-1298

Recommendation 1: *Develop a Corrective Action Plan, with firm due dates, which requires PMIs to review the exemptions on the airworthiness certificates for all aircraft currently overseen to determine 1) whether exemptions on each aircraft airworthiness certificate are appropriate (the modifications identified in the exemption were made) and 2) whether any aircraft has a limitation preventing use in 14 CFR 135 operations. If an aircraft has a limitation preventing aircraft use under 14 CFR 135 operations, determine if a subsequent STC allowed for the removal of any private use limitation, and that appropriate documentation showing STC compliance was made.*

Concur: This is a complex issue that will require extensive analysis and research to understand the scope and the impact of all exemptions currently in active use for 14 CFR parts 23 (Airworthiness Standards: Normal Category Airplanes), 25 (Airworthiness Standards: Transport Category Airplanes), 27 (Airworthiness Standards: Normal Category Rotorcraft) and 29 (Airworthiness Standards: Transport Category Rotorcraft). There are currently over 1,000 exemptions within these 14 CFR parts, requiring a labor-intensive review of each one to determine if it allows conditions or limitations that could impact compliance with 14 CFR part 135 (Operating Requirements: Commuter and on Demand Operations and Rules Governing Persons on Board Such Aircraft) operations. Once these have been identified, we then need to determine if the limitation or condition impacts the operation of the aircraft, what needs to be done to address it and if correction is needed, can the aircraft continue to operate and if so, for how long and under what conditions, etc.

The exemption identified in this complaint¹, allows the Cessna Aircraft Company to install interior doors between passenger compartments in the Cessna Model 560XL aircraft. The affected rule (14 CFR 25.813(e)²) states:

No door may be installed between any passenger seat that is occupiable for takeoff and landing and any passenger emergency exit, such that the door crosses any egress path (including aisles, crossaisles and passageways).

This exemption required this operating limitation to be added to the Airplane Flight Manual:

The airplane must not be operated for hire or offered for common carriage. This does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR part 125 and 14 CFR part 91, subpart F, as applicable.

As we know, 14 CFR part 135.178(f)³ operating regulation prevents the unsafe condition this exemption allows, and states in part:

- (f) *Emergency exit access.* Access to emergency exits must be provided as follows for each passenger-carrying airplane:
- (1) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, must be unobstructed and at least 20 inches wide.

The exemption and the requirements of 14 CFR part 135.178(f) appear to conflict in this case and could raise the question as to whether the aircraft is being operated in compliance with either the current air operators certificate or the exemption. Once the determination that the aircraft is being operated in full compliance of 14 CFR part 135.178(f) is made, our concern is now whether the aircraft meets the requirements of its Type Design as airworthiness exemptions are explicitly granted as part of the aircrafts airworthiness.

To accomplish the analysis and determine the scope and applicability of the analysis to aircraft currently in use for 14 CFR part 135 operations, will require the formation of a dedicated team of specialists to review each exemption, identify the applicable aircraft make, model, series and whether it imposes an adverse impact or potential noncompliance in 14 CFR part 135 operations. This team will include members of the Flight Standards Service and the Aircraft Certification Service. Once the exemptions have been reviewed and their potential impact to 14 CFR part 135 operations has been determined, a comprehensive search for aircraft currently used in 14 CFR part 135

¹ Attachment 1 – Exemption 8621.pdf

² Attachment 2 – CFR-2017-title14-25.813.pdf

³ Attachment 3 – CFR-2014-title14-vol3-sec135-178.pdf

operations (about 11,041 aircraft) will be conducted to identify the applicable aircraft and companies (5,331 active certificated 14 CFR part 135 Air Operators).

At the completion of the analysis, we will be able to establish the baseline for the continuing efforts to determine the airworthiness actions necessary to ensure the safety of all aircraft, with exemptions, currently operating in 14 CFR part 135 operations. While it is difficult to specify, with any certainty, what the continuing actions will be before the analysis is completed, these actions may include:

1. Issuance of Airworthiness Directives.
2. Targeted inspections of identified aircraft by FAA assigned Principle Inspectors.
3. Letters to air operators requiring them to demonstrate compliance with FAR 135 within a specified number of days.
4. Corrections of aircraft airworthiness certificates that may list an exemption that is not applicable to the aircraft for which it was issued.
5. Removal of exempted aircraft from FAR 135 operations until they can be brought into full compliance for these operations.
6. Review of any Supplemental Type Certificates (STC) that may have been applied to the aircraft to ensure continued compliance for FAR 135 operations.

