



U.S. Department
of Transportation

**Federal Aviation
Administration**

July 19, 2013

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

The Honorable John D. Rockefeller, IV
Chairman, Committee on Commerce,
Science, and Transportation
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

As required by the FAA Modernization and Reform Act of 2012, H.R. 658, Section 313, the Federal Aviation Administration (FAA) is pleased to provide the enclosed report.

Section 313 of the Act requires the FAA to establish an advisory panel comprised of government, and aviation industry representatives, to determine the root causes of inconsistent interpretation of regulations by the FAA's Flight Standards Service and Aircraft Certification Service. This advisory panel was tasked to develop recommendations to improve consistency of interpreting regulations and to improve communications between the government and applicants and certificate/approval holders.

We have sent identical letters to Chairman Shuster, Senator Thune, and Congressman Rahall.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael P. Huerta", with a large circular flourish at the end.

Michael P. Huerta
Administrator

Enclosure



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of Transportation

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July 19, 2013

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

The Honorable Bill Shuster
Chairman, Committee on Transportation
and Infrastructure
House of Representatives
Washington, DC 20515

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Michael P. Huerta
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800 Independence Ave., S.W.
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The Honorable John Thune
Committee on Commerce,
Science, and Transportation
United States Senate
Washington, DC 20510

Dear Senator Thune:

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Michael P. Huerta
Administrator

Enclosure



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of Transportation

**Federal Aviation
Administration**

July 19, 2013

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

The Honorable Nick J. Rahall, II
Committee on Transportation and Infrastructure
House of Representatives
Washington, DC 20515

Dear Congressman Rahall:

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Michael P. Huerta
Administrator

Enclosure



**FEDERAL AVIATION
ADMINISTRATION**

Report to Congress: Consistency of Regulatory Interpretation

**FAA Modernization and Reform Act of 2012 (P.L. 112-95) –
Section 313**

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Acknowledgements

The Federal Aviation Administration (FAA) wishes to acknowledge the participation and ongoing support of the members of the Consistency of Regulatory Interpretation (CRI) Aviation Rulemaking Committee (ARC) that met between June 2012 and November 2012.

1.0 Executive Summary

This report responds to Section 313 of Public Law (P.L.) 112-95, February 14, 2012, the FAA Modernization and Reform Act of 2012.¹ Section 313 requires the establishment of an Aviation Rulemaking Committee (ARC; an advisory panel comprised of government and aviation industry representatives) to determine the root causes of inconsistent interpretation of regulations by the FAA's Flight Standards Service (AFS) and Aircraft Certification Service (AIR). This advisory panel was tasked to develop recommendations to improve consistency of interpreting regulations and to improve communications between the government and applicants and certificate/approval holders.

Section 313 further requires the FAA to submit a report to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the findings of the advisory panel, together with an explanation of how the FAA will address the resulting recommendations, as well as measure the effectiveness of the implemented recommendations.

To comply with Section 313, the FAA chartered the Consistency of Regulatory Interpretation (CRI) ARC on April 30, 2012, and tasked the committee to conduct an assessment by reviewing the October 2010 report by the Government Accountability Office (GAO) on certification and approval processes (GAO-11-14) and determining the root causes of inconsistent interpretation of regulations by AFS and AIR.²

The ARC was further tasked to develop recommendations to:

- (1) Address the findings in the GAO report and other concerns raised by industry stakeholders related to certification and approval processes;
- (2) Improve the consistency of interpreting regulations by AFS and AIR; and
- (3) Improve communications between the FAA and certificate/approval holders and applicants under the jurisdictional oversight of AFS and AIR, as well as between the service organizations, for the identification and resolution of potentially adverse issues in an expeditious and fair manner.

The ARC was required to advise and provide written recommendations to the Associate Administrator for Aviation Safety (AVS-1) by December 31, 2012 to enable the FAA to meet the requirements of Section 313 of the Act. The CRI ARC held its first meeting on June 1, 2012, and held its last meeting on November 1, 2012. The ARC presented the FAA with its six recommendations on November 28, 2012. The final ARC report can be found in Appendix C.

The FAA has preliminarily reviewed the work of the CRI ARC and will continue to determine the feasibility of implementing the recommendations. The intent of this report is to set forth all

¹ See Appendix 1: Excerpt from the Federal Aviation Administration Modernization and Reform Act of 2012 (Public Law 112-95).

² See Appendix 2: CRI ARC Charter, which includes Aviation Rulemaking Committee Charter: Consistency of Regulatory Interpretation Aviation Rulemaking Committee (April 30, 2012).

six CRI ARC recommendations and an initial assessment of how the FAA will address the recommendations and measure the effectiveness of the Agency's implementation methodology.

While the FAA is pleased with the ARC's recommendations, implementation of these proposals will have to be balanced with other important FAA activities, including other existing rulemaking initiatives, Agency priorities, current projects, and its overall safety agenda. The CRI ARC prioritized its six proposed solutions/recommendations, and this report addresses FAA's response to those recommendations.

2.0 CRI ARC Composition

In order to comply with the requirement to establish an advisory panel, the FAA chartered the CRI ARC on April 30, 2012.

The FAA selected seven industry associations representing a variety of certificate/approval holders and applicants under the jurisdictional oversight of AFS and AIR to serve on the ARC. In order to ensure a balance in viewpoints and opinions, the FAA appointed members representing operators/companies certificated under Title 14 of the Code of Federal Regulations (14 CFR) parts 91K, 121, 125, and 135; maintenance providers and repair stations certificated under 14 CFR part 145; and design and production approval holders. Each organization selected one person to participate, and several organizations appointed an alternate member. The individuals participating in the ARC represented the following industry associations:

- Aeronautical Repair Station Association (ARSA)
- Aerospace Industries Association (AIA)
- Airlines for America (A4A)
- General Aviation Manufacturers Association (GAMA)
- National Air Carrier Association (NACA)
- National Air Transportation Association (NATA)
- Regional Airline Association (RAA)

The FAA was represented on the ARC by the Director, Flight Standards Service (AFS-1), and the Director, Aircraft Certification Service (AIR-1).

The Industry Co-Chair of the CRI ARC represented NATA, and AFS-1 served as the Co-Chair and Designated Federal Official.

3.0 Methodology

The CRI ARC's methodology for conducting the assessment was designed to identify root causes for inconsistent interpretation of regulations. In addition to collecting data, the members reviewed and considered the findings in GAO-11-14. The CRI ARC applied the results of the assessment to its recommendations to the FAA.

3.1 Data Collection

At the outset of its efforts and in order to comply with the mandate in P.L. 112-95 to address industry stakeholder concerns, the CRI ARC identified sources and methods for collecting objective data through case studies, a survey, and an inventory of existing regulatory guidance resources.

Case Studies

The industry associations represented on the CRI ARC compiled anecdotal examples involving issues of inconsistent regulatory interpretation/application experienced by their members.

Industry Stakeholder Survey

The industry members of the CRI ARC developed and launched an industry stakeholder survey to involve members from other aviation associations and groups, solicit feedback, and collect data from interested parties.³ The survey was conducted without FAA involvement and included a series of questions that mirrored the questions asked of the expert panel as part of the GAO study. While the respondents to the GAO study felt industry's perception of the certification and approval processes was generally positive, the majority of CRI ARC survey respondents reported negative experiences related to certification and approval. Putting the survey results in context, the CRI ARC acknowledged the respondents were more likely to share negative experiences based on the fact that it was being distributed by industry members, and the anonymity promised to respondents. The members also noted the relatively small number of respondents compared to the total number of certificate/approval holders and applicants under AFS or AIR oversight. Further, the CRI ARC noted respondent emphasis on "fear of retribution" as the industry's primary concern with regard to current issue resolution processes.

Regulatory Guidance Material Inventory

The CRI ARC members first initiated a comprehensive review of available guidance documents to ascertain the scope of effort involved in conducting an inventory of existing regulatory guidance material. Then, the CRI ARC identified different types of guidance documents, how the information is organized, and the parameters for its primary recommendation to develop a master single-source database to organize FAA regulatory guidance material.

³ The FAA members did not participate in development or distribution of the survey.

3.2 Assessment Conducted by CRI ARC

The CRI ARC collected data, conducted its assessment, and developed its recommendations over the course of nine meetings. During these meetings, the members discussed data collection, evaluated case studies submitted by industry members, reviewed the research compiled on FAA guidance material and electronic databases, developed and launched a survey, considered survey results, formulated recommendations, and drafted the committee's final report.

The members developed five categories to organize the data collected regarding inconsistent regulatory interpretation/application. The CRI ARC Final Report presents a detailed discussion of each classification; however, the FAA mentions only the general categories in this report:

- Rulemaking
- Application
- Issue Resolution
- Training/Lack of Information
- Culture/Organization

3.3 Review of GAO Study

In accordance with its mandate, the CRI ARC reviewed GAO-11-14 in order to develop recommendations to address the findings cited by the GAO. In reviewing the GAO report, the members concentrated on the FAA's ability to use, monitor, and report essential metrics in support of the Agency's response. The CRI ARC reviewed and concurred with the FAA responses to the GAO study. The members support the FAA's efforts to strengthen the Office of Aviation Safety (AVS) Quality Management System (QMS), integration of new metrics, and to enhance the tracking of Certification Services Oversight Process (CSOP) data.

3.4 Identification of Root Causes

In their discussions regarding root causes, the members generally concurred with the GAO study's findings. The CRI ARC also studied the survey results and case studies collected in its deliberations. The members identified three root causes for the ongoing inconsistent regulatory interpretation by and between AFS and AIR:

- Need for Clear Regulatory Requirements;
- Regulatory Application Training; and
- Culture.

3.5 CRI ARC Final Report

The CRI ARC submitted its final report to the FAA on November 28, 2012, setting forth its recommendations.⁴ In conducting its initial review of that report, the FAA noted the committee's efforts to prioritize its proposed solutions, as well as the emphasis placed on its primary recommendation.

⁴ See Appendix 3: CRI ARC Final Report, which incorporates *A Report from the Consistency of Regulatory Interpretation Aviation Rulemaking Committee to the Federal Aviation Administration: Recommendations on Improving Consistency of Regulatory Interpretation* (November 28, 2012).

4.0 Recommendations of the CRI ARC

In its charter, the FAA tasked the CRI ARC with making recommendations on improving consistency in regulatory interpretation. After identifying root causes for the inconsistent interpretation of regulations and conducting its assessment, the ARC formulated and prioritized six recommendations to address inconsistent interpretation of regulations by and between AFS and AIR. In its final report, the CRI ARC concentrated on identifying existing efforts and programs to ensure the FAA could leverage existing resources. The CRI ARC emphasized the importance of its primary recommendation to develop a single AVS master electronic database resource—organized by rule. While the members acknowledged the individual efforts of AFS and AIR to consolidate guidance material within each Service, they noted that the proliferation of regulatory guidance material (including advisory circulars, internal directives, policy memos, legal interpretations, and other documents) contribute to issues of inconsistent interpretation/application of the regulations. The CRI ARC suggested that any meaningful effort to standardize a methodology by which regulations are applied at the field, regional, and national level by and between AFS and AIR must begin with an initiative to inventory existing regulatory guidance material. They submitted that instances of inconsistent regulatory interpretation would be significantly reduced by linking all regulatory guidance material back to the applicable rule. In addition, this effort would also allow the Agency to re-evaluate its training priorities and establish a more effective issue resolution methodology.

AFS-1 and AIR-1 represented AVS on the CRI ARC, and the discussion supporting each of the recommendations includes the benefit of their input. The members proposed a number of implementation strategies in their final report, which the FAA considered in developing the preliminary implementation plan discussed in the next chapter of this report.

5.0 FAA Implementation Plan

The preliminary implementation plan discussed below is submitted in accordance with the mandate in P.L. 119-25, Section 313. It is an explanation of how the FAA will implement the advisory panel recommendations, all of which were accepted, and measure effectiveness post-implementation.

The FAA is developing a detailed plan for implementation. The plan will supplement the preliminary plan, and:

- Include a detailed implementation strategy;
- Assign a responsible office/person of responsibility;
- Establish milestones;
- Define a standard for closure; and
- State measures of effectiveness for tracking purposes.

The FAA plans to act on many of the CRI ARC recommendations and has already initiated some activities, which are associated with the CRI ARC's recommendations, as part of the Agency's ongoing efforts to address inconsistent interpretations of regulations at the field, regional, and national level in AFS and AIR. The FAA will also begin other initiatives, as determined during development of the detailed implementation plan, to fulfill the intent of the accepted recommendations.

The FAA will develop measures of effectiveness for implementation of each accepted recommendation, which will be defined in a manner that may be readily monitored. Although there may not be any baseline for each recommendation against which to compare improvements, the FAA intends to consider:

- Identifying metrics;
- Gathering and developing baseline data; and
- Periodically measuring any changes, positive or negative, in rates of completion.

The detailed implementation plan will also provide a standard to be met, at which point the FAA will close the recommendation. This may be based on accomplishment of identified tasks/activities, development of suitable policy/guidance, or completion of a feasibility study.

The following sections set forth an initial plan of action for each recommendation and a table explaining the relative priority of the recommendations established by the CRI ARC.

5.1 Single Master Source for Guidance Organized by 14 CFR Part

AVS is currently undertaking the Aviation Safety Information Management System (AVSIMS) project, which is intended to provide connectivity linkages for all AFS and AIR information. While it would connect the information in the Regulatory Guidance Library (RGL) and Flight Standards Information Management System (FSIMS), it does not incorporate a comprehensive review of content for conflicts or duplicative data. AVS needs to determine if the Master Database concept proposed by the CRI ARC could build on AVSIMS and require *all* letters, policy guidance and all legal interpretations be organized by the applicable final rule (part number in 14 CFR).

Recommendation—The ARC recommends AFS and AIR review all guidance documents and interpretations to identify and cancel outdated material and cross-reference (electronically link) material to its applicable rule. Further, the ARC recommends the FAA expand its current Aviation Safety Information Management System (AVSIMS) initiative to consolidate the service organization-level libraries into a single AVS master electronic database resource, organized by rule, to allow agency and industry users access to relevant rules and all active and superseded guidance material and related documents.

As a threshold matter, AVS needs to determine whether the AVSIMS Initiative can be expanded to address this recommendation. Then, AVS needs to determine the resources required to conduct the initial inventory. While the inventory process would likely consolidate duplicative guidance documents, streamline processes across service organizations, and aid in prioritizing rules and guidance material—the scope of the effort raises concern due to potential costs and resource constraints.

AVS will task AFS and AIR to coordinate with the Office of Quality, Integration and Executive Services (AQS) and the Office of the Chief Counsel (AGC) to: (1) determine whether the existing AVSIMS initiative can be expanded to include AGC interpretations and Chief Counsel Opinions; (2) determine the projected cost of such an initiative; and (3) assess its relative priority ranking against other agency IT initiatives.

5.2 Develop Instructions for FAA Personnel with Policy Development Responsibilities

The ARC noted multiple instances where guidance published by the FAA appeared to create inconsistent interpretation/application and confusion. In order to address this issue, the members suggested FAA personnel charged with regulatory interpretation/application responsibilities (or the development of guidance) follow a standardized methodology or decision tree to ensure that the new guidance does not contradict or otherwise negate preexisting acceptable methods of compliance.

The ARC members suggested the FAA look to the guidance issued by AIR as exemplary (with potential for the guidance to be mirrored AVS-wide) to address the concerns with regard to the issuance of policy statements, policy memorandums, and deviation memorandums. Order IR 8100.16 was developed by AIR for all AIR employees who write, review, or approve policy statements, policy memorandums, or deviation memorandums, as well as those who implement these policy documents, and other offices, as applicable.⁵

Recommendation—The ARC recommends the FAA Office of Aviation Safety (AVS) develop a standardized decision making methodology for the development of all policy and guidance material to ensure such documents are consistent with adopted regulations.

AVS will task AFS, AIR and AQS to establish a working group to determine whether existing guidance can be revised/reissued/changed to address this concern. If existing guidance does not sufficiently address these concerns, the plan will include a timeline for implementation of this recommendation through possible issuance of an AVS-level directive (prioritized in accordance with the FAA’s current initiatives and safety agenda).

5.3 Review FAA and Industry Training Priorities and Curricula with Focus on Appropriate Use of Guidance in Conjunction with 14 CFR

The CRI ARC cited regulatory application training for FAA and industry personnel as a root cause, and noted inadequate and nonstandard FAA and industry training as an early cause of inconsistent regulatory interpretation/application. The members suggested that current FAA training in regulatory development methodology, standard application, and resolution protocols has not kept pace with changes within the Agency or the stakeholder community.

The CRI ARC cited examples where inconsistent regulatory interpretation can arise from an FAA employee’s overreliance on guidance material that does not have the force of law, and the members suggested rebalancing the training curriculum in favor of 14 CFR could contribute to a standardized methodology for regulatory interpretation/application.

Recommendation—The ARC recommends the FAA, in consultation with industry stakeholders, review and revise its regulatory training for agency personnel and make the curriculum available to industry to ensure the training includes:

- The methodology to research and extract intent and purpose of applicable portions of 49 U.S.C. and 14 CFR for regulatory decision making.
- Interactive workshops that use case studies, decision trees, and methodology training for understanding the overall system of regulations and guidance, as well as appropriate discretionary authority.
- Appropriate initial and recurrent training for various AFS and AIR personnel.

⁵ See Order IR 8100.16, Aircraft Certification Service Policy Statement, Policy Memorandum, and Deviation Memorandum Systems (5/13/2011).

Supplementary Recommendation—The ARC further recommends the FAA study the feasibility of developing a specific training program designed for personnel with regulatory development and oversight responsibilities. The study should consider supporting standard courses of study that lead to formal recognition or credentialing of those trained in regulatory development and application.

AVS will task AFS and AIR to develop a timeline for reviewing the issue of FAA personnel training. Further, AVS will task AFS and AIR to consider the supplementary recommendation regarding a formal recognition program for individuals who complete a prescribed curriculum of study in regulatory interpretation/application. As FAA/AVS develops this timeline, FAA will consider solicitation of industry input, as appropriate.

5.4 Regulatory Consistency Communications Board (RCCB)

The CRI ARC discussed a general reluctance and/or failure by both industry and the FAA to work issues of inconsistent regulatory interpretation/application through to a final resolution. In considering this cultural dynamic, the ARC endeavored to develop a recommendation that would (1) allow a process by which the certificate/approval holder or applicant (and Agency personnel) could appeal or dispute a regulatory decision without fear of reprisal; and (2) provide industry and the FAA a vehicle for the timely, impartial resolution of difficult regulatory issues.

According to the ARC, under this concept, the FAA would establish an RCCB comprised of representatives from the relevant headquarters policy divisions in AFS and AIR, as well as the Office of the Chief Counsel (AGC). The RCCB concept could also address concerns noted by the ARC with regard to the FAA's Consistency and Standardization Initiative (CSI), including slow response time and fear of retribution on the part of industry.

The CRI ARC believes that as the RCCB becomes the accepted final arbiter by all parties, questions will be rectified at lower levels without fear of retribution. As the RCCB is refined, the training curriculum could be reviewed to ensure that the people assigned to review duties have adequate knowledge and skills to address regulatory inquiries. The ARC believes that the RCCB could provide both a more neutral and more centralized/standardized mechanism for addressing and resolving regulatory compliance issues and would allow operators and the FAA to review questions that have already been asked and answered, thereby eliminating duplicative work.

Recommendation—The ARC recommends the FAA establish a RCCB comprising representatives from AFS, AIR, and AGC that would provide clarification to FAA personnel and certificate/approval holders and applicants on questions related to the application of regulations. The RCCB would be the arbiter for all parties. The FAA should consider:

- Providing an inquiry template to streamline the RCCB process;
- Establishing reasonable timeframes for responses by the RCCB and appropriate performance metrics; and

- Making all resolutions of potentially common questions available to both the FAA and industry, with operator data de-identified.

Contrary to some characterizations, the FAA established the CSI as a means for industry and the public to question or dispute an AVS action. The CSI allows decision-makers at every level of the AVS management chain to review the matter thoroughly and be accountable for the answers provided. By using existing resources and leveraging the existing workforce in different functions, the FAA can improve its response time when addressing questions of regulatory interpretation.

AVS will task AFS and AIR to coordinate with AGC (and AQS as needed) to consider alternatives, finding the most effective way to leverage existing resources to implement this recommendation. One alternative would be to implement this recommendation on a virtual basis, through the use of dedicated e-mail addresses and internal communication systems, as opposed to creating a physical office.

5.5 Clarity in Final Rules Issued by the FAA

The CRI ARC suggested that more comprehensive final rules would increase the agency's ability to reduce inconsistency in interpretation/application. When the members identified the need for clear regulatory requirements, they noted that unclear regulatory language contributes to inconsistent interpretation/application. They further suggested that when a regulation is unclear, its application varies from one inspector to another and compliance differs among certificate holders.

As AVS currently has a strategic initiative focused on the development of an FAA-wide rulemaking prioritization model, the methodology under development by the Aviation Rulemaking Advisory Committee (ARAC) Rulemaking Prioritization Working Group (RPWG) may address the concerns raised by the CRI ARC.

Recommendation—The ARC recommends the FAA improve its rulemaking procedures and guidance to ensure each proposed and final rule preamble contain a comprehensive explanation of the purpose, technical requirements, and intent.

AVS will task the Office of Rulemaking (ARM) to assist with developing an implementation plan for this recommendation.

5.6 Regulatory Operations Communications Center (ROCC)

The CRI ARC discussed a more formal decision making structure to complement the RCCB (discussed above) to address issues of inconsistent interpretation/application at different levels of AFS and AIR (and between service organizations) in the long term. The members describe a central clearinghouse/focused adjudication forum when defining the ROCC concept. Under the ROCC concept, AVS would establish a 24/7 operations center staffed (virtually) by policy and/or legal personnel trained and experienced in the regulations, policy and guidance associated with flight operations, aircraft maintenance, aircraft certification and aircraft production.

The CRI ARC noted that the ROCC would not replace or duplicate the functions of the Air Traffic Command Center or the Washington Headquarters Operations Center (WOC). It also noted the significant resources required for such an undertaking. This concept will require additional study.

Recommendation—The ARC recommends AFS and AIR determine the feasibility of establishing a full-time Regulatory Operations Communication Center (ROCC) as a centralized support center to provide real-time guidance to FAA personnel and industry certificate/approval holders and applicants. The ROCC concept should be implemented by leveraging existing resources.

AVS will task AFS and AIR to conduct a feasibility study to determine whether the ROCC concept could be effectively implemented, and the projected resources that would be required to implement.

5.7 Summary of Recommendations

The table below includes each of the six CRI ARC recommendations, organized by the relative priority identified by the ARC members. AVS will be responsible for developing the FAA’s detailed plan for addressing each accepted recommendation and/or exploring feasible alternatives, and the table also defines the assigned office or committee that will be tasked to assist AVS, as discussed above.

Relative Priority Assigned by the CRI ARC	CRI ARC Recommendation	Assigned FAA Office/ Committee
First	<p>Single Master Source for Guidance Organized by 14 CFR Part</p> <p>Recommendation 3—The ARC recommends AFS and AIR review all guidance documents and interpretations to identify and cancel outdated material and cross-reference (electronically link) material to its applicable rule.</p>	AFS
	<p>Further, the ARC recommends the FAA expand its current Aviation Safety Information Management System (AVSIMS) initiative to consolidate the service organization-level libraries into a single AVS master electronic database resource, organized by rule, to allow agency and industry users access to relevant rules and all active and superseded guidance material and related documents.</p>	AGC AIR AQS

Relative Priority Assigned by the CRI ARC	CRI ARC Recommendation	Assigned FAA Office/ Committee
Second	<p>Develop Instructions for FAA Personnel with Policy Development Responsibilities</p> <p>Recommendation 2—The ARC recommends the FAA Office of Aviation Safety (AVS) develop a standardized decision making methodology for the development of all policy and guidance material to ensure such documents are consistent with adopted regulations.</p>	<p>AFS AIR AQS</p>
Third	<p>Review FAA and Industry Training Priorities and Curricula with Focus on Appropriate Use of Guidance in Conjunction with 14 CFR</p> <p>Recommendation 4—The ARC recommends the FAA, in consultation with industry stakeholders, review and revise its regulatory training for agency personnel and make the curriculum available to industry to ensure the training includes:</p> <ul style="list-style-type: none"> • The methodology to research and extract intent and purpose of applicable portions of 49 U.S.C. and 14 CFR for regulatory decision making. • Interactive workshops that use case studies, decision trees, and methodology training for understanding the overall system of regulations and guidance, as well as appropriate discretionary authority. • Appropriate initial and recurrent training for various AFS and AIR personnel. 	<p>AFS AIR FAA</p>
Third (Supplementary)	<p>The ARC further recommends the FAA study the feasibility of developing a specific training program designed for personnel with regulatory development and oversight responsibilities.</p> <p>The study should consider supporting standard courses of study that lead to formal recognition or credentialing of those trained in regulatory development and application.</p>	<p>FAA</p>

Relative Priority Assigned by the CRI ARC	CRI ARC Recommendation	Assigned FAA Office/ Committee
Fourth	<p>Regulatory Consistency Communications Board</p>	<p>AFS AIR AGC</p>
	<p>Recommendation 5—The ARC recommends the FAA establish a Regulatory Consistency Communications Board (RCCB) comprising representatives from AFS, AIR, and Office of the Chief Counsel (AGC) that would provide clarification to FAA personnel and certificate/approval holders and applicants on questions related to the application of regulations. The RCCB would be the arbiter for all parties. The FAA should consider:</p>	
	<ul style="list-style-type: none"> • Providing an inquiry template to streamline the RCCB process; 	
	<ul style="list-style-type: none"> • Establishing reasonable timeframes for responses by the RCCB and appropriate performance metrics; and • Making all resolutions of potentially common questions available to both the FAA and industry, with operator data de-identified. 	
Fifth	<p>Clarity in Final Rules Issued by the FAA</p> <p>Recommendation 1—The ARC recommends the FAA improve its rulemaking procedures and guidance to ensure each proposed and final rule preamble contains a comprehensive explanation of the purpose, technical requirements, and intent.</p>	<p>ARM ARAC RPWG</p>
Sixth	<p>Regulatory Operations Communications Center (ROCC)</p> <p>Recommendation 6—The ARC recommends AFS and AIR determine the feasibility of establishing a full-time Regulatory Operations Communication Center (ROCC) as a centralized support center to provide real-time guidance to FAA personnel and industry certificate/approval holders and applicants. The ROCC concept should be implemented by leveraging existing resources.</p>	<p>AFS AIR</p>

6.0 Conclusion

The intent of this report is to relay the results of the assessment conducted by the CRI ARC, its resulting recommendations, and the FAA's initial implementation plan, as mandated by P.L. 112-95, Section 313. This report is not intended to serve as a detailed implementation plan to address the recommendations set forth in the CRI ARC Final Report.

After reviewing the data collected and conducting their assessment, the members formulated and prioritized six recommendations to address inconsistent interpretation of regulations by and between AFS and AIR. The FAA has preliminarily reviewed the work of the CRI ARC and will continue to determine the feasibility of implementing the recommendations. While the FAA is pleased with the ARC's recommendations, implementation of these proposals will have to be balanced with other important FAA activities, including other existing rulemaking initiatives, Agency priorities, current projects, and its overall safety agenda.

Appendix 1: Excerpt from the Federal Aviation Administration Modernization and Reform Act of 2012 (Public Law 112-95)

SEC. 313. CONSISTENCY OF REGULATORY INTERPRETATION.

(a) **ESTABLISHMENT OF ADVISORY PANEL.**—Not later than 90 days after the date of enactment of this Act, the Administrator of the Federal Aviation Administration shall establish an advisory panel comprised of both Government and industry representatives to—

(1) review the October 2010 report by the Government Accountability Office on certification and approval processes (GAO-11-14); and

(2) develop recommendations to address the findings in the report and other concerns raised by interested parties, including representatives of the aviation industry.

(b) **MATTERS TO BE CONSIDERED.**—The advisory panel shall—

(1) determine the root causes of inconsistent interpretation of regulations by the Administration's Flight Standards Service and Aircraft Certification Service;

(2) develop recommendations to improve the consistency of interpreting regulations by the Administration's Flight Standards Service and Aircraft Certification Service; and

(3) develop recommendations to improve communications between the Administration's Flight Standards Service and Aircraft Certification Service and applicants and certificate and approval holders for the identification and resolution of potentially adverse issues in an expeditious and fair manner.

(c) **REPORT TO CONGRESS.**—Not later than 1 year after the date of enactment of this Act, the Administrator shall transmit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the findings of the advisory panel, together with an explanation of how the Administrator will implement the recommendations of the advisory panel and measure the effectiveness of the recommendations.

Appendix 2: CRI ARC Charter



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Aviation Rulemaking Committee Charter

Effective Date: 04/30/12

SUBJECT: Consistency of Regulatory Interpretation Aviation Rulemaking Committee

1. **PURPOSE.** This charter creates the Aviation Rulemaking Committee (ARC) for the Consistency of Regulatory Interpretation according to the Administrator's authority under Title 49 of the United States Code (49 U.S.C.) 106(p)(5). This charter also outlines the committee's organization, responsibilities, and tasks.
2. **BACKGROUND.** On February 15, 2012, the President signed the FAA Modernization and Reform Act of 2012 (the Act). Section 313 of the Act specifies that the Administrator of the Federal Aviation Administration, in consultation with representatives of the aviation industry, shall determine the root causes of inconsistent interpretation of regulations by the Administration's Flight Standards Service and Aircraft Certification Service.
3. **OBJECTIVES AND TASKS OF THE ARC.** The ARC will provide a forum for the United States aviation community to discuss and provide recommendations to the FAA. The ARC will specifically conduct the assessment required by Section 313 of the Act, and advise and provide written recommendations to the Associate Administrator for Aviation Safety, AVS-1.
 - a. In conducting the assessment, the committee shall:
 - i. Review the October 2010 report by the Government Accountability Office (GAO) on certification and approval processes (GAO-11-14); and
 - ii. Determine the root causes of inconsistent interpretation of regulations by the Administration's Flight Standards Service and Aircraft Certification Service.
 - b. Recommendations: The advisory panel shall:
 - i. Develop recommendations to address the findings in the GAO report and other concerns raised by interested parties, including representatives of the aviation industry;
 - ii. Develop recommendations to improve the consistency of interpreting regulations by the Administration's Flight Standards Service and Aircraft Certification Service; and
 - iii. Develop recommendations to improve communications between the Administration's Flight Standards Service and Aircraft Certification Service and applicants, certificate holders, and approval holders for the identification and resolution of potentially adverse issues in an expeditious and fair manner.
 - c. The ARC will submit a report detailing recommendations for tasks a(i) and a(ii) and b(i) through b(iii) by December 31, 2012, thereby enabling the Administrator to meet the requirements of the FAA Modernization and Reform Act of 2012, Section 313, paragraph (c).
4. **ARC PROCEDURES.**
 - a. The committee advises and provides written recommendations to the Associate Administrator for Aviation Safety, and acts solely in an advisory capacity. Once the ARC recommendations are delivered to the Associate Administrator for Aviation Safety, it is

Initiated By: AFS-1

within the Associate Administrator's discretion to determine when and how the report of the ARC is released to the public.

- b. The ARC may propose additional tasks as necessary to the Associate Administrator for Aviation Safety for approval.
- c. The ARC will submit a report detailing recommendations within eight months from the effective date of this charter or by December 31, 2012. The chair of the ARC sends the recommendation report to both the Associate Administrator for Aviation Safety and the Director of the Office of Rulemaking.
- d. The ARC may reconvene following the submission of its recommendations for the purposes of providing advice and assistance to the FAA, at the discretion of the Associate Administrator for Aviation Safety provided the charter is still in effect.

5. ARC ORGANIZATION, MEMBERSHIP, AND ADMINISTRATION. The FAA will establish a committee of members of the aviation community. The committee will function as the advisory panel comprised of both government and industry representatives as required by section 313 of the Act. Members will be selected based on their familiarity with the subject and regulatory compliance. Membership will be balanced in viewpoints, interests, and knowledge of the committee's objectives and scope. Committee membership will be limited to promote discussion. Active participation and commitment by members will be essential for achieving the ARC objectives. Attendance is essential for continued membership on the committee. When necessary, the committee may establish specialized work groups that include at least one member of the FAA and invited subject matter experts from industry and government.