This action plan will resolve the complainants concerns for all aircraft currently in use for 14 CFR part 135 operations, the actions to answer recommendations 2, 3 and 4 will address these same concerns for additional/new aircraft being added to 14 CFR part 135 operations in the future.

Guidance, is currently in draft, that addresses the review of all exemptions when considering whether an airplane can be added to an air operators certificate. This is further explained in the responses to recommendations two and three.

When analysis and the scope of the work to be completed has been determined, a comprehensive action plan will be developed. We will complete the comprehensive action plan by December 1, 2017.

Recommendation 2 and 3 (combined): *Revise FAA Order 8900.1 to provide better clarity on ASI responsibilities to review limitations placed on aircraft as a result of limitations in associated exemptions and establish procedures to ensure exemptions are reviewed prior to aircraft addition to 14 CFR 135 Op Specs.*

Concur: It must be remembered, it is always the air operator's responsibility to ensure their aircraft are in compliance with their operating rules, as such, guidance has been drafted for both the industry and FAA inspectors to mitigate the gaps found when adding an aircraft to an air operators certificate. The draft guidance will enter our review process which includes soliciting comments from FAA inspectors. After the conclusion of this

process, we will publish an Information for Operators (InFO), addressing the adding of an aircraft to an air operators certificate, and an associated Advisory Circular (AC) to the public outlining the changes and requirements for adding aircraft to their operating certificates. The timelines for publication of these documents may vary, however, our goal for project completion is within 6 months from September 30, 2017.

Recommendation 4: *Have personnel in AFS-200 review the INFO prepared by the whistleblower to determine whether it is appropriate for publication, and ensure that it is published in a timely manner.*

Concur: The content in the supplied InFO cites language from the FAA Order 8900.1 (Flight Standards Information Management System) that is outdated and is currently in the process of being updated. Publishing the current information in the InFO, as written, would only serve to promulgate known outdated information as well as being limited to only one exemption issue. When the guidance materials have been updated, and the analysis in recommendation 1 is complete, we will publish an InFO that addresses all of the identified exemptions that impact current 14 CFR part 135 operations.

We also propose to publish a Notice directed at PI's to ensure the future aircraft additions to operator's operations specifications are reviewed with a specific focus on any airworthiness exemptions and the compatibility of any associated Conditions and Limitations with the intended operations of the aircraft. We will publish the InFO and the Notice by September 1, 2018.

Recommendation 5: *In the June 27, 2013 DOT OIG Report, FAA's Civil Aviation Registry Lacks Information Needed for Aviation Safety and Security Measures, Report Number FI-2013-101, OIG recommendations 1, 2, and 3 (page 10), all pertained to enhancing the accuracy and integrity of the information contained in the registry. Based on the volume of aircraft identified as operating in the NAS with expired registration (as provided by the whistleblower), it is clear that the registry does not have sufficient processes or personnel to maintain a robust and accurate registry. The FAA needs to implement these recommendations in a manner which addresses the recommendations' full intent, to include sufficient quality control processes.*

Concur: The FAA is evaluating additional actions that could be taken to further enhance the accuracy and integrity of the information contained in the registry. Specifically, to the recommendations in the 2013 DOT OIG Report:

OIG recommendation 1. *Develop procedures for periodic reassessments of aircraft and airman data to improve and maintain data integrity.*

Response: Aircraft owners are required to re-register their aircraft every three years. The aircraft data is reviewed during the re-registration process. The Registry updates its airman data from data submitted when an airman updates their

medical certificate. The FAA is evaluating procedural enhancements that would address registry records in cases where a safety risk is identified.

OIG recommendation 2. *Issue policy or regulations that clarify informational requirements for registration of aircraft owned by trusts for non-citizens.*

Response: FAA published a policy clarification concerning registration of aircraft owned by trusts for non-citizens, in the Federal Register on June 18, 2013

OIG recommendation 3. *Develop procedures to ensure that airman addresses are kept current.*

Response: Concerning airman data, the Registry acquired software to standardize an address using the rules established by the US Postal Service (USPS). It also checks if the address is valid; i.e. street, city, state and zip code; by checking against a data base of addresses provided by the USPS. We intend to partner with other offices within the Flight Standards Service (AFS) and the Office of Security and Hazardous Materials (ASH) to develop plans for a multi-level active enforcement program to identify and address inaccurate aircraft operators and airmen records. We will complete a plan of action for this effort by December 1, 2017.

Attachments