- a. This ARC will consist of members from industry and the FAA, and include members from the Flight Standards Service and the Aircraft Certification Service. It will consist of members, representing a broad spectrum of 14 CFR parts. Within the committee two separate work groups will be established. One to address the specific areas of concern for the Flight Standards Service and one to address the specific areas of concern for the Aircraft Certification Service.
- b. The Associate Administrator for Aviation Safety is the sponsor of the ARC and will select an industry chair(s) from the membership of the ARC and the FAA designated Federal official for the ARC. The FAA participation and support will come from all affected lines-of-business. The ARC sponsor will:
 - 1. Appoint members or organizations to the ARC;
 - 2. Receive all ARC recommendations and reports;
 - 3. Select industry and FAA members; and
 - 4. Provide administrative support for the ARC, through the Flight Standards Service.
- i. The industry chair(s) will:
 - 1. Coordinate required committee and work group (if any) meetings in order to meet the ARC's objectives and timelines;
 - 2. Provide notification to all ARC members of the time and place for each meeting;
 - 3. Ensure meeting agendas are established and provided to the committee members in a timely manner;
 - 4. Keep meeting minutes;

5. Perform other responsibilities as required to ensure the ARC's objectives are met; and
 6. Provide status updates in writing to the Associate Administrator for Aviation Safety at monthly intervals beginning one month after the effective date of this charter.
6. **COST AND COMPENSATION.** The estimated cost to the Federal Government for the Consistency of Regulatory Interpretation ARC is approximately \$24,000 annually. All travel costs for government employees will be the responsibility of the government employee's organization. Non-government representatives, including the industry co-chair, serve without government compensation and bear all costs related to their participation on the committee.
7. **PUBLIC PARTICIPATION.** ARC meetings are not open to the public. Persons or organizations outside the ARC who wish to attend a meeting must get approval in advance of the meeting from a committee co-chairperson or designated federal official.
8. **AVAILABILITY OF RECORDS.** Consistent with the Freedom of Information Act, Title 5, U.S.C., section 522, records, reports, agendas, working papers, and other documents that are made available to or prepared for or by the committee will be available for public inspection and copying at FAA Headquarters, 800 Independence Avenue, SW, Washington, DC 20591. Fees will be charged for information furnished to the public according to the fee schedule published in Title 49 of the Code of Federal Regulations, Part 7.

You can find this charter on the FAA Web Site at:
<http://www.faa.gov/about/committees/rulemaking/>.

9. **EFFECTIVE DATE AND DURATION.** This ARC is effective upon issuance of this charter. The ARC will remain in existence for ten months, unless sooner suspended, terminated or extended by the Administrator.
10. **DISTRIBUTION.** This charter is distributed to director-level management in the Office of the Associate Administrator for Aviation Safety, the Office of the Chief Counsel, the Office of Aviation Policy and Plans, the Office of the Director, Flight Standards Service, and the Office of Rulemaking.

The effective date of this charter is **APR 30 2012**


Michael P. Huerta
Acting Administrator

Appendix 3: CRI ARC Final Report

This Appendix includes *A Report from the Consistency of Regulatory Interpretation Aviation Rulemaking Committee to the Federal Aviation Administration: Recommendations on Improving Consistency of Regulatory Interpretation*, which was submitted by the CRI ARC to the FAA, through the Associate Administrator for Aviation Safety (its sponsor), on November 28, 2012.

**A REPORT FROM THE
CONSISTENCY OF REGULATORY INTERPRETATION
AVIATION RULEMAKING COMMITTEE
TO THE FEDERAL AVIATION ADMINISTRATION**

Recommendations on Improving Consistency of Regulatory Interpretation

November 28, 2012

Prepared for:

Associate Administrator for Aviation Safety
Federal Aviation Administration
Washington, DC

**A Report from the Consistency of Regulatory Interpretation Aviation Rulemaking
Committee to the Federal Aviation Administration**

Recommendations on Improving Consistency of Regulatory Interpretation

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LETTER TO ASSOCIATE ADMINISTRATOR FOR AVIATION SAFETY

November 28, 2012

Ms. Margaret Gilligan
Associate Administrator for Aviation Safety
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, DC 20591

Dear Ms. Gilligan:

The Consistency of Regulatory Interpretation (CRI) Aviation Rulemaking Committee (ARC) was established on April 30, 2012 to comply with Section 313 of the Federal Aviation Administration (FAA) Modernization and Reform Act of 2012 (the "Act"). The Act requires the Administrator, in consultation with representatives of the aviation industry, to determine the root causes of inconsistent interpretation of regulations by the FAA's Flight Standards Service (AFS) and Aircraft Certification Service (AIR). The Administrator tasked the CRI ARC to conduct the assessment required by Section 313 of the Act and provide written recommendations.

The members reviewed the October 2010 report by the Government Accountability Office (GAO) on certification and approval processes (GAO-11-14), identified root causes for inconsistent application of regulations, and formulated six recommendations to address these issues within and between AFS and AIR. The CRI ARC prepared this final report in accordance with its charter.

After careful consideration of the data collected (including case studies compiled by the industry members and the results of an Industry Stakeholder Survey), the CRI ARC developed and prioritized its recommendations with an emphasis on finding meaningful resolution to this ongoing concern while being mindful of the limitations on FAA resources.

On behalf of the members, it has been a pleasure to participate on the CRI ARC and assist the FAA to further address the issue of inconsistent application of regulations at the field, regional, and national level within and between AFS and AIR. We appreciate the FAA's willingness to consider solutions involving both Agency and industry resources in furtherance of the goal of ensuring the safest possible operating environment for all stakeholders. The members would be happy to provide additional support as you prepare the report to Congress in order to meet the objectives of Section 313 of the Act.

Sincerely,



Eric R. Byer, Industry Co-Chair
National Air Transportation Association



John M. Allen, Co-Chair & Designated Federal Official
Director, Flight Standards Service (AFS-1)
Federal Aviation Administration

EXECUTIVE SUMMARY

On April 30, 2012, the Administrator of the Federal Aviation Administration (FAA) established the Consistency of Regulatory Interpretation (CRI) Aviation Rulemaking Committee (ARC) in order to satisfy the requirements of section 313 of the FAA Modernization and Reform Act of 2012 (Public Law 112-95) (the “Act”). In the Act, Congress directed the Administrator to establish an advisory panel to review the October 2010 report by the Government Accountability Office (GAO) on certification and approval processes (GAO-11-14) and develop recommendations to address the findings in the report. In completing its study, the ARC determined root causes of inconsistent interpretation of regulations by the FAA’s Flight Standards Service (AFS) and Aircraft Certification Service (AIR). The ARC also developed recommendations to address inconsistencies by and between AFS and AIR. The ARC submits this report for consideration by the Administrator in the preparation of the FAA Report to Congress required by the Act.

Methodology

At the outset of its study, the ARC identified sources and methods for collecting objective data through case studies submitted by the industry members, survey results, and an inventory of existing regulatory and guidance documents.

Classifications for Inconsistent Application of Regulations

The members developed a series of five classifications to categorize issues of inconsistent application:

- Rulemaking
- Application
- Issue Resolution
- Training/Lack of Information
- Culture/Organization

Case Studies

The ARC compiled case studies, submitted by its industry members, involving issues of regulatory application. The ARC reviewed and classified these case studies and decided to seek additional data.

Industry Stakeholder Survey

To involve other aviation stakeholders in its review, the industry members of the ARC developed and distributed an Industry Stakeholder Survey (“Survey”). The ARC reviewed responses from 437 participants. The Survey included:

- Questions mirroring those asked of the expert panel in GAO-11-14;
- Questions relating to the consistency of regulatory application at the local/field office level;
- Questions specific to jurisdictional oversight; and
- An opportunity to provide additional information/specific examples.

Regulatory Guidance Material Inventory

The ARC also conducted a review of FAA regulatory guidance material to explore issues involving inconsistencies further. The ARC identified different types of guidance material, how the documents are organized, and the scope of effort involved in developing a master single-source database for FAA regulatory guidance documents.

Identification of Root Causes

The members reviewed GAO-11-14 and discussed case studies and Survey results to determine root causes. The ARC identified three root causes for the ongoing inconsistencies by and between AFS and AIR:

- **Need for Clear Regulatory Requirements:** Unclear regulatory language contributes to inconsistent application. When a regulation is unclear, its application varies from one inspector to another and compliance differs among certificate holders. Over time, better analytical tools, new technologies and best practices change compliance techniques, creating further ambiguity.
- **Regulatory Application Training:** Inadequate and nonstandard FAA and industry training is an early cause of inconsistent regulatory application. Training in regulatory development methodology and standard application and resolution protocols have not kept pace with changes either at FAA or the stakeholder community.
- **Culture:** There is a general reluctance and/or failure by both industry and the FAA to work issues of inconsistent regulatory application through to a final resolution. Timeliness of decisions and a “fear of retribution” contribute to an acceptance of inconsistent regulatory application.

Recommendations

After identifying root causes for the inconsistent interpretation of regulations, the ARC developed six recommendations. The ARC acknowledged the limited resources available to the FAA for implementation of new programs and technologies, and the members concentrated on identifying existing efforts and programs to ensure the FAA could leverage existing resources. The ARC this report by presenting the information as follows:

- Recommendations to improve the consistency of regulatory application by AFS and AIR; and
- Recommendations to improve communications between the FAA and industry stakeholders.

The members went further and considered the priority of each one due to budget constraints facing the agency. In their deliberations, the members emphasized the importance of the ARC's primary recommendation:

Primary Recommendation—The ARC recommends AFS and AIR review all guidance documents and interpretations to identify and cancel outdated material and cross-reference (electronically link) material to its applicable rule. Further, the ARC recommends the FAA expand its current Aviation Safety Information Management System (AVSIMS) initiative to consolidate the service organization-level libraries into a single AVS master electronic database resource, organized by rule, to allow agency and industry users access to relevant rules and all active and superseded guidance material and related documents. (*See* section 6.3.)

The ARC also prioritized the remaining recommendations highlighting that successful implementation of its primary recommendation supports the effectiveness of the ones that follow. The members noted that concurrent implementation would most effectively address inconsistent interpretation of regulations by and between AFS and AIR.

Recommendation—The ARC recommends the FAA Office of Aviation Safety (AVS) develop a standardized decision-making methodology for the development of all policy and guidance material to ensure such documents are consistent with adopted regulations. (*See* section 6.2.)

Recommendation—The ARC recommends the FAA, in consultation with industry stakeholders, review and revise its regulatory training for agency personnel and make the curriculum available to industry to ensure the training includes:

- The methodology to research and extract intent and purpose of applicable portions of 49 U.S.C. and 14 CFR for regulatory decision-making.
- Interactive workshops that use case studies, decision trees, and methodology training for understanding the overall system of regulations and guidance, as well as appropriate discretionary authority.
- Appropriate initial and recurrent training for various AFS and AIR personnel.

Supplementary Recommendation—The ARC further recommends the FAA study the feasibility of developing a specific training program designed for personnel with regulatory development and oversight responsibilities. The study should consider supporting standard courses of study that lead to formal recognition or credentialing of those trained in regulatory development and application. (*See* section 6.4.)

Recommendation—The ARC recommends the FAA establish a Regulatory Consistency Communications Board (RCCB) comprising representatives from AFS, AIR, and Office of the Chief Counsel (AGC) that would provide clarification to FAA personnel and certificate/approval holders and applicants on questions related to the application of regulations. The RCCB would be the arbiter for all parties. The FAA should consider:

- Providing an inquiry template to streamline the RCCB process;
- Establishing reasonable timeframes for responses by the RCCB and appropriate performance metrics; and
- Making all resolutions of potentially common questions available to both the FAA and industry, with operator data de-identified.

(*See* section 7.1.)

Recommendation—The ARC recommends the FAA improve its rulemaking procedures and guidance to ensure each proposed and final rule preamble contain a comprehensive explanation of the purpose, technical requirements, and intent. (*See* section 6.1)

Recommendation—The ARC recommends AFS and AIR determine the feasibility of establishing a full-time Regulatory Operations Communication Center (ROCC) as a centralized support center to provide real-time guidance to FAA personnel and industry certificate/approval holders and applicants. The ROCC concept should be implemented by leveraging existing resources. (*See* section 7.2.)

Conclusion

The ARC generally agreed with the findings in GAO-11-14, which were further supported by the data collected and considered by the members. While the ARC concurred with the FAA response to the GAO study, the members felt that issues of inconsistent interpretation of the regulations still need to be addressed by the agency. However, the members also noted that industry needs to work with the FAA to achieve progress and ensure a more standardized methodology for regulatory application at the national, regional, and field levels of AFS and AIR.

The ARC prioritized six recommendations to highlight the importance of its primary recommendation and allow for development of a reasonable implementation strategy. Finally, the ARC encouraged continued efforts by industry stakeholders and the FAA to address inconsistent regulatory interpretation.

A Report from the Consistency of Regulatory Interpretation Aviation Rulemaking Committee to the Federal Aviation Administration

Recommendations on Improving Consistency of Regulatory Interpretation

1.0 CONSISTENCY OF REGULATORY INTERPRETATION AVIATION RULEMAKING COMMITTEE

On February 14, 2012, the President signed the FAA Modernization and Reform Act of 2012 (the “Act”).¹ Pursuant to section 313 of the Act, the Federal Aviation Administration (FAA) chartered the Consistency of Regulatory Interpretation (CRI) Aviation Rulemaking Committee (ARC).² The CRI ARC created a forum for the U.S. aviation community to assess, determine the root causes of, and provide recommendations to reduce inconsistent interpretation and application of regulations. The focus of the CRI ARC’s efforts was limited to the FAA’s Flight Standards Service (AFS) and Aircraft Certification Service (AIR), their interactions with each other, and their interactions with industry stakeholders.

The FAA selected nine members for the ARC representing a variety of certificate/approval holders and applicants under the jurisdictional oversight of AFS or AIR (i.e., persons certificated under Title 14 of the Code of Federal Regulations (14 CFR) Part 21 (design and production approval holders); Parts 91K, 121, 125, 135 (operators); Parts 65 and 145 (maintenance providers)) and the agency.³

The FAA tasked the ARC to submit its recommendations to the Associate Administrator for Aviation Safety (AVS-1) by December 31, 2012.⁴ The members submitted the six recommendations presented and prioritized in this report to enable the FAA to meet its Congressional reporting deadline under the Act.

¹ FAA Modernization and Reform Act of 2012 (Public Law 112-95).

² See Aviation Rulemaking Committee Charter: Consistency of Regulatory Interpretation Aviation Rulemaking Committee (April 30, 2012) (the “Charter”).

³ The Director, Flight Standards Service (AFS-1) and Director, Aircraft Certification Service (AIR-1) represented the FAA on the ARC. The members and program support are listed in [Appendix A](#).

⁴ The ARC may reconvene following the submission of its recommendations to advise and assist the FAA, at the discretion of its sponsor, AVS-1, provided the ARC charter is still in effect. The ARC will remain in effect until February 28, 2013, unless sooner suspended, terminated, or extended by the Administrator.

2.0 BACKGROUND

This chapter discusses background information relevant to the ARC's methodology and the development of its recommendations.

2.1 Overview

The ARC addressed concerns about the lack of standardization in regulatory application by the agency, particularly with regard to certification/approval processes. In formulating its recommendations, the ARC wanted to ensure that the FAA conducts certifications and approvals in a manner that:

- Supports the activities of current certificate/approval holders and applicants, as well as the entry of new operating organizations and design applicants in the marketplace;
- Enables the development of new products and technologies; and
- Enhances the global competitiveness of the U.S. aviation industry.

2.1.1 Congressional Review

In 2010, Congress requested that the Government Accountability Office (GAO) examine the (i) extent of variation in the FAA's interpretation of standards for certification and approval decisions and (ii) views of key stakeholders and experts on how well these processes work.

After reviewing the GAO report, Congress included Section 313 in the Act directing the Administrator to establish an advisory panel to:

- Review the October 2010 GAO report on certification and approval processes (GAO-11-14) and develop related recommendations;
- Determine the causes of inconsistent interpretation of regulations by AFS and AIR; and
- Develop recommendations to improve the consistency of interpreting such regulations.

2.1.2 FAA Aviation Rulemaking Committee

The ARC was chartered to determine the root causes and make recommendations to address the inconsistent application of regulations. While the Charter allowed the ARC to form separate work groups specific to each discipline (AFS or AIR), the members decided the issues were applicable to both service organizations within AVS. The members determined an integrated approach would more efficiently focus resources on developing effective recommendations. The ARC sought recommendations to enhance management of the workload, allocate limited resources, and incorporate safety management system (SMS) principles in the agency's decision-making methodology.

The ARC's mandate did not include an examination of the resources available to review and take action on applications submitted; nor did it contain the amount of time applicants are delayed or wait-listed during the certification/approval process. However,

the factors considered in developing the ARC's recommendations could be applied to all applications, certification (including approval or acceptance of documents), surveillance, and enforcement activities. To further this objective, the ARC supports the recommendations issued by the Aircraft Certification Process Review and Reform Aviation Rulemaking Committee (ACPRR ARC) in these areas.⁵

2.2 Scope of Data

The ARC identified sources and methods for collecting objective data through case studies, a survey, and an inventory of existing regulatory and guidance resources.

2.2.1 Case Studies

The industry associations represented on the ARC compiled anecdotal examples involving issues of inconsistent regulatory application experienced by their members. Following that *ad hoc* gathering of information, the ARC developed the data collection tool attached as [Appendix E](#) to collect consistent and objective information, namely:

- A concise description of the issue,
- The regulatory guidance or policy reference,
- The economic impact of the issue, and
- A description of the proposed solution or status of the issue.

The case studies incorporated in [Appendix F](#) are organized by member association and numbered accordingly for ease of reference:

- Aerospace Industries Association (AIA) and the General Aviation Manufacturers Association (GAMA)—AIA/GAMA-1 to AIA/GAMA-10
- Airlines for America (A4A)—A4A-1 to A4A-10
- National Air Carrier Association (NACA)—NACA-1 to NACA-3
- National Air Transportation Association (NATA)—NATA-1 to NATA-6
- Regional Airline Association (RAA)—RAA-1 to RAA-4

2.2.2 Industry Stakeholder Survey

To involve members from all industry associations and groups in its review, the industry members of the ARC solicited feedback and collected data from interested aviation industry stakeholders. The Industry Stakeholder Survey (“Survey”) was announced on August 28, 2012, and was officially closed on September 25, 2012, although the site stayed open until September 30, 2012.

The industry members of the ARC issued press releases and specifically contacted nine additional industry associations not otherwise represented on the ARC, to ensure a

⁵ A Report from the Aircraft Certification Process Review and Reform Aviation Rulemaking Committee to the Federal Aviation Administration (May 22, 2012).

sufficient level of response to formulate effective recommendations.⁶ Further, the industry members of the ARC conducted a webinar outlining its efforts and the Survey's purpose.⁷ Over 100 participants registered for the webinar.

The Survey comprised 28 questions organized into five sections:

- Part A – Introductory Questions: information collection about the responder for purposes of tracking the responses and categorizing the certificate/approval holders and applicants.
- Part B – About Your Experience with FAA Questions (from GAO Expert Panel): questions that mirrored those asked of the expert panel and published in GAO-11-14.
- Part C – Consistency of Regulatory Application Questions - Field Office Level: questions relating to the consistency of regulatory application at the local/field office level.
- Part D – Certificate Transfer/Change in Oversight Office Questions: questions specific to jurisdictional oversight, including certificate transfer/change in oversight office questions.
- Part E – Additional Comments and Examples: an opportunity to provide additional information and/or specific examples.

The ARC received information from 437 participants, and the results are included in Appendix G of this report. To the extent sufficient information was provided, the classifications discussed in section 2.3.2 of this report were used to categorize the data.

Participants (Part A of the Industry Stakeholder Survey) included:⁸

- Design/production approval holder: 19.0%
- Certificated Air Carrier/Air Operator: 53.3%
- General Aviation/Business Aviation/Corporate Flight Department: 28.8%
- Engineering Firm: 3.2%
- Maintenance certificate holder: 27.2%

In replying to Part B, respondents were fairly consistent with the GAO's findings; the measurable differences related to perception of the certification and approval processes. While the respondents to the GAO study felt industry's experience was generally positive, the majority of Survey respondents reported negative experiences. In putting the Survey results in context, the ARC acknowledged the respondents were more likely to share negative experiences based on the nature and anonymity of the Survey.

⁶ The Industry Chair sent a letter to the AeroSpace and Defence Industries Association of Europe (ASD), Aircraft Electronics Association (AEA), Aircraft Owners & Pilots Association (AOPA), Aviation Technician Education Council (ATEC), European Regions Airline Association (ERA), Experimental Aircraft Association (EAA), Helicopter Association International (HAI), International Air Transport Association Montreal (IATA), and National Business Aviation Association (NBAA).

⁷ The webinar was hosted by NATA, presented live on September 7, 2012 and available for viewing (free of charge) until the survey closed.

⁸ Participants were able to select more than one self-identifying category: a single participant can be certificated as a Part 135 air carrier and as a Part 145 repair station; it would submit multiple responses to certain questions.

373 respondents (representing 7.9% of the 4,729 total certificate holders) self-identified as certificate/approval holders under AFS oversight; whereas, 102 respondents self-identified as design/production approval holders under AIR oversight, which also represents a small percentage considering that AIR issued a total of 3,595 design and production approvals in FY11 alone.

An examination of responses to Part C addressing consistency of regulatory application at the local/field office level revealed that more than 50% of the respondents interact with their local FAA oversight office more than 12 times per year. Those respondents noted relatively low satisfaction in the outcome of these interactions; only 37.8% responded that FAA personnel managed their expectation and the response time was reasonable. In addition, more than 50% cited issues with consistency in regulatory application, and 60% noted that an issue was not satisfactorily resolved.

An examination of responses to Part D of the Survey, which includes questions specific to jurisdictional oversight, revealed that approximately 20% of the cases where the jurisdictional oversight office changed, the respondents initiated the transfer, and of that subset, 16.7% did so for a reason other than a change in the location of the principal base of operations. Such transfers suggest a poor working relationship with the local oversight office, and the ARC reviewed those more detailed responses. On the other hand, 63.3% of respondents indicated no problems with the certificate transfer (smooth transfer).

The industry members of the ARC also reviewed additional comments and examples submitted by respondents in response to Part E of the Industry Stakeholder Survey.⁹ These comments further validated and supported the observations listed in the GAO study as well as the case studies and classifications listed in this report.

2.2.3 Regulatory Guidance Material Inventory

The ARC determined a comprehensive review of the proliferation of FAA guidance and regulatory material was necessary. The members noted that contradictions frequently arise among and between the minimum technical standards and the differing operational requirements. For example, the determination made to address the complexity of a particular certificate/approval holder or applicant's issue is not always supported by the regulation or other guidance. The ARC determined a comprehensive review of "official" and "unofficial" information is essential to eliminating complexity and conflicts.

To evaluate the information "available" and to initiate the recommended review, the ARC identified different types of guidance material, how the guidance material is organized, and the scope of effort to develop a master single-source database to organize FAA regulatory guidance material. Based on the research and information collected, the members recommended the agency develop a single master library of FAA guidance material organized by regulation. (*See* section 6.3.)

⁹ Since Survey participants were promised anonymity, the industry members of the ARC reviewed all narrative comments and examples submitted and then destroyed the information. It was determined that the narrative comments/examples would not be incorporated in this report, submitted to the FAA, or otherwise retained by the ARC.

The ARC developed the following tools:

- (a) Guidance Material Inventory: The Inventory compiles FAA regulatory compliance resources relevant to certificate/approval holders and applicants interacting with AFS or AIR. Each document listed (using the manner in which the document is defined on the FAA website) includes:
- A description of the resource;
 - The publishing service organization or line of business;
 - The primary audience (FAA or industry); and
 - Availability of the document (specific electronic database or other method).
- While the Inventory is generally complete, there are other resources (including documents incorporated by reference) that are not addressed, but can be made available. (The FAA Guidance Material Inventory is included in Appendix H of this report.)
- (b) FAA Electronic Database Library Master List: The Master List includes the electronic databases used by the FAA and industry for application of regulations. The Master List is organized by the data collection system and indicates whether the database is used by the FAA, by industry, or both.

The two most functional and comprehensive databases are the Regulatory Guidance Library (RGL) and Order 8900.1, Flight Standards Information Management System (FSIMS). FSIMS provides most AFS information in a single-source, Web-based, repository of policy and guidance available to both the FAA and industry, including Order 8900.1.¹⁰ FSIMS also links to the CFR, other FAA orders, ACs and job aids.

The RGL was developed by AIR as a searchable database containing regulatory, guidance, and aviation product information. The RGL is accessible to both industry and the FAA and can be found on the FAA website. AVS is working to consolidate all AVS guidance (including FSIMS and the RGL) into the Aviation Safety Information Management System (AVSIMS).

While the majority of AFS guidance is contained in FSIMS and AIR guidance is primarily contained in the RGL, there is a great deal of overlap, which indicates a lack of cooperation and coordination that causes conflicting information to be developed and published, wasting valuable government resources.

There are also a number of documents that are not included on the FAA website. While legal interpretations and Chief Counsel opinions are available on the FAA website, the online resource is incomplete since Regional Counsel Opinions are not incorporated. Further, the online resource only contains legal interpretations and Chief Counsel opinions issued from 1990 to the present.

¹⁰ FSIMS is the product of an FAA effort to digitize and combine all previous AFS Orders dealing with inspector guidance, for both operations and airworthiness inspectors. FSIMS was created to consolidate inspector guidance previously contained in multiple handbooks and to standardize access to the Order for all users.

The Master List provides an inventory and short description of all the agency’s “regulatory” databases (i.e., sources containing information that can be or is used to establish compliance with 14 CFR):

- Regulations—pending, current and past.
- Certificates and Operations Specifications (OpSpecs)—pending, current and past (i.e., a “history” of the forms or generic paragraphs, how and why they changed and the regulatory justification).
- Internal guidance material—directives for FAA personnel, including orders, notices, memoranda, legal interpretations (issued by headquarters and regions), Chief Counsel opinions, decisions from cases appealed to the Administrator, orders and opinions issued by the Department of Transportation (DOT) or the National Transportation Safety Board (NTSB), opinions issued by federal courts and/or any other documents that could be used to “interpret” or apply a regulation issued by the FAA.
- External guidance material—primarily intended for industry, including Advisory Circulars (AC) and letters written by AFS or AIR to answer specific questions, explain the FAA’s position, or find compliance with 14 CFR or guidance material (i.e., AFS letter to Aeronautical Repair Station Association (ARSA) on the “definition” of and recordkeeping for the term “overhaul”).

(The complete FAA Electronic Database Library Master List is included in [Appendix H](#) of this report.)

- (c) Single-Source Guidance List: As the final step in this data collection process, the ARC measured the effort involved in reviewing FAA guidance and compiling a single-source guidance list organized by 14 CFR part. The members used 14 CFR Part 43 and 14 CFR Part 145 as examples. The ARC developed an inventory list (by 14 CFR part) of all of the active publications used to support each rule. The lists contain documents by type (as identified in the Guidance Material Inventory discussed in sub-paragraph (a)) available in the electronic databases (referenced in the Electronic Database Library Master List discussed in sub-paragraph (b)). The ARC identified significant challenges, including overlap in guidance documents, highlighting the need for a single source for guidance material organized by rule. (See Recommendation 3.)

(The complete 14 CFR Part 43 & 14 CFR Part 145 Single-Source Guidance Lists are included in [Appendix H](#) of this report.)

2.3 Methodology and Approach

This section describes the development of the ARC’s methodology for review.

2.3.1 Meetings

The ARC held nine meetings to discuss data collection, evaluate case studies submitted by the industry members, review the research compiled on FAA guidance material and electronic databases, develop and launch a survey, consider survey results, develop recommendations, and draft the final report.

2.3.2 Classification of Inconsistent Regulatory Application

The members developed five categories to organize the data regarding inconsistent regulatory application. The bulleted items listed below each enumerated paragraph are included as examples of the types of issues that typically fell under that heading, and some issues may overlap or flow across multiple classifications.

- (a) Rulemaking: This classification relates to the clarity of the final rule. In general, the Notice of Proposed Rulemaking (NPRM) and final rule preambles should explain the safety and technical intent of the requirement, as well as provide the necessary understanding of expected compliance measures. However, inconsistent application of a regulation often occurs when there is inadequate clarity regarding the safety and technical intent and application in terms of acceptable methods of compliance and impact upon the industry. The economic analyses and regulatory flexibility determination in the final rule preamble should provide a clear understanding of the interpretation and intended application of the new requirement in terms of the expected impact upon various industry sectors and the anticipated costs. The information in the NPRM and final rule preamble should be used in support and develop guidance, procedures and policies for internal and external purposes. The following issues fell under this heading:
- Regulatory deficiency—the language of the rule is ambiguous, too narrow or too broad. Whether a rule is performance-based or prescriptive, when it is unclear, the FAA will often prescribe methods of compliance that override the original intent.
 - Conflicting rules—two rules were not coordinated before issuance.
 - Requested consideration by Congress (i.e., legislative mandates for rulemaking)—justification for these rules is largely based on a legislative mandate, which can impact the clarity in terms of safety intent, economic analyses and regulatory flexibility determination.
- (b) Application: This classification involves inconsistent *application* of the minimum standard contained in the regulation or the procedure for obtaining approval/acceptance of similarly situated persons. This classification often flows directly from the shortcomings in the rulemaking process identified in subparagraph (a) above and can be attributed to lack of clarity in the final rule. In addition, there are differences in regulatory understanding from one person to the next, which can result in inconsistent application. These issues often result in loss of resources and time by the government and the industry as well as “forum shopping.”¹¹ The following issues fell under this heading:

¹¹ Submittal of applications and/or requests to an inspector or office known to handle the matter in a certain fashion.

- Rulemaking by policy or guidance—new policy or guidance can cause previously acceptable methods of compliance to be suddenly no longer acceptable even though there has been no change to the rule itself. The need for expediency to address a specific situation often creates a precedent with obligations beyond the intent, purpose and enforceability of a regulation.
 - Regulatory creep—when the compliance “expectations” become the best available technology or best practices rather than the minimum standard contemplated by the original rule.
 - Clarity of purpose—the rule’s intent gets lost over time.
 - Compliance that does not follow published guidance material (including internal mandatory guidance for FAA personnel).
 - Compliance with documents incorporated by reference.
 - Changes in the application due to:
 - Passage of time
 - Changes in personnel
 - Changes or reversals of previously approved/accepted data/product due to:
 - Change of oversight offices
 - Changes in personnel
 - Changes in operation/applicant/certificate holder
 - New regulations or policy treated as applicable to an existing rule
- (c) Issue Resolution: This classification involves the review of an issue or action taken by FAA or industry personnel, or both. It covers the issues handled at the local/field level and those matters elevated to the regional or national level. After an occurrence of actual or perceived inconsistent application as discussed in subparagraph (c) above, the certificate/approval holder or applicant engages in issue resolution. The following issues fell under this heading:
- Clarity of resolution processes for different matters—
 - Issue(s) for a particular person
 - Issue(s) of national or international import
 - Timeliness (e.g., economic impact of delay in allowing the appropriate “process” to work)
 - The inconsistencies of resolutions among and between local, regional, national and international offices on similar matters
 - No comprehensive method of capturing “lessons learned” across the AVS service organizations
 - Lack of an effective appeal process
 - Formal requests for interpretation, petitions for rulemaking, and requests for temporary exemptions are viewed as impractical and ineffective recourse
 - Fear of retaliation (on the part of the industry and the FAA)

- (d) Training/Lack of Information: This classification involves inadequate training for regulators and designees, as well as the lack of consistent information on the part of both industry and the FAA. These issues can compound the concerns raised in several of the categories listed above. The following issues fell under this heading:
- Difficulty in obtaining “all” the information necessary to make an objective decision with respect to regulations
 - FAA, designee, and industry personnel training
 - Accountability/responsibility of certificate/approval holders and applicants
- (e) Culture/Organization: This classification addresses agency and industry cultural and organizational issues, which often result from training/lack of information, as discussed in subparagraph (d) above. The following issues fell under this heading:
- Lack of AFS/AIR coordination and cooperation where the regulations contemplate a seamless transition from certification to operations (e.g., Reduced Vertical Separation Minimum (RVSM) “double” approval process, Terrain Awareness and Warning System (TAWS) installation approvals).
 - Resistance to change—the FAA and industry stakeholders need to acknowledge that industry tends to avoid involvement in the rulemaking and issue resolution processes, and the agency tends to find the path to “no” easier than the path to “yes.”

3.0 APPLICATION AND CERTIFICATION/APPROVAL PROCESSES

This chapter provides a general discussion of AVS certification/approval processes. AFS and AIR issue certificates and approvals for operators and aviation products used in the national airspace system (NAS) based on standards set forth in 14 CFR. AFS and AIR personnel apply, oversee, and enforce the regulations governing certificate/approval holders and applicants through the use of FAA policies and guidance, such as orders, notices, and advisory circulars (AC).

3.1 Aircraft Certification Service

AIR administers the safety standards governing design, production, and airworthiness of civil aeronautical products; oversees design, production, and airworthiness certification programs to ensure compliance with prescribed safety standards; provides a safety performance management system to ensure continued operational safety of aircraft; and works with aviation authorities, manufacturers, and other stakeholders to help improve the safety of the international air transportation system.

As of September 30, 2012, AIR had a workforce of approximately 1,325 safety professionals, including 683 aerospace engineers, 256 aviation safety inspectors, and 32 flight test pilots, in 39 field offices that issue approvals to the designers, manufacturers, and modifiers of aircraft and aircraft engines, propellers, parts, and equipment, including the avionics and other equipment required for the Next Generation Air Transportation System (NextGen).¹²

Since 2005, AIR has used project sequencing to prioritize certification applications on the basis of available resources. Projects are evaluated against several criteria, including safety attributes and their impact on the air transportation system.¹³ AIR is organized into the Office of the Director and four headquarters divisions located in Washington, DC, and four geographic directorates (Engine and Propeller Directorate, Rotorcraft Directorate, Small Airplane Directorate, and Transport Airplane Directorate). AIR headquarters offices and the directorates share responsibility for the design and production approval, airworthiness certification, and continued airworthiness programs of all U.S. civil aviation products. The directorates develop and implement national regulatory requirements, policy and procedures for continued operational safety and type, production, and airworthiness certifications for their designated products. Each directorate also has responsibility for overseeing certification activities, including field office operations (Aircraft Certification Offices (ACO), Manufacturing Inspection District Offices (MIDO), and Manufacturing Inspection Offices (MIO)), certification programs, and projects within its geographic area. AIR is also responsible for the appointment and oversight of designees and delegated organizations that play a critical role in acting on behalf of the FAA to perform many certification and approval activities, such as the issuance of design and airworthiness approvals for aircraft modifications or parts.¹⁴

¹² NextGen is a federal effort to transform the U.S. national airspace system from a ground-based system of air traffic control to a satellite-based system of air traffic management.

¹³ In FY11, AIR issued approximately 3,519 design approvals, 76 production approvals, and 647 airworthiness certificates.

¹⁴ Designees and delegated organizations are authorized to act on FAA's behalf under the organization designation authorization (ODA) program pursuant to 14 CFR 183.45.

3.2 Flight Standards Service

AFS sets the standards for certification and oversight of airmen, air operators, air agencies, and designees. AFS also approves or accepts operator programs and projects, and issues approvals and operational authorizations (such as training program(s), RVSM authorization, and special flight permits).

At the time of this report, AFS has a workforce of over 5,000 safety professionals, including nearly 2,740 aviation safety inspectors, that issue certificates allowing individuals and entities to operate in the NAS. The majority are assigned to AFS field offices (e.g., Flight Standards District Office (FSDO), Certificate Management Office (CMO), International Field Office (IFO)/International Field Unit (IFU), or Aircraft Evaluation Group (AEG)). AFS field offices are located in one of eight regional divisions: Alaskan Region (AAL), Central Region (ACE), Eastern Region (AEA), Great Lakes Region (AGL), Northwest Mountain Region (ANM), Southern Region (ASO), Southwest Region (ASW), and Western Pacific Region (AWP).

Certification projects originate at the field office level where office managers use the Certification Services Oversight Process (CSOP) to initiate certification projects. Once the FAA determines it has the resources to oversee a new certificate holder, accepted projects are generally processed on a first-in, first-out basis within each office.¹⁵ Projects within and among the different types of air operators and air agencies require various amounts of FAA resources. For example, an agricultural operator certification requires fewer FAA resources than a repair station certification. Additionally, certifications of small commercial aircraft operations that are single pilot, single plane require a different set of resources than operations that are dual pilot and/or fly more aircraft.¹⁶

AFS is also responsible for assuring the continued operational safety of the national airspace system by overseeing certificate holders, monitoring (along with AIR) operator and air agency operations and aircraft maintenance, and overseeing designees and delegated organizations. AFS uses designees, operating under the delegated authority of the Administrator, to supplement its workforce.¹⁷

¹⁵ AFS issued 4,347 air operator and air agency certificates in fiscal year 2011, including certificates to commercial air carriers under 14 CFR Part 121, operators of smaller commercial aircraft under 14 CFR Part 135, repair stations under 14 CFR Part 145, and pilot schools and training centers under 14 CFR Parts 141 and 142, respectively.

¹⁶ GAO-11-14 at 7.

¹⁷ AFS designees conduct airman certification activities, including administering practical test(s) to individual airman applicants and certificated airmen.

4.0 REVIEW OF GAO-11-14

This chapter addresses the ARC's requirement to review GAO-11-14 and develop recommendations to address the findings in the GAO report.

4.1 Recommendations for Executive Action

The GAO acknowledged the FAA's actions to address variations in the certification and approval processes, but noted such actions lacked outcome-based performance measures and a continuous evaluative process to determine if the actions had the intended effects. The GAO further noted that while AFS and AIR notify applicants as to whether resources are available to begin work and AIR tracks how long individual submissions are wait-listed, AFS does not track wait-listed submissions.

The GAO suggested that the FAA develop a continuous evaluative process with measurable performance goals to determine the effectiveness of improvements to the certification and approval processes. The GAO made the following recommendations:

- (a) GAO Recommendation 1: Determine the effectiveness of actions to improve the certification and approval processes by developing a continuous evaluative process and use it to create measurable performance goals for the actions, track performance toward those goals, and determine appropriate process changes. To the extent that this evaluation of agency actions identifies effective practices, consider instituting those practices agency wide.
- (b) GAO Recommendation 2: Develop and implement a process in AFS to track how long certification and approval submissions are wait-listed, the reasons for wait-listing them, and the factors that eventually allowed initiation of the certification process. Use the data generated from this process to assess the extent of wait-listing delays and to reallocate resources, as appropriate, to meet demand better.

4.2 FAA Response to GAO-11-14

The Department of Transportation (DOT) submitted the FAA response to GAO-11-14 on February 28, 2011.¹⁸

- (a) FAA Response to GAO Recommendation 1: The FAA concurred with the GAO recommendation and noted that the strengthening of the AVS Quality Management System (QMS) has resulted in improvements to the certification and approval processes. The FAA further noted that on October 1, 2010, new metrics were implemented, which provide the following capabilities:

¹⁸ U.S. Department of Transportation Statement on Government Accountability Office (GAO) Report: "Aviation Safety: Certification and Approval Processes are Generally Viewed as Working Well, but Better Evaluative Information Needed to Improve Efficiency" (February 28, 2011).

- The ability to track process performance and product conformity;
- A method for setting measurable performance goals as a metric for assessing the effectiveness of the certification and approval processes, and
- A method for identifying appropriate actions to correct systemic issues that are negatively impacting certain processes and their outcomes.

In its response, the FAA suggested that implementation of these new metrics warranted closing the recommendation.

The GAO changed the status of this recommendation to Closed–Implemented. On October 1, 2011, the FAA implemented new metrics that provide the ability to track process performance and product conformity. The GAO indicated that these metrics will allow the FAA to set measurable performance goals necessary to determine the effectiveness of the certification and approval processes and assist it in deciding the appropriate actions necessary to address systemic issues that may negatively impact certain processes and their outcomes.

- (b) FAA Response to GAO Recommendation 2: The FAA concurred with the GAO recommendation and noted that the CSOP is the existing AFS process for tracking wait-listed certification applicants. The CSOP database already includes reasons for wait-listing applications such as insufficient staff, incomplete training requirements, and lack of travel funds. Tracking the causes of these delays will facilitate the resolution of these issues and hopefully allow wait-listed certification projects to proceed more quickly.

The CSOP does not currently track how long certification submissions are wait-listed. In response to the GAO recommendation, the FAA indicated that it would revise CSOP software to capture this information by September 30, 2011, contingent upon the availability of funds. In addition, CSOP dealt with the reallocation of resources, to the extent possible, while maintaining the highest priority of regulatory oversight of existing certificate holders. The CSOP database contains information regarding the availability of resources in other field offices and whether those resources can be shifted to meet demand better.

In its response, the FAA suggested that the planned CSOP software revision will fully satisfy the intent of this recommendation.

The GAO changed the status of this recommendation to Closed–Implemented. In October 2011, the FAA indicated that it had altered the software in the AFS CSOP database to designate when certification submissions are wait-listed. The database now tracks how long certification submissions are wait-listed. As a result, the FAA now has the capability to track how long certification submissions are waitlisted and reallocate resources, as appropriate, to meet demand better.

4.3 Concurrence with FAA Response to GAO Study

In reviewing the findings in GAO-11-14, the ARC members concentrated on the FAA’s ability to use, monitor and report essential metrics in support of the agency’s response to GAO-11-14. The ARC reviewed and concurred with the FAA responses to the GAO study. The ARC concurred with the FAA response to the GAO study and supports the FAA’s efforts to strengthen the AVS QMS, integration of new metrics, and enhance the tracking of CSOP data.

5.0 ROOT CAUSES OF INCONSISTENT INTERPRETATION OF REGULATIONS BY AFS AND AIR

This chapter addresses the root causes of inconsistent regulatory application. The ARC generally concurred with the GAO study's findings, and reviewed the Survey results and case studies. The ARC identified three root causes for the ongoing inconsistent application of regulations by and between AFS and AIR:

- **Need for Clear Regulatory Requirements:** Unclear regulatory language contributes to inconsistent application. When a regulation is unclear, its application varies from one inspector to another and compliance differs among certificate holders. Over time, better analytical tools, new technologies and best practices change compliance techniques, creating further ambiguity.
- **Regulatory Application Training:** Inadequate and nonstandard FAA and industry training is an early cause of inconsistent regulatory application. Training in regulatory development methodology and standard application and resolution protocols have not kept pace with changes either at FAA or the stakeholder community.
- **Culture:** There is a general reluctance and/or failure by both industry and the FAA to work issues of inconsistent regulatory application through to a final resolution. Timeliness of decisions and a “fear of retribution” contribute to an acceptance of inconsistent regulatory application.

6.0 RECOMMENDATIONS TO IMPROVE CONSISTENCY OF REGULATORY APPLICATION

This chapter discusses the ARC's recommendations to improve consistency of regulatory application.

6.1 Clarity in Final Rules Issued by the FAA

The ARC determined that more comprehensive final rules would increase the agency's ability to reduce inconsistency in application. In developing regulations, the safety intent and purpose of the action must be clear in the preamble and include anticipated examples. In a similar effort, the Airworthiness Directive Implementation Aviation Rulemaking Committee (AD ARC) recommended that service bulletins (SB) incorporated by reference in ADs include a clear, succinct statement of safety intent (i.e. the technical objective of the SB) rather than reiterating the causal unsafe condition, and that they include a succinct description of the aircraft configuration that meets the intent.¹⁹ In addition, training should be conducted in a manner that assists the trainee in developing a standardized decision-making methodology based upon the intent of the final rule (as set forth in the preamble).

The industry must participate actively in the rulemaking process to ensure that the intent and purpose of the final rule is clear. Clarity in the final rule will improve guidance development and, by extension, a standardized approach to regulatory application at all levels by the agency and the industry.

The ARC incorporated the ACPRR ARC's review of general rulemaking process challenges, which highlighted an opportunity to improve its timeliness. Timeliness issues are linked to clarity; the review developed by the Aviation Rulemaking Advisory Committee Rulemaking Prioritization Working Group (ARAC RPWG) will help in that effort.²⁰ The FAA tasked the ARAC RPWG to provide advice and recommendations on how to prioritize rulemaking projects. The working group developed parameters and criteria for a risk assessment methodology, ensuring that the most effective rulemaking project receives the highest priority.²¹

Recommendation 1—The ARC recommends the FAA improve its rulemaking procedures and guidance to ensure each proposed and final rule preamble contain a comprehensive explanation of the purpose, technical requirements, and intent.

¹⁹ AC 20-176, Design Approval Holder Best Practices for Service Bulletins Related to Airworthiness (12/19/2011) at ¶2-4.

²⁰ FAA, Aviation Rulemaking Advisory Committee (ARAC)—New Task (76 FR 21936).

²¹ See FAA Aviation Rulemaking Advisory Committee Rulemaking Prioritization Working Group (RPWG), Recommendation Report (October 2011).

6.2 Develop Instructions for FAA Personnel with Policy Development Responsibilities

The ARC noted multiple instances where guidance published by the FAA appeared to create inconsistent application and confusion. In order to address this issue, the members suggested personnel charged with regulatory application responsibilities (or the development of guidance) follow a standardized methodology or decision tree to ensure that the new guidance does not contradict or otherwise negate a current acceptable method of compliance.

The ARC suggested the FAA look to the guidance issued by AIR to address the concerns with regard to the issuance of policy statements, policy memorandums, and deviation memorandums. Order IR 8100.16 was developed by AIR for all AIR employees that write, review, or approve policy statements, policy memorandums, or deviation memorandums, as well as those that implement these policy documents, and other offices, as applicable.²² This approach of providing guidance to the regulators writing guidance material has proven to be effective in addressing industry concerns regarding AIR guidance. The members highlighted the general principle citing the purpose of a policy statement that may define a means of compliance, but it must be consistent with the language of the regulation and the regulatory preamble. In addition, each method of compliance provided in a policy statement must be firmly based in the rule.²³ The Order further notes that only the rulemaking process can effect changes to regulations and policy statements must not contradict regulatory language. In establishing this foundational principle, the guidance goes further to build a decision tree to be used by the individuals developing the guidance to ensure that it does not exceed its scope and/or contradict regulations or existing guidance.

Instructions to clarify the issues and concepts for review during the process of developing guidance or regulatory policy would address recurring issues such as terminology changing over time (i.e., minimize), acceptable methods of compliance, and design standards. The question often arises as to whether the bar was raised over time (which means that rulemaking changed the intent of the rule and the purpose is clearly delineated during the rulemaking process) or the acceptable method of compliance still satisfies the applicable criteria (and nothing should change). The ARC also discussed the issue of design standards changing over time without a clear understanding of whether a previously accepted means of compliance is still acceptable. Clarification in the rulemaking process (*see* Recommendation 1) coupled with instructions on how to apply the final rule will alleviate some of these issues. Institutionalizing the concept throughout AVS and in training curricula would ensure that any policy office that drafts policy or guidance is reviewing the same concepts and answering the same questions as it reviews the guidance or policy. By integrating the Master Database (*see* Recommendation 3) at this level of the process, the FAA can reduce workload and leverage existing resources to develop and publish effective guidance documents.

Recommendation 2—The ARC recommends the FAA Office of Aviation Safety (AVS) develop a standardized decision-making methodology for the development of all policy and guidance material to ensure such documents are consistent with adopted regulations.

²² *See* Order IR 8100.16, Aircraft Certification Service Policy Statement, Policy Memorandum, and Deviation Memorandum Systems (5/13/2011).

²³ IR 8100.16 at ¶2-2.

6.3 Single Master Source for Guidance Organized by 14 CFR Part

The myriad of guidance material catalogued in multiple databases contributes to inconsistent regulatory application during certification and approval processes. The ARC concluded a central repository of material organized by 14 CFR part is needed. The master database would identify the rule, and then allow the user to access all guidance related to that rule. The importance of integrating all information (including interpretations and policy memos) cannot be overstated. Linked, indexed, and cross-referenced information by rule ensures that all aspects of the regulation—its purpose, intent, previous findings and applications—are considered during application.

AVS is currently undertaking the AVSIMS project, which provides connectivity linkages for all AFS and AIR information. While it would connect the information in the RGL and FSIMS, it does not incorporate a comprehensive review of content for conflicts or duplicative data. The Master Database could build on AVSIMS and require *all* letters, policy guidance and all legal interpretations be organized by the 14 CFR parts. While exploring the current implementation plan and methodology for AVSIMS, the ARC’s proposed Master Database would allow a review of all documents impacted by a change in a rule and/or guidance and it would allow the development of a “history” for future review and consideration.

The Master Database would link all guidance so a regulator tasked with revising an AC could search for all relevant documents in addition to reviewing any associated draft NPRMs. A comprehensive review process would allow the agency to determine whether related documents should remain in effect or be changed. The proliferation of guidance and outdated or contradictory information, as well as the difficulty in dealing with both service organizations for a single approval (e.g., RVSM) would be reduced.

The inventory process would consolidate guidance, streamlining processes, and aid in prioritizing rules and guidance material. The ARC conducted an initial exercise to develop a single-source guidance list for 14 CFR Part 43 and 14 CFR Part 145. (*See* section 2.2.3(c) and Appendix H of this report.) The challenges of integrating legal interpretations and Chief Counsel Opinions may require further review.

While the ARC supports efforts to separate advisory guidance developed to assist the public from internal directives that are mandatory for FAA employees, a review of all guidance will help determine whether separating guidance documents reduces or contributes to inconsistency issues. A comprehensive inventory will take significant time, but the ARC determined the effort is essential to addressing regulatory application issues. While the foundation for addressing the issue is improving the clarity of final rules (*see* Recommendation 1), a review and inventory of guidance material is a significant building block. The FAA can leverage existing resources and processes to develop an efficient and cost-effective methodology to achieve this goal.

The ARC discussed examples where one field office (i.e., FSDO, ACO) approves or accepts a document but a change in oversight necessitates a “new” review and approval process. The members also discussed the impact of changes in FAA oversight personnel on certification/approval processes. A single-source resource tool, which could address these issues, needs to be part of the AVS training curriculum to support a change in the culture. (*See* Recommendation 4.) As AVS undertakes this effort, it will be essential to communicate its purpose to all personnel. A proper transition will increase the effectiveness of the tool.

Recommendation 3—The ARC recommends AFS and AIR review all guidance documents and interpretations to identify and cancel outdated material and cross-reference (electronically link) material to its applicable rule. Further, the ARC recommends the FAA expand its current Aviation Safety Information Management System (AVSIMS) initiative to consolidate the service organization-level libraries into a single AVS master electronic database resource, organized by rule, to allow agency and industry users access to relevant rules and all active and superseded guidance material and related documents.

6.4 Review FAA and Industry Training Priorities and Curricula with Focus on Appropriate Use of Guidance in Conjunction with 14 CFR

After ensuring clarity in the final rule and identifying the applicable guidance material, the ARC addressed training for industry and AVS personnel. The ARC suggested the FAA work with industry in developing the curriculum and learning methodology for enhanced regulatory training for FAA personnel. The training should be available not only to FAA regulators, but also to industry.

The ARC cited examples where regulatory inconsistency can arise from an FAA employee's overreliance on guidance material that does not have the force of law. Rebalancing the training curriculum in favor of 14 CFR will enhance standard application. A curriculum should include:

- Reading and understanding the regulations;
- Learning how to determine the rule's safety purpose and intent through the preamble; and
- Learning how to use guidance material to explain the application within FAA's certification and approval processes.

Upon review of the FAA Academy's AFS ASI regulatory training curriculum (*see Appendix I*), the ARC noted that existing initial indoctrination and planned recurrent training courses already incorporate general segments on Title 49 of the United States Code (49 U.S.C.) and 14 CFR as the foundational documents for day-to-day work. However, the curriculum did not incorporate a standardized methodology for applying the regulations. The FAA should ensure that its employees acquire the knowledge, skills, and ability to apply the information as a coherent system for aviation safety assurance and risk mitigation.

Complexity in the aviation system creates innumerable unique situations. An effective training curriculum must incorporate decision trees and methodologies through hands-on workshops, and facilitated discussion methodologies that focus on the use of the overall system of regulations and guidance and appropriate use of professional discretion.

Recommendation 4—The ARC recommends the FAA, in consultation with industry stakeholders, review and revise its regulatory training for agency personnel and make the curriculum available to industry to ensure the training includes:

- The methodology to research and extract intent and purpose of applicable portions of 49 U.S.C. and 14 CFR for regulatory decision-making.
- Interactive workshops that use case studies, decision trees, and methodology training for understanding the overall system of regulations and guidance, as well as appropriate discretionary authority.
- Appropriate initial and recurrent training for various AFS and AIR personnel.

Recommendation 4a—The ARC further recommends the FAA study the feasibility of developing a specific training program designed for personnel with regulatory development and oversight responsibilities. The study should consider supporting standard courses of study that lead to formal recognition or credentialing of those trained in regulatory development and application.

7.0 RECOMMENDATIONS TO IMPROVE COMMUNICATIONS BETWEEN FAA AND INDUSTRY STAKEHOLDERS

This chapter discusses the ARC’s recommendations to improve communications between the FAA (AFS and AIR) and industry stakeholders (certificate/approval holders and applicants).

7.1 Regulatory Consistency Communications Board (RCCB)

During its review of the Survey results, the ARC discovered that nearly 50 percent of respondents cited “[i]ndustry fear of retaliation” as the key factor hindering the Consistency and Standardization Initiative (CSI) efforts. Industry respondents also attributed slow or adverse regulatory decisions at the field level to a fear of retaliation within the FAA.

In one respondent’s opinion, “The FSDO inspectors view any request for their approvals strictly from a perspective of whether or not they can be held personally liable for their decision.” Time and again, the ARC found fear of retaliation cited as the primary reason that regulatory decisions at the local level were not appealed or disputed.

In considering this cultural dynamic, the ARC endeavored to develop a recommendation that would serve two important functions:

- (1) Allow a process by which the certificate/approval holder or applicant (and agency personnel) could appeal or dispute a regulatory decision without fear of reprisal.
- (2) Provide industry and the FAA a vehicle for the timely, impartial resolution of difficult regulatory issues.

The ARC realized fear of retaliation or personal liability could only be alleviated if the decision in question or dispute was reviewed by an entity without operational or institutional authority over either party. After considering a number of different options, the ARC decided that a centralized decision support mechanism to address regulatory questions or disputes could reduce inconsistent regulatory decisions, remove fear of retaliation and get inspectors and industry stakeholders back to their primary responsibilities in the shortest time possible.

Under this concept, the FAA would establish an RCCB comprising representatives from the relevant headquarters policy divisions in AFS and AIR, as well as the Office of the Chief Counsel (AGC). The FAA would create electronic RCCB mailboxes for each of these divisions to receive incoming questions from operators and FAA personnel on regulations and policy with respect to consistency. This approach would allow the FAA to use existing technologies and processes to receive and track inquiries (e.g., each inquiry would automatically receive a time/date stamp and persist in an electronic archive). Also, the RCCB approach would allow multiple employees within each division to view inquiries for action, input, and/or situational awareness. In this manner, the RCCB would serve as a workforce multiplier for both AFS and AIR.

The RCCB would meet on a regular basis to discuss and respond to regulatory interpretation questions from each division’s RCCB mailbox. The policy division “owning” each question would be responsible for receiving, tracking, and ultimately responding to the inquiry, and for publishing the completed Q&A to a publicly accessible location (e.g., FAA website page).

Although the ARC recognized that the complexity of many issues will preclude instant or even rapid responses to all inquiries, the members believe the process would be significantly more efficient than current practice and the FAA should therefore consider developing reasonable timeframes for responses as well as appropriate performance metrics.

The RCCB concept could also address an inherent weakness in the FAA's CSI. Contrary to some characterizations, the CSI was established as a means for industry and the public to question or dispute an AVS action. The CSI allows decision-makers at every level of the AVS management chain to review the matter thoroughly and be accountable for the answers provided. The RCCB could provide both a more neutral and more centralized/standardized mechanism for addressing and resolving regulatory compliance issues and would allow operators and the FAA to review questions that have already been asked and answered, thereby eliminating duplicative work. By using existing resources and leveraging the existing workforce in different functions, the FAA can ensure its responsiveness.

The ARC believes that as the RCCB becomes the accepted final arbiter by all parties, questions will be rectified at lower levels without fear of retribution. As the RCCB is refined, the training curriculum would be reviewed to ensure that the people assigned to review duties have adequate knowledge and skills to address regulatory inquiries. Eventually, knowledgeable and properly trained government and industry stakeholders, coupled with the elimination of outdated and conflicting guidance material, could render the RCCB increasingly obsolete.

Recommendation 5—The ARC recommends the FAA establish a Regulatory Consistency Communications Board (RCCB) comprising representatives from AFS, AIR, and Office of the Chief Counsel (AGC) that would provide clarification to FAA personnel and certificate/approval holders and applicants on questions related to the application of regulations. The RCCB would be the arbiter for all parties. The FAA should consider:

- Providing an inquiry template to streamline the RCCB process;
- Establishing reasonable timeframes for responses by the RCCB and appropriate performance metrics; and
- Making all resolutions of potentially common questions available to both the FAA and industry, with operator data de-identified.

7.2 Regulatory Operations Communications Center (ROCC)

The RCCB concept could be implemented on an expedited basis; however, a more formal decision-making structure may be necessary to address issues of inconsistent application at different levels of AFS and AIR (and between service organizations) in the long term. A more focal and central clearing house or adjudication forum could complement the RCCB. The ARC considered this approach in defining the ROCC concept. Under the ROCC concept, AVS would establish a 24/7 operations center staffed (virtually) by policy and/or legal personnel trained and experienced in the regulations, policy and guidance associated with flight operations, aircraft maintenance, aircraft certification and aircraft production.

Developing a ready-access decision-support system could centralize and assist inspectors and engineers with interpretation queries and establishing consistency in regulatory application. AVS could leverage existing resources and personnel to staff the ROCC. Subject matter experts can be identified in headquarters and field offices, and a single tracking database can be developed to measure metrics. ROCC personnel and resources would be available not only to assist FAA personnel, but also to assist industry stakeholders and members of the public.

The ARC notes that the ROCC would not replace or duplicate the functions of the Air Traffic Command Center or the Washington Headquarters Operations Center (WOC). Rather, it would function in a similar, but stand-alone, fashion to provide 24/7 regulatory interpretation or dispute assistance for FAA regulators, industry stakeholders, and the aviation public.

The ARC acknowledges that implementation would take time and initially the ROCC may serve as a central repository for information. For example, the ROCC could track the various questions submitted for clarification of a particular Airworthiness Directive (AD) so different operators would receive a consistent answer based on a singular application methodology. Developing a help desk approach for the ROCC would serve as a workforce multiplier. Inspectors and engineers could determine whether a question had already been addressed by an FAA subject matter expert and could then apply the same methodology, which would streamline the certification and approval process.

Like the RCCB, the ROCC concept could address an inherent weakness in the FAA's CSI, which was established as a means for industry and the public to question or dispute AVS actions without fear of retribution.

While the RCCB concept can be implemented using existing resources on an expedited timeframe, ROCC staffing, training, and funding issues need to be addressed as the FAA explores implementation options. However, the ARC noted that the ROCC itself could be a workforce multiplier for AFS and AIR. In addition, many components of the ROCC concept could be implemented "virtually" using current resources and communication methodologies. The ROCC could identify 24/7 response capability from existing policymaking personnel to address these issues. The ROCC would use chain of command to communicate with inspectors, affecting a change in how such issues are approached.

Recommendation 6—The ARC recommends AFS and AIR determine the feasibility of establishing a full-time Regulatory Operations Communication Center (ROCC) as a centralized support center to provide real-time guidance to FAA personnel and industry certificate/approval holders and applicants. The ROCC concept should be implemented by leveraging existing resources.

8.0 CONCLUSION

The ARC developed and agreed to the recommendations presented in this report, which address the issue of consistency of regulatory application in AFS and AIR certification/approval processes. The ARC designed its recommendations to affect systemic, long-term change; streamline resource allocation; further integrate SMS principles in the AVS processes; and reduce costs to government and industry.

The ARC reviewed current efforts under way to address inconsistent regulatory application, including AVSIMS (AVS project to consolidate AFS and AIR guidance material in a single master database). In addition, the FAA is constantly reviewing and assessing personnel training in the context of a changing workforce. However, these efforts have not been integrated into a larger-scale effort to include all applicable regulations and guidance. The ARC emphasized the importance of an application methodology based firmly in the rule, as opposed to institutional practice.

In prioritizing its recommendations, the ARC noted that the FAA can leverage existing resources for implementation in a timely manner. In its primary recommendation, the members highlighted the importance of the current AVSIMS project and suggested the consolidated database should also include AGC documents. The ARC emphasized that the electronic database must be organized by rule to be effective.

The members also recommended implementation of an AVS-level directive for a standardized decision-making methodology in the development of policy and guidance material; restructuring training curricula to ensure that FAA personnel are using a standardized application methodology; establishment of a board that would receive, track, coordinate, discuss, and provide clarification to FAA personnel and certificate/approval holders and applicants; improvement in the rulemaking procedures to ensure clarity in the final rule preamble; and further study to determine the feasibility of an operations center.

The ARC members and their respective organizations appreciated the opportunity to work with the FAA in studying the issues raised in the GAO report and formulating the recommendations. The ARC appreciates the cooperation and assistance of stakeholders from multiple sectors of the aviation industry in participating in the Survey and submitting case studies for the ARC to review. The members look forward to assisting the FAA in implementing the recommendations contained in its Final Report.

APPENDICES

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- FAA Guidance Material Inventory
- FAA Electronic Database Library
- 14 CFR Part 43 & 14 CFR Part 145 Single-Source Guidance Lists

APPENDIX I: FAA ACADEMY AFS ASI TRAINING CURRICULUM

APPENDIX A: CRI ARC MEMBERS

Co-Chairs

Mr. Eric Byer, Industry Co-Chair

National Air Transportation Association (NATA)

Mr. John Allen, Co-Chair & Designated Federal Official

Director, Flight Standards Service (AFS-1)

Federal Aviation Administration

Members and Alternates

Aeronautical Repair Station Association (ARSA)

Ms. Sarah MacLeod

Mr. Craig Fabian, *Alternate Member*

Aerospace Industries Association (AIA)

Mr. Dan Elwell

Mr. Michael Doellefeld, *Alternate Member*

The Boeing Company

Airlines for America (A4A)

Mr. Paul McGraw

Mr. Joe White, *Alternate Member*

Federal Aviation Administration (FAA)

Ms. Dorenda Baker

Director, Aircraft Certification Service (AIR-1)

General Aviation Manufacturers Association (GAMA)

Mr. Pete Bunce

Mr. Walter Desrosier, *Alternate Member*

National Air Carrier Association (NACA)

Mr. George Paul

Regional Airline Association (RAA)

Ms. Stacey Bechdolt

ARC Program Support

Carol E. Giles & Associates, Inc.

Ms. Carol Giles

McBreen & Kopko

Ms. Lisa Harig

Ms. Randa Hayes

National Air Transportation Association

Ms. Celeste Clark

APPENDIX B: ABBREVIATIONS & ACRONYMS

<u>Abbreviation/Acronym</u>	<u>Definition</u>
14 CFR	Title 14 of the Code of Federal Regulations
49 U.S.C.	Title 49 of the United States Code
A4A	Airlines for America
AAL	FAA Alaska Region
AC	Advisory Circular
ACE	FAA Central Region
ACO	Aircraft Certification Office
ACPRR ARC	Aircraft Certification Process Review and Reform Aviation Rulemaking Committee
AD	Airworthiness Directive
AEA	Aircraft Electronics Association
AEA	FAA Eastern Region
AEG	Aircraft Evaluation Group
AFS	Flight Standards Service
AGC	FAA Office of the Chief Counsel
AGL	FAA Great Lakes Region
AIA	Aerospace Industries Association
AIR	Aircraft Certification Service
AMOC	Alternative Method of Compliance
ANM	AFS Northwest Mountain Region
AOPA	Aircraft Owners & Pilots Association
ARAC RPWG	Aviation Rulemaking Advisory Committee Rulemaking Prioritization Working Group
ARC	Aviation Rulemaking Committee

Abbreviation/Acronym	Definition
ARSA	Aeronautical Repair Station Association
ASAP	Aviation Safety Action Program
ASD	AeroSpace and Defence Industries Association of Europe
ASI	Aviation Safety Inspector
ASIAS	Aviation Safety Information Analysis and Sharing
ASO	FAA Southern Region
ASW	FAA Southwest Region
ATEC	Aviation Technician Education Council
AT JTA	Air Transportation Job Task Analysis
ATO	Air Traffic Organization
ATOS	Air Transportation Oversight System
AVS-1	Associate Administrator for Aviation Safety
AVSIMS	Aviation Safety Information Management System
AWP	FAA Western Pacific Region
C&E	Compliance and Enforcement
CAM	Civil Aeronautics Manuals
CAMP	Continuous Airworthiness Maintenance Program
CAR	Civil Air Regulations
CFR	Code of Federal Regulations
CHDO	Certificate Holding District Office
CMO	Certificate Management Office
CRI ARC	Consistency of Regulatory Interpretation Aviation Rulemaking Committee
CSI	Consistency & Standardization Initiative
CSOP	AFS Certification Service Oversight Process

Abbreviation/Acronym	Definition
DCT	ATOS Data Collection Tool (DCT)
DOA	Delegated Option Authorization
DOT	Department of Transportation
EAA	Experimental Aircraft Association
ELOS	Equivalent Level of Safety
EPI	ATOS Element Performance Inspection
ERA	European Regions Airline Association
FAA	Federal Aviation Administration
FOEB	Flight Operations Evaluation Board
FSB	Flight Standardization Board
FSDO	Flight Standards District Office
FSIMS	Flight Standards Information Management System
FY	Fiscal Year
GA JTA	General Aviation Job Task Analysis
GAMA	General Aviation Manufacturers Association
GAO	Government Accountability Office
HAI	Helicopter Association International
H.R. 658	FAA Modernization and Reform Act of 2012
H.R. 5900	Airline Safety and Federal Aviation Extension Act of 2010
IATA	International Air Transport Association Montreal
IAW	In accordance with
ICA	Instructions for Continued Airworthiness
IFO	International Field Office
IFU	International Field Unit
InFO	Information for Operators

Abbreviation/Acronym	Definition
JTA	Job Task Analysis
JTI	Job Task Item
LOA	Letter of Authorization
MEL	Minimum Equipment List
MIDO	Manufacturing Inspection District Offices
MIO	Manufacturing Inspection Offices
MMEL	Master Minimum Equipment List
M/M/S	Make, Model, and Series
MoC	Method of Compliance
MSpec	Management Specification
NACA	National Air Carrier Association
NAS	National Airspace System
NATA	National Air Transportation Association
NBAA	National Business Aviation Association
NextGen	Next Generation Air Transportation System
NPRM	Notice of Proposed Rulemaking
NTSB	National Transportation Safety Board
ODA	Organization Designation Authorization
OpSpecs	Operations Specifications
OPSS	Operations Safety System
PAW	Practical Application Workshop
PC	Production Certificate
PMA	Parts Manufacturer Approval
POI	Principal Operations Inspector
PTRS	Program Tracking and Reporting Subsystem

Abbreviation/Acronym	Definition
QMS	Quality Management System
RAA	Regional Airline Association
RCCB	Regulatory Consistency Communications Board
RGL	Regulatory Guidance Library
ROCC	Regulatory Operations Communication Center
RVSM	Reduced Vertical Separation Minimum
SAFO	Safety Alert for Operators
SAI	ATOS Safety Attribute Inspection
SDR	Service Difficulty Report
SFAR	Special Federal Aviation Regulation
SMS	Safety Management System
STC	Supplemental Type Certificate
TAWS	Terrain Awareness and Warning System
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TSO	Technical Standard Order
TSOA	Technical Standard Order Approval
TSpecs	Training Specifications
UPN	Unapproved Part Notification
U.S.C.	United States Code
VDRP	Voluntary Disclosure Reporting Program

APPENDIX C: CRI ARC CHARTER



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Aviation Rulemaking Committee Charter

Effective Date: 04/30/12

SUBJECT: Consistency of Regulatory Interpretation Aviation Rulemaking Committee

1. **PURPOSE.** This charter creates the Aviation Rulemaking Committee (ARC) for the Consistency of Regulatory Interpretation according to the Administrator's authority under Title 49 of the United States Code (49 U.S.C.) 106(p)(5). This charter also outlines the committee's organization, responsibilities, and tasks.
2. **BACKGROUND.** On February 15, 2012, the President signed the FAA Modernization and Reform Act of 2012 (the Act). Section 313 of the Act specifies that the Administrator of the Federal Aviation Administration, in consultation with representatives of the aviation industry, shall determine the root causes of inconsistent interpretation of regulations by the Administration's Flight Standards Service and Aircraft Certification Service.
3. **OBJECTIVES AND TASKS OF THE ARC.** The ARC will provide a forum for the United States aviation community to discuss and provide recommendations to the FAA. The ARC will specifically conduct the assessment required by Section 313 of the Act, and advise and provide written recommendations to the Associate Administrator for Aviation Safety, AVS-1.
 - a. In conducting the assessment, the committee shall:
 - i. Review the October 2010 report by the Government Accountability Office (GAO) on certification and approval processes (GAO-11-14); and
 - ii. Determine the root causes of inconsistent interpretation of regulations by the Administration's Flight Standards Service and Aircraft Certification Service.
 - b. Recommendations: The advisory panel shall:
 - i. Develop recommendations to address the findings in the GAO report and other concerns raised by interested parties, including representatives of the aviation industry;
 - ii. Develop recommendations to improve the consistency of interpreting regulations by the Administration's Flight Standards Service and Aircraft Certification Service; and
 - iii. Develop recommendations to improve communications between the Administration's Flight Standards Service and Aircraft Certification Service and applicants, certificate holders, and approval holders for the identification and resolution of potentially adverse issues in an expeditious and fair manner.
 - c. The ARC will submit a report detailing recommendations for tasks a(i) and a(ii) and b(i) through b(iii) by December 31, 2012, thereby enabling the Administrator to meet the requirements of the FAA Modernization and Reform Act of 2012, Section 313, paragraph (c).
4. **ARC PROCEDURES.**
 - a. The committee advises and provides written recommendations to the Associate Administrator for Aviation Safety, and acts solely in an advisory capacity. Once the ARC recommendations are delivered to the Associate Administrator for Aviation Safety, it is

Initiated By: AFS-1

within the Associate Administrator's discretion to determine when and how the report of the ARC is released to the public.

- b. The ARC may propose additional tasks as necessary to the Associate Administrator for Aviation Safety for approval.
- c. The ARC will submit a report detailing recommendations within eight months from the effective date of this charter or by December 31, 2012. The chair of the ARC sends the recommendation report to both the Associate Administrator for Aviation Safety and the Director of the Office of Rulemaking.
- d. The ARC may reconvene following the submission of its recommendations for the purposes of providing advice and assistance to the FAA, at the discretion of the Associate Administrator for Aviation Safety provided the charter is still in effect.

5. ARC ORGANIZATION, MEMBERSHIP, AND ADMINISTRATION. The FAA will establish a committee of members of the aviation community. The committee will function as the advisory panel comprised of both government and industry representatives as required by section 313 of the Act. Members will be selected based on their familiarity with the subject and regulatory compliance. Membership will be balanced in viewpoints, interests, and knowledge of the committee's objectives and scope. Committee membership will be limited to promote discussion. Active participation and commitment by members will be essential for achieving the ARC objectives. Attendance is essential for continued membership on the committee. When necessary, the committee may establish specialized work groups that include at least one member of the FAA and invited subject matter experts from industry and government.

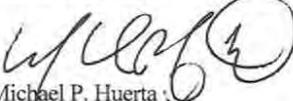
- a. This ARC will consist of members from industry and the FAA, and include members from the Flight Standards Service and the Aircraft Certification Service. It will consist of members, representing a broad spectrum of 14 CFR parts. Within the committee two separate work groups will be established. One to address the specific areas of concern for the Flight Standards Service and one to address the specific areas of concern for the Aircraft Certification Service.
- b. The Associate Administrator for Aviation Safety is the sponsor of the ARC and will select an industry chair(s) from the membership of the ARC and the FAA designated Federal official for the ARC. The FAA participation and support will come from all affected lines-of-business. The ARC sponsor will:
 - 1. Appoint members or organizations to the ARC;
 - 2. Receive all ARC recommendations and reports;
 - 3. Select industry and FAA members; and
 - 4. Provide administrative support for the ARC, through the Flight Standards Service.
- i. The industry chair(s) will:
 - 1. Coordinate required committee and work group (if any) meetings in order to meet the ARC's objectives and timelines;
 - 2. Provide notification to all ARC members of the time and place for each meeting;
 - 3. Ensure meeting agendas are established and provided to the committee members in a timely manner;
 - 4. Keep meeting minutes;

5. Perform other responsibilities as required to ensure the ARC's objectives are met; and
 6. Provide status updates in writing to the Associate Administrator for Aviation Safety at monthly intervals beginning one month after the effective date of this charter.
6. **COST AND COMPENSATION.** The estimated cost to the Federal Government for the Consistency of Regulatory Interpretation ARC is approximately \$24,000 annually. All travel costs for government employees will be the responsibility of the government employee's organization. Non-government representatives, including the industry co-chair, serve without government compensation and bear all costs related to their participation on the committee.
7. **PUBLIC PARTICIPATION.** ARC meetings are not open to the public. Persons or organizations outside the ARC who wish to attend a meeting must get approval in advance of the meeting from a committee co-chairperson or designated federal official.
8. **AVAILABILITY OF RECORDS.** Consistent with the Freedom of Information Act, Title 5, U.S.C., section 522, records, reports, agendas, working papers, and other documents that are made available to or prepared for or by the committee will be available for public inspection and copying at FAA Headquarters, 800 Independence Avenue, SW, Washington, DC 20591. Fees will be charged for information furnished to the public according to the fee schedule published in Title 49 of the Code of Federal Regulations, Part 7.

You can find this charter on the FAA Web Site at:
<http://www.faa.gov/about/committees/rulemaking/>.

9. **EFFECTIVE DATE AND DURATION.** This ARC is effective upon issuance of this charter. The ARC will remain in existence for ten months, unless sooner suspended, terminated or extended by the Administrator.
10. **DISTRIBUTION.** This charter is distributed to director-level management in the Office of the Associate Administrator for Aviation Safety, the Office of the Chief Counsel, the Office of Aviation Policy and Plans, the Office of the Director, Flight Standards Service, and the Office of Rulemaking.

The effective date of this charter is **APR 30 2012**


Michael P. Huerta
Acting Administrator

SEC. 313. CONSISTENCY OF REGULATORY INTERPRETATION.

(a) ESTABLISHMENT OF ADVISORY PANEL.—Not later than 90 days after the date of enactment of this Act, the Administrator of the Federal Aviation Administration shall establish an advisory panel comprised of both Government and industry representatives to—

(1) review the October 2010 report by the Government Accountability Office on certification and approval processes (GAO–11–14); and

(2) develop recommendations to address the findings in the report and other concerns raised by interested parties, including representatives of the aviation industry.

(b) MATTERS TO BE CONSIDERED.—The advisory panel shall—

(1) determine the root causes of inconsistent interpretation of regulations by the Administration’s Flight Standards Service and Aircraft Certification Service;

(2) develop recommendations to improve the consistency of interpreting regulations by the Administration’s Flight Standards Service and Aircraft Certification Service; and

(3) develop recommendations to improve communications between the Administration’s Flight Standards Service and Aircraft Certification Service and applicants and certificate and approval holders for the identification and resolution of potentially adverse issues in an expeditious and fair manner.

(c) REPORT TO CONGRESS.— Not later than 1 year after the date of enactment of this Act, the Administrator shall transmit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the findings of the advisory panel, together with an explanation of how the Administrator will implement the recommendations of the advisory panel and measure the effectiveness of the recommendations.

APPENDIX D: FAA MODERNIZATION AND REFORM ACT OF 2012, SECTION 313

FAA Modernization and Reform Act of 2012 (P.L.112-95) § 313

SEC. 313. CONSISTENCY OF REGULATORY INTERPRETATION.

(a) ESTABLISHMENT OF ADVISORY PANEL.—Not later than 90 days after the date of enactment of this Act, the Administrator of the Federal Aviation Administration shall establish an advisory panel comprised of both Government and industry representatives to—

(1) review the October 2010 report by the Government Accountability Office on certification and approval processes (GAO–11–14); and

(2) develop recommendations to address the findings in the report and other concerns raised by interested parties, including representatives of the aviation industry.

(b) MATTERS TO BE CONSIDERED.—The advisory panel shall—

(1) determine the root causes of inconsistent interpretation of regulations by the Administration’s Flight Standards Service and Aircraft Certification Service;

(2) develop recommendations to improve the consistency of interpreting regulations by the Administration’s Flight Standards Service and Aircraft Certification Service; and

(3) develop recommendations to improve communications between the Administration’s Flight Standards Service and Aircraft Certification Service and applicants and certificate and approval holders for the identification and resolution of potentially adverse issues in an expeditious and fair manner.

(c) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Administrator shall transmit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the findings of the advisory panel, together with an explanation of how the Administrator will implement the recommendations of the advisory panel and measure the effectiveness of the recommendations.

APPENDIX E: ISSUE DESCRIPTION DATA TOOL

STANDARDIZATION ARC – ISSUE DESCRIPTION	
Issue:	
Regulatory/Guidance/Policy Reference:	
Description:	
Economic Impact/Data Support:	
Proposed Solution/Proposal:	

APPENDIX F: CASE STUDIES

The industry associations represented on the CRI ARC collected the case studies included in this Appendix from their members. (See section 2.2.1.) The information was collected by using the data collection tool included in Appendix E of this report. After compiling and reviewing the data, the members developed five classifications to organize the case studies (rulemaking, application, issue resolution, training/lack of information, and culture/organization). (See section 2.3.2.)

The following case studies are included in this Appendix:

- Aerospace Industries Association (AIA) and the General Aviation Manufacturers Association (GAMA)—AIA/GAMA-1 to AIA/GAMA-10
- Airlines for America (A4A)—A4A-1 to A4A-10
- National Air Carrier Association (NACA)—NACA-1 to NACA-3
- National Air Transportation Association (NATA)—NATA-1 to NATA-6
- Regional Airline Association (RAA)—RAA-1 to RAA-4

Note: Where a classification(s) is listed, the industry association denoted it in blue in the *Issue* column.

A Report from the Consistency of Regulatory Interpretation ARC to the FAA

Issue	Regulatory/Guidance/ Policy Reference	Description	Economic Impact/ Data Support:	Proposed Solution/Proposal/Status:
<p>AIA/GAMA-1: Fuel Tank Ignition Prevention and Aircraft Structure</p>	<p>14 CFR 25.981(a)(3), Fuel tank ignition prevention (Amendment 25-102) SFAR 88</p>	<p>The FAA promulgated a wide number of regulations to address fuel tank explosion safety following TWA flight 800 ranging from fuel tank inerting to ignition prevention. In promulgation of the ignition prevention rules, the preamble material discussing assuring that no aircraft system such as fuel pumps, gauging, flight controls, etc. can introduce a spark into the fuel tank even when latent failures are present. The rule also mentions that lightning must be considered to assure that potential ignition doesn't carry down wires or system tubes into the fuel tanks. The initial application of the ignition prevention standard was through SFAR-88 which required all part 121 aircraft to comply with the ignition prevention aspects of 25.981 by December 2002. This was accomplished with the existing fleet of affected air carrier airliners who complied as described in the preamble of the rule.</p> <p>In 2006, four years after a large number of existing commercial aircraft had successfully demonstrated compliance to the ignition prevention standard of 25.981, the interpretation of the regulation was significantly expanded to also include consideration of lightning effects upon aircraft structure and not just the aircraft systems as discussed in the preamble of the rule. This new interpretation of 25.981 was so broad that traditional methods of aircraft construction whereby wings are comprised of metallic elements that are riveted together could not comply with the requirement. At no time during promulgation of the requirement was there any discussion of including consideration of aircraft structure in the ignition prevention requirement. More importantly, there was no consideration of the impact if traditional methods of construction were no longer acceptable and there was no discussion of the fact that there are no suitable alternatives available. This clearly shows that it was never within the scope of interpretation or intent that 25.981 would consider the lightning effects on aircraft structure.</p> <p>Nevertheless, this new interpretation persisted out of the Transport standards staff office and was later affirmed by FAA legal. After significant efforts by both industry and FAA to identify acceptable methods of compliance to the significantly expanded and stringent interpretation, it was determined that there was in fact no practical way to comply with this new interpretation. FAA Transport Directorate issued a new policy (ANM-112-08-002) acknowledging that there is no way to comply with their interpretation of the 25.981 (despite the fact that SFAR 88 compliance for all existing commercial aircraft has already been shown to the same rule based on an interpretation as it was promulgated) and instructed applicants of all new type designs to seek an exemption from the rule so that FAA could address the safety issue through alternate methods.</p>		<ul style="list-style-type: none"> • Interpretation and application of a new regulatory requirement must be consistent with the intent and scope when it was promulgated through NPRM and final rule. Any policy or interpretation of a rule that expands the impact beyond what was envisioned and foreseeable during promulgation is completely inappropriate and contrary to requirements for rulemaking. • FAA should have clear policy and work instructions that the development of new policy which provides an interpretation regarding the application of a regulation must remain consistent with the intent and scope of the rule as it was promulgated. • In the event FAA determines that there is no reasonable, practical or possible method of compliance then the rule itself must not have been properly promulgated. Any such rule should be immediately rescinded by FAA to be corrected as appropriate and properly promulgated in accordance with all applicable rulemaking requirements. It is inappropriate for FAA to require applicants to seek exemption or ELOS from improperly promulgated requirements in which there is not a practical acceptable method of compliance.

A Report from the Consistency of Regulatory Interpretation ARC to the FAA

Issue	Regulatory/Guidance/ Policy Reference	Description	Economic Impact/ Data Support:	Proposed Solution/Proposal/Status:
<p>AIA/GAMA-2: Installation of Infrared Searchlights in Rotorcraft</p>	<p>14 CFR 27.1309 14 CFR 29.1309 AIR PS-ASW-27-29-06, Certification of Airborne Surveillance and Searchlight Systems Using Lasers or Infrared Searchlights in 14 CFR parts 27 and 29 Rotorcraft.</p>	<p>The FAA Rotorcraft Directorate is in the process of re-interpreting 27/29.1309 system safety analysis requirements to expand the scope to consider potential impact upon persons in the world beyond the aircraft. Specifically, draft policy AIR PS-ASW-27-29-06, Certification of Airborne Surveillance and Searchlight Systems Using Lasers or Infrared Searchlights in 14 CFR parts 27 and 29 Rotorcraft proposes to prohibit the installation of IR and laser illuminators that are commonly installed in border patrol and police helicopters because the potential impact of these lights upon persons on the ground cannot be fully evaluated. There is a long history of FAA approved installations of this type of equipment on rotorcraft in full compliance with all applicable airworthiness standards. In addition, a plain language reading of the applicable regulations and review of the promulgation materials reveals the cited regulations clearly apply to the function and safety of the aircraft itself and are not applicable to the world at large nor are they operational requirements. A change to the historic interpretation and application of regulations which no longer allows for previously accepted and approved methods of compliance and type design configurations is a change to the regulations themselves and therefore cannot be done through the development of new policy. Any change to existing FAA requirements as defined by the rule itself or custom and practice of interpretation and application should only be done through the formal rulemaking process consistent with the requirements of the Administrative Procedures Act, E.O. 12866 and FAA Order IR 8100.16.</p>		<p>Ensure proper awareness, training and enforcement of FAA policy and work instructions for the development of new or revised policy to ensure consistency with the regulatory requirement itself and avoid inappropriate rulemaking by policy. Specifically, §2-2,d. of FAA Order IR8100.16 states:</p> <p><i>d. Policy statements must not invalidate other guidance. Policy statements must not invalidate a method of compliance the FAA previously agreed to, unless –</i></p> <ol style="list-style-type: none"> <i>(1) It was accepted in error,</i> <i>(2) It is no longer in conformance with a change in the regulations, or</i> <i>(3) It no longer supports a finding of compliance; in which case, a justification should be included in the policy statement.</i> <p><i>When the policy statement contains a method of compliance that may be perceived as more stringent, the policy statement must make clear that the previously acceptable method is still acceptable.</i></p>

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<p>AIA/GAMA-3: Minimum Aisle Width in Business Jets</p>	<p>14 CFR 25.815, Width of aisle</p>	<ul style="list-style-type: none"> • §25.815 requirement for minimum aisle width is based on CAR4b.362 and has essentially remained unchanged for over 50-years with thousands of individual aircraft TC, ATC and STC approvals which clearly demonstrates through custom and practice the intent, interpretation, application and acceptable methods of compliance for this rule. • The requirement has consistently been applied to business airplane configurations to maintain the minimum specified aisle width during taxi, takeoff and landing (TTL) configurations which are the phases of flight that potential aircraft evacuation may be required. During other phases of flight, seats and other cabin interior features are typically adjustable to improve cabin comfort and provide configurations conducive to business use. Placards at each seating location have been used to assure proper configuration during the TTL phases. These business airplanes have always operated in both §91 and §135. • In 1999, FAA transport standards staff provided a re-interpretation via internal FAA memorandum which re-defined 25.815 minimum aisle width requirement by placing restrictions on business airplanes to prohibit use in §135 service if they employ features which reduce aisle width during any phase of flight. • After industry appeal, AIR-1 issued a memorandum recognizing the long standing custom and practice which defined the intent of the rule and stated that similar configurations will continue to be acceptable until FAA considers rulemaking to change the rule. The FAA memorandum also rescinded the limitations/exemptions issued to specific airplanes. • In 2010, FAA transport standards staff again provided a re-interpretation via internal email directly to ACOs stating that any cabin configuration which employs configurations that can reduce aisle-width during any phase of flight must be limited to "private use only". 	<p>FAA justification ranged from SFAR-109 voluntary standards for private use cabins to confusion and differences in the interpretation of the terms "executive use airplanes, executive service, and air carrier service" as they were used in the 199 and 200 clarification memos.</p>	<p>This re-interpretation of 25.815 and determination that previously compliant cabin configurations FAA approved in thousands of airplanes would no longer be acceptable in the future would have a significant impact upon all business aircraft manufacturers suddenly halting all deliveries and rendering thousands of FAA approved designs as no longer valid for use on future airplanes.</p>

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<p>AIA/GAMA-4: Certification Procedure for Modification and Replacement Part</p>	<p>14 CFR 21.93, Change to Type Design 14 CFR 21.303, Modification and Replacement Parts Order 8110.4, Type Certification Order 8110.42, Parts Manufacturer Approval (PMA) AC 21-24, Supplemental Type Certification</p>	<ul style="list-style-type: none"> Applicant was pursuing several different PMAs for modification and replacement components installed on piston engines and small airplanes using test & computation. Applicant & ACO reached agreement on all certification plans and project activity continued for several months. ACO advised applicant that they determined STC is a more appropriate certification process for these projects and halted all work toward PMA. The basis for this determination is because the modification and replacement parts would require a change to the applicable ICA and therefore the only way to ensure an operator incorporates the ICA supplement is to make it an STC. These replacement parts were clearly eligible for PMA according to Part 21, Order 8110.4, Order 8110.42 and AC21-24, as they were minor changes to type design. An STC for these types of parts/components would not be acceptable in the field by customers as they would no longer be simple replacement parts and would require owner/operators to install an STC which is a major change to type design. ACO manager did not agree that the current regulations and policy were adequate for this type of component and requested the applicant to develop an issue paper to work toward resolution. Although existing regulation and policy were clear on this matter and FAA had consistently applied the PMA process for hundreds of similar types of modification components over several years, there was no avenue available to the applicant for timely resolution. After 8-months of back-and-forth on the issue paper between the applicant, ACO, Directorate, and national policy office, AIR-100 finally issued a notice clarifying that the PMA process was applicable to these types of projects. 	<p>Unfortunately, the business opportunity for the applicant was lost due to FAA delay.</p>	<ul style="list-style-type: none"> The issue paper process is the formal mechanism within the type certification process to document issues and efforts toward resolution and agreements on acceptable methods of compliance. However, this process must be timely with a predictable schedule in order to meet the needs of the applicant as well as FAA's resource planning. Each FAA office required to be involved in an issue paper review should be held accountable to turn it around in a pre-determined period of time. An efficient issues resolution process is needed when an applicant and local FAA office have a very different understanding and interpretation of applicable requirements and certification procedures. In situations where FAA personnel may identify issues/concerns in which they disagree with existing FAA policy/guidance, they should raise them directly with the cognizant policy office for consideration and potential resolution. FAA should not hold-up an applicant project while it debates internally whether existing applicable policy/guidance should be updated/changed.

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<p>AIA/GAMA-5: Part 25 Jammed Flight Control Design Requirements</p>	<p>14 CFR 25.671(c)(2), Flight controls</p>	<ul style="list-style-type: none"> • 25.671(c) airworthiness standard for flight control dual path and protection against jams established in 1970 in Amendment 25-23 • There have been significant changes in the interpretation and application of this requirement over time based on what is deemed to be an acceptable method of compliance. These changes in interpretation of what is acceptable require significant redesign of previously compliant design configurations at significant cost. • Example of 25.671(c) compliance requirement over 6 major business jet TC/ATC programs: <ul style="list-style-type: none"> ○ 1982 C650 – single failure (FMEA analysis) ○ 1997 Lear45 – single failure + probable failure ○ 2000 C680 – Single failure + probable failure + latent failure in any order ○ 2004 Horizon - Single failure + probable failure + latent failure in stated order + inclusion of engine failures ○ In addition, definition of “extremely improbable” for the purposes of 25.671 is qualitative and subject to the discretion of transport standards staff which is not consistent with 25.1309 system safety analysis methodologies and definitions • Industry efforts to appeal at TAD and AIR to reach common understanding of regulatory requirement and resolution on acceptable methods of compliance continued for months resulting in applicants having to accept whatever is necessary to move forward with certification program. • Industry discussions with ACO & TAD identified concerns of FAA specialists <ul style="list-style-type: none"> ○ Previous methods of compliance were not adequate and that an evolving understanding of “extremely improbable” means the acceptable methods of compliance must increase in correspondence ○ Standardization requires that FAA hold the next applicant to the same level 		<ul style="list-style-type: none"> • Ensure proper awareness, training and enforcement of legal requirements for rulemaking and FAA policy regarding continued acceptability of previously accepted methods of compliance. This is specifically addressed in §2-2,d. of FAA Order IR8100.16 which states “<i>When the policy statement contains a method of compliance that may be perceived as more stringent, the policy statement must make clear that the previously acceptable method is still acceptable.</i>” • An efficient issues resolution process is needed when an applicant and local FAA office have a very different understanding and interpretation of applicable requirements. FAA should continue to work toward a decision on issues that were raised by an applicant even when business decisions result in acceptance of the interpretation/application they disagree with on a particular project. • A clear understanding of performance based terms promulgated in regulatory requirements is needed to ensure consistent interpretation and application of the requirement, particularly over time. For example, the terms “minimize, reduce, prevent, probable, improbable, etc.” when promulgated as part of regulatory requirement need to be adequately understood with respect to the intent in order to facilitate consistent application in the future. It is not appropriate for the minimum standard to evolve over time to become more stringent based on experience, capability or technological advancements because legal requirements for rulemaking require consideration of impact and cost benefit at the time of promulgation.

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<p>AIA/GAMA-6:</p> <p>Functionality & Reliability (F&R) Testing Requirements</p>	<p>14 CFR 21.35 (b), (f): Certification Procedures for Products and Parts, Flight Test</p> <p>AC 23-8: Flight Test Guide for Certification of Part 23 Airplanes</p> <p>AC 25-7: Flight Test Guide for Certification of Transport Category Airplanes</p> <p>AC 27-1: Certification of Normal Category Rotorcraft</p> <p>AC 29-2: Certification of Transport Category Rotorcraft</p>	<ul style="list-style-type: none"> • During type certifications of the Boeing 787-8 new TC and 747-8 amended TC, Boeing was given additional guidance and requirements by the Seattle Aircraft Certification Office (SACO) that did not appear to have foundation in the existing regulations and guidance material. • The additional guidance and requirements was associated with certifying changes made to previously certified aircraft and engine types. • During Boeing and SACO discussions, SACO expressed concerns about the adequacy of existing regulations and guidance material in this area and advised that they were developing and would enforce policy for clarification. • In reviewing the FAA's intent, Boeing raised concerns that the additional guidance: <ol style="list-style-type: none"> 1. deviates from the Advisory Circular guidance established over multiple certification projects since the regulation was developed; and 2. does not seem to be integrated with practices utilized during engine certification. • This lack of clarity and midstream leverage of additional policy poses significant and unnecessary risk (cost/schedule) to any applicant planning or executing a certification program. 	<ul style="list-style-type: none"> • Boeing's final proposal was to the FAA for 787-8 GE powered F&R Test: 150 hrs on a flight test airplane; 150 hours on a production airplane. • FAA required: 300 hours on a single ship set of engines and required at least 150 hours on a production airplane. • Schedule constraints led us to the final plan of 300 hours on a flight test airplane and 150 hours on a production airplane. Similar scenario for 747-8 Program experienced; risk of promulgating to other OEMs/Programs. • Financial impacts can be calculated on flight time, fuel burn, reporting effort, overhead, etc. 	<ul style="list-style-type: none"> • Review the above circumstances in contrast to requirements put forth in Order IR 8100.16, existing internal work instructions and QMS requirements to identify what controls are in place, or needed, to mitigate a sudden increase of requirements without due processing to ensure the intent, including cost/benefit, of the original rule is not exceeded. • Consider an automatic review process to prevent the cumulative effect of numerous changes in guidance material or use of issue papers does not result in requirements beyond the intent of the original rule.

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<p>AIA/GAMA-7:</p> <p>Design Requirements Relative to Flight Attendants Ability to See Passengers</p>	<p>14 CFR 25.785 (h) (2) - Seats, berths, safety belts, and harnesses</p> <p>AC 25-785-1B, Appendix A</p>	<ul style="list-style-type: none"> • The referenced regulation states: Each seat located in the passenger compartment and designated for use during takeoff and landing by a flight attendant required by the operating rules of this chapter must be: <ul style="list-style-type: none"> • ○ (2) To the extent possible, without compromising proximity to a required floor level emergency exit, located to provide a direct view of the cabin area for which the flight attendant is responsible. • The intent or underlying threat to be mitigated by the rule is not clear, thus, the criteria for acceptance are arbitrary and variable. • Thirty years after the release of the rule, expectations continue to change, adding specificity: <ul style="list-style-type: none"> ○ Added additional condition of 'during all phases of flight' when previously compliance was aimed at taxi, takeoff and landing. ○ Changing expectation on number of flight attendants involved (1993 - number to be "minimized", 1997 - "at least half", 1999 - "majority"). ○ AC 25-785-1B, released in 2010, adds very prescriptive expectation - restricted inches of acceptable head movement allowed to see a minimum percentage of passengers. • Current accepted methods penalize configurations including seating zones with a low number of seats. • The net effect of the added specificity increases the requirements, increasing the cost of compliance activity (FAA, Operators and Manufacturers) without a commensurate safety benefit. 	<ul style="list-style-type: none"> • Despite the rule remaining unchanged since 1990 (first issued in 1980), Boeing has had to utilize different Means of Compliance for certification projects in 1993, 1995, 1997, 1998, 1999, 2010, 2011 and 2012. • The total financial impact is difficult to quantify; however, thirty years after the release of the rule, the MOC expectations should not still be controversial. 	<ul style="list-style-type: none"> • Review the above circumstances in contrast to requirements put forth in Order IR 8100.16, existing internal work instructions and QMS requirements to identify what controls are in place, or needed, to appropriately scope requirements for rules containing ambiguous language (such as "to the extent possible", "minimize" or "maximize"). • Consider an automatic review process to prevent the cumulative effect of numerous changes in guidance material or use of issue papers does not result in requirements beyond the intent of the original rule.

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<p>AIA/GAMA-8: Fuel System Strainer/Filter and Powerplant Instruments</p>	<p>14 CFR 33.67 Fuel System 14 CFR 33.91 Contaminated Fuel Test 14 CFR 25.997 Fuel Strainer or Filter 14 CFR 25.1305 Powerplant Instruments</p>	<ul style="list-style-type: none"> Applicant has utilized a consistent design configuration for fuel system filtration and instrumentation on several models of turbine engines with a combined fleet service experience of almost 300,000,000 hours (as of 2005) with no known clogs/failures that were not properly detected. Testing shows that the fuel filter always reaches contamination capacity before the strainer which is also reinforced with operating experience which demonstrates that fuel filter monitor indirectly monitors strainer condition. A single field event occurred in which a fuel filter blockage resulted in by-bass which was properly indicated to the crew resulting in aircraft return. FAA determined that the compliant fuel system filtration design would no longer be acceptable method of compliance for the next engine model program. FAA required the engine manufacturer to incorporate an additional pressure sensor located at a different location relative to the fuel strainer in order to provide additional information regarding a potential fuel blockage. There is no regulatory basis for determining that the previously acceptable design should no longer be acceptable and millions of hours of operational experience clearly shows that there is very little safety risk. The FAA EPD is imposing an additional design requirement. 	<p>Engine manufacturer forced to redesign a long standing and proven fuel filtration system incurring significant expense in the non-recurring design/testing and ongoing support throughout the life cycle of the engine model for the production and availability of additional parts not common with the existing fleet.</p>	<p>Previous methods of compliance and compliant design configurations must continue to be compliant and acceptable unless there is specific operational experience and data which shows that it is not compliant in which case there should be written justification.</p>

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<p>AIA/GAMA-9: Flammability Testing for Interior Honeycomb Panel Joints</p>	<p>14 CFR 25.853 (a) – Flammability Requirements for Interior Compartments</p>	<ul style="list-style-type: none"> • The reference regulation generally describes what parts of an aircraft interior need to meet various levels of flammability requirements as outlined in Appendix F of the same CFR part. • The regulation has not changed since late 1960s. • The subject of this particular example is the 'joint' created in honeycomb composite interior panels when one side of the panel is cut to allow the panel to bend. The cut area is filled with a potting compound. • This specific type of joint construction has been used for over 20 years. • In 2008, new interpretation / guidance was forced on Boeing. The added requirement was testing of the small joints for flame propagation. Previously, testing of the panel (no joint) was an acceptable means of compliance. • Boeing found the new requirement was not being applied to other manufacturers, indicating lack of consistent interpretation across various FAA offices. • Testing demonstrates joint construction has no appreciable impact on flammability behavior; however, FAA continues to require the testing. 	<ul style="list-style-type: none"> • With new requirement in 2009, immediate aircraft deliveries were at risk; Boeing had to file for and receive an exemption to avoid prolonged impact to deliveries. • The cost of the additional testing requirement cost is significant. 	<p>Review the above circumstances in contrast to requirements put forth in Order IR 8100.16, existing internal work instructions and QMS requirements to identify what controls are in place, or needed, to mitigate sudden increase of requirements without due processing to ensure the intent, including cost/benefit, of the original rule is not exceeded.</p>

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<p>AIA/GAMA-10:</p> <p>Design Requirements for Seat Belt Placard – Inconsistency & Lack of Risk-based Engineering Judgment</p>	<p>14 CFR 25.1541 (a) (b) – General Requirements for Markings and Placards</p>	<ul style="list-style-type: none"> • FAA requires industry utilize an evaluation called “naïve subject testing” to verify placards and markings for passengers will be understood by the general public. FAA witness is typically required for such testing. This testing is accomplished through randomly surveying in-transit public travelers and, in the case discussed here, was conducted at two large commercial airports. • Consistent with the general industry trend, Boeing has begun replacing text placards with symbols, such as the “fasten seatbelt” placard discussed here. • During a recent project, Boeing conducted the required naïve subject testing on the following placard design:  • After the above was approved, Boeing sought FAA approval to use the placard shown below, highlighting the similarity:  • FAA would not approve use of the second placard without additional naïve subject testing due to the additional ‘seat cushion’ in the image. • No risk-based, data-driven safety concern was identified – the critical message to fasten the seat belt remained unchanged. • This was an overly stringent & inappropriate application of FAA order 8100.4C expectations for data in support of showings of compliance. 	<p>Boeing was forced to rework (remove placard with additional seat cushion) on 17 sets of 787 seats and 3 sets of 737 seats.</p> <p>FAA and Boeing resources were required for additional naïve subject testing.</p>	<p>Review the above circumstances in contrast to requirements put forth in Order 8110.4C, existing internal work instructions and QMS requirements to identify what controls are in place, or needed, to avoid applying FAA & industry resources to certification activity that is not safety-related. In this example, the interpretation of 8110.4C prioritized process over engineering judgment.</p>

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<p>A4A-1:</p> <p>Referencing Technical Standard Orders in Operating Rules</p> <p>1. Application (Reversal of application due to changes of personnel and oversight offices, and passage of time)</p> <p>2. Regulatory deficiency (Rule is too broad.)</p> <p>Wholesale incorporation of a Technical Standard Order (TSO) by reference to specify system requirements of an operating rule clearly sets the stage for differing interpretations or requirements.</p>	<p>14 CFR 121.354</p>	<p>1. 14 CFR 121.354, Terrain Awareness and Warning Systems (TAWS), mandated Part 121 operating requirements for the system by 'incorporating by reference' TSO-C151. This practice generated differing views of whether the TSOs "500 [foot] callout" was required to operate the aircraft, or optional. Subsequent changes to the TSO complicated the issue. Interpretations differed among air carriers, major airplane manufacturers, and FAA field and HQ personnel, and over time. An AVS-1 clarifying letter issued a year after the rule went into effect influenced a DAH to make the callout an option in the production configuration of ordered airplanes. Due to subsequent FAA HQ interpretations, the DAH reversed and treated the callout as mandatory. Recently, an ASI and AGC have questioned the compliance of airplanes delivered without the callout. This issue remains open.</p> <p>2. TSOs specify requirements for gaining FAA approval of aircraft "equipment" (e.g., avionics components). They do not address requirements of the aircraft operating rules for aircraft systems, nor do they provide or necessarily have basis in an equipment-aircraft interface specification to guide aircraft modifiers. TSOs and documents that they reference often include optional provisions to provide for integration of the TSO "equipment" across a wide range of aircraft system architectures.</p>	<p>Potential to retrospectively require airplane modifications not required by a rule,</p>	<p>The case indicates a need to:</p> <ol style="list-style-type: none"> 1) specifically identify in proposed and final operating rule language the capabilities of aircraft "equipment" defined in a TSO that would be included in or excluded from operating rule requirements for the aircraft system; 2) reinforce adherence to proper practices for incorporating documents "by reference"; and 3) maintain integrity over time in applying rules involving TSOs and in supporting past interpretations and applications.

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<p>A4A-2:</p> <p>Inconsistent Interpretation of Regulations Over Time</p> <p>Application (Reversal of application due to changes of personnel and oversight offices, and passage of time)</p> <p>In several instances, the agency has, over time, changed its interpretation of the requirements of operating rules with respect to relief provided under Master Minimum Equipment List (MEL) provisions.</p>	<p>14 CFR 121.803 14 CFR 121.303</p>	<p>In the preamble of 14 CFR 121.803, Emergency Medical Equipment, the agency stated that enhanced emergency medical kits (EMKs) were “no go” items, but also said that, “...air carriers should not be forced to seek authorization on a case-by-case basis for flights without EMKs...”</p> <p>The preamble concluded that “... until the FAA develops more experience with the enhanced EMKs and AEDs it will [disallow MEL relief for EMKs]”, and effect this position by adopting, “... §121.803(a) without the words “unless authorized by the Administrator.”” The FAA has not been using the phrase “unless authorized by the Administrator” to allow MEL relief.</p> <p>Two years after the EMK rule went into effect (i.e., in 2003), industry presented risk-management data base showing that three-flight relief MEL relief (i.e., allowing continued flight operations for three-flights after a use of an EMK) was reasonable. In 2007, AFS-1 granted that relief. Recently, FAA announced that it was unilaterally reducing EMK relief to one flight, and might eliminate all relief. Initially, FAA’s new application held that since the EMK provision did not include the “unless authorized by the Administrator” provision, operating requirements could not be changed to allow MEL relief without amending the rule. This reversal of position took air carrier, airplane manufacturer, and FAA field personnel experienced with managing and overseeing the MEL program completely by surprise. (The issue currently is in work.)</p> <p>Although FAA indicated its reversal was based on the absence of a phrase in the EMK regulatory language, industry is not satisfied that it knows FAA’s actual reasons for changing its application of the rule and its preamble</p>	<p>Potential to retrospectively require procurement and maintenance of airplane equipment once having relief,</p>	<p>The case brings into question the steadfastness and integrity of regulatory application over time. It also indicates a need and recommendation to document, in 14 CFR .303 that the absence of “unless authorized by the Administrator” from regulatory equipment provisions does not prohibit MEL relief.</p>

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<p>A4A-3: Non-acceptance of Repair Records Over Time or from Earlier Inspectors</p> <p>Application (Reversal of previously accepted data due to changes of oversight offices and treatment of a new regulation as applicable to an existing rule)</p> <p>Standards for compliance with regulatory requirements for recording repairs have been, in effect, applied retroactively without rulemaking.</p>	<p>14 CFR 121.1105</p>	<p>This issue emerged shortly after adoption of the again airplane safety rule when some applications of rule posited that compliance could not be accomplished unless the operator verified the classification of all structural repairs made over the life of an airplane, and updated records accordingly. Each air carrier is responsible for classifying each repair as major and minor per its FAA-approved maintenance program. Applicable recordkeeping requirements for a repair depend on its classification. Interpretations of the “aging” rule often dismiss records kept by air carriers per recordkeeping regulations and maintenance programs and practices applicable at the time of a repair. This includes records documented and transferred by previous operators of an airplane and overseen by previous inspectors of the previous operator.</p> <p>This issue is exacerbated by an outstanding need to update national guidance for classifying a repair as major or minor.</p>	<p>Potential airplane groundings and forced retirements</p>	<p>The case indicates a general problem FAA and its inspectors have with accepting the oversight of previous inspectors and determinations of compliance with new regulations based on records of compliance with earlier regulations. The case indicates a need for FAA, industry and air carriers to develop a standard for making, keeping and accepting records of repairs. Unless otherwise stated in the rule, application of the standard should facilitate acceptance of records generated and accepted under previous regulations, practices, operators and inspectors, perhaps requiring the current airplane operator to make its own determination of the category of a repair on a case-by-case basis.</p>

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<p>A4A-4:</p> <p>Questions of Technical Compliance with Airworthiness Directives</p> <p>1. Training/Lack of Information (FAA personnel training)</p> <p>Culture/Organization (Lack of AFS/AIR coordination)</p> <p>2. Application (Changes due to passage of time)</p>	<p>14 CFR 43.13</p>	<p>1 In 2008, FAA’s Special Emphasis Audit of compliance with airworthiness directives (ADs) brought to light that inspectors often were not referring to the FAA’s engineering authorities when questions over technical compliance surfaced, or when questions should have been acknowledged as within the purview of the technical authority (e.g., the ACO).</p> <p>2 Among several other related issues, ADs have gradually evolved from one-page FAA directives to the wholesale incorporation by reference of large DAH service bulletins, displacing (i.e., no longer applying) the acceptance toward AD compliance of air carrier engineering and maintenance authorities under 14 CFR 43.13(c) and expanding vulnerabilities to assertions of non-compliance.</p>		<p>These issues were addressed by the AD ARC, including the recording of metrics to address the effectiveness of implemented AD ARC recommendations.</p>
<p>A4A-5</p> <p>Delayed forwarding of AMOC applications by PMI and queries by ACOs</p> <p>Culture/Organization (Lack of AFS/AIR coordination)</p> <p>Training/Lack of Information (FAA personnel training)</p>	<p>14 CFR 39.19, FAA Order 8110.103A</p>	<p>An ACO engineer who was cognizant over a particular airworthiness directive (AD) significantly delayed the approval a carrier’s application for an alternate method of compliance (AMOC) to the AD because the carrier’s PMI had not commented on the application. Long-standing FAA policy has specified that a Part 121 carrier must submit an AMOC application to the PMI. The carrier may simultaneously submit a copy to the FAA approving authority -- usually the cognizant ACO. The PMI may or may not comment on the application, but must forward it to the cognizant ACO. This policy was clarified and emphasized in recent revisions to FAA Order 8110.103A and 14 CFR 39.19. However, A4A still receives reports the same as this example, indicating non-standardized practice of policy and delayed dispositioning of AMOC applications among PMIs and ACOs.</p>	<p>Can result in AOG situations pending completion of AMOC processing.</p>	<p>Strengthen emphasis and training on processing AMOC applications and the roles of PMIs and ACOs in the process.</p>

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<p>A4A-6</p> <p>Non-standard and premature application of important terminology in Airworthiness Directives</p> <p>Training/Lack of Information (FAA personnel)</p>	<p>AC 20-176</p>	<p>New guidance recently established in AC 20-176 (12/19/11) specifies that service instructions “incorporated by reference” in an airworthiness directive (AD) may reference other documents in two distinct ways. Instructions that state “refer to” allow the carrier latitudes, such as using their own procedures, to accomplish the tasks in the referenced document. Instructions that state “in accordance with” allow the carrier no deviation from the referenced document. Some inspectors are applying the new guidance to service instructions approved without implementing the new guidance and that reference other documents with the term “per”. Those inspectors assert that that “per” has the same meaning as “in accordance with” (i.e., no latitude). This retroactive application of a new standard requires carriers to gain approvals for AMOCs to use their own maintenance manuals in accomplishing “per” tasks, which FAA allowed before AC 20-176 was adopted. This application also contravenes Required Inspection Items (RIIs) in FAA-accepted carrier maintenance manuals. Were this application valid, FAA would be obligated to formally retain and manage all ‘per’ references as “incorporated by reference”. Retroactive application of the new standard to service instructions approved without implementing all of the new standards of AC 20-176 is invalid, of potentially significant impact, and suggests lack of a comprehensive understanding of the AC or a training lapse.</p> <p>In a variant of this case, some inspectors are treating “refer to” references as “in accordance with” references, also suggesting lack of understanding of the AC or a training lapse, or a deleterious disregard for the guidance of new guidance in the AC.</p>	<p>Needless applications for AMOCs, changes to maintenance programs and approvals of those programs and request for interpretation. Can force unnecessary and non-standard airplane modifications.</p>	<p>Strengthen training on the application of AC 20-176 to service bulletins or in an AD itself. In effect, the new terminology has an ‘effective date’ and does not apply to service instructions approved before that date.</p>

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<p>A4A-7</p> <p>Erroneous Guidance regarding a safety rule.</p> <p>Training/Lack of Information (FAA personnel)</p>	<p>14 CFR 39</p>	<p>An airworthiness directive (AD) requires operators of certain Airbus airplanes to perform an inspection, and before further flight, repair any damage found. An air carrier applied for an alternate method of compliance (AMOC) to repair damage it had found. The cognizant FAA engineer advised the carrier that it could operate the affected airplane under relief provisions of the Minimum Equipment List program – a clear violation of the AD. The carrier insisted on, and ultimately obtained an AMOC; however, this case exhibits advice for a non-complaint application of 14 CFR Part 39.</p>	<p>Potential enforcement action, adverse press coverage</p>	<p>Refresher training for ACOs.</p>
<p>A4A-8</p> <p>Non-standard application of guidance on AD development</p> <p>Rulemaking (Conflicting rules – not coordinated before issuance)</p>	<p>FAA Order IR-M 8040.1C “AD Manual”</p>	<p>FAA stated in the preamble of a final AD for an Airbus model that it adopted the AD without requiring resolution of numerous errors in the associated service instructions that commenters had highlighted. The agency stated that carriers could apply for AMOCs to resolve those errors. This case exhibits non-standard application of guidance on AD development and requires each affect operator to apply for an AMOC – a duplication that could have been avoided by effectively responding to comments to the docket.</p> <p>Operators and the Lead Airline Process were criticized for not resolving errors in the problematic MD-80 wire bundle ADs (although they did submit numerous comments)</p>	<p>Requires each operator affected by an AD to apply for an AMOC applicable to all affected operators.</p> <p>Motivates affected parties to avoid expending resources on commenting on proposed ADs.</p>	<p>In training and staffing ADs, and in guidance material, emphasize the value to all affected parties of avoiding the need for AMOCs in the provisions of final ADs, and the value of sustaining practices that the operators and public perceive as comments due consideration of their comments.</p>

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Issue	Regulatory/Guidance/ Policy Reference	Description	Economic Impact/ Data Support:	Proposed Solution/Proposal/Status:
<p>A4A-9</p> <p>Application of a one-time inspection requirement as a inviolable configuration requirement</p> <p>1. Issue resolution (Fear of retaliation on the part of FAA personnel)</p> <p>Application (Compliance does not follow guidance)</p> <p>2. Rulemaking (Regulatory deficiency and process)</p>	<p>FAA Order IR-M 8040.1C "AD Manual"</p> <p>AD 2005-23-17</p>	<p>1. An airworthiness directive (AD) required operators of certain Boeing airplanes to perform a one-time inspection of a duct clamp, and before further flight, position the clamp in a certain orientation if necessary. Under duress, several inspectors interpreted the specified orientation to be a configuration requirement inviolable at any time. The case involved non-standard application of a requirement for a 'one-time-inspection' and use of risk management principles.</p> <p>2. Clamp orientation was not specified in ICAs that accompanied the AD, nor did the ICAs specify an inspection interval. An AD poorly written and coordinated with its ICAs contributed to this case, which the AD ARC reviewed.</p>	<p>This event resulted in significant and unnecessary disruptions of scheduled air services, and nearly produced large-scale groundings.</p>	<p>Use this case to improve guidance documents so that mandates for one-time inspections either stand as one-time requirements or provide for recurring inspections.</p>

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Issue	Regulatory/Guidance/ Policy Reference	Description	Economic Impact/ Data Support:	Proposed Solution/Proposal/Status:
<p>A4A-10</p> <p>FAA's proposal of an AD that would require upgrading Fuel Quantity Indication Systems of all-cargo planes surprised industry</p> <p>Rulemaking (Regulatory deficiency and process)</p>	<p>B757 NPRM - FAA Docket No. 2012-0187 (2012) (FAA has not yet dispositioned comments to this NPRM.)</p> <p>FRM Proposed Rule Preamble – Docket No. FAA 2005-22997 (2005)</p> <p>FRM Final Rule Preamble – Docket No. FAA 2005-22997 (2008)</p>	<p>In the preamble of the proposed rule for Fuel Tank Flammability Reduction Means (FRM), FAA stated that it would not require upgrades to fuel quantity indication systems (FQIS) if FRM was installed. In the final FRM rule, FAA excluded all-cargo planes from the requirement to install FRM. However, the preamble of the FRM final rule did not mention FQIS upgrades for excluded planes. In 2012, four years after the FRM was adopted, FAA proposed an AD for B757 all-cargo planes that would require FQIS upgrades, which are about as costly as FRM retrofits. Further, in the B757 NPRM preamble, FAA stated that it intends to issue similar ADs for all other applicable all-cargo models.</p> <p>There are technical and risk-analysis reasons why industry posited that all-cargo planes require neither FRM or FQIS upgrades, and believed FAA agreed.</p>	<p>Because the preamble of the FRM final rule did not address FAA's apparent intent for FQIS upgrades for all-cargo planes, its regulatory evaluation supporting the FRM rule also is highly inaccurate. Neither operators or manufacturers had not been aware of, nor able to plan for, the potentially significant design and implementation costs of FQIS upgrades in all-cargo airplanes,</p>	<p>Improve the completeness of preambles to significant final rules, especially those that involve exclusions.</p>

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Issue	Regulatory/Guidance/ Policy Reference	Description	Economic Impact/ Data Support:	Proposed Solution/Proposal/Status:
<p>NACA-1: Master Minimum Equipment List (MMEL) dispatch requirements Application (Lack of Standardization) Training/Lack of Information</p>	<p>MMEL Preamble Order 8900.1</p>	<p>If an MEL is going to expire in-flight before you land, but is not expired at time of dispatch, is it legal to operate? Some members indicate their FSDO says no while some indicate the FSDO says yes. During a visit to NACA, a representative of AFS-200 said it was okay, but there is nothing clearly stated in the MEL preamble</p>	<p>AT Gemini Air Cargo in 2000 – the FAA FSDO grounded Carrier A's DC-10 in South America after over hearing our plan to fly to Miami to repair a wiring problem and the MEL would expire about one hour before we landed. It took a week to get the tolls and permits for the team to fix the aircraft loosing 500K in revenue.</p>	<p>Make a clear statement in the MMEL that an aircraft cannot be dispatched once an MEL expires unless the airline has a short term escalation plan approved by the FAA This is all I found in the handbook but it does not specifically address my question: E. Equipment Discrepancies After Blocking Out. The preamble to the Part 121 Minimum Equipment List refers to the MEL as a dispatch (or flight release) document designed to be used during the preparation for flight and not intended to replace abnormal/emergency procedures when an item becomes inoperative during a flight. This provides some latitude for the air carrier in establishing procedures to allow the pilot in command to consult with the maintenance and the dispatch organization. Together they will decide the best course of action in event of an equipment failure after a flight departs the blocks. 1) <i>For air carrier operations, the phrase, time of dispatch or release should be considered as the time that the aircraft begins movement for the purpose of takeoff. This is interpreted as the time that the aircraft is either pushed-back from the blocks, or the first movement of the aircraft taxiing away from the blocks, or is towed from the blocks for the purpose of takeoff. The intent is to provide protection for the required operational conditions to be considered for the dispatch of a flight in situations where delays may be encountered.</i> 2) <i>The air carrier is responsible for operating its aircraft in an airworthy condition. The certificate holder should include a procedure for handling equipment or instrument failure after the aircraft has departed the blocks for the purpose of takeoff. The procedure should allow the pilot in command to communicate with the dispatch and maintenance organizations, if required, to review the situation and determine whether the flight should:</i> a) return for repairs (the failed equipment is a no-go item), or b) return to accomplish an (M) procedure specified in the MEL before continuing the flight, or c) continue using the alternate procedure (abnormal procedure) for operating with the failed item. 3) <i>The air carrier procedure may also provide for the flight to continue when the pilot in command determines that the flight can be operated safely using the alternate procedure under the conditions of the dispatch release, without communicating with the dispatch and maintenance organizations.</i> NOTE: If the conditions for a flight are changed to the extent that the original dispatch or flight release is no longer valid, then a new dispatch or flight release or an amended release is required.</p>

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<p>NACA-2: Consistency with inspectors during ATOS audits and air carrier evaluation program Application (Compliance with Guidance)</p>	<p>Order 8900.1, V10 C1 S1, P10-2 and S2 P10-21 (B) and (C) Order 8900.1, V10 C2 S5, P10-192(C)(4) Order 8900.1, V10 C2 S4, P10-172(F)(5)(a) & (b) and P10-173(A) & (B) Order 8900.1, V10 C1 S1, P10-4(H)</p>	<p>Carrier A: We hear this all the time during our ATOS audits. The inspector will want to check the question "NO" if we don't comply with their 8900, especially when they start trying to answer the JTIs. They are telling us that they are required to use the 8900 as their guidance, even though the FAR may not be that specific. It gets very frustrating. We have utilized the FAA Stakeholder Feedback with great success, especially when we believe our interpretation is correct. We have been able to change a number of things in the SAI and EPI questionnaire that were referenced incorrectly. Whenever inspectors try to pull the 8900 card when we disagree, we'll tell them to put "No", and we will utilize the stakeholder feedback form for a disposition. They seem to be OK with that approach. Here is the shortcut: http://www.faa.gov/about/office_org/headquarters_offices/avs/stakeholder_feedback/afs/afs900/ We have been obtaining faster changes/clarifications through this website than our inspectors can effect.</p> <p>Carrier B: A specific example of the previous comment about the ATOS checklist being given the equivalent status of a "rule" is the question regarding the voluntary Flight Operations Quality Assurance (FOQA) program. Our POI cannot accept "No" as an answer on his "data collection" tool. He spent three days calling different folks here and eventually decided to answer the question "Yes" with a detailed explanation that, under a different certification scheme, would be called a parallel conformity.</p> <p>Carrier C: During a very recent findings review of an Air Carrier Evaluation Program (ACEP) Inspection, the ACEP inspector wrote the following finding: "The certificate holder does not comply with the intent of the Advisory Circular". All findings from ACEP Team are turned over to FSDO for Corrective Action Process. My problem with this particular finding was the verbiage of the finding. An AC is just that, advisory in nature and certainly not something the certificate holder must "comply with the intent of."</p>	<p>Time and manpower spent over non-issues.</p>	<p>Spoke with AVS-1 at board meeting – her answer below:</p> <p>–[W]hen I attended your Board meeting, several of your members raised concerns that sometimes our inspectors find them in noncompliance with guidance materials, rather than with the regulation. To help mitigate any misunderstanding or the appearance of inconsistencies in data collection, Flight Standards is making the following changes:</p> <ol style="list-style-type: none"> 1. An ATOS Frequently Asked Questions (FAQ) document, addressing the concerns, will be added to the following public website: http://www.faa.gov/about/initiatives/atos/oversight/ A copy is attached below. 2. The following items will be clarified in a future enhancement and revision of Order 8900.1, Volume 10: <ul style="list-style-type: none"> • Information on how data collection tools (DCT) relate to regulatory compliance, including compliance with the intent of the regulations • Information on how inspectors use policy and guidance material such as orders, notices and advisory circulars during the evaluation of a certificate holder's program • Information on Job Task Items (JTIs) and how they are used • Information on when a DCT question is answered "no" • Freedom of Information Act (FOIA) requirements 3. A memorandum and broadcast message will notify our inspectors of this information.

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<p>NACA-3: SFAR 110 and Order 8900.1 (CHG 97) conflict—handbook change was issued but SFAR 110 was not issued</p> <p>Application (Compliance with Guidance)</p>	<p>SFAR 110 Order 8900.1 (CHG 97) V3 C18 S4 OpSpec/Mspec B050(F) (6/28/2010)</p>	<p>It appears it is trying to enforce SFAR 110 even though that has not been issued yet. This section is clarifying OpSpecs Paragraph B050. I just copied [89001. V3 C18 S4, B050] section F, which is the section that is most concerning (particularly items 1 and 2 of section F):</p> <p>F. Operations in Support of the Military or in Hostile Areas. In addition to the requirements cited for operations conducted in areas of limited FAA oversight, the operator must establish the following procedures before conducting operations outside the United States in support of military operations, or in hostile areas where onsite FAA oversight cannot be accomplished.</p> <p>1) For operations conducted outside the United States in support of the U.S. military or under a U.S. Government contract, the contracting Federal agency must approve the operator's threat mitigation plan.</p> <p>2) The operator must ensure all contracts with U.S. Government agencies contain provisions that require the contracting agency to report on an annual basis, or as sooner identified, an annual safety report to the operator and CHDO to ensure the operator immediately corrects all safety issues.</p> <p>...</p>	<p>The chance that many flights could be canceled.</p>	<p>Called and E mail John Duncan and asked him to call the POI and inform him not to enforce the handbook and then cancel the handbook change – which did occur</p> <p>The issue here is how did it happen in the first place?</p>
<p>NATA-3: 145 Manual Review and Acceptance (Consistency across different regions)</p> <p>Application (Lack of Standardization)</p>	<p>14 CFR Part 145</p>	<p>There is still conflict among FSDOs on what is approved, accepted by and acceptable to the FAA. Inspectors in one office may want a manual to be approved, when others may allow it to be accepted.</p> <p>RSQCM and Training Manuals - One manual accepted or approved in one region is unacceptable in another region (PIPP) Principal Inspectors Personal Preference.</p>	<p>Wasted time on both the FAA and Industry sides trying to obtain approval or acceptance all over again.</p>	<p>The regulations are clear and for the most part so is the guidance, inspectors should be held accountable when they move outside the regulations and guidance when they impose their own opinions on industry. This is a huge problem; everyone understands it is; yet no one has the where withal to stand up.</p> <p>The positive news is that as the guidance for the inspector becomes more clear, it then becomes evident they are not reading it or blatantly going against it.</p>

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<p>NATA-1:</p> <p>Training philosophy and curriculum</p> <p>Training/Lack of Information</p> <p>Culture/ Organization</p>		<p>A member of industry while attending a FAA training course brought to the attention of the FAA training course instructor that a particular piece of guidance contradicted the regulations. The instructor agreed that the contradiction existed but told the industry member that FAA teaches to the guidance, not the regulations.</p> <p>The FAA has a contract for instructor support at its training facility in OK. The instructors are for the most part ex-FAA or retired FAA inspectors. It would seem that the FAA is promulgating inconsistency having retired FAA inspectors instruct on "how they did it when they were in the field", instead of teaching real world examples of how to apply regulations and their own policy and guidance in conjunction with the regulation.</p>	<p>Not teaching FAA inspectors how to apply the regulations from a regulator's point of view and instead only teaching the policy and guidance puts the industry at a great disadvantage and even the inspector. The industry has to comply with the regulations, inspectors not knowing the regulations or understanding how to apply them when they are performing their oversight duties, only creates contradiction between the two and wastes both the FAA and industry time and resources.</p>	<p>The FAA should consider an outside teaching facility such as Flight Safety or contract their instructors to teach at the OK facility. The FAA should provide more direct oversight to the delivery of the courses and actually content being taught as opposed to what the FAA thinks is being taught.</p>
<p>NATA-2:</p> <p>There is disagreement among FSDO inspectors about whether or not an Operator's RVSM Responsible Person can delegate responsibility or action to a designee in his absence.</p> <p>Application</p> <p>Training/Lack of Information</p>	<p>No inspector has ever cited guidance</p> <p>AC 91-85 should be applicable</p>	<p>RVSM guidelines require that the operator designate a person who will be responsible for ensuring that pilots are properly trained, the aircraft is operated in accordance with RVSM Operations Procedures, and that in regard to RVSM the aircraft is maintained correctly.</p> <p>If the RVSM manual does not make provision for the RVSM representative to delegate actions or responsibility, inspectors have asked that language be inserted into the manual in case the aircraft is on a trip and the RVSM representative is unavailable to perform needed duties (like placarding the aircraft or ensuring that the parts installed on the aircraft are correct).</p> <p>We've had difficulty pinpointing what language is acceptable. The language we currently use in the RVSM template has been written with the assistance a couple different FAA inspectors. However, some inspectors still ask that we remove the provision for a delegate completely because it's not allowed (no guidance sited though there seems to be some additional discussion about whether or not actions versus responsibility can be delegated).</p>		<p>A point of contact in the FAA to help resolve the dispute. Someone who is able to tell an inspector that the language is either acceptable, or not. Someone who can say that the language used in the template has been reviewed and is fine or if a specific inspector has a good point, let us know that we should change the template so that everyone has the correct verbiage.</p>

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<p>NATA-3:</p> <p>145 Manual Review and Acceptance (Consistency across different regions)</p> <p>Application</p> <p>Lack of Standardization</p>	<p>14 CFR Part 145</p>	<p>There is still conflict among FSDOs on what is approved, accepted by and acceptable to the FAA. Inspectors in one office may want a manual to be approved, when others may allow it to be accepted.</p> <p>RSQCM and Training Manuals - One manual accepted or approved in one region is unacceptable in another region (PIPP) Principal Inspectors Personal Preference.</p>	<p>Waste time on both the FAA and Industry sides trying to obtain approval or acceptance all over again.</p>	<p>The regulations are clear and for the most part so is the guidance, inspectors should be held accountable when they move outside the regulations and guidance when they impose their own opinions on industry. This is a huge problem; everyone understands it is; yet no one has the where withal to stand up.</p> <p>The positive news is that as the guidance for the inspector becomes more clear, it then becomes evident they are not reading it or blatantly going against it.</p>
<p>NATA-4:</p> <p>Inconsistency from inspector to inspector and FSDO to FSDO regarding certification and approvals.</p> <p>Application (Lack of Standardization)</p>	<p>14 CFR Part 135 14 CFR Part 145 Order 8900.1, Volume 2</p>	<p>The FAA has certification processes and guidance that instructs both the inspector and owner/applicant on what is expected. However, certification requirements still vary from office to office. Inspectors insert personal opinion as policy and hold operators hostage when they don't comply, therefore variation in decisions occur regularly regarding approvals from Flight Standards district offices.</p> <p>Applicants which acquire aircraft that were once on a certificate under different operator and FSDO, may find themselves unable to meet the conformity requirements of their FSDO, when little change may have occurred to the aircraft, only change is, it is now in a different region or FSDO.</p>	<p>Operators and or repair stations lose clients and money when they are unable to meet the conformity inspections required by some FSDOs.</p> <p>Results in manual rewrite, retraining of personal, etc. on processes that were in compliance in another region or FSDO.</p>	<p>Movement of aircraft and operator programs should be transparent, once a program or aircraft receives FAA approval/acceptance, the aircraft configuration, and/or programs should not have to go through the process again unless there have been changes.</p> <p>Inspectors should be held accountable when they do not follow the regulations and their guidance and start injecting their personal opinions.</p>
<p>NATA-5:</p> <p>Inspectors mandate compliance to the handbook and SAIs, etc.</p> <p>Application</p> <p>Training/Lack of Information</p>	<p>14 CFR Part 135</p>	<p>Generally, it is understood that an air carrier will build its programs in accordance with the CFRs, yet inspectors mandate compliance to the handbook. Audits performed by inspectors will cite noncompliance with handbook policy and SAIs instead of CFRs.</p> <p>An air carrier has encountered several instances where the Principles &/or ASIs cite non-compliance to FAA Order 8900/Handbook, this has resulted in LOIs being written and operators having to show compliance with handbooks.</p>		<p>Inspectors should use the FARs to regulate compliance not FAA Orders— that is what industry is held accountable to. If a violation is going to proceed based on non-compliance with FAA guidance, then there should be a check and balance or review process that requires the inspector to cite a regulatory reference.</p>

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<p>NATA-6: Training Program Approval Application (Lack of Standardization)</p>	<p>14 CFR 145.51(a)(7) and 145.163</p>	<p>DAS operates 5 domestic and 1 foreign repair stations. The same training program manual has been approved at 4 of the domestic repair stations and was originally approved at the foreign repair station. The program has never been approved at one of the domestic repair stations and a recent recertification audit of the foreign repair station has driven a number of editorial [non regulatory] changes to the program.</p>	<p>DAS continuously strives to standardize repair stations in order to ensure consistent compliance with regulatory requirements, deliver a consistent customer experience, and take advantage of best practices. Any time editorial changes to any of the standardized manuals are required by a local FAA office; the change must be coordinated and implemented at the remaining locations in order to maintain a standardized manual. As multiple audits are conducted at each location, the number of independent changes represents a significant burden in terms of company and FAA resources.</p>	<p>Regulatory manuals that have been accepted or approved by one FAA locale should be accepted or approved by another FAA locale unless it can be demonstrated that the previously accepted or approved manual does not meet regulatory requirements.</p>
<p>RAA-1: ASAP vs. VDRP Application</p>	<p>AC 120-66B AC 00-58B</p>	<p>These two voluntary programs work to improve safety. Both rely on voluntary participation by individuals, the airline, or both. The programs allow disclosure of inadvertent non-compliance with FARs with limited threat of civil penalty. FSDOs across the country enforce the programs differently in that some require both a VDRP and an ASAP to be filed while others will allow one program or the other to handle the event in its entirety.</p>	<p>A tremendous amount of manpower is devoted to both of these programs. Many times, efforts are duplicated for one carrier while another carrier does not have to submit the same event to both programs.</p>	<p>An over-arching policy that specifically defines how the voluntary programs should be managed within an airline is necessary and would be most helpful. Currently, the POI is left to individual interpretation of when a company must submit a VDRP once an ASAP has been filed. This independent interpretation should be eliminated.</p>
<p>RAA-2: Issuance of aircraft return to service following application of MEL Application Training/Lack of Information</p>	<p>14 CFR 43.9, 121.605, 121.628 Notice N8900.162 Order 8900.1 (CHG 167), V4 C4 S1, P4-621 through 4-640</p>	<p>Some operators are required to issue an Airworthiness Release (or appropriate maintenance log entry) after deferral of an aircraft component or system per the MEL, regardless of whether any (M) Maintenance action was required to implement use of the MEL. Other operators are allowed to continue service with log entry from the pilot and communication with Dispatch/Maintenance Control. While some guidance infers that an AW Release is required in every instance, other guidance specifies that an AW Release may not be required in every instance.</p>	<p>Operators that are required to issue a new Airworthiness Release after each MEL deferral incur unnecessary flight delays and inconvenience to passengers when deferring items per the MEL that require no Maintenance action, particularly when the need for deferral is discovered after pushback.</p>	<p>Provide very clear guidance as to whether an Airworthiness Release is required after deferral per MEL when no maintenance action is required. Perhaps a better definition of whether a flight crew consulting with Maintenance Control constitutes a maintenance action (troubleshooting). Is troubleshooting by evaluation of failure symptoms truly a maintenance action?</p>

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<p>RAA-3:</p> <p>Definition and acceptability of component repair data</p> <p>Application</p>	<p>AC 43-18 AC 120-77 Order 8300.14</p>	<p>Although components repaired at repair stations may be perfectly acceptable for installation and use, the CMOs of some operators have made determination that the data used to substantiate the repairs are inadequate and the parts are not acceptable for use, despite opinions to the contrary expressed by certification offices. This is particularly an issue when TSO products are involved.</p>	<p>Operators that are not allowed to use components that are repaired in accordance with data accepted by some CMOs, but not others, are at a very distinct competitive disadvantage. The effected operators incur additional unnecessary time and expenses, as well as use of additional resources, which all can result in flight delays and passenger inconvenience.</p>	<p>Provide very clear guidance on exactly what constitutes acceptable and/or approved data, and what data is sufficient to allow a repaired product to be returned to service. There needs to be agreement between and consistent guidance from Certification and Flight Standards offices.</p>
<p>RAA-4:</p> <p>Communication Reports</p> <p>Application</p> <p>Rulemaking</p>	<p>14 CFR 121.711 Communication Reports February 2, 2010 Legal Interpretation of 14 CFR 121.711 (written by Rebecca MacPherson) Order 8900.1, V3 C31 S1 through S4 SAI 3.1.11 (Revision #7): Computer Based Record Keeping System - OP</p>	<p>The Legal Interpretation published on February 2, 2010 states the following: "...at a minimum, 121.711 requires the time and date of the radio contact, the approximate position of the aircraft, the aircraft registration number, the flight call sign, and a narrative of the conversation." Our mainline partner is not required to report position of the aircraft or aircraft registration number. Enforcement and guidance from various CMOs has been inconsistent.</p>	<p>Our CMO advised that the additional report should be incorporated into our FOM guidance or we would not be in compliance. We currently report those elements every time initial radio contact is established with Dispatch, Maintenance Control, or station in flight. The economic impact is higher head count in Station Operations to collect this information along with a narrative of the conversation. Also, increased radio congestion could result in the need for more air-to-ground receivers.</p> <p>From a safety perspective, we attempt to limit required reporting below 10,000'. However, these additional reporting parameters increases time that the crewmember is on company frequency, and therefore, not monitoring ATC with the other pilot.</p>	<p>CMTs apply the same interpretation of reference guidance to operators so that one interpretation does not impact safety or create a competitive disadvantage.</p>

APPENDIX G: INDUSTRY STAKEHOLDER SURVEY QUESTIONNAIRE & RESULTS

The industry members of the ARC developed and conducted an Industry Stakeholder Survey (“Survey”) to solicit feedback and collect data from stakeholders. The Survey information was also circulated to industry associations and groups that were not participating on the ARC. (See section 2.2.2.)

The Survey was announced on August 28, 2012 and was officially closed on September 25, 2012, although the site stayed open until September 30, 2012. The ARC received responses from 437 participants.²⁴

The survey comprised 28 questions organized into five sections:

- Part A – Introductory Questions: information about the responder for purposes of tracking responses and categorizing certificate/approval holders and applicants.
- Part B – About Your Experience with FAA Questions (from GAO Expert Panel): questions that mirror those asked of the expert panel and published in GAO-11-14.
- Part C – Consistency of Regulatory Application Questions - Field Office Level: questions relating to the consistency of regulatory application at the local/field office level.
- Part D – Certificate Transfer/Change in Oversight Office Questions: questions specific to jurisdictional oversight, including certificate transfer/change in oversight office questions.
- Part E – Additional Comments and Examples: an opportunity to provide additional information and/or specific examples.²⁵

²⁴ Participants were able to select more than one self-identifying category: a single participant can be certificated as a part 135 air carrier and as a part 145 repair station; it would submit multiple responses to certain questions.

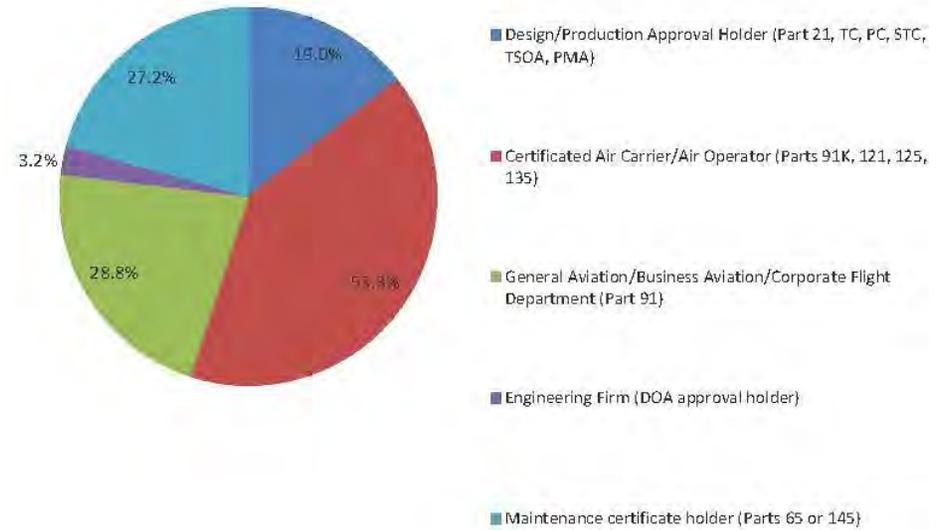
²⁵ Since Survey participants were promised anonymity, the industry members of the ARC reviewed all narrative comments and examples submitted and then destroyed the information. It was determined that the narrative comments/examples would not be incorporated in this report, submitted to the FAA, or otherwise retained by the ARC.

Question #1

Nature of your aviation business:

Answer Options	Response Percent	Response Count
Design/Production Approval Holder (Part 21, TC, PC, STC, TSOA, PMA)	19.0%	83
Certificated Air Carrier/Air Operator (Parts 91K, 121, 125, 135)	53.3%	233
General Aviation/Business Aviation/Corporate Flight Department (Part 91)	28.8%	126
Engineering Firm (DOA approval holder)	3.2%	14
Maintenance certificate holder (Parts 65 or 145)	27.2%	119
Other (please specify)		49
	answered question	437
	skipped question	43

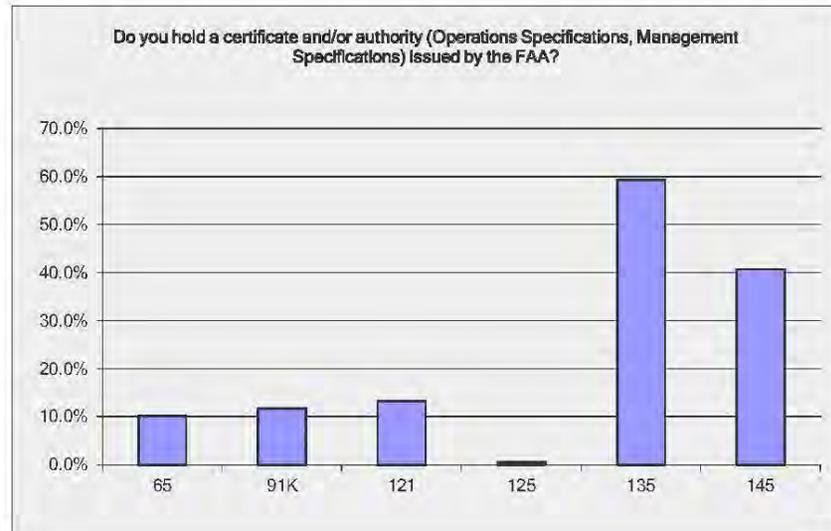
Nature of your aviation business:



Question #2

Do you hold a certificate and/or authority (Operations Specifications, Management Specifications) issued by the FAA?

Answer Options	Response Percent	Response Count
65	10.2%	33
91K	11.7%	38
121	13.3%	43
125	0.6%	2
135	59.3%	192
145	40.7%	132
answered question		324
skipped question		156



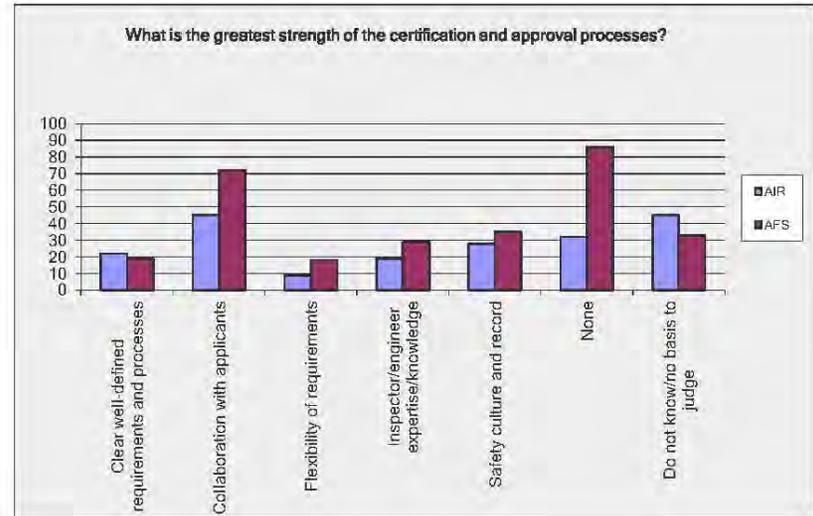
Question #3

In which Federal Aviation Administration (FAA) jurisdictional oversight region are you located?											
Flight Standards (AFS)											
Answer Options	Alaska Region	Central Region	Eastern Region	Great Lakes Region	Northwest Mountain Region	Southern Region	Southwest Region	Western Pacific Region	Do Not Know	Response Count	
Location	8	37	81	54	56	46	96	48	24	450	
Aircraft Certification (AIR)											
Answer Options	Small Airplane Directorate (Central Region)	Engine & Propeller Directorate (New England Region)	Transport Airplane Directorate (North West Region)	Rotorcraft Directorate (South West Region)	Do Not Know	Response Count					
Location	27	8	47	115	105	302					
										Question Totals	
										<i>answered question</i>	461
										<i>skipped question</i>	19

Question #4

What is the greatest strength of the certification and approval processes?

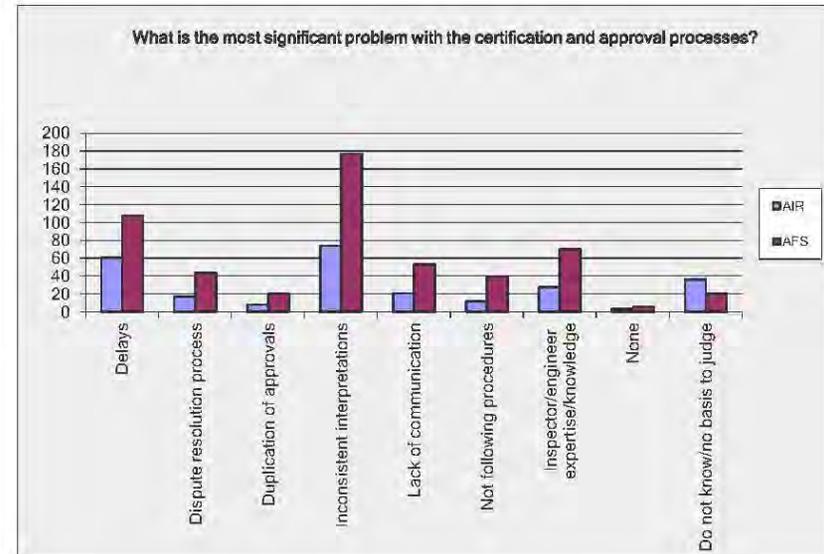
Answer Options	AFS	AIR	Response Count
Clear well-defined requirements and processes	19	22	39
Collaboration with applicants	72	45	87
Flexibility of requirements	18	9	25
Inspector/engineer expertise/knowledge	29	19	42
Safety culture and record	35	28	51
None	86	32	99
Do not know/no basis to judge	33	45	63
Other (please specify)			15
	answered question		257
	skipped question		223



Question #5

What is the most significant problem with the certification and approval processes?

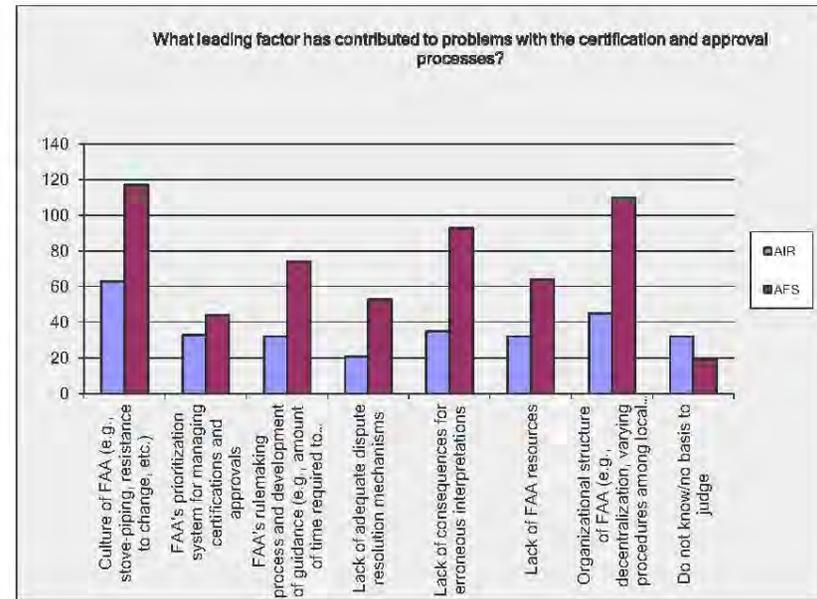
Answer Options	AFS	AIR	Response Count
Delays	108	61	134
Dispute resolution process	44	17	51
Duplication of approvals	20	8	24
Inconsistent interpretations	177	74	195
Lack of communication	53	21	61
Not following procedures	40	12	46
Inspector/engineer expertise/knowledge	70	28	83
None	6	3	9
Do not know/no basis to judge	20	36	46
Other (please specify)			23
answered question			265
skipped question			215



Question #6

What leading factor has contributed to problems with the certification and approval processes?

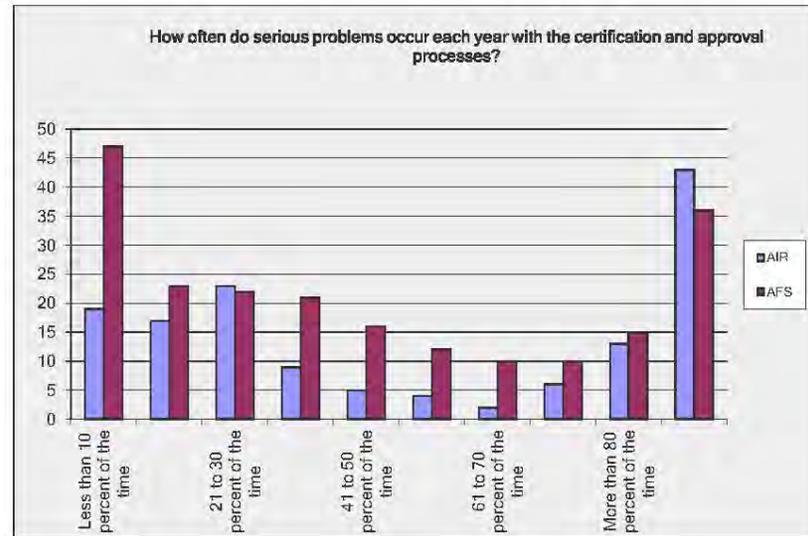
Answer Options	AFS	AIR	Response Count
Culture of FAA (e.g., stove-piping, resistance to change, etc.)	117	63	139
FAA's prioritization system for managing certifications and approvals	44	33	64
FAA's rulemaking process and development of guidance (e.g., amount of time required to develop or change regulations, etc.)	74	32	87
Lack of adequate dispute resolution mechanisms	53	21	60
Lack of consequences for erroneous interpretations	93	35	105
Lack of FAA resources	64	32	81
Organizational structure of FAA (e.g., decentralization, varying procedures among local officers, etc.)	110	45	123
Do not know/no basis to judge	19	32	43
Other (please specify)			17
answered question			263
skipped question			217



Question #7

How often do serious problems occur each year with the certification and approval processes?

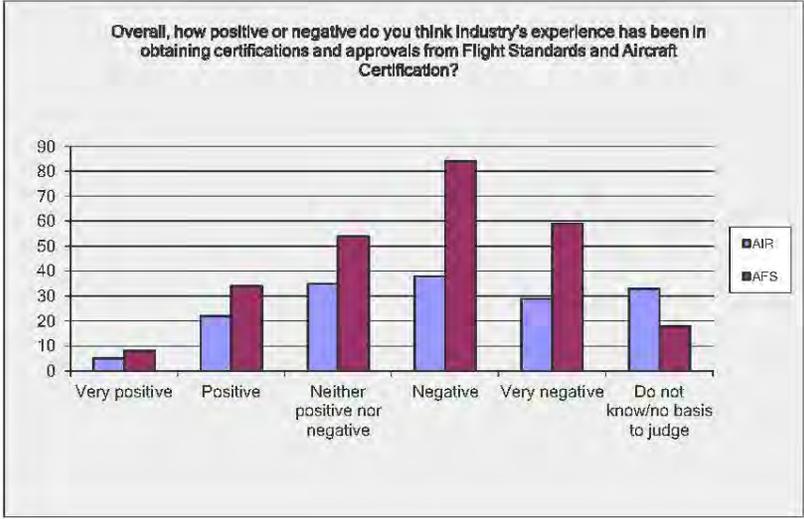
Answer Options	AFS	AIR	Response Count
Less than 10 percent of the time	47	19	66
11 to 20 percent of the time	23	17	40
21 to 30 percent of the time	22	23	45
31 to 40 percent of the time	21	9	30
41 to 50 percent of the time	16	5	21
51 to 60 percent of the time	12	4	16
61 to 70 percent of the time	10	2	12
71 to 80 percent of the time	10	6	16
More than 80 percent of the time	15	13	28
Do not know/no basis to judge	36	43	79
<i>answered question</i>			265
<i>skipped question</i>			215



Question #8

Overall, how positive or negative do you think industry's experience has been in obtaining certifications and approvals from Flight Standards and Aircraft Certification?

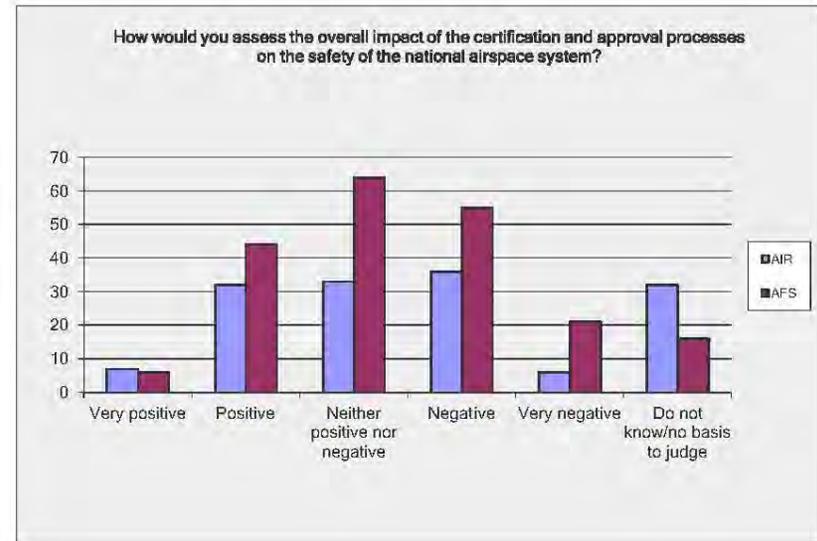
Answer Options	AFS	AIR	Response Count
Very positive	8	5	11
Positive	34	22	44
Neither positive nor negative	54	35	70
Negative	84	38	107
Very negative	59	29	70
Do not know/no basis to judge	18	33	43
<i>answered question</i>			266
<i>skipped question</i>			214



Question #9

How would you assess the overall impact of the certification and approval processes on the safety of the national airspace system?

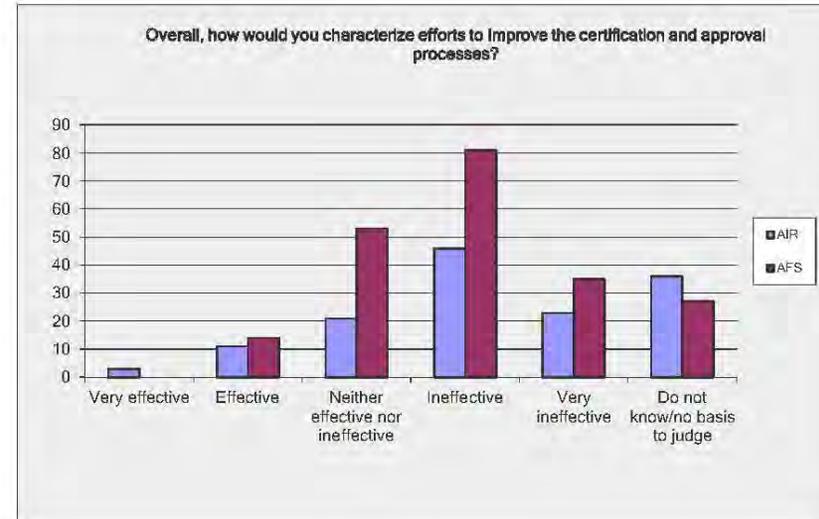
Answer Options	AFS	AIR	Response Count
Very positive	6	7	13
Positive	44	32	76
Neither positive nor negative	64	33	97
Negative	55	36	91
Very negative	21	6	27
Do not know/no basis to judge	16	32	48
answered question			288
skipped question			212



Question #10

Overall, how would you characterize efforts to improve the certification and approval processes?

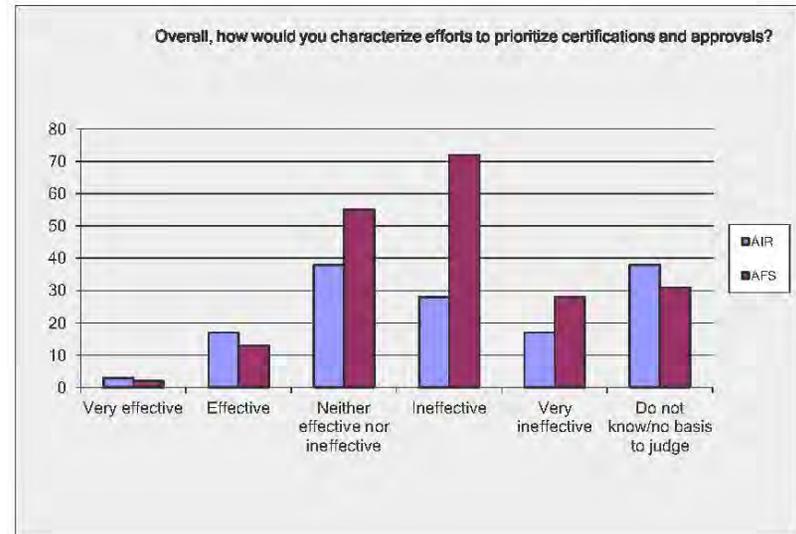
Answer Options	AFS	AIR	Response Count
Very effective	0	3	3
Effective	14	11	25
Neither effective nor ineffective	53	21	74
Ineffective	81	46	127
Very ineffective	35	23	58
Do not know/no basis to judge	27	36	63
answered question			267
skipped question			213



Question #11

Overall, how would you characterize efforts to prioritize certifications and approvals?

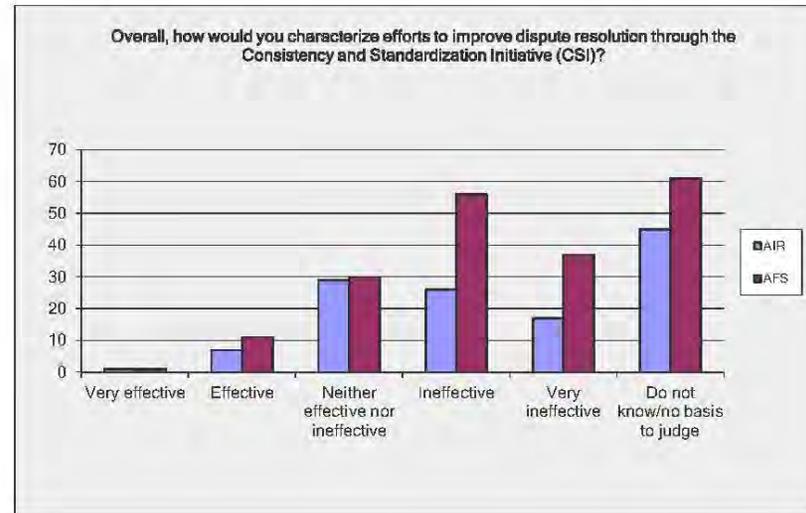
Answer Options	AFS	AIR	Response Count
Very effective	2	3	5
Effective	13	17	30
Neither effective nor ineffective	55	38	93
Ineffective	72	28	100
Very ineffective	28	17	45
Do not know/no basis to judge	31	38	69
<i>answered question</i>			264
<i>skipped question</i>			216



Question #12

Overall, how would you characterize efforts to improve dispute resolution through the Consistency and Standardization Initiative (CSI)?

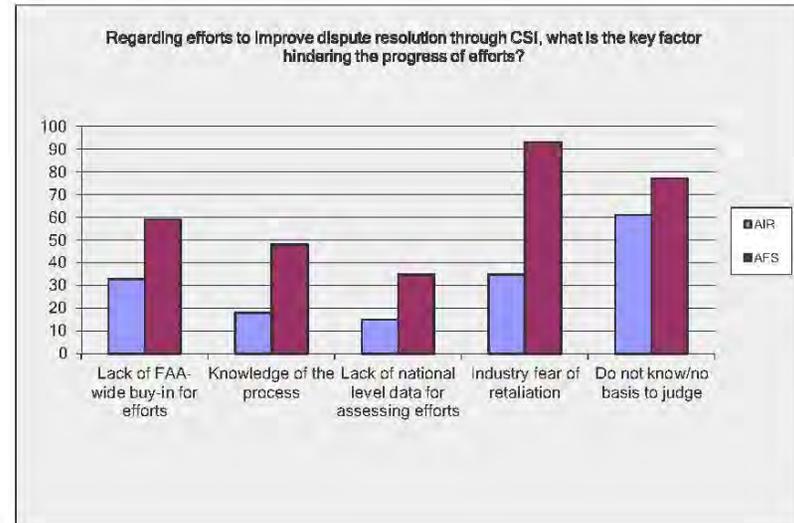
Answer Options	AFS	AIR	Response Count
Very effective	1	1	2
Effective	11	7	18
Neither effective nor ineffective	30	29	59
Ineffective	56	26	82
Very ineffective	37	17	54
Do not know/no basis to judge	61	45	106
<i>answered question</i>			263
<i>skipped question</i>			217



Question #13

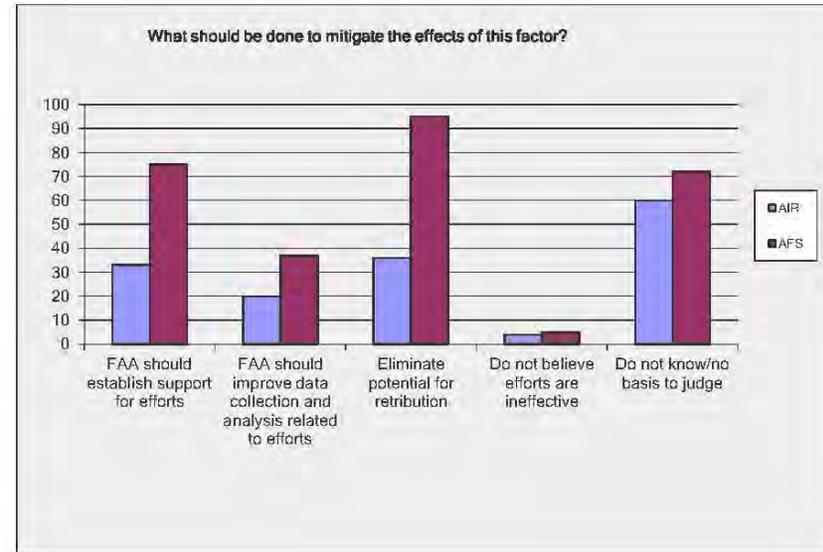
Regarding efforts to improve dispute resolution through CSI, what is the key factor hindering the progress of efforts?

Answer Options	AFS	AIR	Response Count
Lack of FAA-wide buy-in for efforts	59	33	76
Knowledge of the process	48	18	55
Lack of national level data for assessing efforts	35	15	45
Industry fear of retaliation	93	35	102
Do not know/no basis to judge	77	61	106
Other (please specify)			15
	<i>answered question</i>		258
	<i>skipped question</i>		222



Question #14

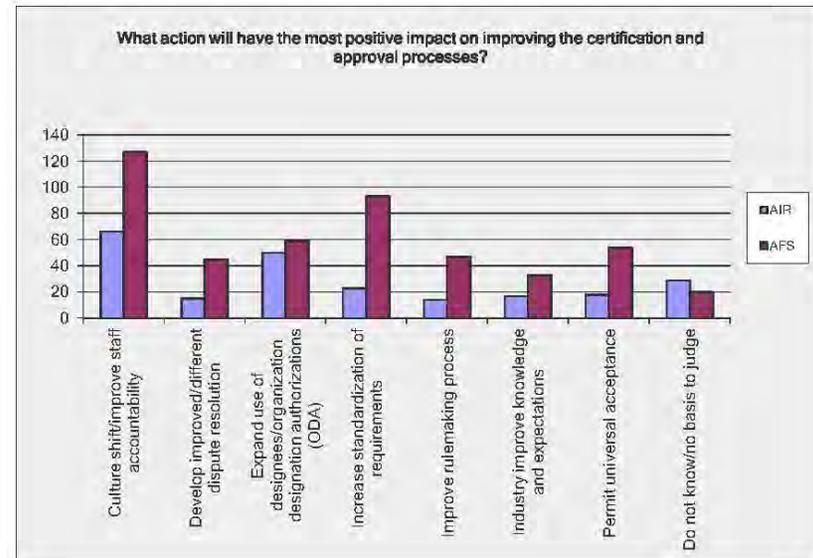
What should be done to mitigate the effects of this factor?			
Answer Options	AFS	AIR	Response Count
FAA should establish support for efforts	75	33	86
FAA should improve data collection and analysis related to efforts	37	20	46
Eliminate potential for retribution	95	36	103
Do not believe efforts are ineffective	5	4	7
Do not know/no basis to judge	72	60	101
Other (please specify)			24
	<i>answered question</i>		249
	<i>skipped question</i>		231



Question #15

What action will have the most positive impact on improving the certification and approval processes?

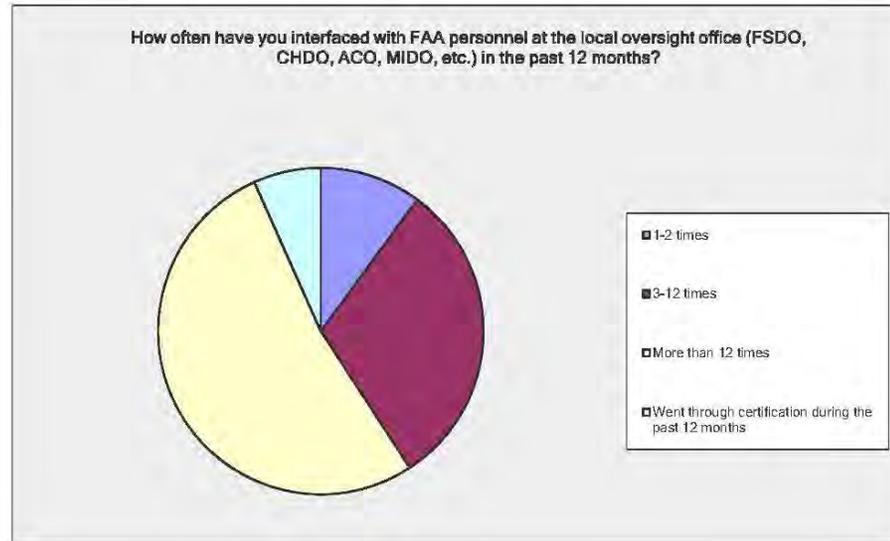
Answer Options	AFS	AIR	Response Count
Culture shift/improve staff accountability	127	66	154
Develop improved/different dispute resolution	45	15	52
Expand use of designees/organization designation authorizations (ODA)	59	50	86
Increase standardization of requirements	93	23	103
Improve rulemaking process	47	14	55
Industry improve knowledge and expectations	33	17	42
Permit universal acceptance	54	18	59
Do not know/no basis to judge	20	29	43
Other (please specify)			10
<i>answered question</i>			262
<i>skipped question</i>			218



Question #16

How often have you interfaced with FAA personnel at the local oversight office (FSDO, CHDO, ACO, MIDO, etc.) in the past 12 months?

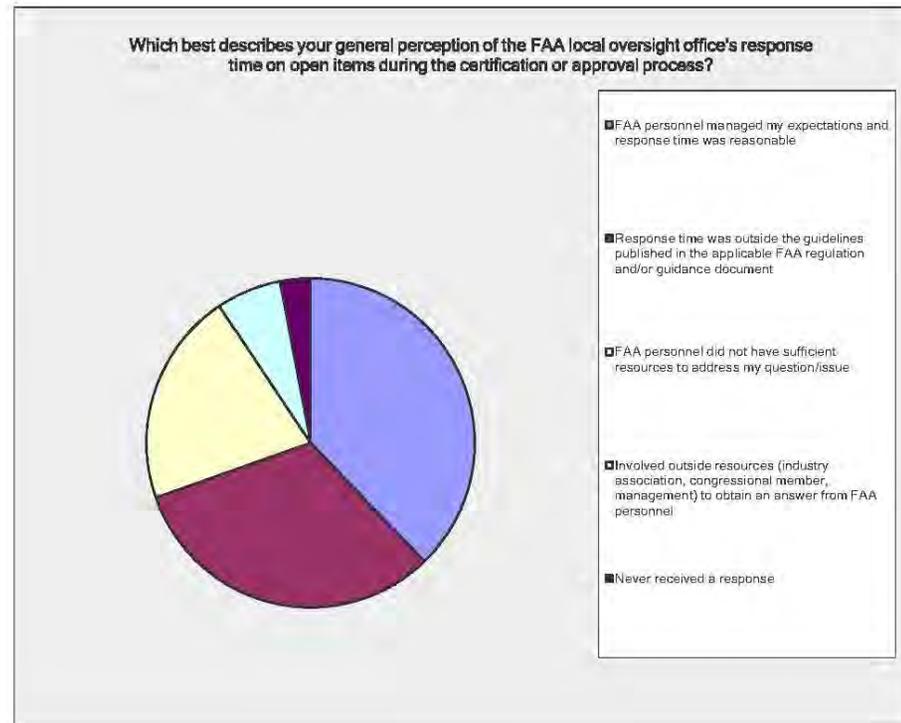
Answer Options	Response Percent	Response Count
1-2 times	10.1%	24
3-12 times	30.7%	73
More than 12 times	52.5%	125
Went through certification during the past 12 months	6.7%	16
answered question		238
skipped question		242



Question #17

Which best describes your general perception of the FAA local oversight office's response time on open items during the certification or approval process?

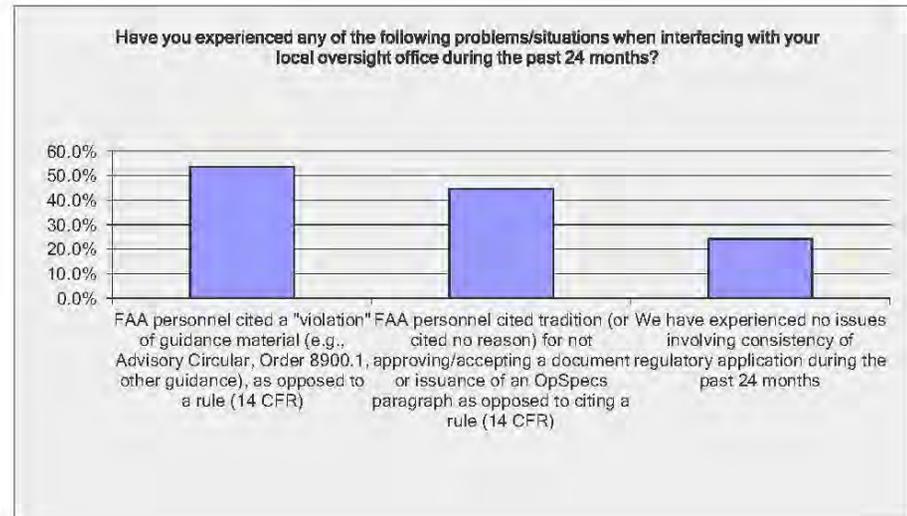
Answer Options	Response Percent	Response Count
FAA personnel managed my expectations and response time was reasonable	37.8%	88
Response time was outside the guidelines published in the applicable FAA regulation and/or guidance document	31.8%	74
FAA personnel did not have sufficient resources to address my question/issue	21.0%	49
Involved outside resources (industry association, congressional member, management) to obtain an answer from FAA personnel	6.4%	15
Never received a response	3.0%	7
answered question		233
skipped question		247



Question #18

Have you experienced any of the following problems/situations when interfacing with your local oversight office during the past 24 months?

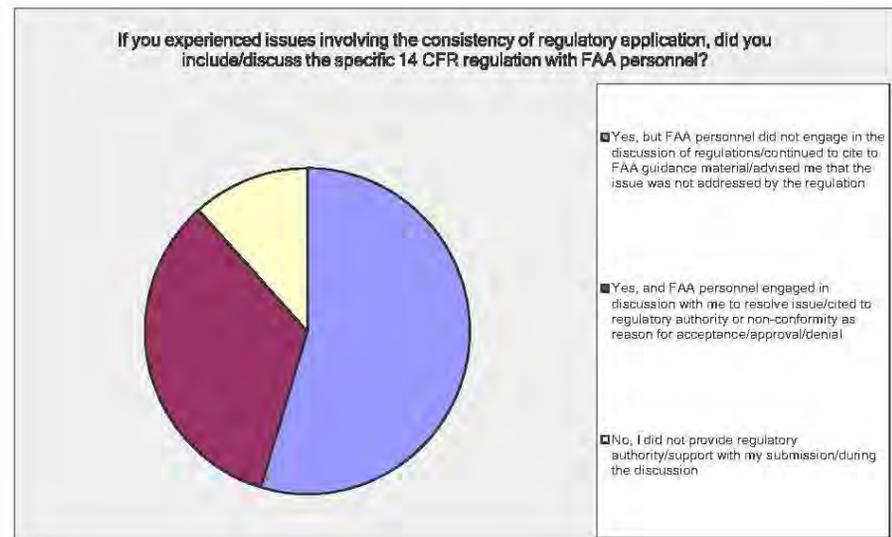
Answer Options	Response Percent	Response Count
FAA personnel cited a "violation" of guidance material (e.g., Advisory Circular, Order 8900.1, other guidance), as opposed to a rule (14 CFR)	53.6%	120
FAA personnel cited tradition (or cited no reason) for not approving/accepting a document or issuance of an OpSpecs paragraph as opposed to citing a rule (14 CFR)	44.6%	100
We have experienced no issues involving consistency of regulatory application during the past 24 months	24.1%	54
answered question		224
skipped question		256



Question #19

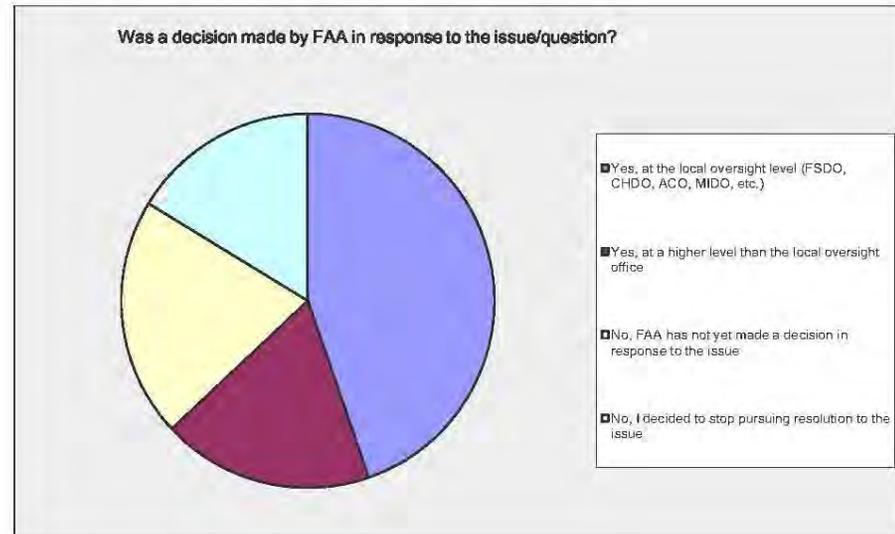
If you experienced issues involving the consistency of regulatory application, did you include/discuss the specific 14 CFR regulation with FAA personnel?

Answer Options	Response Percent	Response Count
Yes, but FAA personnel did not engage in the discussion of regulations/continued to cite to FAA guidance material/advised me that the issue was not addressed by the regulation	54.6%	112
Yes, and FAA personnel engaged in discussion with me to resolve issue/cited to regulatory authority or non-conformity as reason for acceptance/approval/denial	33.7%	69
No, I did not provide regulatory authority/support with my submission/during the discussion	11.7%	24
<i>answered question</i>		205
<i>skipped question</i>		275



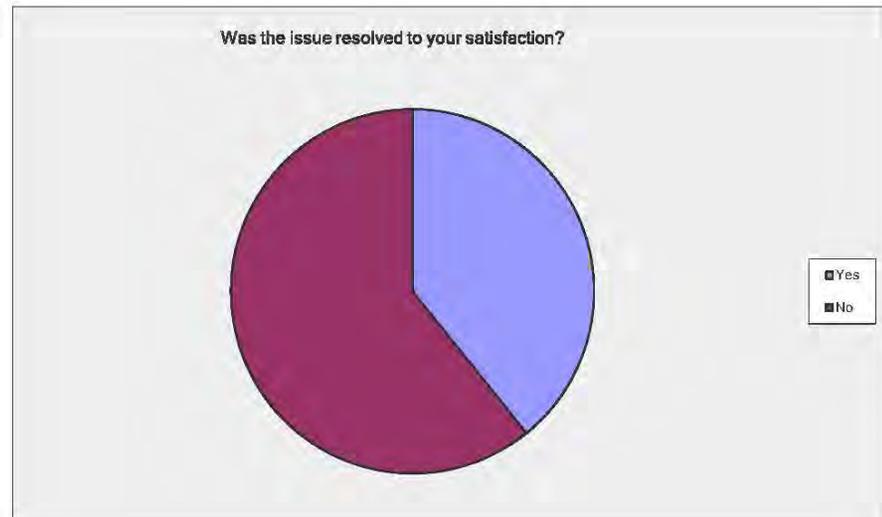
Question #20

Was a decision made by FAA in response to the issue/question?		
Answer Options	Response Percent	Response Count
Yes, at the local oversight level (FSDO, CHDO, ACO, MIDO, etc.)	44.7%	93
Yes, at a higher level than the local oversight office	18.3%	38
No, FAA has not yet made a decision in response to the issue	20.7%	43
No, I decided to stop pursuing resolution to the issue	16.3%	34
answered question		208
skipped question		272



Question #21

Was the issue resolved to your satisfaction?		
Answer Options	Response Percent	Response Count
Yes	39.2%	78
No	60.8%	121
<i>answered question</i>		199
<i>skipped question</i>		281



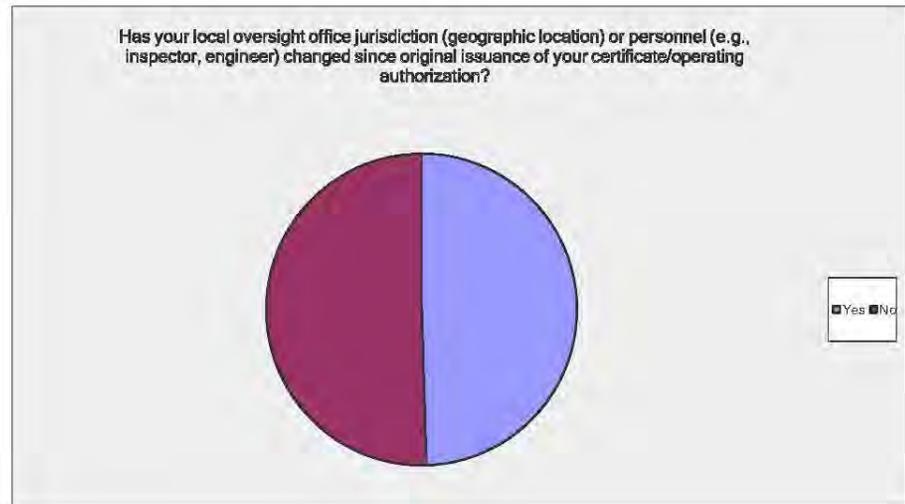
Question #22

Please provide a brief explanation:	
Answer Options	Response Count
	97
<i>answered question</i>	97
<i>skipped question</i>	383

Question #23

Has your local oversight office jurisdiction (geographic location) or personnel (e.g., inspector, engineer) changed since original issuance of your certificate/operating authorization?

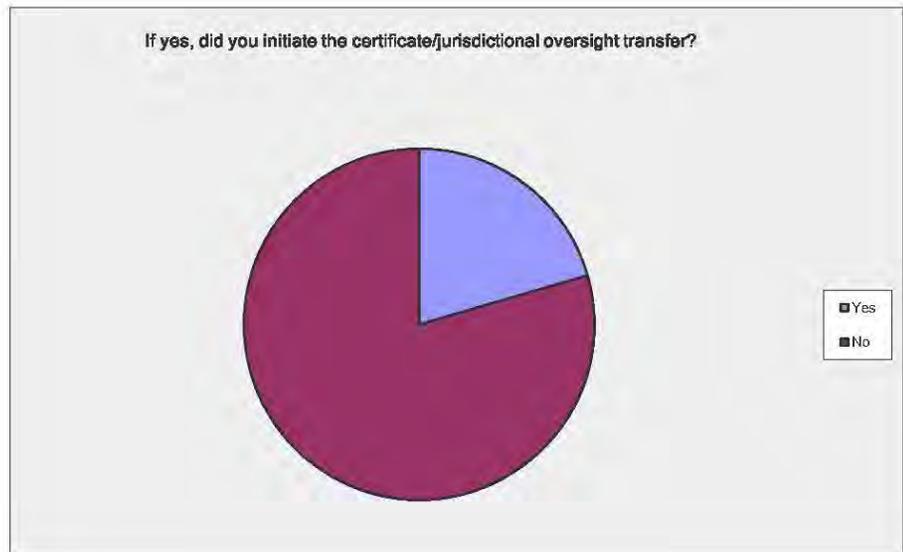
Answer Options	Response Percent	Response Count
Yes	49.5%	104
No	50.5%	106
<i>answered question</i>		210
<i>skipped question</i>		270



Question #24

If yes, did you initiate the certificate/jurisdictional oversight transfer?

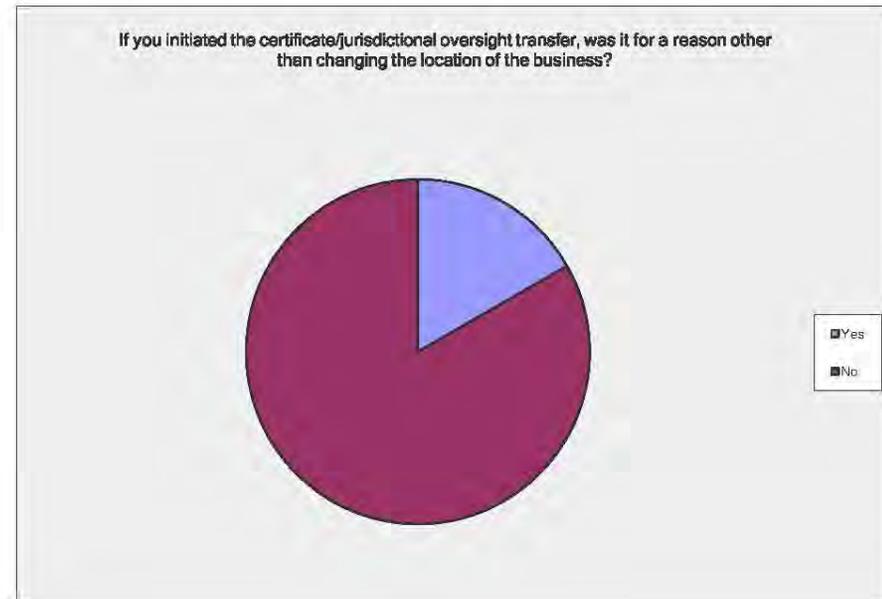
Answer Options	Response Percent	Response Count
Yes	20.5%	26
No	79.5%	101
answered question		127
skipped question		353



Question #25

If you initiated the certificate/jurisdictional oversight transfer, was it for a reason other than changing the location of the business?

Answer Options	Response Percent	Response Count
Yes	16.7%	14
No	83.3%	70
<i>answered question</i>		84
<i>skipped question</i>		396



Question #26

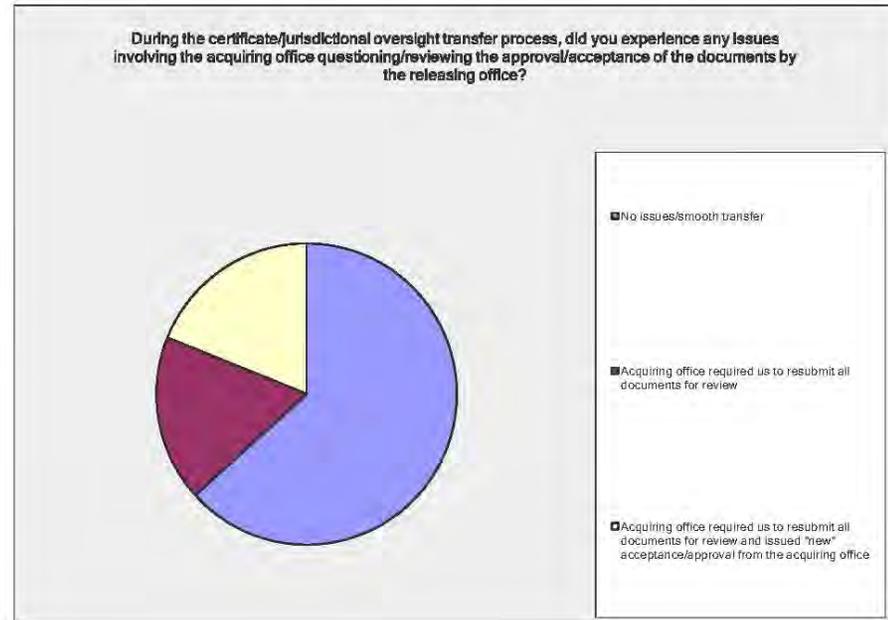
If yes, briefly describe the reason that you initiated the certificate/jurisdictional oversight transfer:

Answer Options	Response Count
	20
<i>answered question</i>	20
<i>skipped question</i>	460

Question #27

During the certificate/jurisdictional oversight transfer process, did you experience any issues involving the acquiring office questioning/reviewing the approval/acceptance of the documents by the releasing office?

Answer Options	Response Percent	Response Count
No issues/smooth transfer	63.3%	57
Acquiring office required us to resubmit all documents for review	17.8%	16
Acquiring office required us to resubmit all documents for review and issued "new" acceptance/approval from the acquiring office	18.9%	17
<i>answered question</i>		90
<i>skipped question</i>		390



Question #28

Additional Comments and Examples:

Answer Options	Response Count
	60
<i>answered question</i>	60
<i>skipped question</i>	420

APPENDIX H: GUIDANCE MATERIAL INVENTORY & DATABASE LIBRARY

The ARC initiated its review by identifying different types of guidance material, determining how the guidance material is organized, and defining the scope of effort to develop a master single-source database to organize FAA regulatory guidance material. (*See* section 2.2.3.) The ARC developed the following tools to facilitate the review:

- FAA Guidance Material Inventory: A compilation of FAA regulatory compliance resources relevant to an applicant/approval holder/certificate holder interacting with AFS or AIR. The resources are organized by document (using the manner in which the document is defined on the FAA website).
- FAA Electronic Database Library Master List: A master list of the electronic databases used by the FAA and industry for “Application.” The Master List is organized by the data collection system and indicates whether the database is used by the FAA, industry, or both.
- 14 CFR Part 43 & 14 CFR Part 145 Single-Source Guidance Lists: An inventory list (by 14 CFR part) of all of the active publications used to support each rule. The lists contain documents by type (as identified in the Guidance Material Inventory) available in the electronic databases (referenced in the Electronic Database Library Master List).

FAA Guidance Material Inventory

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Advisory Circular (AC)	The AC system provides guidance, information, and nonregulatory material to the general aviation community and to the public.	AFS AIR	Industry	RGL	Draft ACs are available for review and comment. Compliance with ACs is not mandatory.
AFS-1 Memorandums	AFS-1 Memorandums include a policy statement giving guidance or acceptable practices on how to find compliance with a specific CFR section or paragraph. These documents are generally explanatory in nature, but may contain guidance that is mandatory for ASIs.	AFS	Industry & FAA Personnel	RGL	None available online at this time.

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Airworthiness Directive (AD)	ADs are legally enforceable rules issued by the FAA in accordance with 14 CFR part 39 to correct an unsafe condition in a product (defined as an aircraft, aircraft engine, propeller, or appliance).	AIR	Industry	RGL	<p>Compliance with ADs is mandatory.</p> <p>FAA issues 3 types of ADs:</p> <ul style="list-style-type: none"> • Notice of Proposed Rulemaking (NPRM), followed by a Final Rule • Final Rule; Request for Comments • Emergency ADs <p>The AD NPRM database includes Notice of Proposed Rulemaking for ADs.</p> <p>Note: While Service Bulletins (SB) are often incorporated by reference, there is no database of SBs available on the FAA Website.</p>
Aviation Maintenance Alerts	Aviation Maintenance Alerts provide the aviation community with an economical means to exchange service experiences and to assist the FAA in improving aeronautical product durability, reliability, and safety.	AFS	Industry	FSIMS	<p>Maintenance Alerts are advisory in nature.</p> <p>FAA prepares this publication from information operators and maintenance personnel who maintain civil aeronautical products pertaining to significant events or items of interest.</p>

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
<p>Civil Air Regulations (CAR)</p> <p>Civil Aeronautics Manuals (CAM)</p> <p>Aeronautical Bulletins</p>	<p>CARs were part of the original certification basis for aircraft first certified in the 1940s, 1950s, and 1960s by the Civil Aeronautics Administration. As such, the CARs may still be needed as a reference for older aircraft, or as a standard for minor changes to older aircraft designs.</p> <p>CAM policies provide detailed technical information on acceptable methods of complying with the regulations. Such policies are for the guidance of the public and not mandatory.</p> <p>Prior to the establishment of the CARs by the Civil Aeronautics Authority in 1938, the aeronautical regulations used during 1926 until 1938 were the Aeronautical Bulletins.</p>	<p>FAA</p>	<p>Industry & FAA Personnel</p>	<p>RGL</p>	<p>These documents are historical and have been superseded; however, they may be referenced for certain older aircraft.</p> <p>These documents are available in the CARs/CAMs/Aero-Bulletins Database.</p>

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
<p>ATOS Data Collection Tool (DCT)</p> <ul style="list-style-type: none"> • ATOS DCT Temporary Revisions • ATOS Element Performance Inspection • ATOS Safety Attribute Inspection (SAI) • ATOS DCT Bridging Documents • DCT Change Report 	<p>Data Collection Tools (DCT) capture details of an assessment and provide a means for aviation safety inspectors (ASI) to determine regulatory compliance. Inspectors perform assessments using DCTs before the initial approval or acceptance of a certificate holder's system or program, and on a recurring schedule to ensure that the initial basis for approval or acceptance is still valid. When an ASI makes a determination about compliance, he/she considers several factors, including whether or not the system or program meets the intent of the regulations, policy, and/or guidance.</p>	<p>AFS</p>	<p>AFS ASIs</p>	<p>FSIMS</p>	<p>The Air Transportation Oversight System (ATOS) improves the certification and surveillance processes for air carriers. It assesses the safety of air carrier operating systems using system safety principles; safety attributes, risk management, and structured system engineering practices. Three major functions further define the oversight system: design assessment, performance assessment, and risk management.</p>
<p>CFR Final Rules</p>	<p>The CFR Final Rules database contains amendments to Federal Aviation Regulations that have gone through the rulemaking process, were finalized, and then were published in the Federal Register.</p>	<p>FAA</p>	<p>Industry & FAA Personnel</p>	<p>RGL</p>	<p>Database includes Final Rule (and Preamble).</p>

A Report from the Consistency of Regulatory Interpretation ARC to the FAA

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
CFR Notice of Proposed Rulemaking (NPRM)	CFR NPRMs are proposals to amend Federal Aviation Regulations. The NPRMs can be reviewed and commented on by the public. Based on the comments it receives, the FAA may accept some recommendations and revise the rule, put the rule into effect as is, or withdraw the rule. After this process is complete and the proposed Rulemaking documents are approved, they become CFR Final Rules.	FAA	Industry & FAA Personnel	RGL	Database includes Proposed Rule (and Preamble).
Exemptions	An Exemption is a petition for a request to the FAA by an individual or entity asking for relief from the requirements of a regulation in effect. The FAA's response to the petition is documented in this database and is one of the following: granted, partially granted or denied.	FAA	Industry/ Exemption Holder or Applicant	RGL	
Federal Regulations	The CFR is a codification of general and permanent rules that pertain to agencies and departments of the Federal Government.	FAA	Industry & FAA Personnel	RGL	Database includes Special Federal Aviation Regulations (SFAR).
Flight Procedure Standards, AFS-420 Guidance	This database includes guidance material (Orders & ACs) published by AFS-420 and AFS-460.	AFS	Industry & ASIs	FSIMS	

A Report from the Consistency of Regulatory Interpretation ARC to the FAA

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Handbooks & Manuals	FAA publishes a number of FAA-handbooks and manuals for beginners and aviation professionals. Publications are updated periodically to reflect new FAA regulations and technical developments.	AFS	Industry	FAA Website (Regulations & Policies – Handbooks & Manuals)	Publications available on the FAA website are FAA-approved.
Information for Operators (InFO)	<p>An InFO message contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety.</p> <p>InFOs contain information or a combination of information and recommended action to be taken by the respective operators identified in each individual</p>	AFS	Industry & ASIs	FAA Website (Aviation Industry – Airline Safety)	InFOs are informational only.

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Issue Paper	<p>FAA uses issue papers when necessary to provide a structured means of accomplishing the necessary steps in the type certification and type validation processes.</p> <p>Issue papers provide a structured means for describing and tracking the resolution of significant technical, regulatory, and administrative issues that occur during a project.</p> <p>For type certification projects, issue papers are useful tools for keeping an unbiased uniform certification approach between applicants. Issue papers also form a valuable reference for future type certification programs and for development of regulatory changes.</p>	AIR	Industry/ Applicant & FAA Personnel	<p>Closed Issue Papers available under FOIA</p> <p>ELOS Findings available in RGL</p>	<p>In addition to specific issue papers discussed below, the FAA uses issues papers in the following situations:</p> <ul style="list-style-type: none"> • For other FAA approvals (e.g., PMA and 14 CFR § 21.305(d) or § 21.8 (effective 04/16/2011)) we can use issue papers, with discretion, to document and resolve compliance issues where directorate or policy office guidance is required. • PMA issue papers document the FAA and applicant mutually agreed upon understanding and approach to certification of a part's design • Unsafe Features or Characteristics addressing unsafe conditions that could preclude certification as defined in 14 CFR § 21.21(b)(2). • All other issues during type certification projects that become controversial or may otherwise require type certification board (TCB) action to resolve. An example of this is the nonstandard method/means of compliance proposed by the applicant. <p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
<p><u>Issue Paper:</u> Method of Compliance (MoC)</p>	<p>The most common type of issue paper defines a particular method of compliance that requires directorate or policy office coordination as a result of peculiarities in the type design or the need to define specific conditions and/or establish the environment under which substantiation must be shown.</p>	<p>AIR</p>	<p>Applicant & FAA Personnel</p>	<p>Closed Issue Papers available under FOIA</p>	<p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>
<p><u>Issue Paper:</u> Equivalent Level of Safety (ELOS)</p>	<p>Equivalent level of safety (ELOS) findings are granted when literal compliance with a certification regulation cannot be shown and compensating factors exist which can provide an ELOS (see 14 CFR § 21.21(b)(1)). Compensating factors are normally any design changes, limitations, or equipment imposed that will facilitate granting the equivalency. An issue paper documents the evolution and conclusion of the request for an ELOS finding.</p>	<p>AIR</p>	<p>Industry/ Applicant & FAA Personnel</p>	<p>RGL</p>	<p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance. An ELOS finding and an equivalent safety finding (ESF) have the same meaning.</p>
<p><u>Issue Paper:</u> Proposed Special Condition</p>	<p>The basis for issuing and amending special conditions is found in 14 CFR § 21.16. Under the provisions of § 21.16, a special condition is issued only if the existing applicable airworthiness standards do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller, because of novel or unusual design features of the product to be type certificated</p>	<p>AIR</p>	<p>Applicant & FAA Personnel</p>	<p>Closed Issue Papers available under FOIA</p>	<p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
<p><u>Issue Paper:</u> Certification basis (G-1)</p>	<p>G-1 issue papers designate the applicable airworthiness and environmental regulations (noise and environmental findings), including special conditions, that must be met for certification as stated in 14 CFR §§ 21.17, 21.21, 21.25, 21.27, 21.29, or 21.101, as applicable. It also designates applicable Special Federal Aviation Regulations (SFARs), and records any exemptions granted (see 14 CFR § 11.25). This issue paper must provide the definitive justification for selecting the certification basis, including specific amendment levels. An exemption is a temporary or permanent allowable noncompliance with a particular regulation for a specific product.</p>	<p>AIR</p>	<p>Applicant & FAA Personnel</p>	<p>Closed Issue Papers available under FOIA</p>	<p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
<p><u>Issue Paper:</u> Determination of Compliance (G-2)</p>	<p>G-2 issue papers provide a statement of FAA procedural requirements, including those that define the applicant's responsibilities for showing compliance. This issue paper is designed to capture the "compliance checklist" which shows the regulatory requirement and the method of compliance proposed by the applicant for each regulation identified in the certification basis. For foreign-manufactured products to be eligible for an import type certificate (TC), the applicant must show, and the FAA must find, that the type design complies with the U.S. type certification basis, G-1. Under bilateral agreements, the exporting civil aviation authority (CAA) may be authorized to approve data used for showing compliance to the requirements in the G-1 issue paper. Therefore, the G-2 issue paper outlines the responsibilities of the applicable exporting CAAs.</p>	<p>AIR</p>	<p>Applicant & FAA Personnel</p>	<p>Closed Issue Papers available under FOIA</p>	<p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>

A Report from the Consistency of Regulatory Interpretation ARC to the FAA

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
<p><u>Issue Paper:</u> Environmental Consideration (G-3)</p>	<p>G-3 issue papers designate the applicable environmental regulations, that is, the regulations establishing standards for aircraft noise and for fuel venting and exhaust emissions for turbine engine powered airplanes.</p>	<p>AIR</p>	<p>Applicant & FAA Personnel</p>	<p>Closed Issue Papers available under FOIA</p>	<p>Note: It is permissible for FAA to combine the contents of issue papers G-1 thru G-3 into one single master issue paper G-1. Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>
<p><u>Issue Paper:</u> Export (Import) Requirements – Country (G-4)</p>	<p>For products exported from the U.S., the G-4 issue paper cites FAA findings of compliance with the importing country’s airworthiness requirements on the importing CAA’s behalf. For products imported to the U.S., the G-4 issue paper establishes the exporting CAA’s function for airworthiness certification, operating matters, and additional compliance findings relative to those defined in the G-1 issue paper.</p>	<p>AIR</p>	<p>Applicant & FAA Personnel</p>	<p>Closed Issue Papers available under FOIA</p>	<p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>
<p><u>Issue Paper:</u> New Information</p>	<p>FAA can use an issue paper to examine issues that arise from a better understanding of environmental or other hazards that were not well-understood in the past or that did not exist previously.</p>	<p>AIR</p>	<p>Applicant & FAA Personnel</p>	<p>Closed Issue Papers available under FOIA</p>	<p>Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.</p>

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Issue Paper: Type Validation	<p>When the FAA is the validating authority (VA), the FAA validation team writes an issue paper for each validation item (VI). A validation item is a certification item or airworthiness standard of particular interest to the validating authority.</p> <p>FAA will also write issue papers on certification basis (G-1) and other unique import requirements</p>	AIR	Applicant & FAA Personnel	Closed Issue Papers available under FOIA	Reference AC120-66 for Issue Paper process and Order 8110.112 for FAA internal guidance.
<p>Job Task Analysis</p> <ul style="list-style-type: none"> • Air Transportation Job Task Analysis (AT JTA) • General Aviation Job Task Analysis (GA JTA) 	<p>Job task analysis (JTA) is the standard human factors approach to identify the knowledge, skills, and attitudes necessary to perform each task in a given job. The JTA helps identify what instructions, tools, and other resources are necessary.</p>	AFS	AFS ASIs	FSIMS	<p>JTAs include:</p> <ul style="list-style-type: none"> • Task • Function & Duty • Difficulty & Importance & Frequency • Criticality & Time & Job Aid • PTRS Tracking Code • Specialty (e.g., Ops, MX, Avionics) • Legal References • Purpose • Significant Interfaces • Procedural Guidance (e.g., Regulations, Orders, ACs) • Forms • Steps, Sub-Steps & Knowledges with Recommended Training

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FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Job Task Item (JTI)	Some DCT questions are supplemented by JTIs. JTIs contain additional explanatory information aviation safety inspectors (ASI) can use to help verify the adequacy of written policies, procedures, instructions, and other documentation. ASIs are not required to address each JTI.	AFS	AFS ASIs	FSIMS	
Legal Interpretations & Chief Counsel Opinions	This database consists of legal interpretations issued from 1990 to the present and will be updated on a regular basis.	AGC	Industry & FAA Personnel	FAA Website (AGC – Regulations Division)	Note: Database does not include interpretations issued by Regional Counsel.
Master Minimum Equipment List (MMEL) & AEG Guidance Documents <ul style="list-style-type: none"> • MMEL • MMEL Policy Letters • Flight Standardization Board (FSB) Reports • Flight Operations Evaluation Board (FOEB) • MMEL Industry Group 	An MMEL is a categorized list of systems, instruments and equipment on an aircraft that may be inoperative for flight. Specific procedures or conditions may be associated with operation with the relevant item inoperative. It is considered by default that any equipment or system which is not included in the MMEL must be operative for the aircraft to be allowed to flight. The MMEL is defined on a per aircraft model basis.	AFS	Industry/ Manufacturers & FAA Personnel	FSIMS	

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
<p>Operations Safety System (OPSS) Documents</p> <ul style="list-style-type: none"> • OPSS Guidance • Operations Specifications (OpSpecs) • OpSpecs Working Group • Prohibition Against Certain Flights within the Tripoli (HLLL) Flight Information 	<p>WebOPSS is an automated system of standardized templates used to capture mission critical data in a real-time environment. The data and templates are used to produce a legal contract between the FAA and the Aviation Industry known as OpSpecs and Authorizing Documents.</p>	<p>AFS</p>	<p>Industry & FAA Personnel</p>	<p>FSIMS WebOPSS</p>	<p>OpSpecs are binding on the operator.</p> <p>WebOPSS replaces three components of the legacy system; the OPSS and IOPSS system and the OPSS HQ policy and template system.</p>
<p>Orders and Notices</p>	<p>An Order/Notice is a directive that the FAA uses to issue policy, instructions and work information to its own personnel and designees. It spells out how the FAA expects to carry out its responsibilities.</p>	<p>AFS AIR</p>	<p>FAA Personnel</p>	<p>RGL</p>	<p>FAA orders direct the activities of FAA personnel.</p> <p>Certificate holders are not required to comply with FAA orders.</p> <p>Guidance in orders also applies to FAA designees.</p>

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Order 8900.1, Flight Standards Information Management System (FSIMS)	Order 8900.1 directs the activities of ASIs responsible for the certification, technical administration, and surveillance of air carriers, certain other air operators conducting operations in accordance with the appropriate part 14 CFR, certificated airmen, and other aviation activities. This order also provides direction for tasks related to aircraft accidents and incidents, investigations and compliance, the aviation safety program, administrative areas, and miscellaneous tasks not related to a specific regulation. In addition, it contains regional and district office requirements for the support of ASIs responsible for those activities.	AFS	AFS ASIs	FSIMS	<p>FSIMS guidance is mandatory for ASIs in the performance of their job functions.</p> <p>Certificate holders are not required to comply with FAA orders.</p> <p>Order 8900.1 canceled (and incorporated the content from) FAA Orders 8300.10, Airworthiness Inspector's Handbook, 8400.10, Air Transportation Operations Inspector's Handbook, and 8700.1, General Aviation Operations Inspector's Handbook.</p>
Parts Manufacturer Approval (PMA)	PMAs are both a design approval and a production approval. It is issued for the production of modification or replacement parts, which includes materials, parts, processes, and appliances.	AIR	Industry/Manufacturers	RGL	
Policy Statement	The Policy Statement database is a searchable repository of Aircraft Certification Service policy statements. A policy statement gives guidance or acceptable practices on how to find compliance with a specific CFR section or paragraph. These documents are explanatory and not mandated. They are also not project-specific.	AIR	Industry & FAA Personnel	RGL	Applicants should expect that the certifying officials would consider this information when making findings of compliance relevant to new certificate actions. Also, as with all advisory material, this policy statement identifies one means, but not the only means, of compliance.

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Regulatory Basis Tool	This database provides users with a way to create a 14 CFR part as it looked sometime in the past. FAA calls this a Regulatory Basis. Users can create a Regulatory Basis using either a date in the past or an Amendment level in the past.	FAA	Industry	RGL	Historical tool.
Safety Alert for Operators (SAFO)	<p>A SAFO is an information tool that alerts, educates, and makes recommendations to the aviation community. This community includes air carrier certificate holders, fractional ownership program managers, and 14 CFR Part 142 training centers.</p> <p>Each SAFO contains important safety information and may contain recommended actions. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. The information and recommendations in a SAFO are often time critical.</p>	AFS	Industry & ASIs	FAA Website FAA Website (Aviation Industry – Airline Safety)	SAFOs are informational only.

FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Special Airworthiness Information Bulletin (SAIB)	SAIBs provide information for aircraft owners, mechanics, operators, manufacturers, distributors, dealers, and installers who incorporate STC modifications that affect the aircraft's performance or handling qualities of the need to verify airspeed indicators are marked correctly and airspeed limitations are properly documented in airplane flight manuals (AFM) or AFM supplements.	AIR	Industry/ STC Holders	RGL	SAIBs are information only. Recommendations are not mandatory
Special Conditions	A Special Condition is a rulemaking action that is specific to an aircraft make and often concerns the use of new technology that the Code of Federal Regulations do not yet address. Special Conditions are an integral part of the Certification Basis and give the manufacturer permission to build the aircraft, engine or propeller with additional capabilities not referred to in the regulations.	AIR	Manufacturers/ Industry	RGL	
Supplemental Type Certificate (STC)	An STC is a document issued by the FAA approving a product (aircraft, engine, or propeller) modification. The STC defines the product design change, states how the modification affects the existing type design, and lists serial number effectivity. It also identifies the certification basis listing specific regulatory compliance for the design change.	AIR	Industry/ STC Holder	RGL	

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FAA Guidance Document	Description	Published by	Primary Audience	Availability	Notes
Type Certificate Data Sheet (TCDS)	A TC is the design approval for a new (or new model) aircraft, engine, or propeller. In general, there will be a TCDS associated with each Type Certificate issued. The Type Certificate Data Sheet records the basis of certification, the design details, and general information concerning the design.	AIR	Industry	RGL	
Technical Standard Order (TSO)	A TSO is a minimum performance standard issued by the Administrator for specified materials, parts, processes, and appliances used on civil aircraft.	AIR	Industry	RGL	Established standard for compliance.
TSO Index of Articles	The TSO Index of Articles is a listing of authorized manufacturers and articles produced by the TSO Holder under a TSO authorization or letter of TSO Design Approval.	AIR	Industry	RGL	

FAA Electronic Database Library Master List

Regulatory Databases and Other Data Collection Systems	Internal FAA	External FAA	Both
<p>Regulatory Guidance Library (RGL)—consolidates a set of searchable databases that contain regulatory, guidance, and aviation product information, including:</p> <ul style="list-style-type: none"> • Advisory Circulars (AC)—final and draft • Airworthiness Directives (AD) • AD Notices of Proposed Rulemaking (AD NPRM) • Federal Aviation Regulations (FAR), FAR NPRMs, and FAR Final Rules • Civil Air Regulations (CAR), Civil Aeronautics Manuals (CAM), and Aeronautical Bulletins (Aero-Bulletins) • Equivalent Levels of Safety (ELOS) • Exemptions • Special Conditions • Orders and Notices • Policy Statements • Supplemental Type Certificates (STC), Technical Standard Orders (TSO), and Parts Manufacturer Approvals (PMA) • Type Certificate Data Sheets (TCDS) • Regulatory Basis • Special Airworthiness Information Bulletins (SAIB) 			X
<p>Web Based Operations Safety Subsystem (WebOPSS)—allows FAA and operators to streamline issuance of operational authorizations, as well as improved tracking, and approval processes for the issuance of:</p> <ul style="list-style-type: none"> • Operation Specifications (OpSpecs) • Management Specifications (MSpecs) • Training Specifications (TSpecs) • Letters of Authorization (LOA) <p>NOTE: WebOPSS replaced three components of the legacy system—the OPSS and IOPSS system and the OPSS HQ policy and template system.</p>			X
Service Difficulty Reports (SDR)			X
Unapproved Part Notification (UPN)			X
Master Minimum Equipment List (MMEL)			X

Regulatory Databases and Other Data Collection Systems	Internal FAA	External FAA	Both
<p>FAA Order 8900.1, Flight Standards Information Management System (FSIMS)—directs the activities of aviation safety inspectors (ASI) responsible for the certification, technical administration, and surveillance of air carriers, certain other air operators conducting operations in accordance with the appropriate 14 CFR part, certificated airmen, and other aviation activities. The FSIMS library also includes:</p> <ul style="list-style-type: none"> • ATOS Data Collection (DCT) <ul style="list-style-type: none"> ◦ ATOS DCT Temporary Revisions ◦ ATOS Element Performance Inspection (EPI) ◦ ATOS Safety Attribute Inspection (SAI) ◦ ATOS DCT Bridging Documents ◦ DCT Change Report • Aviation Maintenance Alerts • Air Transportation Job Task Analysis (AT JTA) • General Aviation Job Task Analysis (GA JTA) • MMEL & AEG Guidance Documents <ul style="list-style-type: none"> ◦ Master Minimum Equipment List (MMEL) ◦ MMEL Policy Letters ◦ Flight Standardization Board (FSB) Reports ◦ Flight Operations Evaluation Board (FOEB) ◦ MMEL Industry Group • Operations Safety System (OPSS) Documents <ul style="list-style-type: none"> ◦ Operations Safety System (OPSS) Guidance ◦ Operations Specifications Working Group ◦ Prohibition Against Certain Flights Within the Tripoli (HLLL) Flight Information • FAA Orders • Notices • Flight Procedure Standards, AFS-420 Guidance • AFS-1 Memorandums • Other Documents <p>NOTE: FSIMS includes bridging documents from legacy inspector handbooks: FAA Orders 8300.10, Airworthiness Inspector’s Handbook, 8400.10, Air Transportation Operations Inspector’s Handbook, and 8700.1, General Aviation Operations Inspector’s Handbook.</p> <p>NOTE: Even though Order 8900.1 is only mandatory for ASIs, industry uses the guidance on a regular basis.</p>	X		
Aircraft Registry			X
Airworthiness Directive (AD) Database			X
Information for Operators (InFO) and Safety Alerts for Operators (SAFO)			X

Regulatory Databases and Other Data Collection Systems	Internal FAA	External FAA	Both
Aviation Safety Information Analysis and Sharing (ASIAS) —integrates aviation safety data from 46 safety databases and 45 participating airlines			X
Air Transportation Oversight System (ATOS) NOTE: Industry may use the data collection tools to assist in internal audits.	X		
Air Traffic Quality Assurance (ATQA) Database	X		
Aviation Safety Action Program (ASAP)			X
Aviation Safety Reporting System (ASRS)			X
Flight Operational Quality Assurance (FOQA)			X
Voluntary Disclosure Reporting Program (VDRP)			X
Accident/Incident Data System (AIDS)	X		
Notices to Airmen (NOTAMS) and Temporary Flight Restrictions (TFR)			X
Enforcement Information System (EIS) —primary database for tracking and reporting information about enforcement actions.	X		
Program Tracking and Reporting System (PTRS)	X		
Vital Information System (VIS) —information about operators that feed OpSpecs, and other databases.	X		

NOTE: There are other databases such as air traffic operational error and pilot deviation databases that are not included in the Master List. The List includes those databases that contain (or link to information sources that contain) guidance material relevant to the certification and approval processes.

14 CFR Part 43 Single-Source Guidance List

Regulation ¹ (14 CFR)	Advisory Material	FAA Orders & Other Guidance	Legal Interpretations & Opinions ²
<p>Part 43— Maintenance, Preventative, Maintenance, Rebuilding, and Overhaul</p>	<p><u>AC 43-2B</u>, Minimum Barometry for Calibration and Test of Atmospheric Pressure Instrument</p> <p><u>AC 43-4</u>, [Large AC] Corrosion Control for Aircraft</p> <p><u>AC 43-6B</u>, Altitude Reporting Equipment and Transponder System Maintenance and Inspection Practices</p> <p><u>AC 43-7</u>, Ultrasonic Testing for Aircraft</p> <p><u>AC 43-9C</u>, Maintenance Records</p> <p><u>AC 43.9-1F</u> Instructions for Completion of FAA Form 337</p> <p><u>AC 43-10</u>, United States - Canadian BASA- MIP</p> <p><u>AC 43-11 Chg 1</u>, Reciprocating Engine Overhaul Terminology and Standards</p> <p><u>AC 43-12A Chg 1</u>, Preventive Maintenance</p> <p><u>AC 43.13-1B Chg 1</u>, [Large AC] Acceptable Methods, Techniques, and Practices Aircraft Inspection and Repair</p> <p><u>AC 43.13-2B</u>, Acceptable Methods, Techniques, and Practices - Aircraft Alterations</p>	<p><u>Order 8900.1</u>, FSIMS</p> <p><u>Order 8000.85A</u>, FAA Program for the Establishment of a MIP Under the Provisions of a BASA</p> <p><u>Order 8110.53</u>, Reciprocal Acceptance of Repair Design Data Approvals Between FAA and TCCA</p> <p><u>Order 8110.103</u>, Alternative Methods of Compliance (AMOC)</p> <p><u>Order 8130.13</u>, Proper use of Parts Catalogs/ Maintenance Manuals</p> <p><u>Order 8120.16</u>, Processing Reports of Suspected Unapproved Parts</p> <p><u>Order 8130.21 Chg 1</u>, Procedures for Completion and Use of the Authorized Release Certificate, FAA Form 8130-3, Airworthiness Approval Tag</p> <p><u>Order 8300.12</u>, Corrosion Prevention and Control Programs</p> <p><u>Order 8310.6</u>, Airworthiness Compliance Check Sheets Handbook</p>	<p><i>Request for Policy Interpretation</i> of 14 C.F.R. Parts 43 and 145 for FAA-Certificated Repair Stations Working on Foreign-Registered Aircraft (8/24/2010)</p> <p><i>Legal Opinion</i> on Whether Any Regulation Proscribes an Approval for Return to Service of a U.S.-Registered Aircraft</p> <p>Following an Inspection Required by 14 C.F.R. part 91, 125, or 135 if the Aircraft Registration Certificate is Not Current? (6/18/2012)</p> <p><i>Request for Interpretation</i> of 14 C.F.R. § 43.13(a) and part 43, appendix D -- Whether a procedure specified as “required” in a service bulletin issued by a manufacturer is mandatory under the Federal Aviation Administration’s (FAA) maintenance regulations (14 C.F.R. part 43) for an aircraft operated only under 14 C.F.R. part 91 (6/18/2012)</p> <p><i>Request for Legal Interpretation</i> on the Use of Manufacturers’ Publications to Determine Inspection Intervals and Replacement Times (4/22/2011)</p>

Regulation ¹ (14 CFR)	Advisory Material	FAA Orders & Other Guidance	Legal Interpretations & Opinions ²
<p>Part 43— Maintenance, Preventative, Maintenance, Rebuilding, and Overhaul (<i>cont.</i>)</p>	<p><u>AC 43-14</u>, Maintenance of Weather Radar Radomes</p> <p><u>AC 43-15</u>, Recommended Guidelines for Instrument Shops</p> <p><u>AC 43-16A</u>, GA Maintenance Alerts</p> <p><u>AC 43-18</u>, Fabrication of Aircraft parts by Maintenance Personnel</p> <p><u>AC 43-204</u>, Visual Inspection for Aircraft</p> <p><u>AC 43-205</u>, Guidance for Selecting Chemical Agents and Processes for Depainting and General Cleaning of Aircraft and Aviation Products</p> <p><u>AC 43-206</u>, Inspection, Prevention, Control, and Repair of Corrosion on Avionics Equipment</p> <p><u>AC 43-207</u>, Correlation, Operation, Design, and Modification of Turbofan/ Jet Engine Test Cells</p> <p><u>AC 43-208</u>, Maintenance of Emergency Evacuations Systems for Aircraft Operating Under Part 121</p> <p><u>AC 43-209</u>, L-39 Albatross Military Jet Recommended Inspection Program (NOTE: DRAFT AC 43-209A Pending.)</p>	<p><u>Order 8120.15 Chg 1</u>, Performing Work on New Products or Parts that have left the U.S. PAH/ Supplier's Quality System</p> <p><u>SAFOs (2010–2012)</u>:³ SAFO 10022, Maintenance of Night Vision Imaging Systems (NVIS) (2/15/2010)</p> <p>SAFO 10016, Missing or Improper Seat Stops in Cessna Models (8/26/2010)</p> <p>SAFO 10007, Tundra Tire Installation/Approval for Airplanes Equipped with Leaf Spring Type Main Landing Gear (5/24/2010)</p> <p><u>InFOs (2009–2012)</u>:⁴ InFO 09012, Painting of Pitot Tubes (8/18/2009)</p> <p><u>Policy Memos</u>: Major Alteration Job Aid Memo</p>	<p><i>Request for Legal Interpretation</i> on the Distinction Between "Approve and Return to Service" and "Approve for Return to Service" in Certain Sections of 14 C.F.R. Parts 43 and 65 (7/9/2010)</p> <p><i>Request for Legal Interpretation</i> of FAA Advisory Circular 43.13-2B On Approved Data For Major Alterations-Specifically, Installing an ELT (4/28/2011)</p> <p><i>Request for Interpretation</i> of Applicable Rules in 14 C.F.R. parts 43, 91, and 135 Pertaining to Whether a Pilot of a Transport Category Aircraft May Check Tire Pressure During a Normal Preflight Inspection (2/26/2009)</p> <p><i>Request for Interpretation</i> regarding the fabrication by subcontractors of repair detail(s) as part of a maintenance action per 14 CFR Part 43 and the applicability of the drug and alcohol testing rules of 14 CFR Part 121 Appendix I and J to persons who perform such fabrication (8/7/2006)</p>

Regulation ¹ (14 CFR)	Advisory Material	FAA Orders & Other Guidance	Legal Interpretations & Opinions ²
Part 43— Maintenance, Preventative, Maintenance, Rebuilding, and Overhaul (<i>cont.</i>)	<p><u>AC 43-210</u>, Standardized Procedures for Requesting Field Approval of Data, Major Alterations, and Repairs</p> <p><u>AC 43-211</u>, Recommended Alternative Inspection Schedule for Socata TBM-700 Aircraft</p> <p><u>AC 43-213</u>, Parts Marking Identification</p>		

14 CFR Part 145 Single-Source Guidance List

Regulation ¹ (14 CFR)	Advisory Material	FAA Orders & Other Guidance	Legal Interpretations & Opinions ²
<p>Part 145— Repair Stations⁵</p>	<p>AC-145-4A, Inspection, Retread, Repair, and Alterations of Aircraft Tires</p> <p>AC 145-5, Repair Station Internal Evaluation Programs</p> <p>AC 145-9 Chg 1, Guide for Developing and Evaluating Repair Station and Quality Control Manuals</p> <p>AC 145-10, Repair Station Training Program</p>	<p><u>Order 8900.1</u>, FSIMS</p> <p><u>Order 8000.85A</u>, FAA Program for the Establishment of a MIP Under the Provisions of a BASA</p> <p><u>Order 8110.103</u>, Alternative Methods of Compliance (AMOC)</p> <p><u>Order 8120.16</u>, Processing Reports of Suspected Unapproved Parts</p> <p><u>Order 8120.15 Chg 1</u>, Performing Work on New Products or Parts that have left the U.S. PAH/ Supplier's Quality System</p> <p><u>Order 8130.13</u>, Proper use of Parts Catalogs/ Maintenance Manuals</p> <p><u>Order 8130.21 Chg 1</u>, Procedures for Completion and Use of the Authorized Release Certificate, FAA Form 8130-3, Airworthiness Approval Tag</p> <p><u>Order 8610.6</u>, Certification of Repair Stations for Balloon Maintenance</p> <p><u>Order 8610.1</u>, Certification and Authorization - Repair Station Limited Rating Beech 18 Aircraft - Wing and Center Spar X-Ray Inspection</p>	<p><i>Request for Policy Interpretation</i> of 14 C.F.R. Parts 43 and 145 for FAA-Certificated Repair Stations Working on Foreign-Registered Aircraft (8/24/2010)</p> <p><i>Request for Legal Interpretation</i> of 14 C.F.R. § 91.411(b)(2)</p> <p>Concerning Which Ratings a Certificated Repair Station Must Hold to Perform the Inspections Required by § 91.411(a) (3/12/2012)</p> <p><i>Interpretation</i> regarding who may conduct flammability testing of materials as provided for under 14 C.F.R. §§ 23.853 and 25.853; specifically, whether a part 145 certified repair station may receive a limited rating under 14 C.F.R. § 145.61(c)(1) to perform this function (2/12/2008)</p> <p><i>Request for Legal Interpretation</i> of 14 C.F.R. § 145.157(a) Concerning the Certification Requirements for Persons Authorized to Approve an Article for Return to Service in Repair Stations Located Inside the United States (3/23/2012)</p>

Regulation ¹ (14 CFR)	Advisory Material	FAA Orders & Other Guidance	Legal Interpretations & Opinions ²
Part 145— Repair Stations (cont.)		<p><u>Order 8610.3</u>, Certification of Repair Station for Class and LMTD Ratings, Including the Privileges of those Ratings</p> <p><u>Policy Memos</u> FAA & EASA Reciprocal Acceptance of Repair Data and Certain STCs Major Alteration Job Aid Memo</p>	<p><i>Clarification</i> of whether aircraft owners, operators, or certificate holders must retain in their records a complete audit trail to the origin of their aircraft parts (8/6/2009)</p> <p><i>Request for Interpretation</i> whether the requirements prescribed in 14 C.F.R. § 145.51(c) (commonly referred to as the "showing of need") are applicable to a renewal (under 14 C.F.R. § 145.55(b)» of a U.S. repair station certificate for a repair station located outside the United States (foreign repair station) (12/9/2008)</p> <p><i>Request for Interpretation</i> whether a certificated part 145 repair station may issue an airworthiness release or log entry approving the work it performs on an aircraft for return to service on behalf of a certificate holder operating under part 121 or part 135 (1/5/2009)</p> <p><i>Concerning the</i> <i>application</i> of §121.377 to maintenance personnel at Pratt's repair facility certified under Part 145 of the FARs (5/8/2010)</p> <p><i>Legal Interpretation</i> of "Current" as it Applies to Maintenance Manuals and Other Documents Referenced in 14 C.F.R. §§ 43. 13(a) and 145.109(d) (8/13/2010)</p>

Regulation ¹ (14 CFR)	Advisory Material	FAA Orders & Other Guidance	Legal Interpretations & Opinions ²
Part 145— Repair Stations (cont.)			<p><i>Questions regarding the interpretation of Sections 145.49 and 145.53 of the Federal Aviation Regulations (FAR). what the terms "have" and "appropriate" mean in the context of their usage in FAR 145.49. Further, you raise a similar question regarding use of the term "available" as it is found in FAR 145.53. (Leland S. Edwards, Attorney 1996)</i></p> <p><i>Request for Interpretation of 14 C.F.R. Parts 43 and 65 Regarding Whether the Holder of a Mechanic Certificate Issued Under 14 C.F.R. Part 65 is Required to Hold a Repair Station Certificate Issued Under 14 C.F.R. Part 145 in Order to Perform Non-Destructive Test (NDT) Inspections if the Holder of the Mechanic Certificate is Otherwise Qualified to Conduct NDT Inspections (6/10/2008)</i></p>

¹ These references pertain directly to the 14 CFR Parts 43 and 145. There are others that are ancillary to the performance of maintenance and repair that are listed on the FAA website and available through the RGL.

² Legal Interpretations referenced include only those AGC Legal Interpretations available in the Legal Interpretations & Chief Counsel's Opinions database available on the FAA website. The legal interpretations, clarifications, and opinions listed were issued by AGC-200 unless otherwise noted.

³ SAFOs are available on the FAA website from 2005 to date. The SAFOs listed represent a sampling of the SAFOs issued in the last two years that directly impact or concern Part 43.

⁴ InFOs are available on the FAA website from 2006 to date. The InFOs listed represent a sampling of the InFOs issued in the last three years that directly impact or concern Part 43.

⁵ Repair stations are also required to comply with 14 CFR Part 43; therefore there is some duplication of orders and guidance material listed.

APPENDIX I: FAA ACADEMY AFS ASI TRAINING CURRICULUM

Current Aviation Safety Inspector (ASI) Training – Web and Federal Aviation Administration (FAA) Academy

FAA Academy course 27031, “Orientation to FAA and Flight Standards,” comprises a three-lesson module on regulations and guidance. The modules include:

1. *Introduction:* This module provides an overview of resources that ASIs need to do their jobs. It introduces three “levels” – Title 49 of the U.S.C.; the CFRs; and FAA policy and guidance. There is a specific focus on Title 49, including:
 - Organization (e.g., subtitles) and application to AFS
 - Access (e.g., job aid with guidance on searching Title 49)
 - Application - How an inspector should use information in Title 49
2. *Code of Federal Regulations:* This module covers:
 - Overall structure of the regulations (e.g., chapters, parts, subparts, sections, etc.)
 - Terms used in the regulations, with reference to Part 1 and explanation of shall/must versus may/should.
 - Systematic process that ASIs can use to locate applicable regulations, ensure applicability, and review related references.
 - Tips for keeping abreast of regulatory changes
3. *FAA Guidance and Policy:* This module covers:
 - Sources of FAA guidance and policy (e.g., Orders, Notices, policy letters, ACs.)
 - Content and organization of 8900.1, with suggestions on proper use
 - A job aid for using FSIMS (needs update)

In addition to this and other residential FAA Academy courses, there are a number of Web-based training courses for each of the ASI specialties. These courses cover technical areas along with related regulations, ACs, and handbook guidance. ASIs in all specialties are required to complete certain Web-based courses prior to attending the first Practical Application Workshop (PAW).

All Web-based courses include a module that addresses the meaning of the regulations. The modules discuss roles and requirements for both the FAA and the operator, and are designed to provide relevant references and information in plain language. To ensure that participants know the regulations and understand application of both regulations and associated guidance, the Web-based courses include exercises with scenarios. For instance, the scenarios might require an air carrier ASI to apply the regulations to ATOS Performance and Design Assessments, and a general aviation ASI to apply them to GA certification and surveillance activities.

On average, new ASIs spend 6-7 days in two separate practical applications workshops (PAW) learning to understand and apply regulations and handbook guidance. The PAWs use extensive scenarios and exercises. Each begins with a review of material covered in the technical Web courses related to the specialty-specific PAW. After a high-level review and question session, the PAW curriculum uses exercises and scenarios to provide hands-on training related to the application of the regulations and guidance. In addition to being more extensive and more complex than the exercises and scenarios incorporated into the Web-based courses, the PAW activities allow for interaction between the instructor and participants, as well as interaction and discussion among the participants themselves. The instructor leads and debriefs the exercises in order to respond to questions, issues, and misunderstandings related to the application of regulations covered by the specific PAW. This discussion includes a degree of regulatory interpretation, along with explanation of common misinterpretations.

Indoctrination training for new ASIs also includes the Initial Compliance and Enforcement (C&E) course (12020), which incorporates a six-hour lesson with emphasis on understanding the regulations and their intent. This lesson covers:

- Using Title 49 U.S.C.
 - How 49 U.S.C. is structured
 - Relevant Sections

- Using 14 CFR
 - How 14 CFR is structured
 - How regulations are referenced
 - Intent – preambles
 - Enforceability
 - Applicability
 - False/fraudulent statements
 - Use of other relevant regulations

Exercises associated with this lesson require ASIs to practice breaking several example regulations into who, what, where, when, how components.